EAST PALO ALTO CITY COUNCIL
REGULAR SESSION AGENDA

Tuesday, July 15, 2025, 6:30 PM
EPA Government Center
2415 University Avenue, First Floor
East Palo Alto, CA 94303

NOTICE

This meeting will be held virtually and in-person at the Council Chambers located on 2415 University Ave, First Floor East Palo Alto, CA 94303. The virtual portion of this City Council meeting will be conducted in accordance with City of East Palo Alto Resolution adopted pursuant to Assembly Bill 361.

The public may participate in the City Council Meeting via Zoom Meeting or by attending in-person in the Council Chambers at 2415 University Ave, First Floor East Palo Alto, CA 94303. Community members may provide comments by emailing cityclerk@cityofepa.org, submitting a speaker card at the meeting, or using the **RAISE HAND** feature when the Mayor or City Clerk call for public comment. Emailed comments should include the specific agenda item on which you are commenting.

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US: +1 669 900 6833 or
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+ 1 253 215 8782 or
+ 1 312 626 6799 or
+ 1 929 205 6099 or
+ 1 301 715 8592

Webinar ID: 815 6525 2701

International numbers available: https://zoom.us/u/aMWYF4KT

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1. CALL TO ORDER AND ROLL CALL

2. APPROVAL OF THE AGENDA

3. APPROVAL OF CONSENT CALENDAR

3.1 American Muslim Appreciation & Awareness Month Proclamation

Recommendation: Present the proclamation for American Muslim Appreciation & Awareness Month.

3.2 Ecumenical Hunger Program (EHP) Proclamation

Recommendation: Present the proclamation for the Ecumenical Hunger Program (EHP).

3.3 Contract Amendment Number One with Golden State Construction and Utility, Inc.

Recommendation:

Adopt a resolution:

1. authorizing the City Manager to execute a first amendment to the Woodland Avenue Waterline and Palo Alto Interconnect Project contract with Golden State Construction and Utility, Inc., in a form approved by the City Attorney, to increase the budget by $47,417.95 in the water capital fund for a new not-to exceed total of $480,817.95;
2. Appropriating $47,417.95 from Water Capital Fund for the project;
3. Finding that the proposed action is categorically exempt from the California Environmental Quality Act (CEQA) under Sections 15301 and 15303 of the CEQA Guidelines.

4. CLOSED SESSION

5. PUBLIC COMMENT

6. INFORMATIONAL REPORTS

6.1 Economic Development Strategic Plan – Project Update & Existing Conditions

Recommendation: Receive an informational update on the progress of the Economic Development Strategic Plan (EDSP). This report includes an overview of the Existing Conditions Report identified by HR&A Advisors, Inc., (HR&A) the City's consultant, during the initial research phase.

7. ADJOURN CITY COUNCIL REGULAR MEETING TO THE EAST PALO ALTO SANITARY DISTRICT BOARD MEETING

8. APROVAL OF THE EPASD BOARD MEETING AGENDA

9. EPASD BOARD MEETING PUBLIC COMMENT

10. EPASD BOARD MEETING PUBLIC HEARING

10.1 2025 Sewer System Master Plan

Recommendation: Adopt a Resolution approving the 2025 Sanitary Sewer System Master Plan.

11. EPASD BOARD REPORTS

12. ADJOURN EAST PALO ALTO SANITARY DISTRICT BOARD MEETING AND RECONVENE CITY COUNCIL REGULAR MEETING

13. POLICY AND ACTION

13.1 Accept Evaluation Report on Measure HH Pilot Workforce Development Program and Authorize Issuance of a Request for Proposals to Continue the Program

Recommendation: 1. Review and accept the evaluation report from Informing Change on the Measure HH Pilot Workforce Development Program;
2. Receive updates from the three organizations that have been contracted to implement the Pilot Program;
3. Provide input on the recommended enhancements to the Measure HH Workforce Development Program; and
4. Adopt a resolution:
a. Authorizing City Manager to issue a Request for Proposals ("RFP") to accept proposals to continue the Measure HH Workforce Development Program with recommended program and operational enhancements; and
b. Finding the proposed action does not constitute a "project" within the meaning of the California Environmental Quality Act ("CEQA") pursuant to CEQA Guidelines sections 15378(b)(4) and (5) in that it is a governmental fiscal, organizational or administrative activity that will not result in direct or indirect changes in the environment.

14. PUBLIC HEARINGS

14.1 FY 25-26 Inclusionary In-Lieu Fee Update

Recommendation: Adopt a resolution updating the Inclusionary Housing In-Lieu Fees for Fiscal Year 2025-26, to amounts of $268,800 for Ownership/For-Sale and $306,100 for Rental, or some other alternative approved by City Council.

14.2 Cost Allocation Plan and User Fee reports and amendment to City's Master Fee Schedule – Continued from June 17, 2025

Recommendation:

Adopt a resolution:

1. Approving the Cost Allocation Plan and User and Regulatory Fee Study as the basis for amending the Master Fee Schedule;
2. Amending the City's Master Fee Schedule, based on Cost Allocation Plan and User and Regulatory Fee Study; and
3. Finding the proposed action does not constitute a "project" with the meaning of the California Environmental Quality Act ("CEQA") pursuant to CEQA Guidelines sections 15378(b)(4) and (5) in that it is a governmental fiscal, organizational or administrative activity that will not result in direct or indirect changes in the environment.

15. COUNCIL REPORTS

16. ADJOURNMENT

Upcoming meetings:

Study Session	July 29, 2025	6:00 PM
Regular Meeting	September 2, 2025	6:30 PM
Regular Meeting	September 16, 2025	6:30 PM

This AGENDA is posted in accordance with Government Code Section 54954.2(a)

This Notice of Availability of Public Records: All public records relating to an open session item which are not exempt from disclosure pursuant to the Public Records Act, that are distributed to the majority of the City Council will be available for public inspection at the City Clerk's Office, 2415 University Avenue, East Palo Alto, CA at the same time that the public records are distributed or made available to the City Council. Such documents may also be available on the East Palo Alto website www.cityofepa.org subject to staff's ability to post the documents prior to the meeting. Information may be obtained by calling (650) 853-3100.

The City Council meeting packet may be reviewed by the public in the Library or the City Clerk's Office. Any writings or documents pertaining to an open session item provided to a majority of the City Council less than 72 hours prior to the meeting, shall be made available for public inspection at the front counter at the City Clerk's Office, 2ND Floor, City Hall, 2415 University Avenue, East Palo Alto, California 94303 during normal business hours. Information distributed to the Council at the Council meeting becomes part of the public record. A copy of written material, pictures, etc. should be provided for this purpose.

East Palo Alto City Council Chambers is ADA compliant. Requests for disability related modifications or accommodations, aids or services may be made by a person with a disability to the City Clerk's office at (650) 853-3127 no less than 72 hours prior to the meeting as required by Section 202 of the Americans with Disabilities Act of 1990 and the federal rules and regulations adopted in implementation thereof.

DECLARATION OF POSTING

This Notice is posted in accordance with Government Code §54954.2(a) or §54956. Members of the public can view electronic agendas and staff reports by accessing the City website. Under penalty of perjury, this Agenda was posted to the public at least 72 hours prior to the meeting.

POSTED: July 3, 2025

ATTEST:

James Colin
City Clerk

EAST PALO ALTO CITY COUNCIL STAFF REPORT

DATE: July 15, 2025

TO: Honorable Mayor and Members of the City Council

VIA: Melvin E. Gaines, City Manager

BY: James Colin, City Clerk

SUBJECT: American Muslim Appreciation & Awareness Month Proclamation

Recommendation

Present the proclamation for American Muslim Appreciation & Awareness Month.

Attachments

1. Proclamation

AMERICAN MUSLIM APPRECIATION AND AWARENESS MONTH
CITY OF EAST PALO ALTO

WHEREAS, enriched by the unparalleled diversity of its residents, the City of East Palo Alto takes great pride in supporting individual religious freedoms and is strengthened by the many varied religious, political, and cultural traditions and contributions of its diverse populations, including those that practice Islam; and

WHEREAS, the history of Islam in this country dates to before its founding, originating with enslaved Africans who brought their Muslim beliefs with them to the Americas and who later contributed in numerous ways to the founding of the nation, and there are today millions of American Muslims, both immigrant and native born, of diverse backgrounds and beliefs. Approximately 1,000,000 American Muslims currently reside in California, the highest number of any state in the United States;

WHEREAS, over 15,000 Muslims live in San Mateo County[1], and make innumerable contributions to the cultural, political, and economic fabric and well-being of California and the United States;

WHEREAS, in 2023 the Council on American-Islamic Relations received 607 complaints of hate crimes or hate incidents, a 419% increase from the previous year, and over 8,000 complaints total, the highest-ever in its 30-year history;

WHEREAS, the city council acknowledges the importance of local government in advocating for peace and justice, understanding that Muslims everywhere deserve to live in peace and safety; and

WHEREAS, it is appropriate to acknowledge and promote awareness of the myriad of invaluable contributions of American Muslims in California and across the country and extend to them the respect and camaraderie every American deserves; now, therefore, be it

NOW THEREFORE BE IT RESOLVED, the City of East Palo Alto does hereby recognize the California State Designation of August 2025 as American Muslim Appreciation and Awareness Month to acknowledge the rich history, contributions, and guiding virtues of Muslims and to commend all Muslim communities in California for the lasting positive impact they have made toward the advancement of our city and country.

Dated: July 15, 2024

Martha Barragan, Mayor

CONSENT ITEM 3.2

EAST PALO ALTO CITY COUNCIL STAFF REPORT

DATE: July 15, 2025

TO: Honorable Mayor and Members of the City Council

VIA: Melvin E. Gaines, City Manager

BY: James Colin, City Clerk

SUBJECT: Ecumenical Hunger Program (EHP) Proclamation

Recommendation

Present the proclamation for the Ecumenical Hunger Program (EHP).

Attachments

1. Proclamation

CONSENT ITEM 3.3

EAST PALO ALTO CITY COUNCIL
STAFF REPORT

DATE: July 15, 2025

TO: Honorable Mayor and Members of the City Council

VIA: Melvin E. Gaines, City Manager

BY: Anwar Mirza, City Engineer
Humza Javed, Public Works Director

SUBJECT: Contract Amendment number one with Golden State Construction and Utility, Inc.

Recommendation

Adopt a resolution:

1. authorizing the City Manager to execute a first amendment to the Woodland Avenue Waterline and Palo Alto Interconnect Project contract with Golden State Construction and Utility, Inc., in a form approved by the City Attorney, to increase the budget by $47,417.95 in the water capital fund for a new not-to exceed total of $480,817.95.;
2. Appropriating $47,417.95 from Water Capital Fund for the project;
3. Finding that the proposed action is categorically exempt from the California Environmental Quality Act (CEQA) under Sections 15301 and 15303 of the CEQA Guidelines.

Alignment with City Council Strategic Plan

This recommendation is primarily aligned with:

- Public Infrastructure and Utilities
- Public Health, Safety, and Quality of Life

Background

On October 17, 2023, the City Council adopted Resolution 102-2023 authorizing a contract with

Golden State Construction and Utility, Inc. in the amount of $394,000.00 and established a 10% construction contingency in the amount of $39,400.00, for a total construction budget of $433,400.00. This was for Capital Improvement Project (CIP) WS - 01A, Woodland Avenue Waterline and City of Palo Alto Interconnect Project (project), a priority project in the City's CIP and the 2022 Water System Master Plan.

Analysis

As part of the project, the City re-established an existing emergency intertie with the City of Palo Alto's water system and improved the watermain on Woodland Avenue.

During construction of this project there were various unforeseen circumstances that depleted the project contingency of $39,400. Furthermore, the City Inspector identified deteriorating pavement conditions and potholes on Woodland Avenue/Scofield Avenue adjacent to the water line alignment. The original planned pavement treatment was identified to be inadequate, so the City inspector authorized additional pavement restoration to rehabilitate the pavement for public safety. The cost of this work was negotiated with the contractor per the original contract bid price of pavement related bid items and the work was completed before the additional budget was allocated. Though staff did not have such authority, the reason this work was completed prior to this amendment coming to Council was because of cost savings due to contractor mobilization and for public safety.

The total cost of this work is $47,417.95, and staff is seeking a contract amendment to increase the contract amount to pay for this completed work.

Fiscal Impact

Staff recommend appropriating $47,417.95 from the water capital fund for Capital Improvement Project (CIP) WS - 01A, Woodland Avenue Waterline and City of Palo Alto Interconnect Project.

Public Notice

The public was provided notice of this agenda item by posting the City Council agenda on the City's official bulletin board outside City Hall and making the agenda and report available at the City's website and at the San Mateo Co. Library located at 2415 University Avenue, East Palo Alto.

Environmental

The project is categorically exempt from the California Environmental Quality Act (CEQA) under Sections 15301 and 15303 of the CEQA Guidelines as it involves minor work in public right of way.

Attachment(s):

CONSENT ITEM 3.3

1. Resolution
2. Proposal

RESOLUTION NO. XX – 2025

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF EAST PALO ALTO

AUTHORIZING THE CITY MANAGER TO EXECUTE A CONTRACT AMENDMENT WITH GOLDEN STATE CONSTRUCTION AND UTILITY, INC., TO APPRORIATE $47,417.95 FROM WATER CAPITAL FUND FOR A NEW NOT-TO-EXCEED TOTAL OF $ 480,817.95 FOR THE WOODLAND AVENUE WATERLINE AND PALO ALTO INTERCNNECT PROJECT

WHEREAS, Capital Improvement Project (CIP) WS - 01A, Woodland Avenue Waterline and City of Palo Alto Interconnect Project (project) re-established an existing emergency intertie with the City of Palo Alto's water system and improved the watermain on Woodland Avenue; and

WHEREAS, establishment of interties will allow the City to obtain emergency water in case the City's connection with the Hetch Hetchy Aqueduct is severed; and

WHEREAS, this project is listed in the City's two-year CIP, ten-year CIP, and the 2022 Water System Mater Plan as a priority project; and

WHEREAS, On October 17, 2023, the City Council adopted Resolution 102-2023 authorizing a construction contract with Golden State Construction and Utility, Inc; and

WHEREAS, the City executed a construction contract with Golden State Construction and Utility in the amount of $394,000.00 for the Woodland Avenue Waterline and City of Palo Alto Interconnect Project, established a 10% Construction Contingency in the amount of $39,400.00 for a total construction budget of $433,400.00; and

WHEREAS, The original planned pavement treatment was identified to be inadequate, so the City authorized additional pavement restoration to rehabilitate the pavement for public safety;

WHEREAS, a contract amendment in the amount of $47,417.95 is needed to pay for the additional construction services relating to pavement restoration; and

WHEREAS, the additional improvements can be funded through the General Capital Fund.

NOW, THEREFORE, BE IT RESOLVED THAT THE CITY COUNCIL OF THE CITY OF EAST PALO ALTO HEREBY authorizes the City Manager to:

1. Execute an amendment to the contract with Golden State Construction and Utility Inc., in a form approved by the City Attorney, to increase the contract budget by $47,417.95 for a new not-to-exceed total of $40,817.95;

2. Appropriates $47,417.95 from the water capital fund; and

3. Finds that the project is categorically exempt from the California Environmental Quality Act (CEQA) under Sections 15301 and 15303 of the CEQA Guidelines; and

PASSED AND ADOPTED this 15th day of July 2025**,** by the following vote:

AYES:

NOES:

ABSENT:

ABSTAIN:

Martha Barragan, Mayor

ATTEST:

James Colin, City Clerk

APPROVED AS TO FORM:

John D. Lê, City Attorney

INFORMATIONAL REPORT 6.1

EAST PALO ALTO CITY COUNCIL STAFF REPORT

DATE: July 15, 2025

TO: Honorable Mayor and Members of the City Council

VIA: Melvin E. Gaines, City Manager

BY: Denise J. Garcia, Assistant to the City Manager
Shiri Klima, Assistant City Manager

SUBJECT: Economic Development Strategic Plan – Project Update & Existing Conditions

Recommendation

Receive an informational update on the progress of the Economic Development Strategic Plan (EDSP). This report includes an overview of the Existing Conditions Report identified by HR&A Advisors, Inc., (HR&A) the City's consultant, during the initial research phase.

Alignment with City Council Strategic Plan

This recommendation is primarily aligned with:

Priority: Land Use, Economic and Workforce Development

Background

The City Council's Fiscal Year 2023–2025 Strategic Priorities included a priority to Promote Housing, Economic and Workforce Development. This priority included a project to create an Economic Development Strategy Plan (EDSP) focused on supporting small and micro businesses. Staff worked with Regional Government Services (RGS) to identify and map eight business districts in the City (listed on page 54 of the attached Existing Conditions Report) and create a request for proposals (RFP) to attract and retain a consultant to develop an EDSP that would be informed by current conditions, opportunities, and community feedback from various stakeholders.

Following a thorough interview process, staff preferred HR&A to lead the development and execution of the City's Economic Development Strategic Plan. Along with Kearns & West as a subconsultant providing enhanced Community and Stakeholder outreach and participation, these firms demonstrated expertise in creating impactful, equity-focused plans in collaboration with community members. Their approach emphasizes building an economic development strategy that fosters a thriving, equitable, and inclusive local economy.

On December 3, 2024, the City Council awarded the $199,330 contract to develop the EDSP to HR&A and Kearns & West. The City held a virtual project kickoff meeting on February 18, 2025, bringing together ad-hoc City Council Subcommittee Members Dinan and Abrica, City staff, HR&A Advisors, and Kearns & West. The team discussed the following goals of the EDSP:

1. Develop an equity-centered economic development strategy
2. Analyze the strengths, weaknesses, opportunities, and threats (SWOT) in each of the eight business districts in the City (see attached map and description of the districts on page 54 of the attached Existing Conditions Report)
3. Support local entrepreneurship
4. Create job opportunities
5. Leverage strategic sites for investment
6. Develop a multi-year Economic Development program for the City
7. Diversify the City's tax base

This report provides a mid-point check-in on the progress toward development of the economic development strategic plan and outlines proposed next steps.

Analysis

The project is structured in four phases, beginning with an existing conditions analysis and stakeholder engagement. This phase includes an employment trends analysis, real estate market evaluation of business districts, and local business outreach.

Staff organized a site visit for HR&A Advisors on March 24 and 25, which included a tour of key business corridors such as the Ravenswood Business District, the Four Corners/ Bay Road and University Bay Corridor, the Gateway 101 Shopping Center, and University Circle. HR&A also conducted independent assessments of smaller business areas, including the Pulgas/East Bayshore Corridor, Laurel/Glenn Way East Bayshore, and other neighborhood retail zones. During this visit, HR&A conducted interviews with local stakeholders, including City staff, workforce development and entrepreneurship support organizations (e.g., JobTrain, Live in Peace, Renaissance Center) and local developers (e.g., Sobrato, Emerson Collective).

Following the site visit, HR&A began preparing the Existing Conditions Report to establish a robust baseline understanding of the City's socioeconomic, industry, workforce, and market conditions, drawing from the following sources:

- CoStar – provides commercial real estate data
- Lightcast – provides labor market, demographic, and employment data

- Local sales tax data
- American Community Survey (ACS) of U.S Census 5-Year Estimates
- Regrid – provides property and vacant parcel data
- Site observations and interviews.

Existing Conditions Report – Overview

Details of HR&A's analysis and findings are documented in the attached Existing Conditions Report. Key takeaways are summarized below.

History and Background

- Residents of color in the Bay Area have historically established East Palo Alto as an affordable haven, shaping a City whose history is deeply rooted in resilience and self-determination.
- Although strategically located near major technology hubs, East Palo Alto lacks robust transit access and is constrained by surrounding highways.
- With a land area of 2.5 square miles, East Palo Alto is significantly smaller than its neighboring cities - a reality that will shape development efforts.
- While geographically and populously smaller than its neighbors, East Palo Alto has strong assets and characteristics that could be leveraged for economic prosperity – including proximity to Silicon Valley and Stanford University, access to the waterfront, an engaged community with rich culture, and invested nonprofit and private sector partners.

Demographic and Socioeconomic Context

- East Palo Alto's population growth is slower than that of the region. In recent years, Asian and White populations have grown, while the Black population has declined. East Palo Alto's predominant Latinx population has remained relatively stable in numbers.
- East Palo Alto is younger and has larger households compared to the broader region – highlighting ability to support retail demand and community-oriented amenities and the importance of education, workforce investment and family-sustaining wages.
- East Palo Alto has seen rising median household income and educational attainment – yet incomes remain significantly lower than neighboring cities, and residents earn less even with a college degree.
- Stark racial disparities persist. 70% of the population - primarily Latinx and Black households - earn an average of $25,000 less than the citywide median, which is approximately $105,000.

Industry and Employment Base

- East Palo Alto gained back most of its jobs lost since 2013, though its employment base is still relatively small with a growth rate that lags the region.
- High-wage jobs are growing in East Palo Alto, though low-wage jobs remain dominant locally.
- Professional, Scientific, and Technical Services and Health Care are the largest industries in East Palo Alto - both of which could be strong sources of quality jobs and career pathways.

- East Palo Alto does not capture the region's most competitive industry: tech. At the same time, while the City has industrial space and districts, its manufacturing industry lacks scale.
- East Palo Alto has strong nonprofit workforce training providers, though offerings could be further enhanced to better align with strong regional industries to maximize access to quality jobs.

Business and Retail Landscape

- East Palo Alto is a city of small businesses - the majority of our businesses employ fewer than ten people. This makes small business growth a vital pillar of the City's economic development.
- At the same time, the performance of a few larger businesses has an outsized impact on the City's job supply, tax revenues, and the overall local economy.
- Beyond the Gateway Retail Center, the absence of physically clustered businesses, active storefronts, and workers hinders the development of vibrant commercial corridors and a strong sense of place.
- Limited retail supply and diversity contributes to unmet demand across many categories - highlighting under-tapped potential to capture more of residents' and workers' spending power.

Real Estate Conditions

- Growth across all use types in East Palo Alto has been stagnant since 2015. Within that timeframe, only one new office building and one new multifamily building have been delivered.
- With lower-than-average vacancies and rents keeping relative pace within 20-min driving radius, retail and industrial uses appear to have notable growth potential within East Palo Alto.
- Existing multifamily units are showing signs of tightening demand - rising rents and falling vacancies. The City must facilitate sufficient housing construction to accommodate future growth and ease market pressure on existing and new residents.
- The most notable commercial and industrial properties and developments are in the City's eight business districts. Each district's characteristics and redevelopment potential will inform its future positioning and place-based strategies. These are described in the Appendix of the Existing Conditions Report.

Barriers and Opportunities

- HR&A is currently conducting a strengths, weaknesses, opportunities, and threats (SWOT) analysis while continuing to work with City staff and Kearns & West to engage stakeholders.
- The existing conditions analysis and stakeholder conversations have highlighted four potential policy areas to drive impactful economic development:
    - Define and illustrate what inclusive economic development looks like;
    - Prioritize place-based and industry aligned investment;
    - Streamline City permitting processes and examine feasibility of requirements; and
    - Build internal economic development capacity across functions.

INFORMATIONAL REPORT 6.1

EDSP Review and Guidance from Council Subcommittee

On June 2, 2025, HR&A led a conversation with the attendees from the kick-off meeting, which included City Council Subcommittee Member Dinan (Member Abrica was absent), City leadership (City Manager Gaines, Assistant City Manager Klima, Assistant to the City Manager Garcia, and Community and Economic Development Director Chen), and RGS Economic Development Advisor Brian Moura to review key findings included in the Existing Conditions Report and identify next steps. Member Dinan and City staff asked questions about the findings, provided insights on items not captured in the report, and emphasized various points, including the need to review internal processes and policies.

Current Phase and Community Engagement

Staff and the consultants have now entered phases two and three, focusing on community engagement and identifying actionable opportunities for business development, real estate investment, and workforce growth.

Recent and planned community engagement activities include:

- Launching a project website and listserv to keep the public informed and involved.
- Ongoing stakeholder interviews with workforce development / nonprofit organizations like JobTrain, Live In Peace, Street Code Academy, and WeHope; hard to reach small and micro-businesses; business district stakeholders such as Ravenswood Shores Business Districts and Emerson Collective; and major employers like Four Seasons, LBA Properties at University Circle, Gateway businesses, and Amazon.
- Community outreach at the Juneteenth event (June 21, 2025) at Bell Street Park, where staff gathered community input on assets and opportunities to enhance local economic activity and propel inclusive growth.
- Planning for an interactive public workshop (September 4, 2025) to deepen resident and business participation, with potential goals of validating concerns, challenges, and opportunities and gathering feedback on proposed strategies.

During the July 15 City Council meeting, HR&A and Kearns & West will share a brief summary of engagement takeaways.

Next Steps

The next phase involves synthesizing the findings from both the research and community engagement efforts. A draft of the final EDSP will be presented to the City Council in fall 2025 for review and input prior to its finalization and acceptance by the Council at the end of 2025.

Staff recommends that the City Council receive this informational update and provide feedback on the project’s progress. Council may also offer suggestions or priorities to guide the development of the draft plan.

Fiscal Impact

There is no fiscal impact for this informational report.

Public Notice

The public was provided notice by making the agenda and report available on the City's website and on a bulletin board located at City Hall: 2415 University Avenue, East Palo Alto.

Environmental

The action being considered does not constitute a "Project" within the meaning of the California Environmental Quality Act (CEQA), pursuant to CEQA Guideline section 15378 (b)(5), in that it is a government administrative activity that will not result in direct or indirect changes in the environment.

Government Code: 84308

Applicability of Levine Act: No, as the contract was competitively bid, the entitlement is exempt from the Levine Act.

Attachment

Attachment 1: Existing Conditions Report from HR&A



East Palo Alto Economic Development Strategic Plan

Existing Conditions Report

June 23, 2025

HR&A

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DRAFT



01

Project Overview

PROJECT GOALS

The Economic Development Strategic Plan will develop an equity-focused, actionable economic development strategy tailored to East Palo Alto's needs.



Support local entrepreneurship



Leverage strategic sites



Generate employment opportunities



Diversify tax base & Increase revenues

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DESIRED OUTCOME

Our team's goal is to leave East Palo Alto with clear next steps to realize its economic development vision.

Clear Vision
Grounded in data and engagement

Actionable Frameworks
with measurable outcomes community can understand and use

Priority Actions
to take in the near-, mid-, and long-term

DRAFT

WHERE WE ARE

The Economic Development Strategic Plan spans four phases. This report was prepared at the end of Phase 1.

Existing Conditions Report

Phase 1: Existing Conditions

Establish fact base about economic development in EPA

Phase 2: Synthesis

Identify business, real estate, and workforce development opportunities

Phase 4: Final Plan

Develop economic development strategic plan

Phase 3: Community Outreach

Engage broader community to validate findings and gather input on strategies

DRAFT

EXISTING CONDITIONS REPORT INTRODUCTION

This report aims to establish a **baseline understanding** of EPA's socioeconomic, industry, workforce, and market conditions to inform upcoming phases of the work.

Report Objectives

- ***Lay the foundation for understanding East Palo Alto's economic competitiveness***.
- ***Identify potential opportunities to drive economic growth and address inequities.***
- ***Inform engagement with community stakeholders, strategy development, and implementation planning.***

Stakeholders Engaged

- City leadership & staff
- Local developers
- Workforce development organizations
- Businesses & entrepreneurs
- Ravenswood Shores Business District (RSBD)

Data Sources

- CoStar
- Lightcast
- EPA sales tax data
- ACS 5-year estimate, 2023
- Regrid
- Site visit



02

History & Background

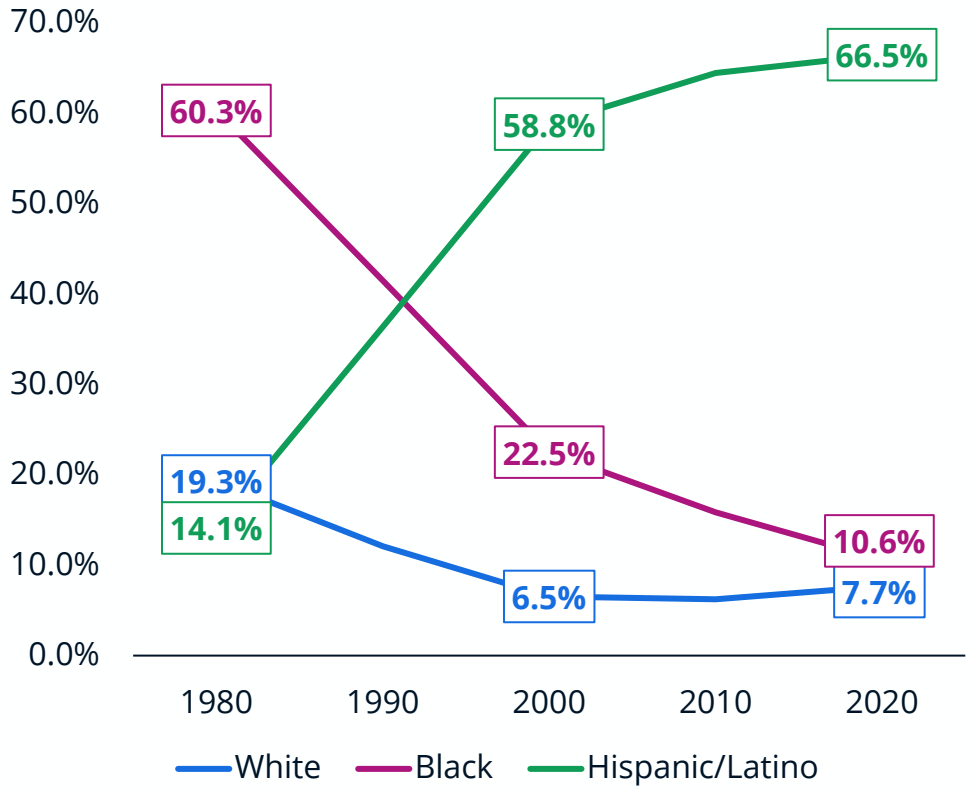
HISTORY

The history of East Palo Alto is deeply rooted in resilience and self-determination, and the city has long been an affordable haven for residents of color in the Bay Area.

A Brief Timeline of East Palo Alto's Recent History

- ***1950s*** *– "Blockbusting" practices employed, driving white flight and shifting to a majority-Black populace*
- ***1960s*** *– Facing minimal resources and racial discrimination, residents in EPA banded together to form their own institutions, including the Nairobi College*
- ***1983*** *– East Palo Alto incorporated as a city, despite intense opposition and concerns about tax revenue*
- ***1980s & 90s*** *– East Palo Alto struggled with drugs and gang violence, and known as the "Murder Capital"*
- ***2000s & 10s*** *– Tech companies increased presence; the city's populace became majority-Latino*
- ***2020s*** *– With crime levels significantly reduced, the city sheds its former label but faces tensions between growth and gentrification concerns.*

Share of Total Population by Race, East Palo Alto
(2015-2025 YTD)



Source(s): *"East of Palo Alto's Eden: Race and the Formation of Silicon Valley", Kim-Mai Culter; US Census Data*

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LOCATION

Strategically located near major tech hubs, East Palo Alto lacks robust transit access and is constrained by surrounding highways.

~25 mins

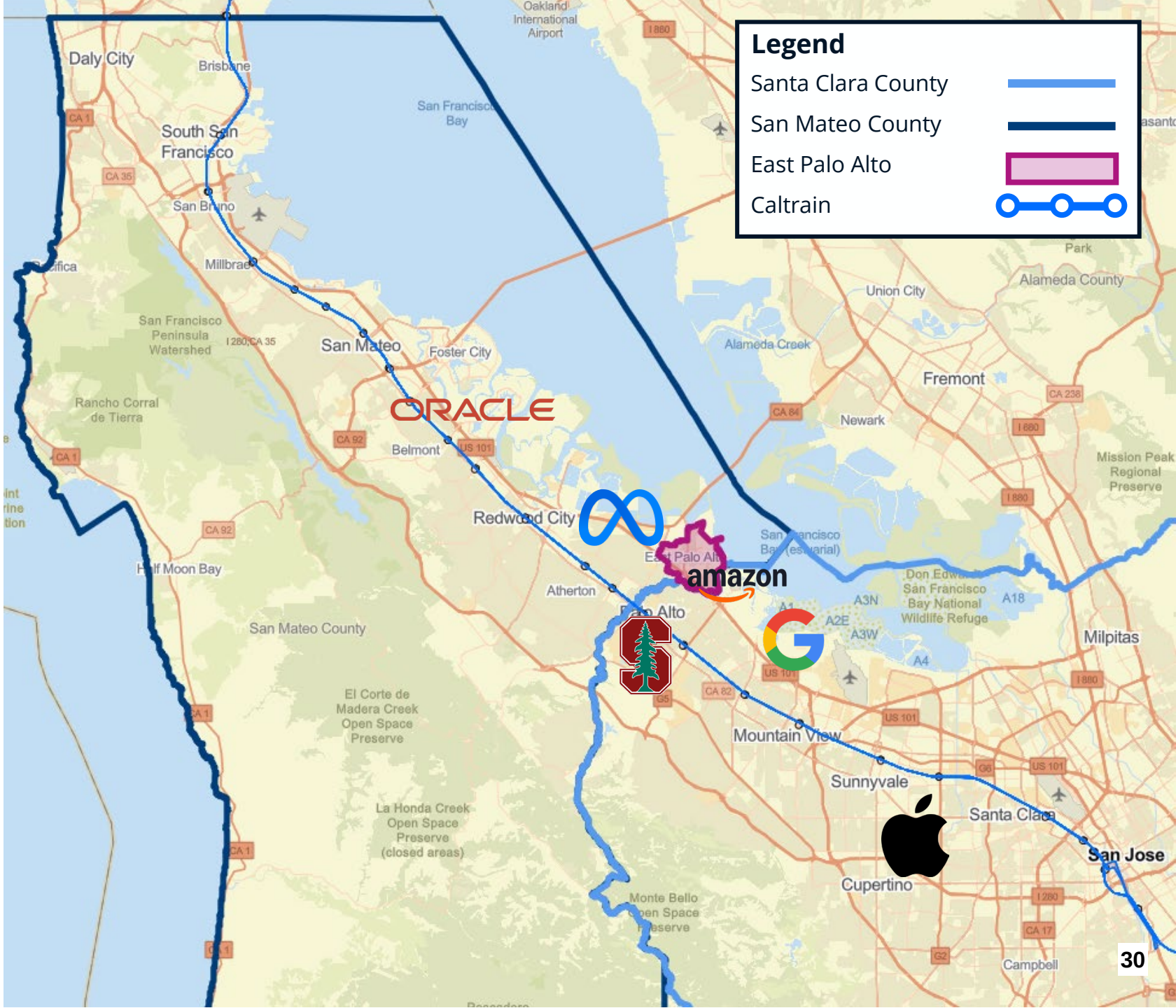
To San Jose

~35 mins

To Oakland

~45 mins

To San Francisco



SIZE

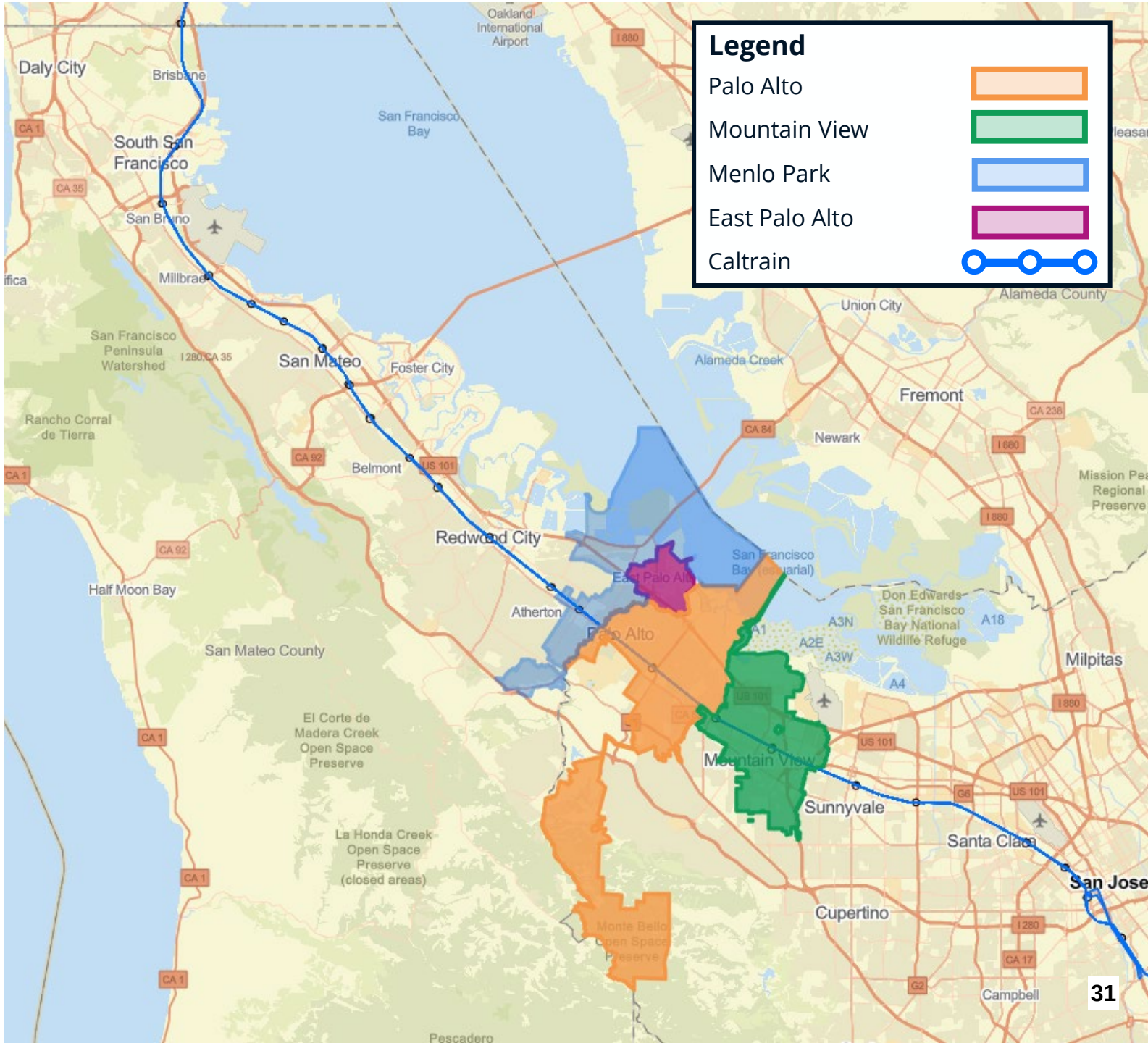
With a land area of 2.5 square miles, East Palo Alto is significantly smaller than its neighboring cities - a reality that will shape development efforts.

2.5 sq mi
East Palo Alto

9.9 sq mi
Menlo Park

11.9 sq mi
Mountain View

24.1 sq mi
Palo Alto



ASSETS

While geographically and populously smaller than its neighbors, East Palo Alto has strong assets and characteristics that could be leveraged for economic prosperity.



Proximity to Silicon Valley & Stanford University



Access to the waterfront



Engaged community & rich culture



Invested non-profit & private sector partners

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East Palo Alto has a strong sense of identity, a tight-knit community, and a legacy of self-advocacy. Today, it is at an inflection point: **How can it maintain this identity while actively participating in—and benefiting from—the economic momentum surrounding it?**





03

Demographic & Socioeconomic Context

DEMOGRAPHIC & SOCIOECONOMIC CONTEXT | KEY TAKEAWAYS

1. **East Palo Alto's population growth is slower than that of the region**. In recent years, Asian and White populations have grown, while the Black population has declined.

2. **East Palo Alto is younger and has larger households** compared to the broader region – highlighting ability to support retail demand and community-oriented amenities and the importance of education and workforce investment and family-sustaining wages.

3. East Palo Alto has seen **rising median household income** and **educational attainment** – yet incomes remain significantly lower, and residents earn less even with a college degree.

4. **Stark racial disparities persist**. 70% of the population - primarily Latinx and Black households - earn an average of $25,000 less than the citywide median.

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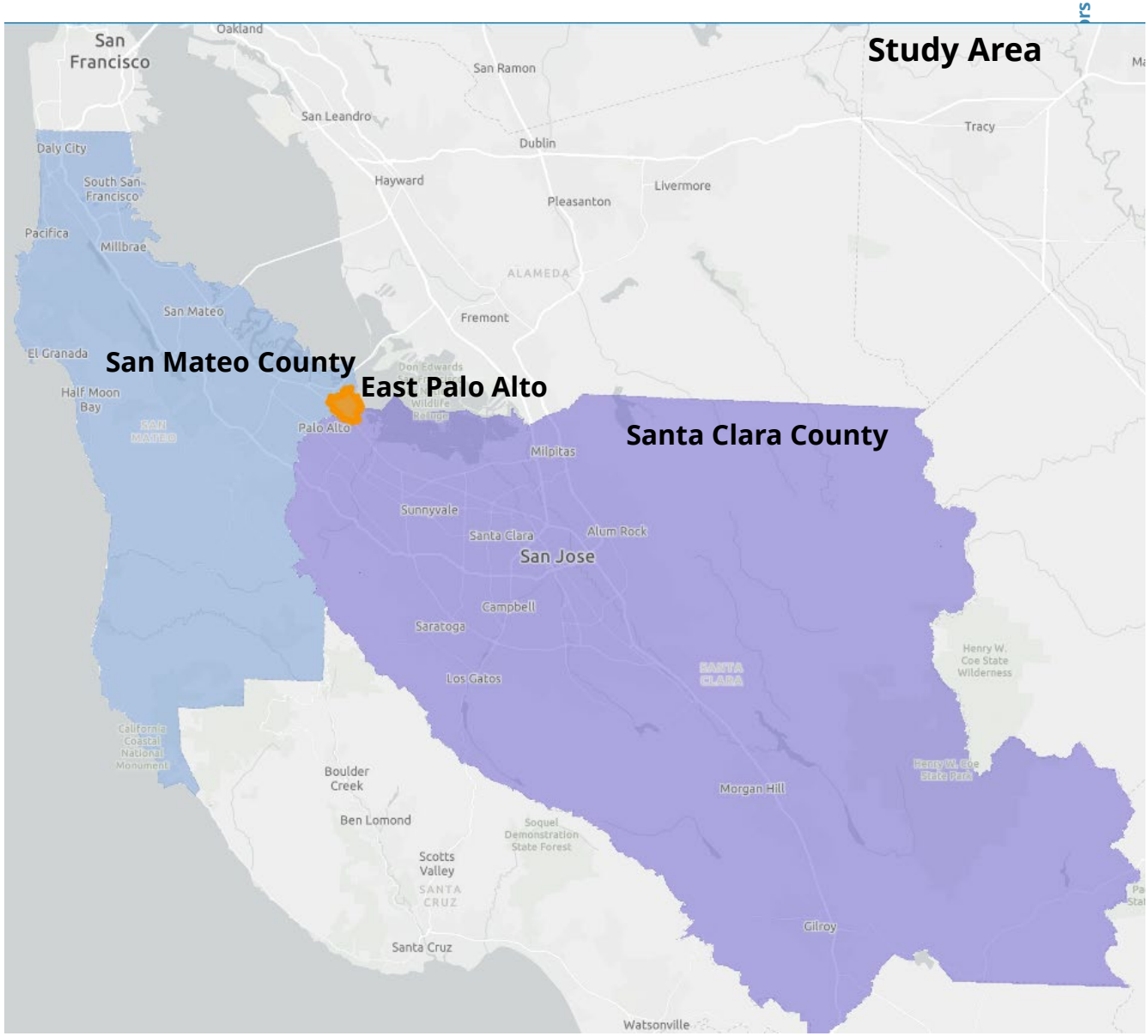
OVERVIEW

Over the last decade, East Palo Alto has seen modest population growth amid rising incomes and education attainment.

29,100
RESIDENTS (2023)
+2% (2013-2023)

$105K
MEDIAN HOUSEHOLD INCOME
+109% (2013-2023)

26%
RESIDENTS WITH A FOUR-YEAR DEGREE
+94% (2013-2023)



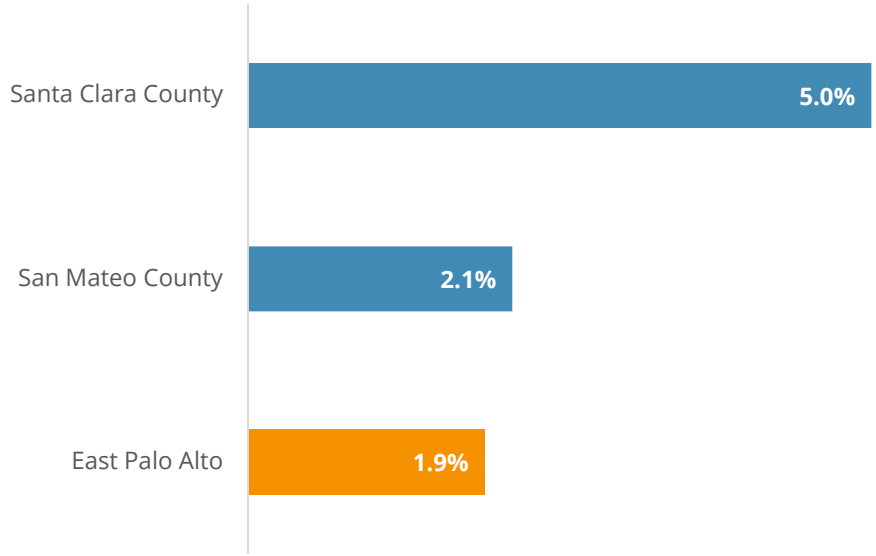
Source: ACS, US Census Bureau

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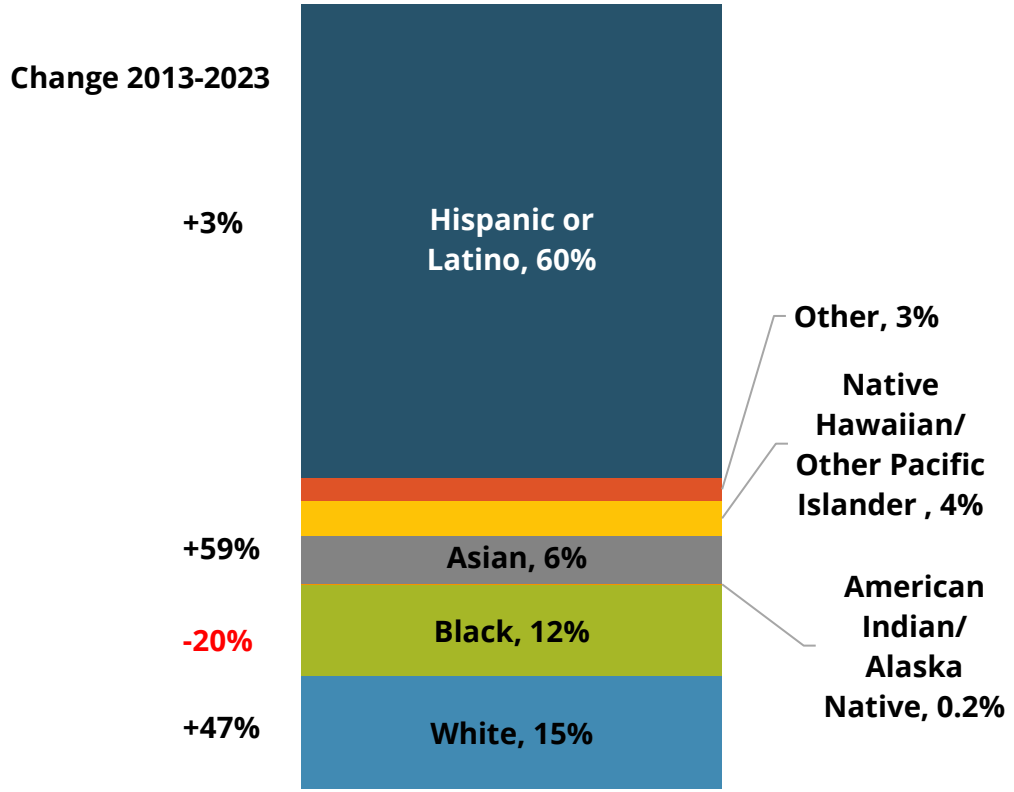
POPULATION GROWTH

East Palo Alto's population is growing at lower rates compared to the region. White, Asian, and Hispanic/Latino populations increased, while the Black population continues to decline.

10-YEAR POPULATION GROWTH (2013-2023)



RACE AND ETHNICITY (2023)



Source: ACS, US Census Bureau

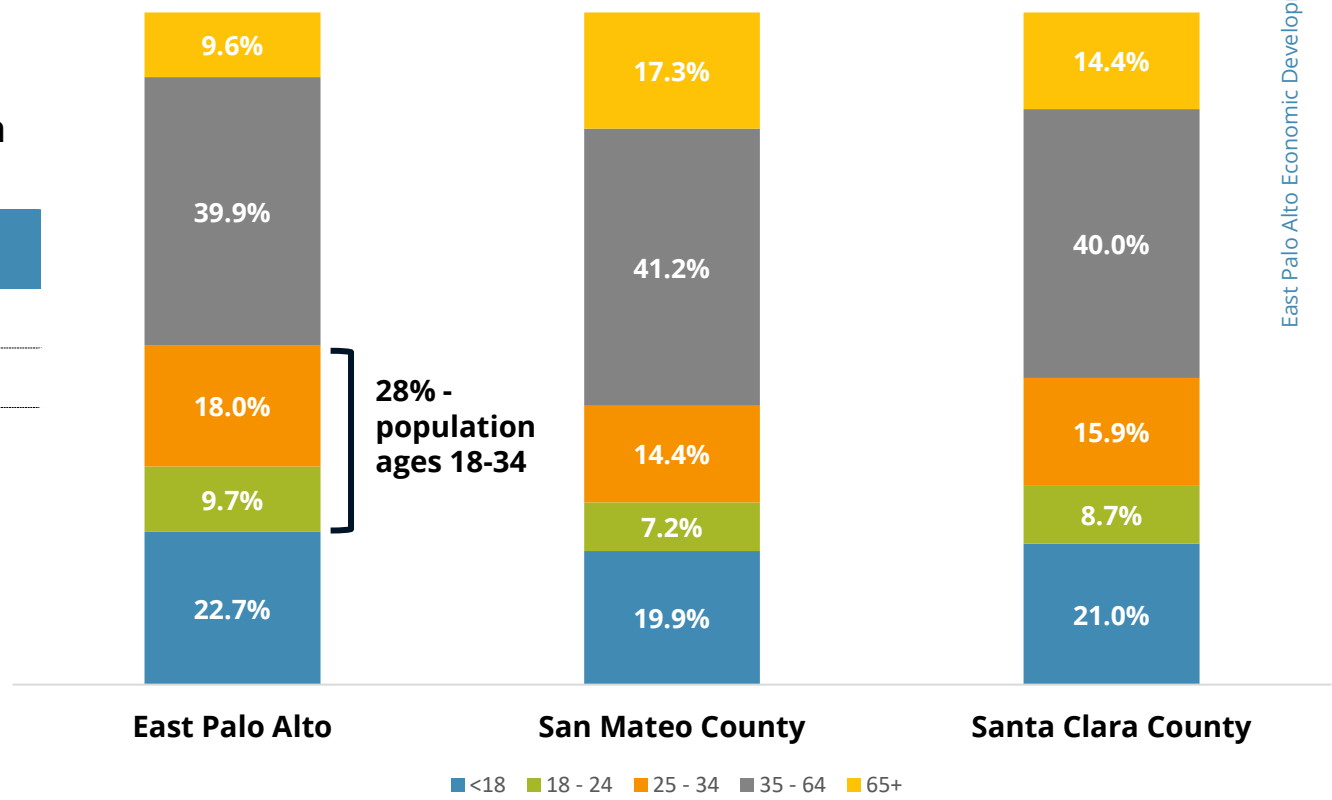
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HOUSEHOLD SIZE AND AGE

East Palo Alto has a larger household size and a higher proportion of children and younger working age population than the region.

2023	East Palo Alto	San Mateo County	Santa Clara County
Total Population	29,100	745,100	1,903,300
Total Households	8,300	264,400	654,500
Average Household Size	3.5	2.8	2.9

POPULATION BY AGE (2023)



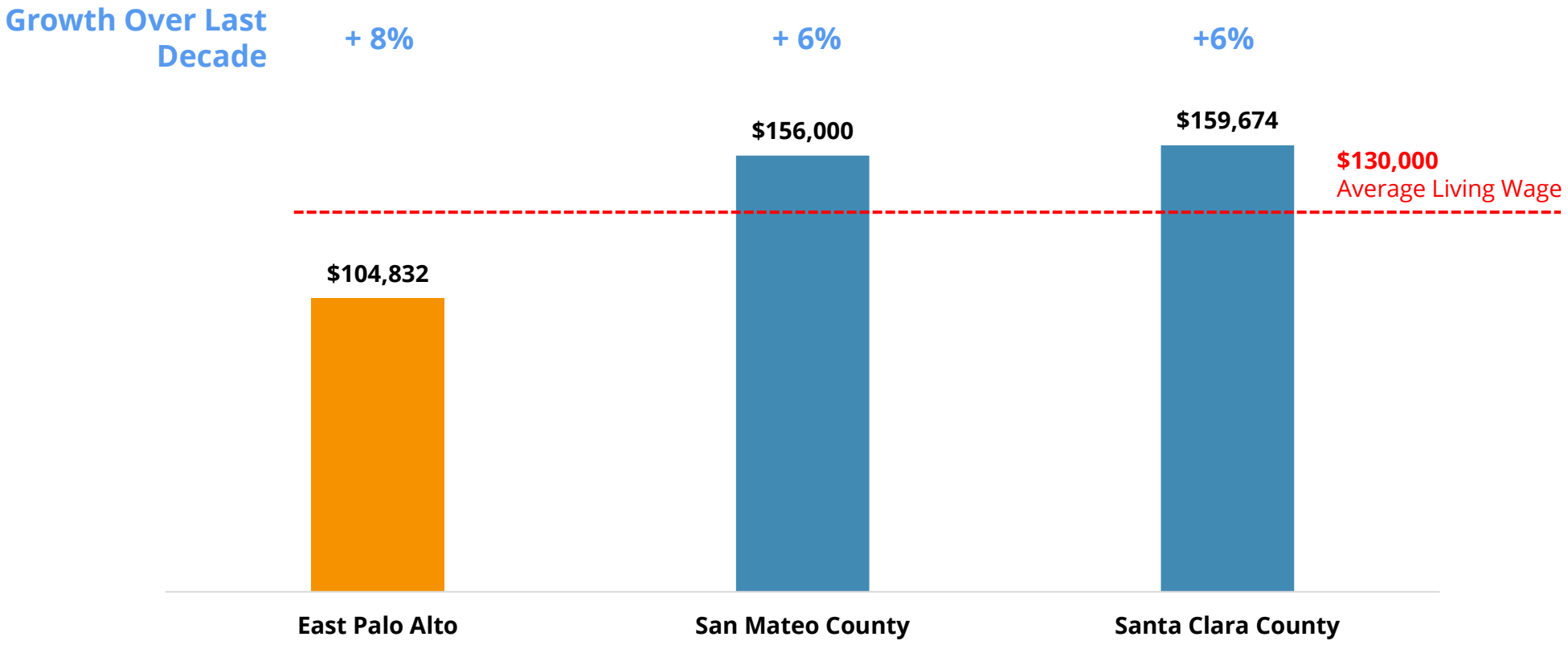
Source: ACS, US Census Bureau

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MEDIAN HOUSEHOLD INCOME

Despite faster growth, East Palo Alto's median household income remains 50% lower than the regional average.

MEDIAN HOUSEHOLD INCOME (2023) & GROWTH (2013-2023 CAGR)



Source: ACS, US Census Bureau, MIT Living Wage Calculator

Living wage is defined as what one full-time worker must earn on an hourly basis to help cover the cost of their family's minimum basic needs where they live while still being self-sufficient.

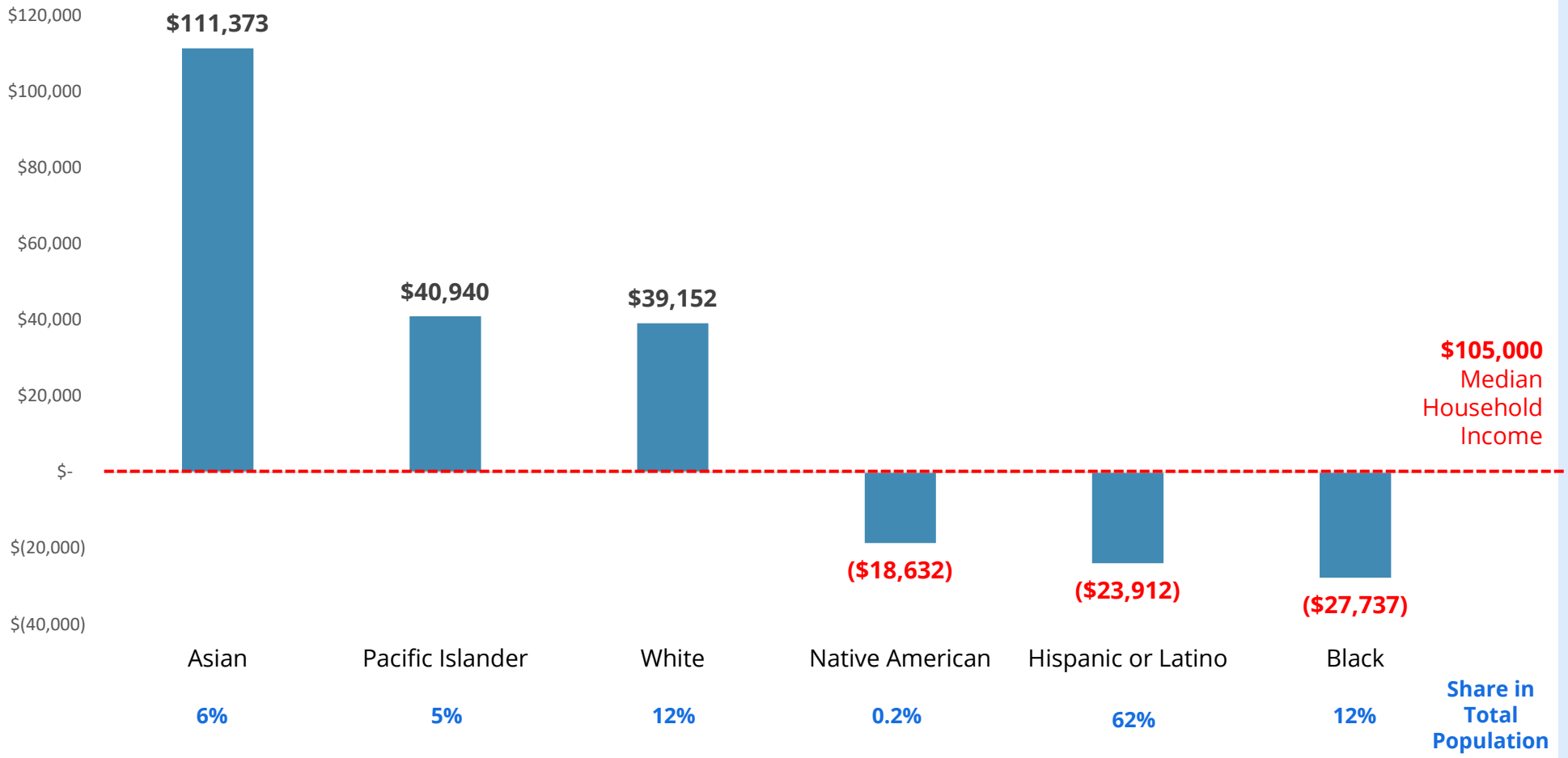
Average living wage in San Mateo County for 2 adults (1 working) and 2 children household is approximately $63/hour or $130,000 annually for a full-time salary. This is $30,000 greater than the median household income in EPA.*

**cost of living was not considered on the city level, which may affect the living wage.*

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HOUSEHOLD INCOME BY RACE

Stark racial inequities exist - Black, Hispanic, and Native American residents earning significantly lower than the median household income.



Over 70% of the population is Hispanic or Latino, or Black. However, the two populations earn, on average, $25,000 less than the city's median income.

Asian, Pacific Islander, and White populations have been increasing and tend to hold higher income jobs.

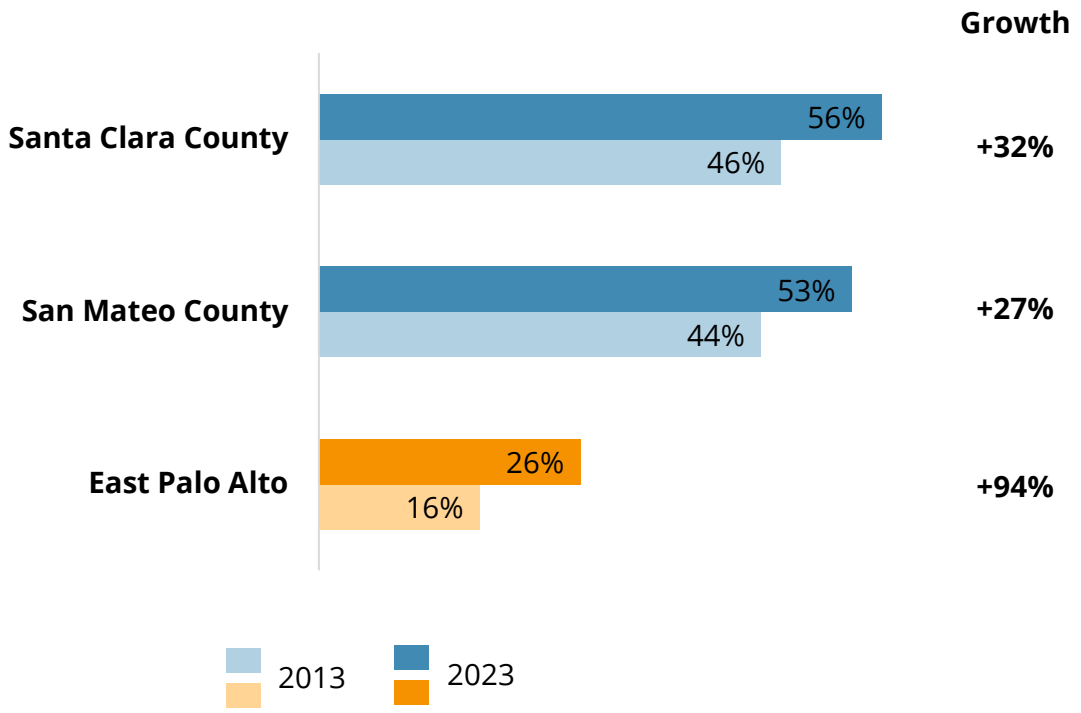
Source: ACS, US Census Bureau

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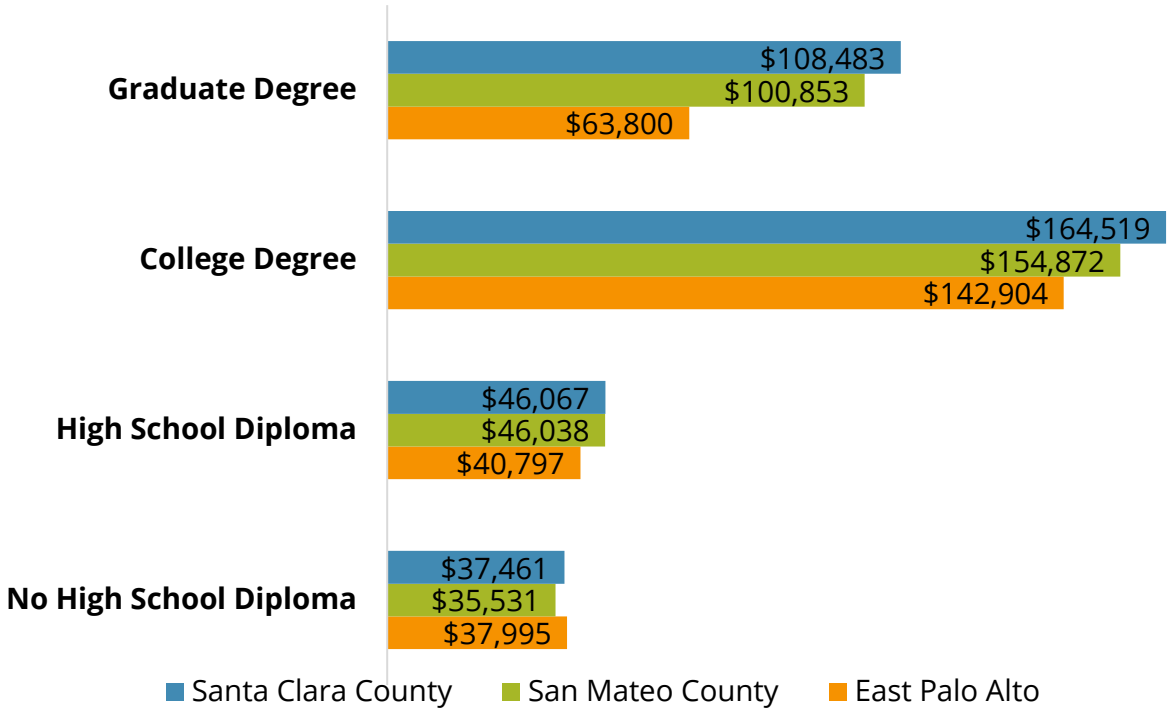
EDUCATIONAL ATTAINMENT

Education attainment level in East Palo Alto is growing though still lags behind the region – but advanced degrees do not close the income gap for East Palo Alto residents.

PERCENTAGE OF POPULATION WITH BACHELOR'S DEGREE (2013-2023)



MEDIAN INDIVIDUAL INCOME BY HIGHEST EDUCATIONAL ATTAINMENT (2023)



Source: ACS, US Census Bureau

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04

Industry & Employment Base

EMPLOYMENT & INDUSTRY LANDSCAPE | KEY TAKEAWAYS

1. East Palo Alto has **gained back most of its jobs lost** since 2013, though its **employment base is still relatively small** with a growth rate that lags the region.

2. **High-wage jobs are growing** in East Palo Alto, though **low-wage jobs remain dominant locally**.

3. **Professional, Scientific, and Technical Services** and **Health Care** are the largest industries in East Palo Alto - both of which could be strong sources of quality jobs and career pathways.

4. **East Palo Alto does not capture the region's most competitive industry: tech**. At the same time, while the city has industrial space and districts, its **manufacturing industry lacks scale**.

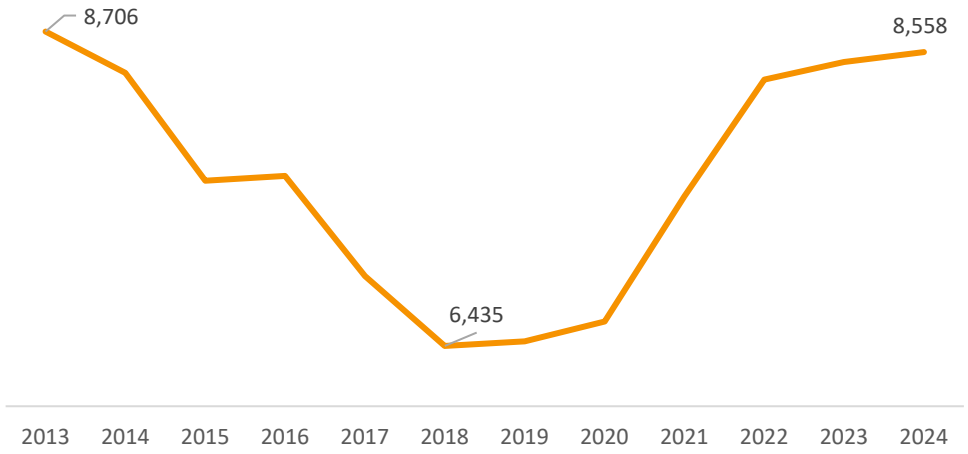
5. EPA has **strong nonprofit workforce training providers**, though offerings could be **further enhanced to better align with strong regional industries** to maximize access to quality jobs.

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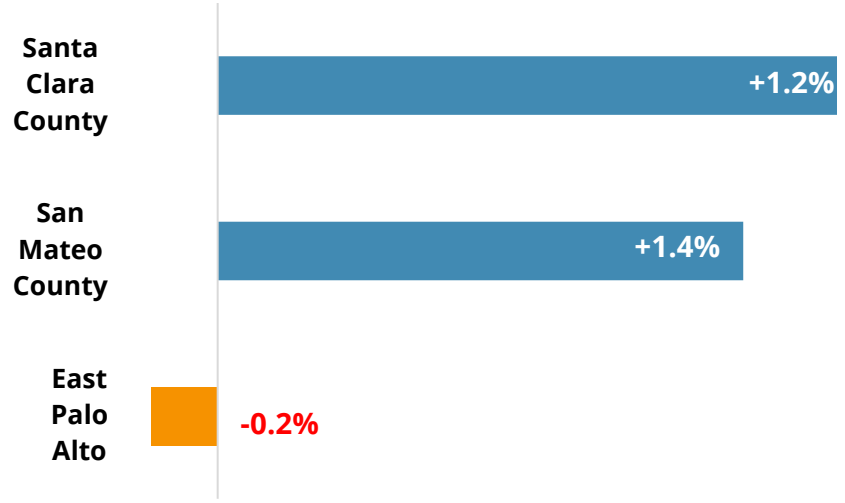
EMPLOYMENT

East Palo Alto experienced a significant economic resurgence in recent years, adding over 2,100 jobs since 2018, though its overall employment base remains small.

EAST PALO ALTO EMPLOYMENT 2013-2024



EMPLOYMENT GROWTH RATE (CAGR) 2013-2024



Compared to neighboring cities, East Palo Alto has a relatively small employment based, as measured by job to population ratio:

Job to Population Ratio:

- *East Palo Alto: 0.3*
- *Sunnyvale: 0.5*
- *Redwood City: 0.7*
- *Mountain View: 1.0*
- *Menlo Park: 1.4*

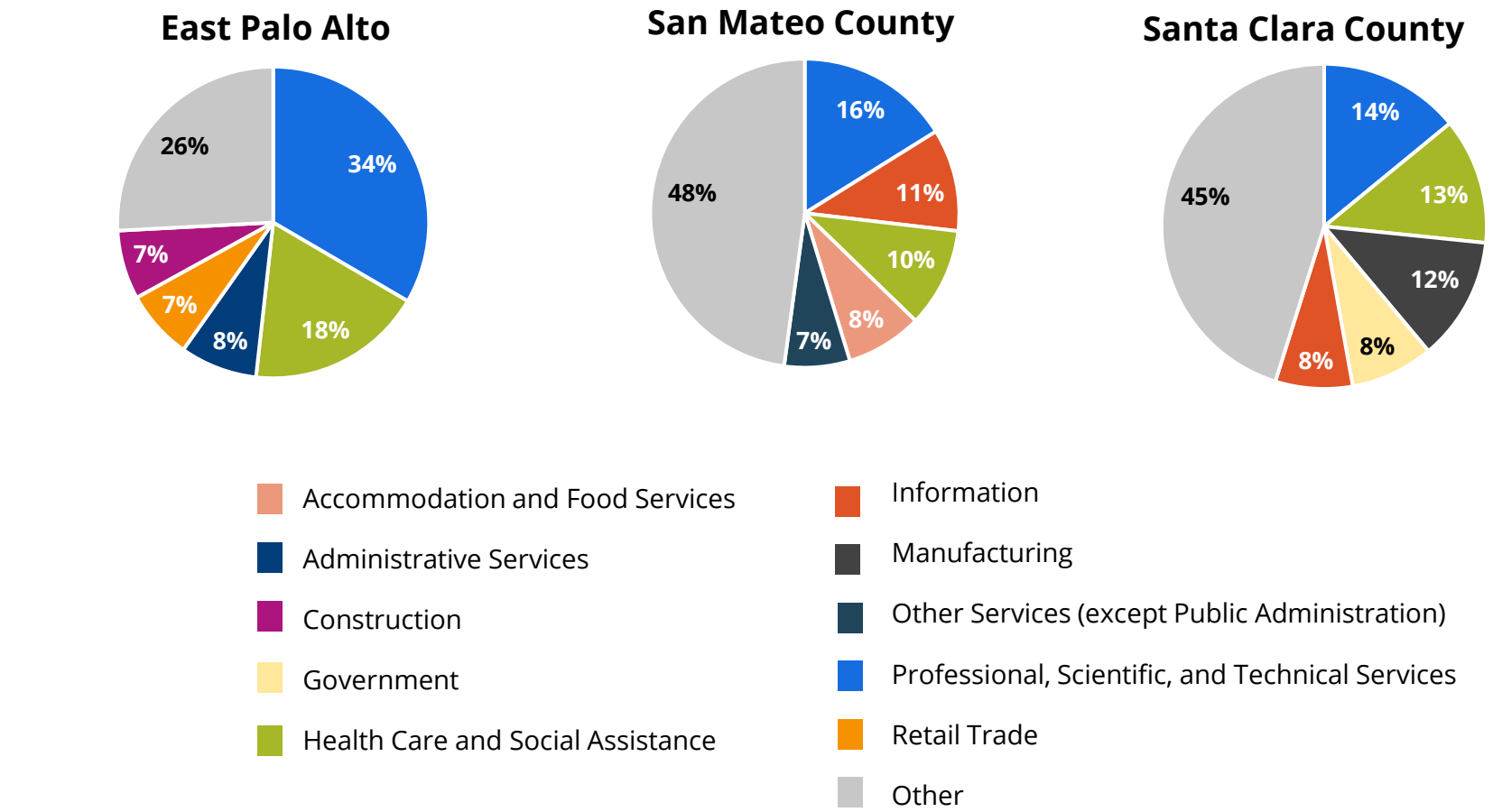
Source: Lightcast.

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INDUSTRIES PROFILE

Professional, Scientific, and Technical Services and Health Care are the largest industries in East Palo Alto, in line with regional trends.

TOP 5 INDUSTRIES (2024)



Source: Lightcast.

East Palo Alto depends more heavily on professional services than surrounding counties overall. There are also large regional industries that do not have a strong presence in East Palo Alto:

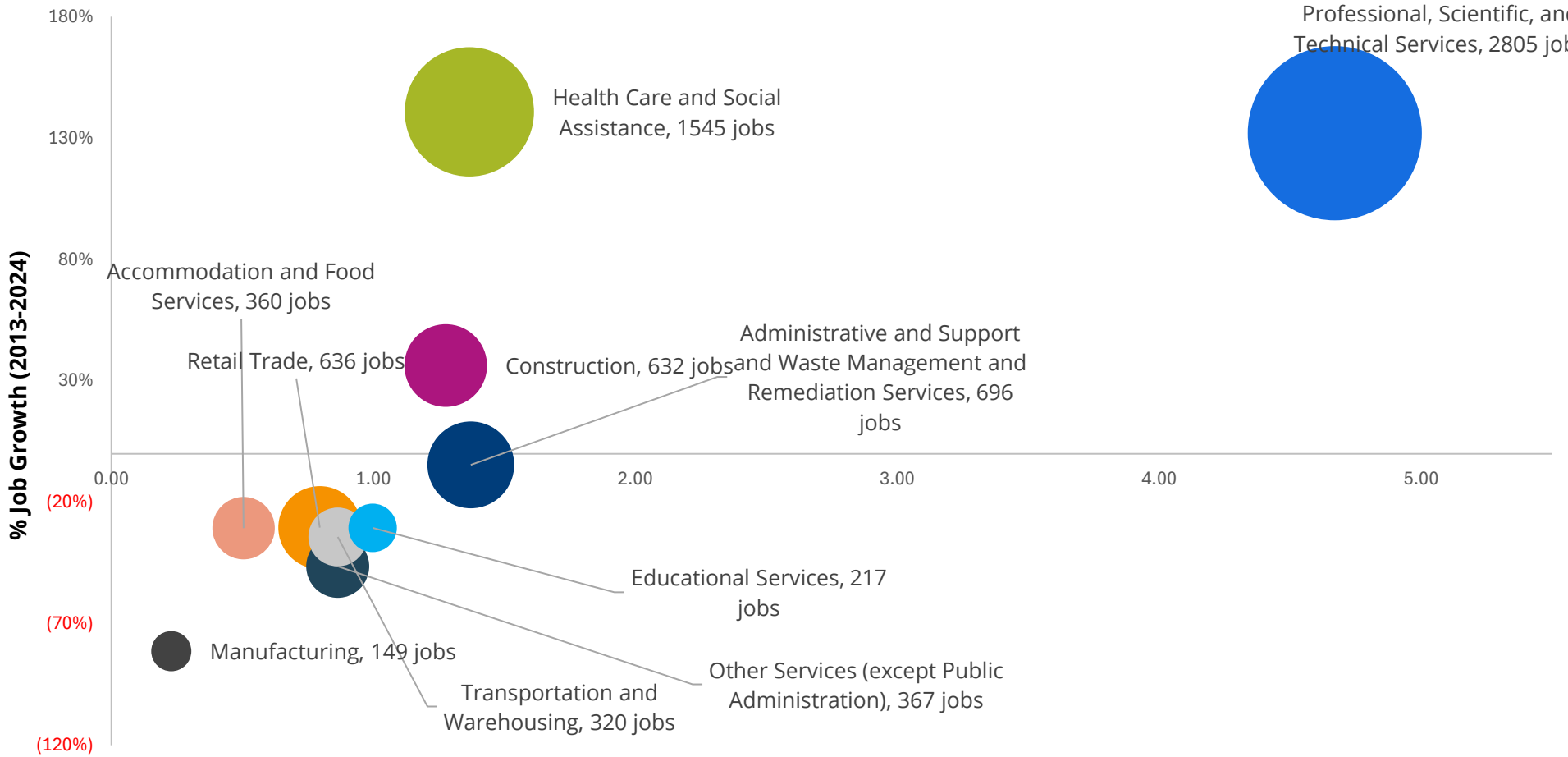
- **Information** is the second largest and growing industry in San Mateo County with growth of +107% in the last decade.
- **Manufacturing** is the third largest industry in Santa Clara County.
- **Management of Companies and Enterprises** is the largest growing industry in Santa Clara County.

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INDUSTRY SPECIALIZATION – EAST PALO ALTO

East Palo Alto's relative strength in professional services and healthcare – both sources of good jobs - presents economic development potential.

East Palo Alto Sectors by Jobs, Growth and Industry Specialization



Source: Lightcast.

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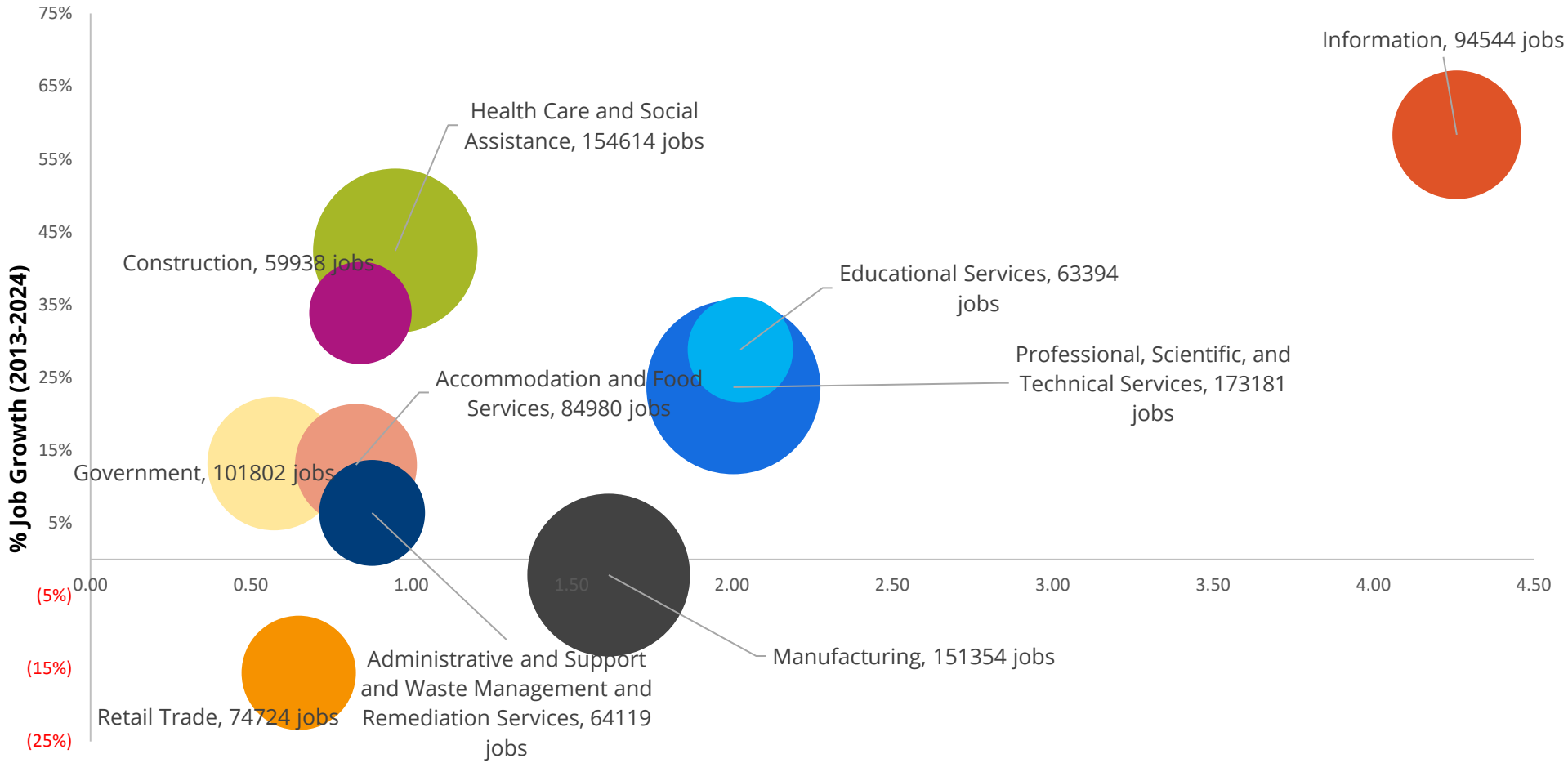
Industry Specialization as Measured by Location Quotient: Location Quotient, as shown on the chart's X axis, measures how specialized a city's economy is in a sector relative to the nation. An Industry Specialization level of 2.0 means a city's economy is twice as specialized in that sector than the national average.

Information Industry: EPA specializes in professional services, in line with San Mateo County. However, information, the most notable industry - in the County in size, growth, and specialization - is largely absent in EPA.

INDUSTRY SPECIALIZATION – REGIONAL

East Palo Alto does not capture the region's strengths in tech or advanced manufacturing, both offering quality jobs and career pathways.

Santa Clara County Sectors by Jobs, Growth and Location Quotient



Source: Lightcast.

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Manufacturing Industry:

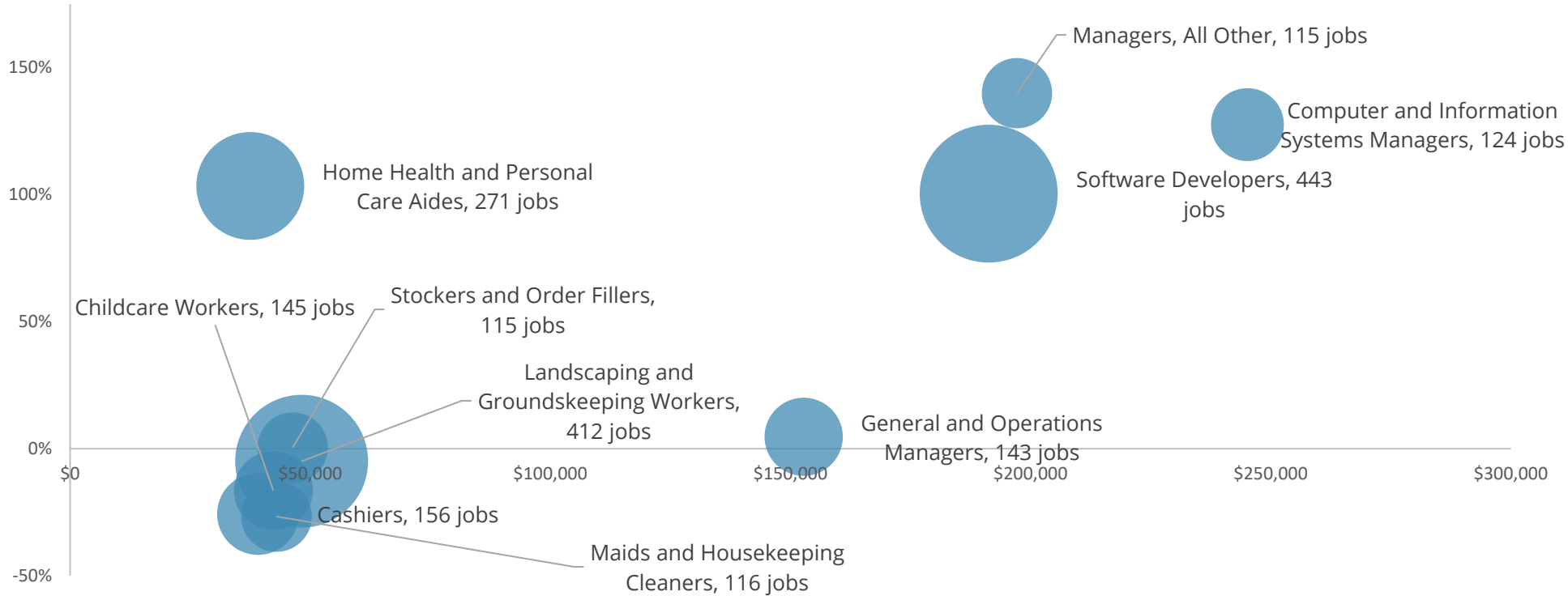
In addition to information industry professional services as economic drivers, Santa Clara County's manufacturing sector is also notable in terms of size and specialization. It has a location quotient of 1.6 and consists 12% of total jobs.

While the number of manufacturing jobs have been declining, its subsectors include high-paying industries in advanced manufacturing such as semiconductor manufacturing that offers high-paying jobs.

OCCUPATIONS & EARNINGS

While higher-paying occupations are growing in East Palo Alto, jobs in the city remain predominantly service-oriented and low-paying.

East Palo Alto Occupations by Size, Percent Growth, and Annual Median Income* (2024)



Source: Lightcast, ACS 5-Year.
*Note: *Annual Median Income is based on San Mateo County data.*

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Top Employers:

East Palo Alto's top employers are a mix of large companies, healthcare industry, and the public sector.

Top 5 Employers by Number of Employees (2023-2024):

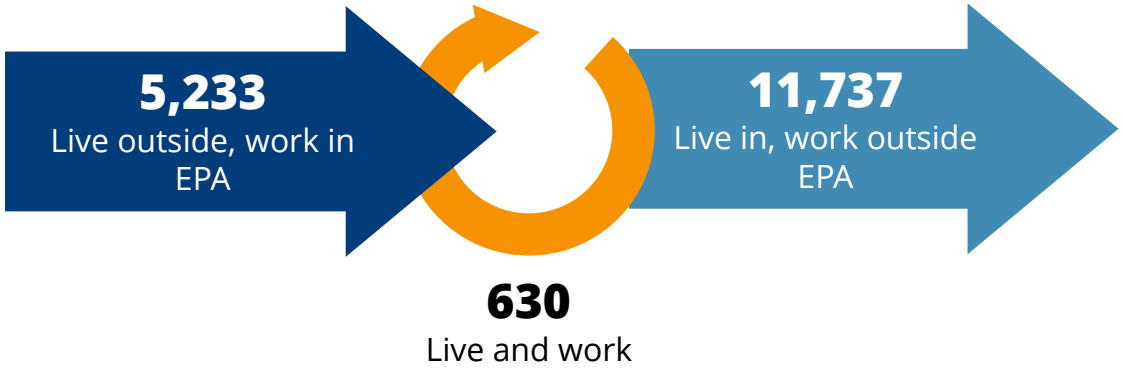
1. Amazon Web Services – 1,613
2. Ravenswood Family Health Center – 334
3. IKEA – 270
4. Ravenswood City School District – 253
5. Four Seasons Hotel – Silicon Valley – 214

Source: City of East Palo Alto 2024 Annual Comprehensive Financial Report.

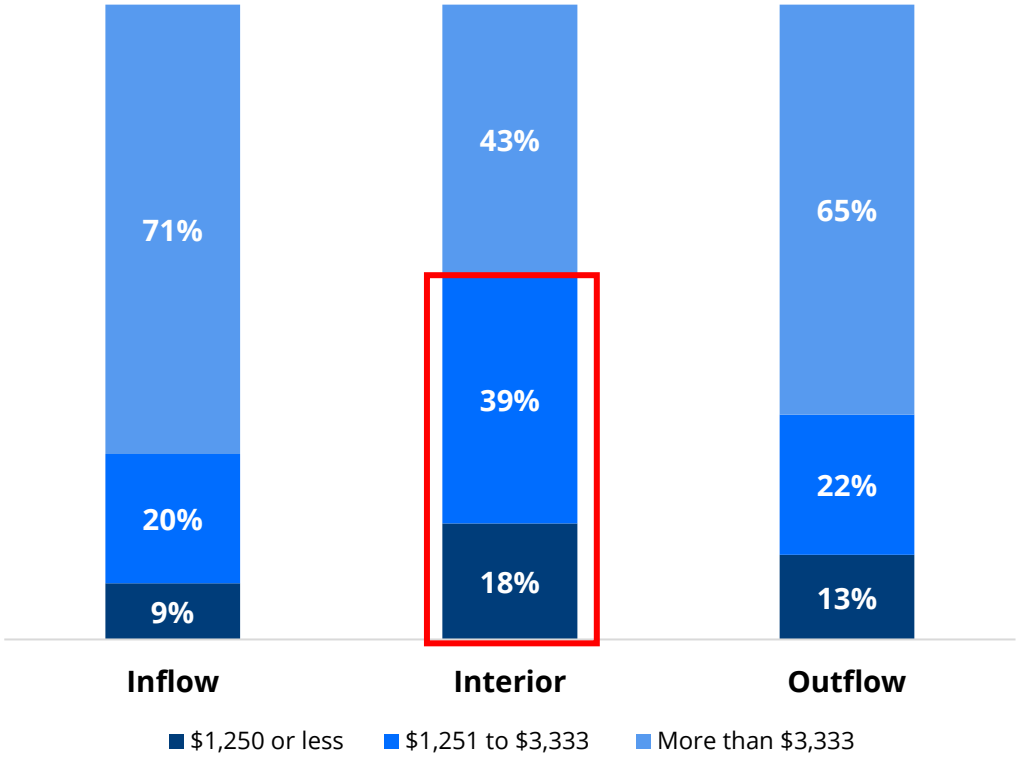
RESIDENT COMMUTE & EARNING PATTERNS

East Palo Alto sees high daytime turnover, with only 630 residents working locally - earning less than both inbound and outbound commuters.

COMMUTER INFLOW/OUTFLOW (2022)



MONTHLY WORKER EARNINGS (2022)



Source: Longitudinal Employer-Household Dynamics (LEHD).

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WORKFORCE DEVELOPMENT

EPA has strong nonprofits invested in workforce development, though workforce programs could be better aligned with strong regional industries to maximize access to quality jobs.

Training Providers for Strong Regional Industries with Quality Jobs					Trainings Available for Other Industries
Information *(Tech)*	**Healthcare**	**Education**	**Advanced Mfg.**	**Professional Services**	
JobTrain **StreetCode** **Live In Peace**	**JobTrain**	***No Provider***	***No Provider***	***No Provider***	*Construction / Trades (JobTrain, Live In Peace)* *Hospitality / Culinary arts (JobTrain)* *Custodial & food services (WeHope)* *Entrepreneurship (REN Center)* *Creative arts (EPACENTER)* *Conservation (Grassroot Ecology*)* *Youth employment (One EPA, Live In Peace)*

** Based in Palo Alto w/ some EPA based programming and ad hoc and through AmeriCorps*

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05

Business & Retail Landscape

TAKEAWAYS

This business analysis yields the following takeaways to inform strategy development and implementation planning.

1. East Palo Alto is **a city of small businesses** - the majority are small businesses that employ fewer than 10 people. This makes **small business growth a vital pillar of its economic development**.

2. At the same time, the **performance of a few larger businesses has an outsized impact** on the city's job supply, tax revenues, and the overall local economy.

3. Beyond the Gateway Retail Center, the **absence of physically clustered businesses, active storefronts, and workers** hinders the development of vibrant commercial corridors and a strong sense of place.

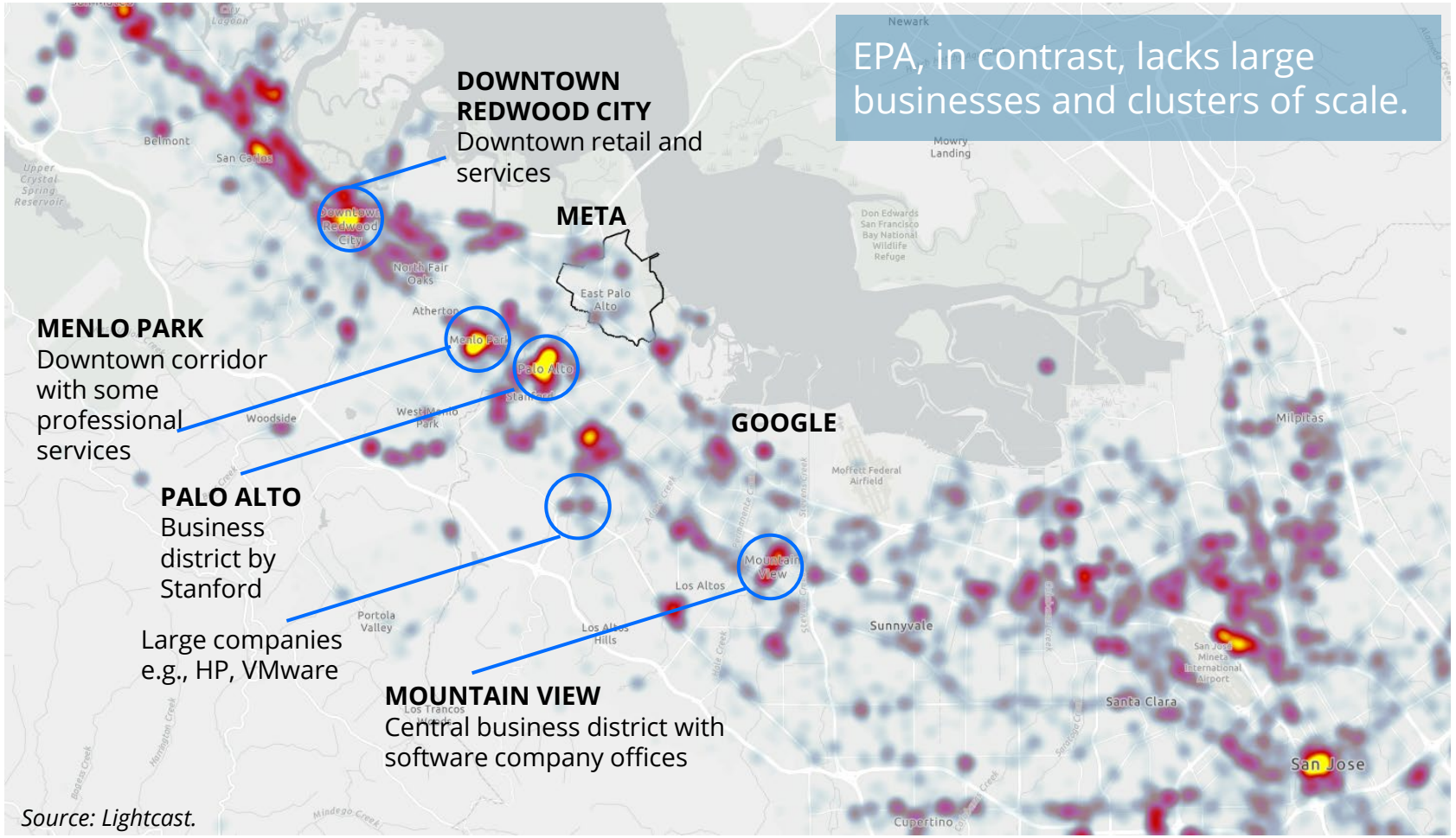
4. Limited retail supply and diversity contributes to unmet demand across many categories - highlighting **under-tapped potential to capture more of residents' and workers' spending power**.

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REGIONAL CONTEXT & PHYSICAL CLUSTERS

Cities such as Palo Alto, Menlo Park, and Redwood City benefit from dense business clusters anchored by major companies and dynamic downtowns.

BUSINESSES IN SAN MATEO COUNTY AND SANTA CLARA COUNTY



Source: Lightcast.

LARGEST REGIONAL EMPLOYERS

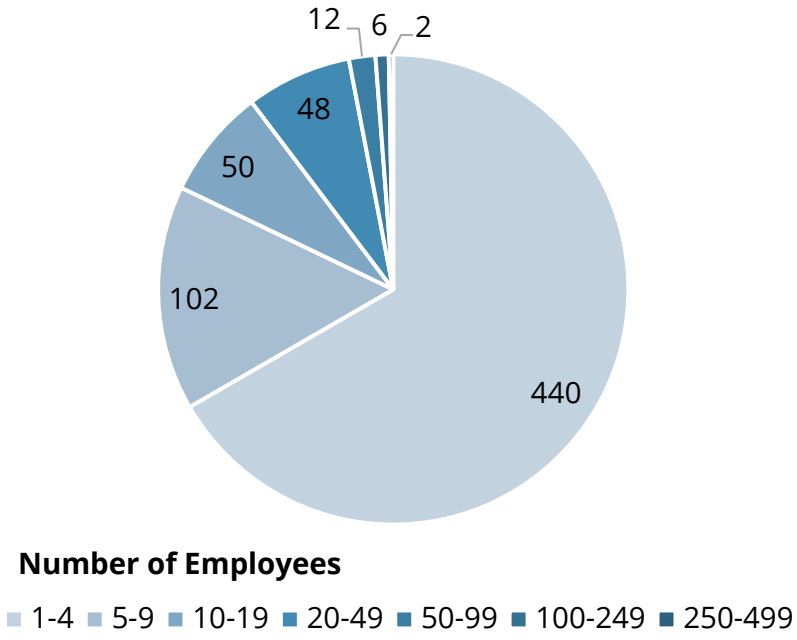
- Meta - tech
- Grail – health care tech
- Exponent – consulting
- Robinhood – Financial tech
- Genesys Cloud Services – tech
- Palantir – tech
- Stanford Skin Center – health care
- Intuit – financial tech
- Stanford University

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EPA BUSINESS LANDSCAPE | SIZE

Over 80% of businesses employ fewer than 10 people. General retail – driven by big-boxes like IKEA and Home Depot – account for significant portions of the City's total sales taxes.

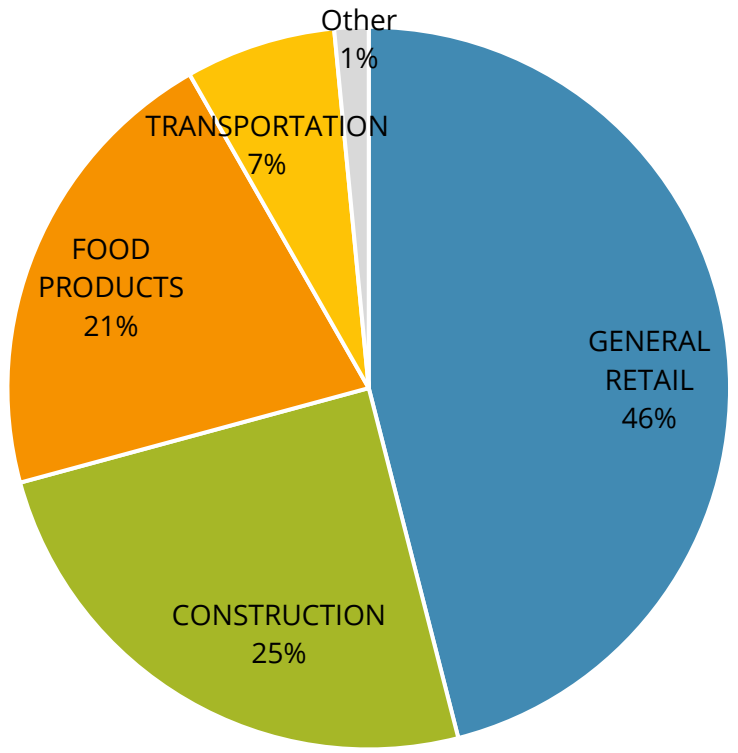
BUSINESSES IN EPA BY NUMBER OF EMPLOYEES



Important to note that available data does not capture informal, home-based, micro businesses. Outreach to these businesses are underway.

Source: Data Axle.

SALES TAX BY TYPE OF BUSINESS (2024)



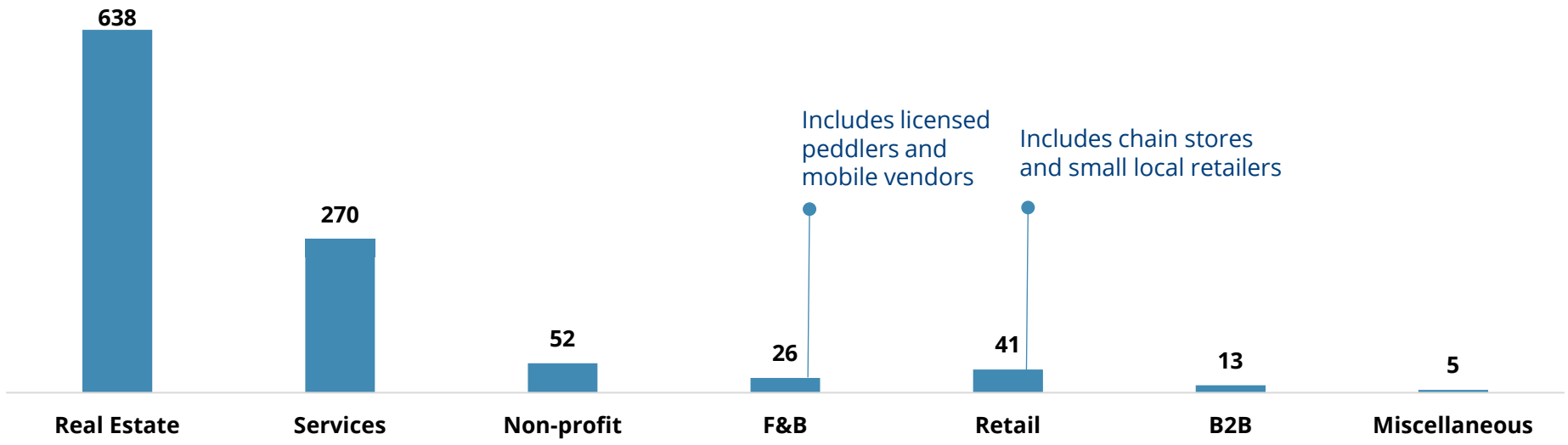
Source: City of East Palo Alto

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EPA BUSINESS LANDSCAPE | TYPE

Based on the City's business license data, there are more than 1,000 EPA-based businesses that contribute to East Palo Alto's economy, providing jobs, services, and tax revenues.

NUMBER OF BUSINESSES IN EAST PALO ALTO BY TYPE (2024)



The majority of active businesses in East Palo Alto are real estate and service-oriented, including contractors, landscapers, beauty salons, and other neighborhood and business services.

It is important to note that this data does not capture the city's informal economy such as unlicensed home-based businesses and vendors.

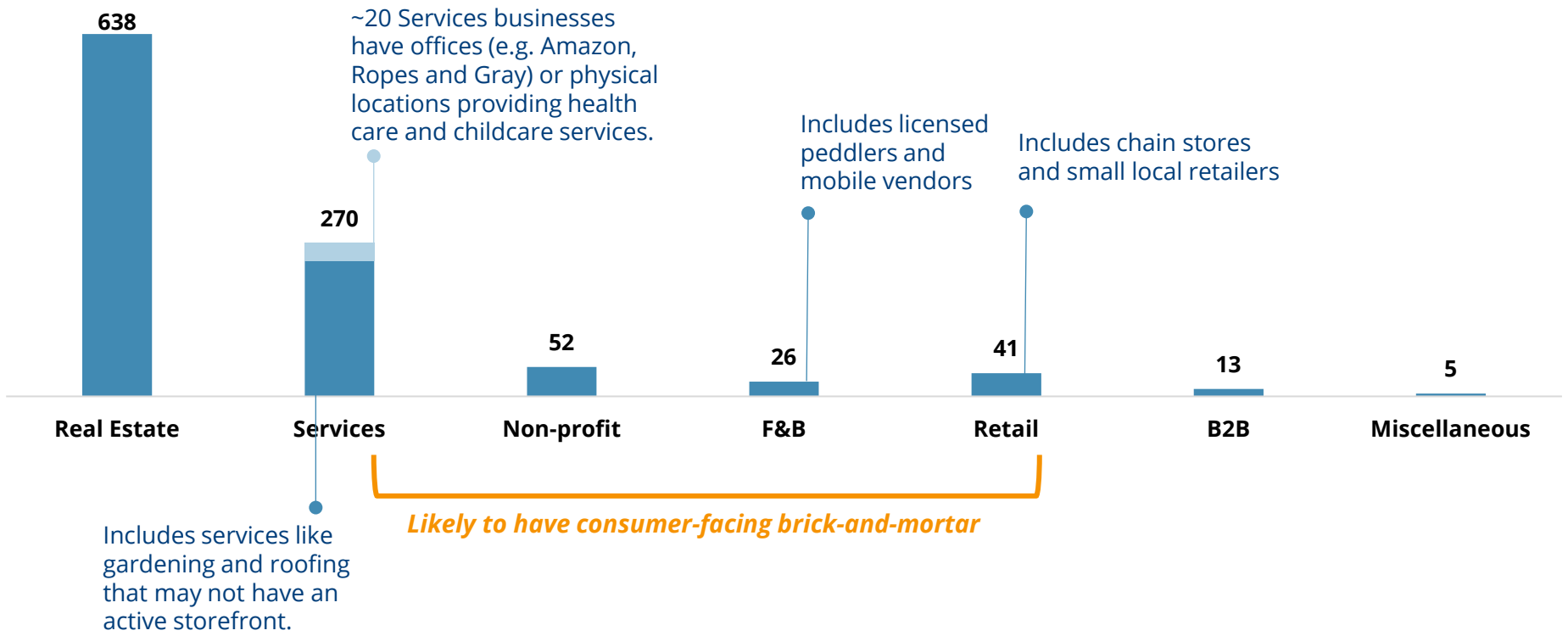
Source: City of East Palo Alto Business License Data.
Note: This analysis used business license data provided by the City as a proxy for business data. The data portrayed here includes only businesses with physical location in East Palo Alto and an active business license status. This graph presents a recategorized dataset based on "business type", "rate type", and qualitative data on type of business.

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EPA BUSINESS LANDSCAPE | PHYSICAL PRESENCE

As the City prioritizes the creation of 'main street' corridors, there is an opportunity to cultivate physical clusters of active storefronts and brick-and-mortar businesses to support street-level vibrancy.

NUMBER OF BUSINESSES IN EAST PALO ALTO BY TYPE (2024)



Source: City of East Palo Alto Business License Data.
Note: This analysis used business license data provided by the City as a proxy for business data. The data portrayed here includes only businesses with physical location in East Palo Alto and an active business license status. This graph presents a recategorized dataset based on "business type", "rate type", and qualitative data on type of business.

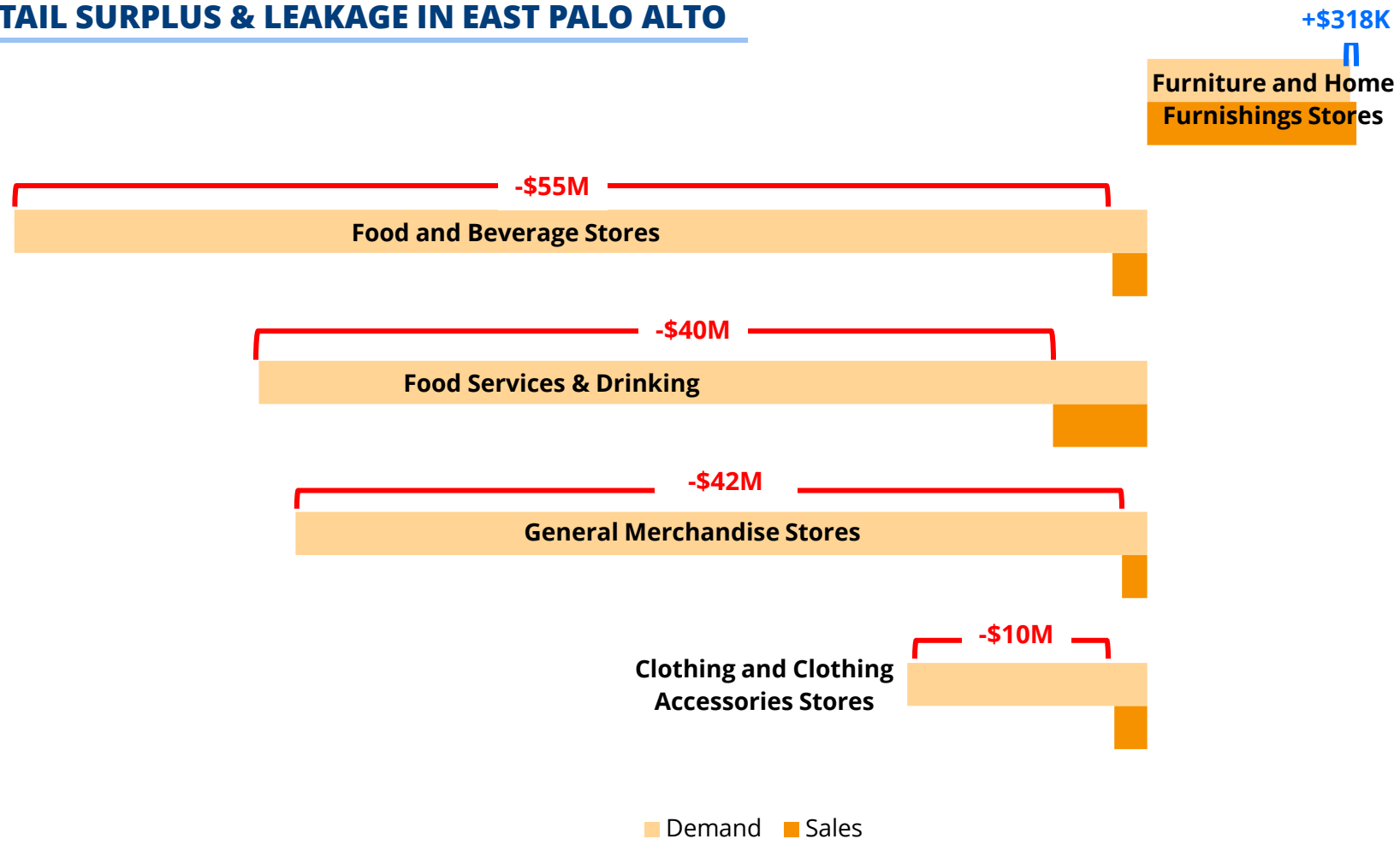
In addition to creating jobs and generating tax revenue, businesses with a physical presence - such as retail stores and offices - contribute to placemaking and dynamic sense of place.

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RETAIL OPPORTUNITIES

EPA's limited retail offerings do not meet its residential demand across multiple categories and are leaving spending power on the table.

RETAIL SURPLUS & LEAKAGE IN EAST PALO ALTO



Source: City of East Palo Alto, ESRI Business Analyst.
Note: Sales might not include the sales from mobile vendor activities.

Retail leakage reflects the gap between local consumer demand and actual in-city sales. It is calculated by subtracting resident demand in dollar amounts by sales generated within the city.

Other than the Furniture and Home Furnishings Stores category, which has a small surplus due to the presence of destination retailers, other shopping categories and F&B categories have large leakages, meaning EPA residents have spending power that is leaking outside of EPA.

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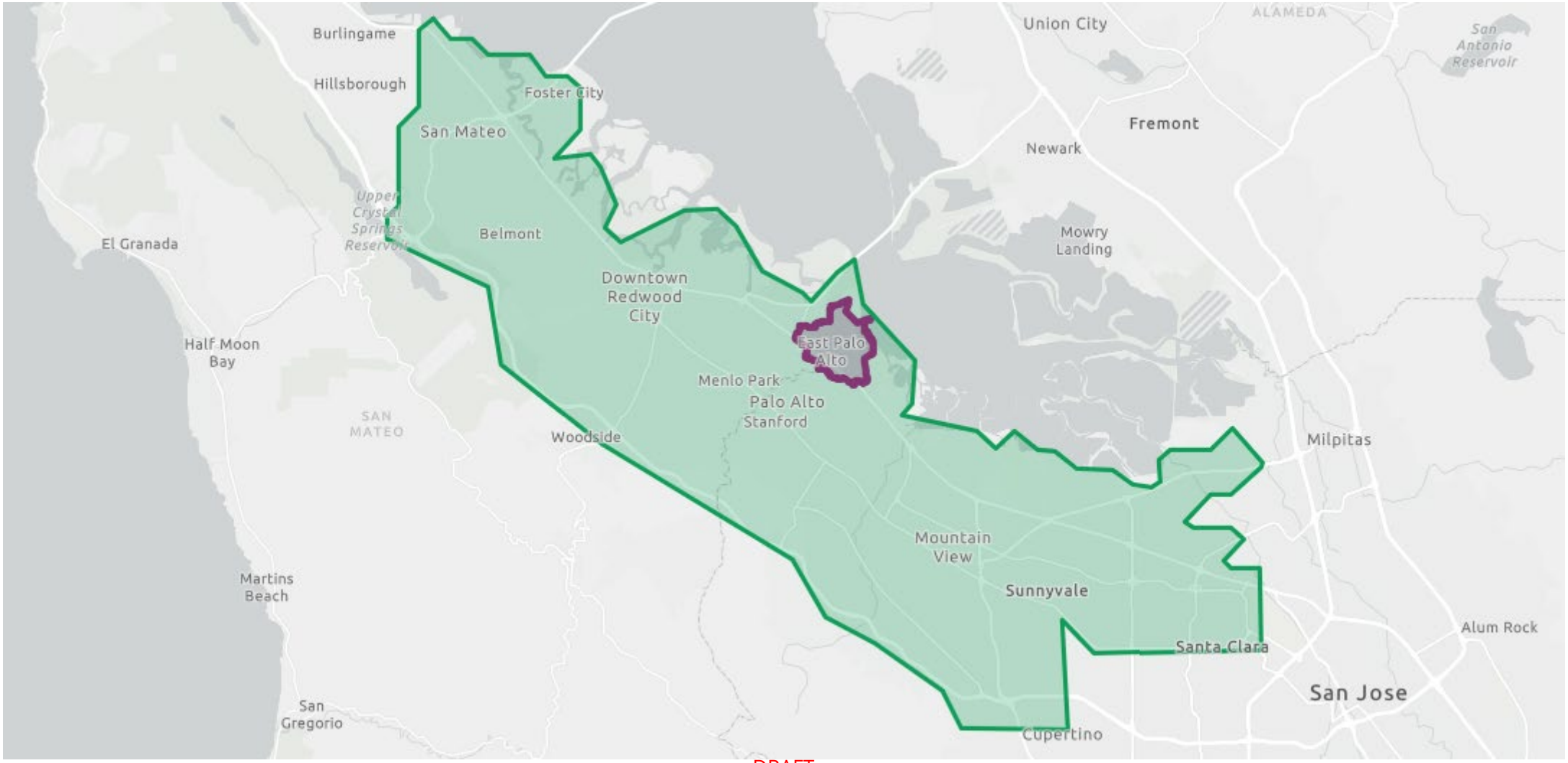


06

Real Estate Conditions

REAL ESTATE TRENDS

The real estate analysis considers the City of East Palo Alto, as well as a custom geography ("Study Area") that represents a 20-minute driving radius from the city.



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1. **Growth across all use types in East Palo Alto has been stagnant** since 2015. Within that timeframe, only one new office building and one new multifamily building have been delivered.

2. With lower-than-average vacancies and rents keeping relative pace with the broader Study Area, **retail and industrial uses appear to have notable growth potential** within East Palo Alto.

3. **Existing multifamily units are showing signs of tightening demand** - rising rents and falling vacancies. The City must facilitate sufficient housing construction to accommodate future growth and ease market pressure on existing and new residents.

4. **Most notable commercial and industrial properties and developments are in the City's eight business districts**. Each district's characteristics and redevelopment potential will inform its future positioning and place-based strategies.

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REAL ESTATE TRENDS | INVENTORY

EPA comprises a modest share of the regional real estate market. Its growth across real estate asset classes have lagged 20-min drive radius - except for office.

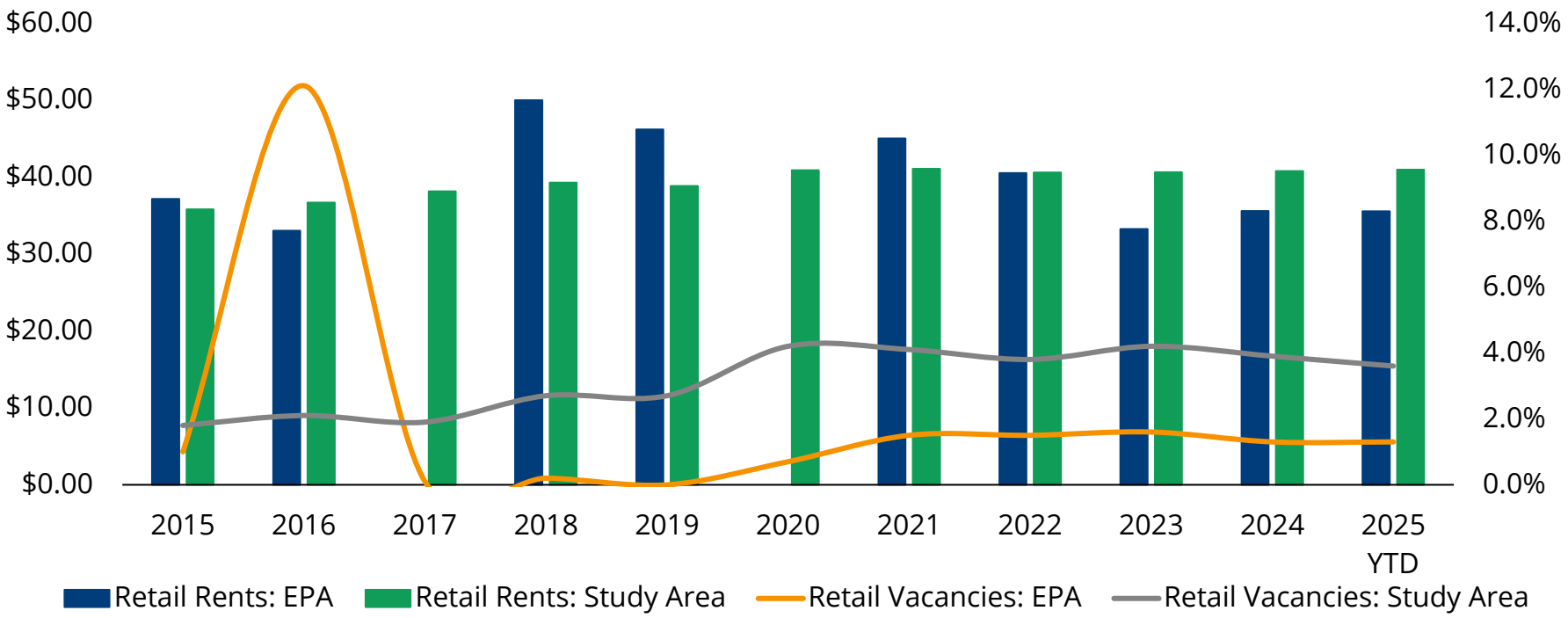
Comparative Land Use Inventory
(2025 YTD)

	Multifamily Residential (For Context)		Retail		Office		Industrial		Hotel	
	Inventory	***Growth since 2015***	**Inventory**	***Growth since 2015***	**Inventory**	***Growth since 2015***	**Inventory**	***Growth since 2015***	**Inventory**	***Growth since 2015***
City of East Palo Alto	3,880 Units	***+1.1%***	770,458 SF	***0%***	790,745 SF	***+37.1%***	470,099 SF	***0%***	200 Rooms	***0%***
Study Area (20-Minute Drive Radius)	122,205 Units	***+20.3%***	32,217,652 SF	***+4.3%***	121,837,206 SF	***+29.0%***	37,397,780 SF	***+4.7%***	20,210 Rooms	***+18.8%***
EPA Share of Total Study Area Inventory	**3.2%**		**2.4%**		**0.6%**		**1.3%**		**1.0%**	

Source(s): *CoStar*

Lower-than-average vacancies suggest that demand for retail is strong in East Palo Alto. However, available space in the city is not commanding the high rents seen elsewhere.

Comparative Retail Rents PSF & Vacancies
(2015-2025 YTD)



CHANGE IN RETAIL RENTS PSF (2015-2025 YTD)

-4%
East Palo Alto

+14%
Study Area

Source(s): *CoStar*
Note(s): *Retail rent data missing for East Palo Alto in 2017 and 2020; retail vacancy data missing for East Palo Alto in 2019.*

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REAL ESTATE TRENDS | RETAIL

Nearly 77% (592K SF) of EPA's retail inventory is concentrated within the Gateway Shopping Center. Elsewhere in the city, much of the retail uses are scattered in small storefronts and in older building stock.

Retail Types Outside of Gateway Shopping Center

178K sq ft (23% of total)

Neighborhood Service



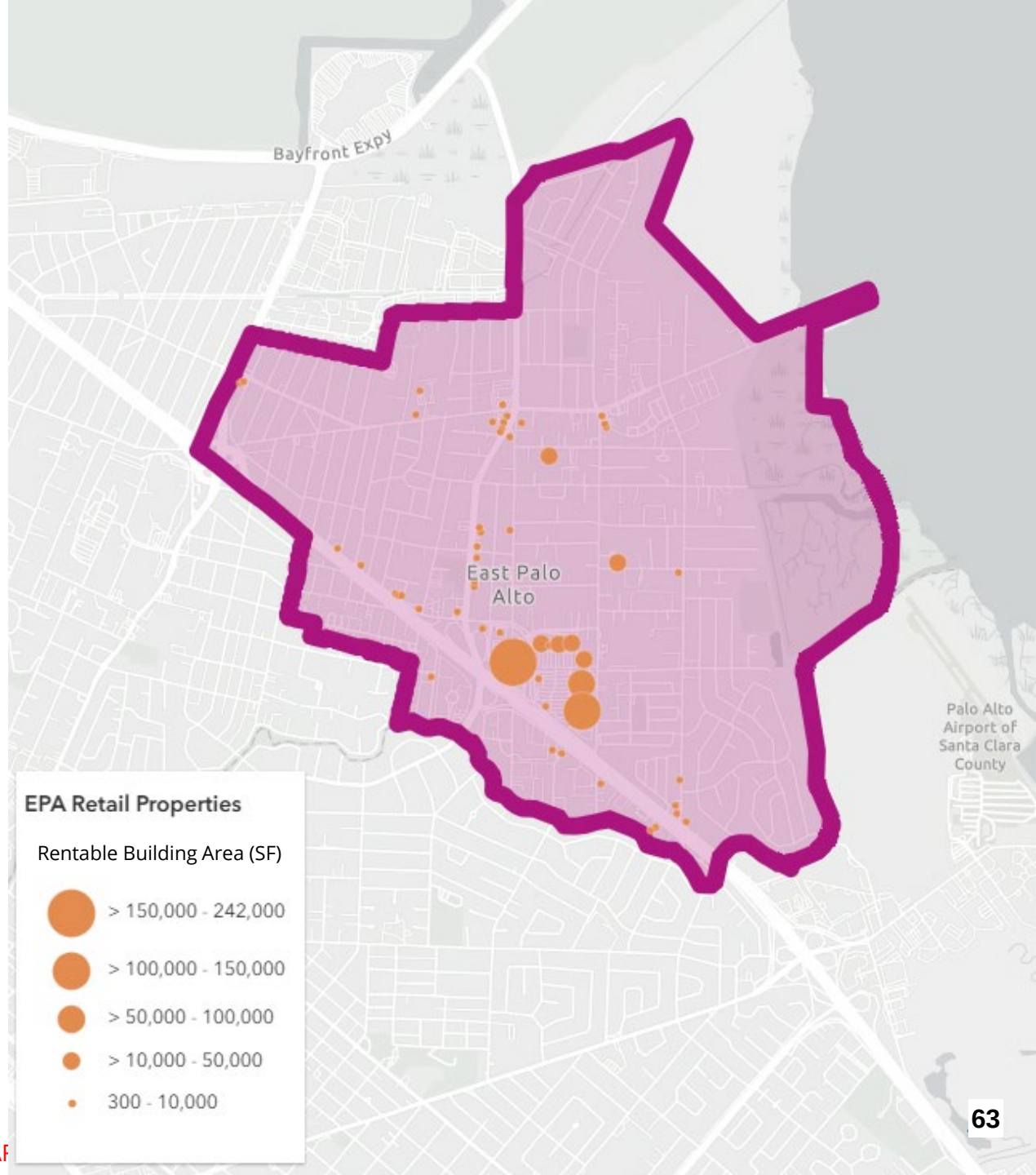
Small-Scale Cluster



Food & Beverage



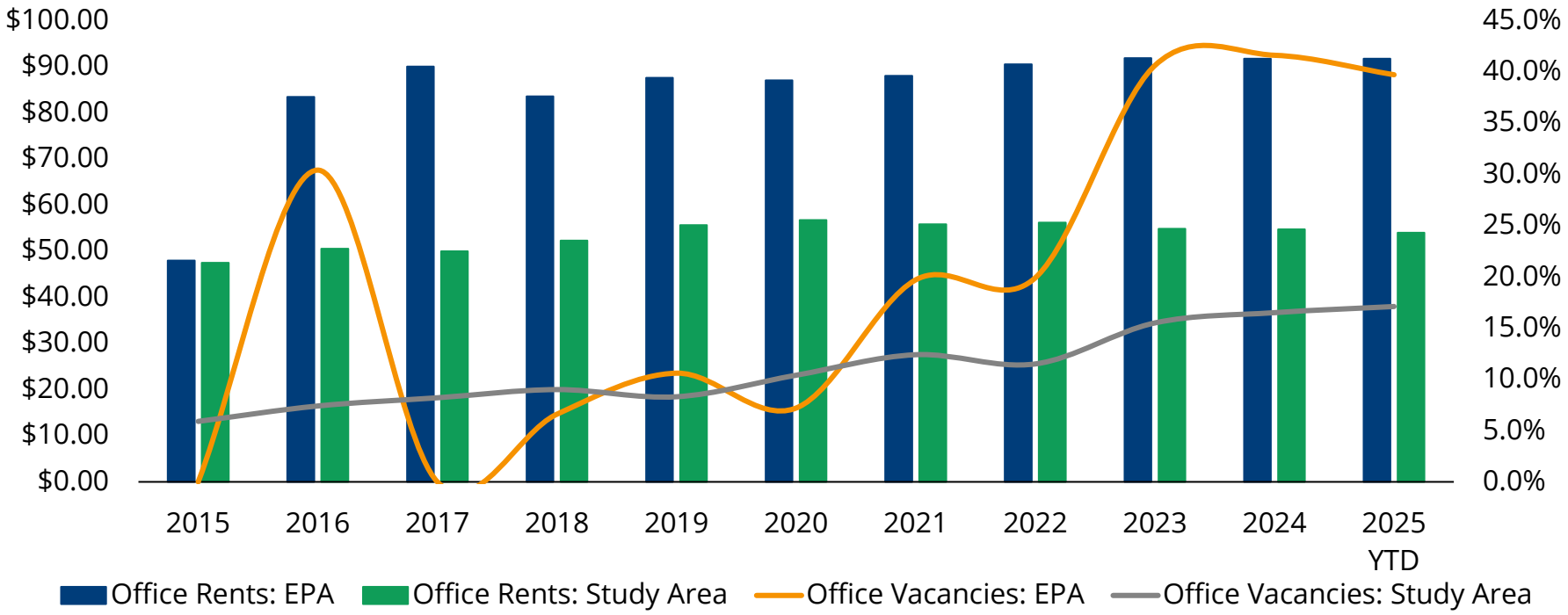
Source(s): *CoStar*



REAL ESTATE TRENDS | OFFICE

Office rents in East Palo Alto increased significantly in 2016, likely due to the delivery of the new Amazon building. Vacancies have doubled since 2022, indicating slowing demand.

Comparative Office Rents PSF & Vacancies
(2015-2025 YTD)



CHANGE IN OFFICE RENTS PSF (2015-2025 YTD)

+91%
East Palo Alto

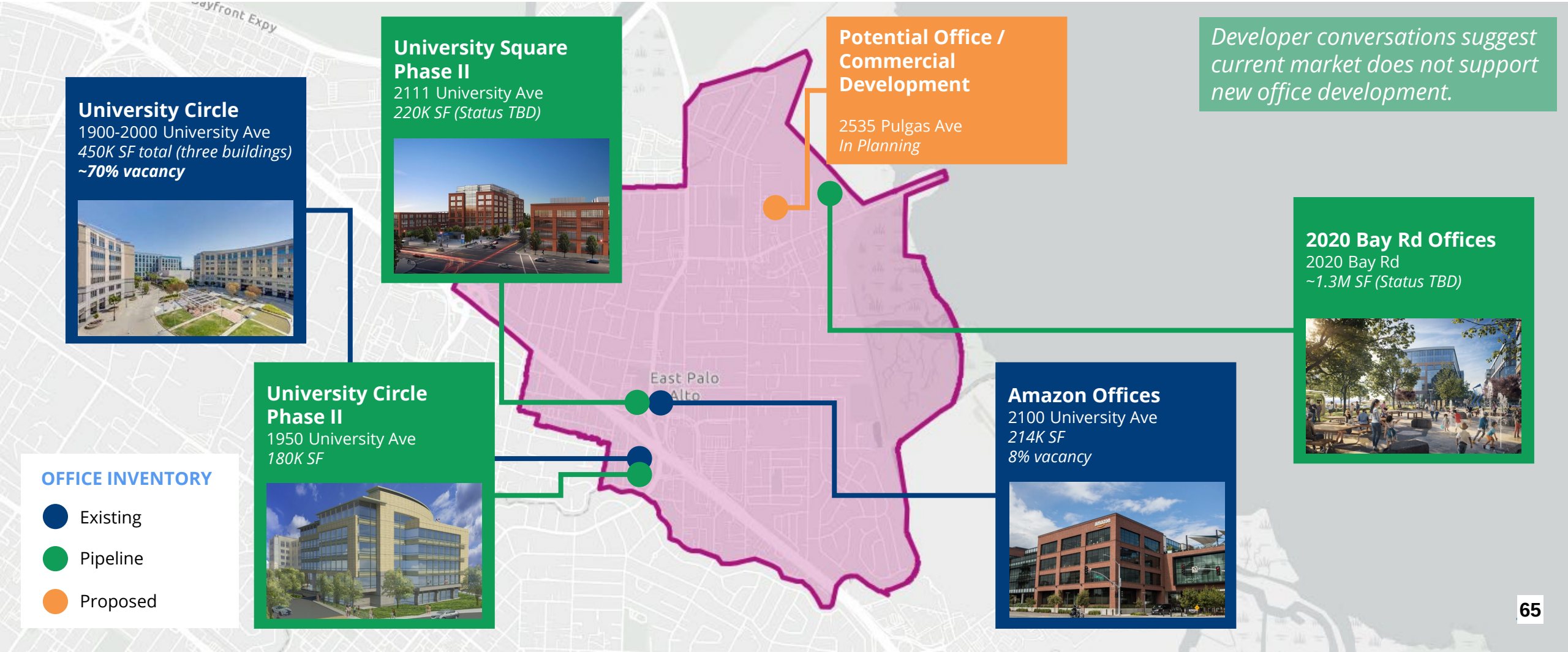
+14%
Study Area

Source(s): *CoStar*
Note(s): *Data on office vacancies is missing for East Palo Alto in 2015 and 2017.*

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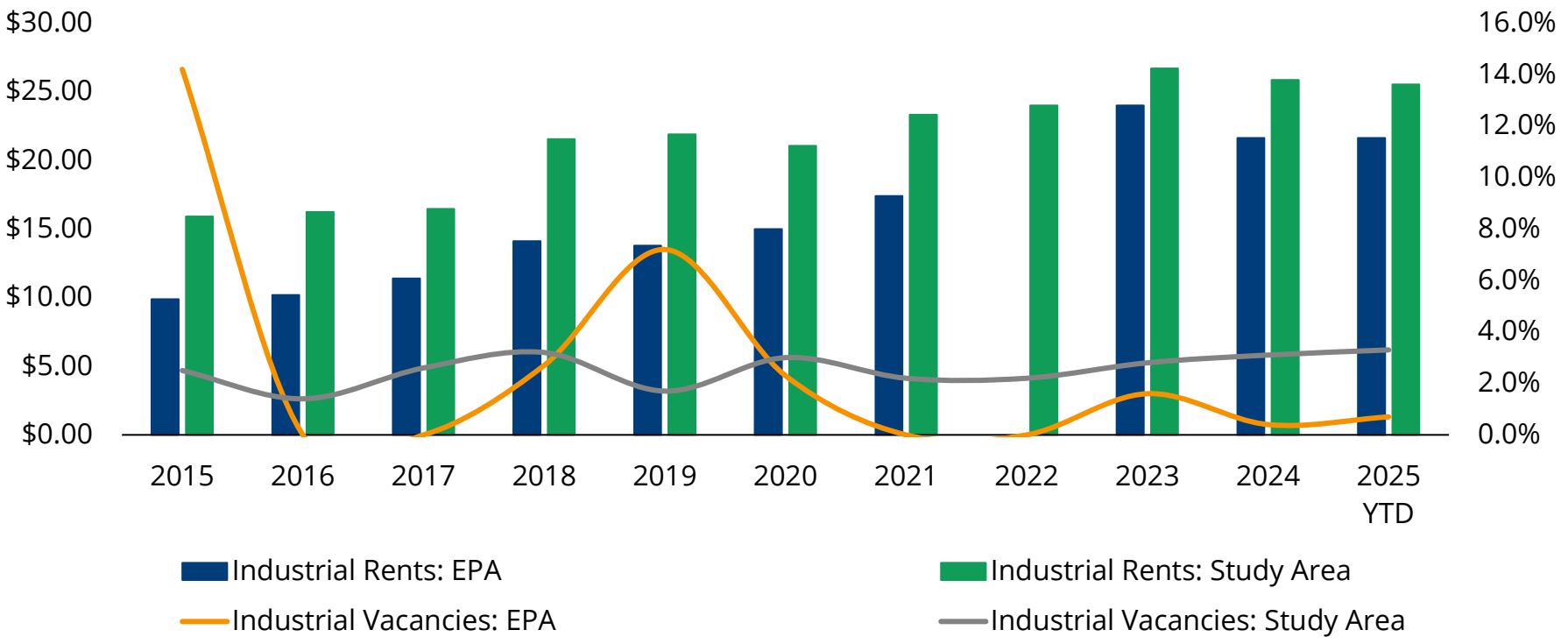
REAL ESTATE TRENDS | OFFICE

The design and location of existing and proposed office campuses in East Palo Alto enable regional access but do not encourage users to engage with the broader community.



Despite stagnant growth in the last decade, industrial space in East Palo Alto has performed well, with rents more than doubling since 2015 and vacancies at or below 3% since 2020.

Comparative Industrial Rents PSF & Vacancies
(2015-2025 YTD)



CHANGE IN INDUSTRIAL RENTS PSF (2015-2025 YTD)

+119%
East Palo Alto

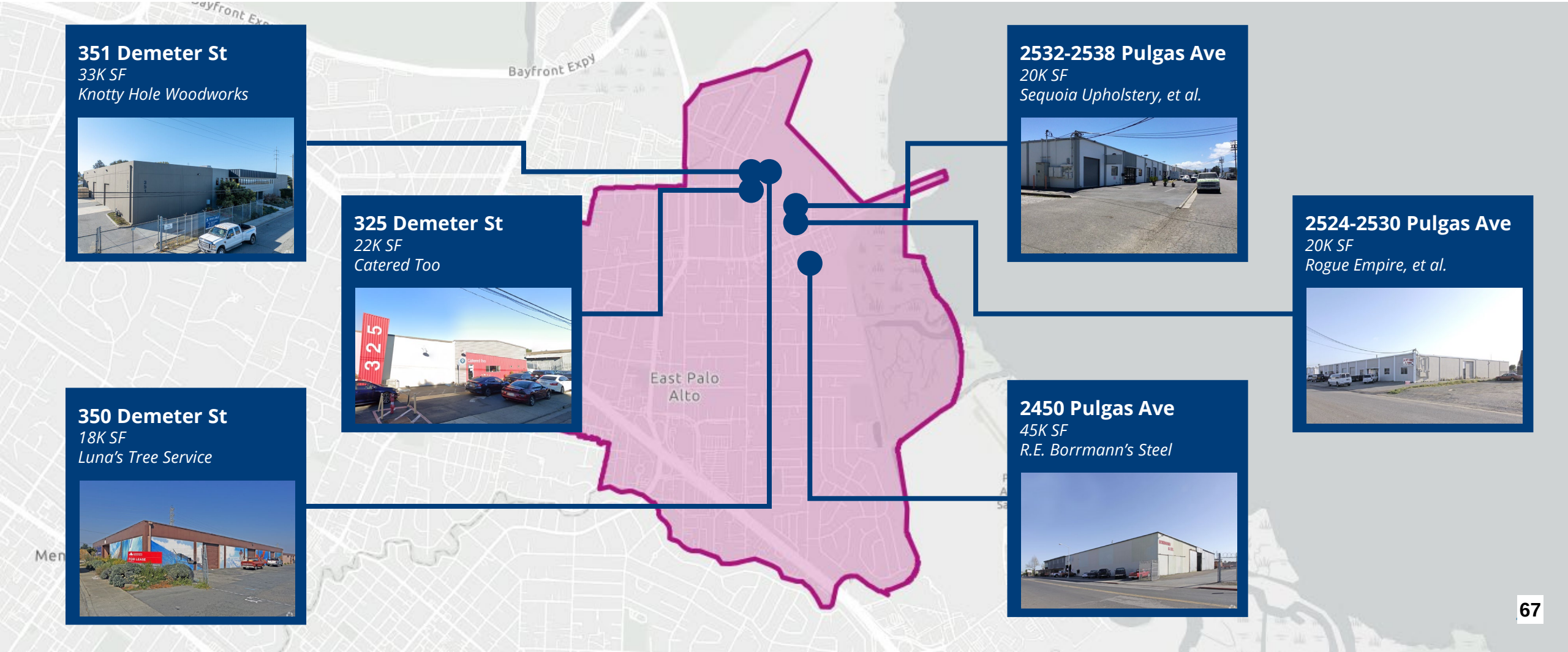
+61%
Study Area

Source(s): *CoStar*
Note(s): *Industrial rent data is missing for East Palo Alto in 2022; industrial vacancy data is missing for East Palo Alto in 2016, 2017, 2021, and 2022.*

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REAL ESTATE TRENDS | INDUSTRIAL

Many of the city's industrial properties are concentrated around Pulgas Ave and Demeter St, including traditional light industrial uses, a catering business, and a martial arts gym.



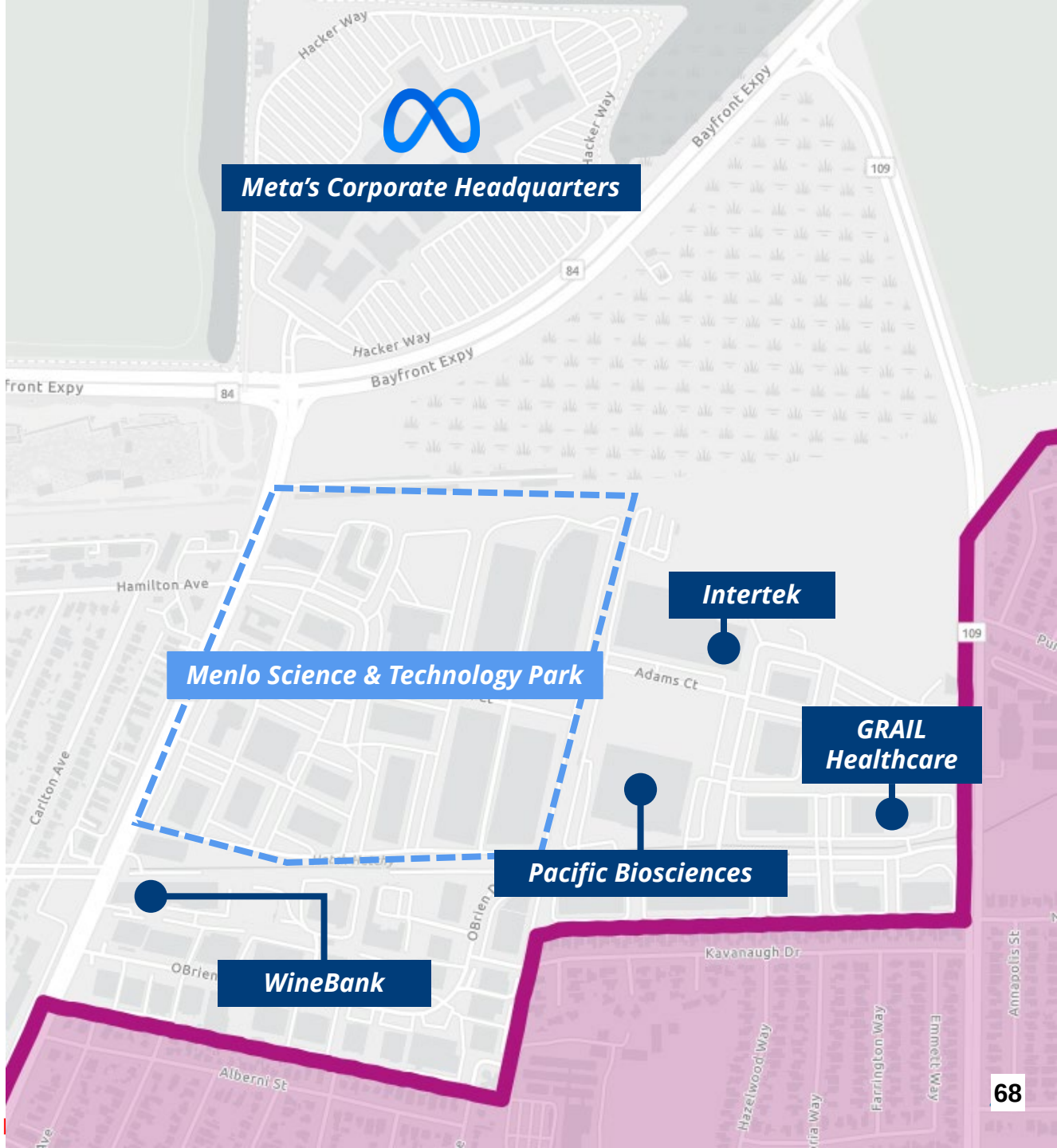
REAL ESTATE TRENDS | OFFICE / INDUSTRIAL

For context, in Menlo Park - just beyond East Palo Alto's northern border - there are office parks that currently house 2.6M SF of office, industrial, and flex space.

Proposed Willow Village

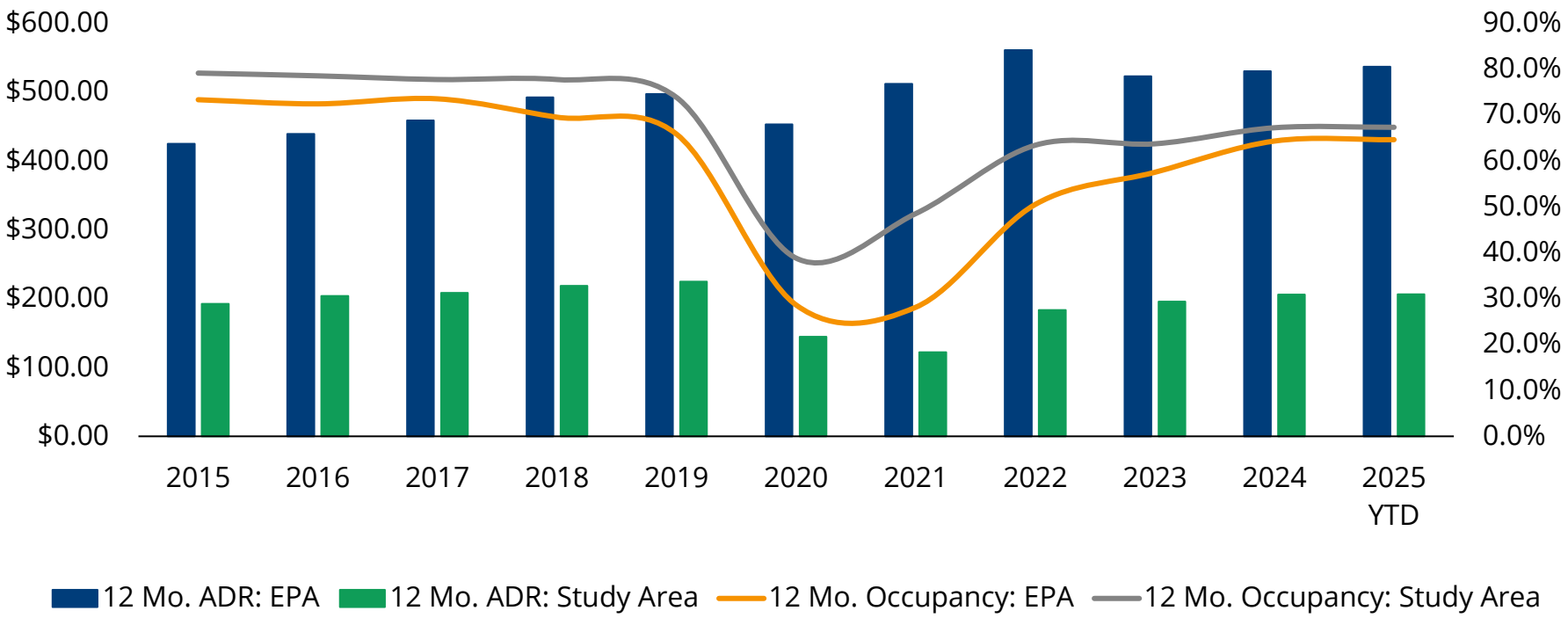
Meta has plans to redevelop the Menlo Science & Technology Park, replacing nearly one million square feet of "outdated buildings" with a "vibrant, walkable, mixed-use village." The project is advancing through approvals and will include the following uses:

- *1.6M SF of office and accessory uses*
- *200K SF of retail & non-office commercial uses, including a grocery store and pharmacy*
- *1,730 residential units (312 below market-rate)*
- *A 193-room hotel with attached retail & dining*
- *Accessible open space & town square*
- *Pedestrian and cyclist pathways*



As a luxury hotel, the Four Seasons in East Palo Alto has significantly outperformed all hotels in the Study Area. The taxes that it generates are a major asset to the City's tax base.

Comparative 12 Mo. ADR & 12 Mo. Occupancy
(2015-2025 YTD)



CHANGE IN HOTEL 12 MONTH ADR (2015-2025 YTD)

+26%
East Palo Alto

+7%
Study Area

Source(s): *CoStar*

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REAL ESTATE TRENDS | HOTELS

There are a handful of hotels in neighboring cities that are comparable in size - at least 150 rooms - to the Four Seasons in East Palo Alto.

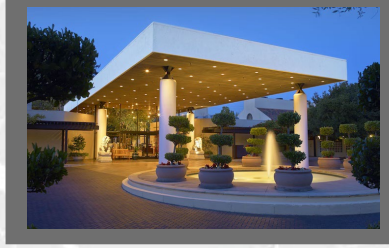
Hotel Nia
200 Independence Dr
Upper Upscale – 250 Rooms



Stanford Park Hotel
100 El Camino Real
Luxury – 162 Rooms



Sheraton Palo Alto
625 El Camino Real
Upper Upscale – 346 Rooms



citizenM Menlo Park
2 Meta Way
Upscale – 240 Rooms



Four Seasons EPA
2050 University Ave
Luxury – 200 Rooms

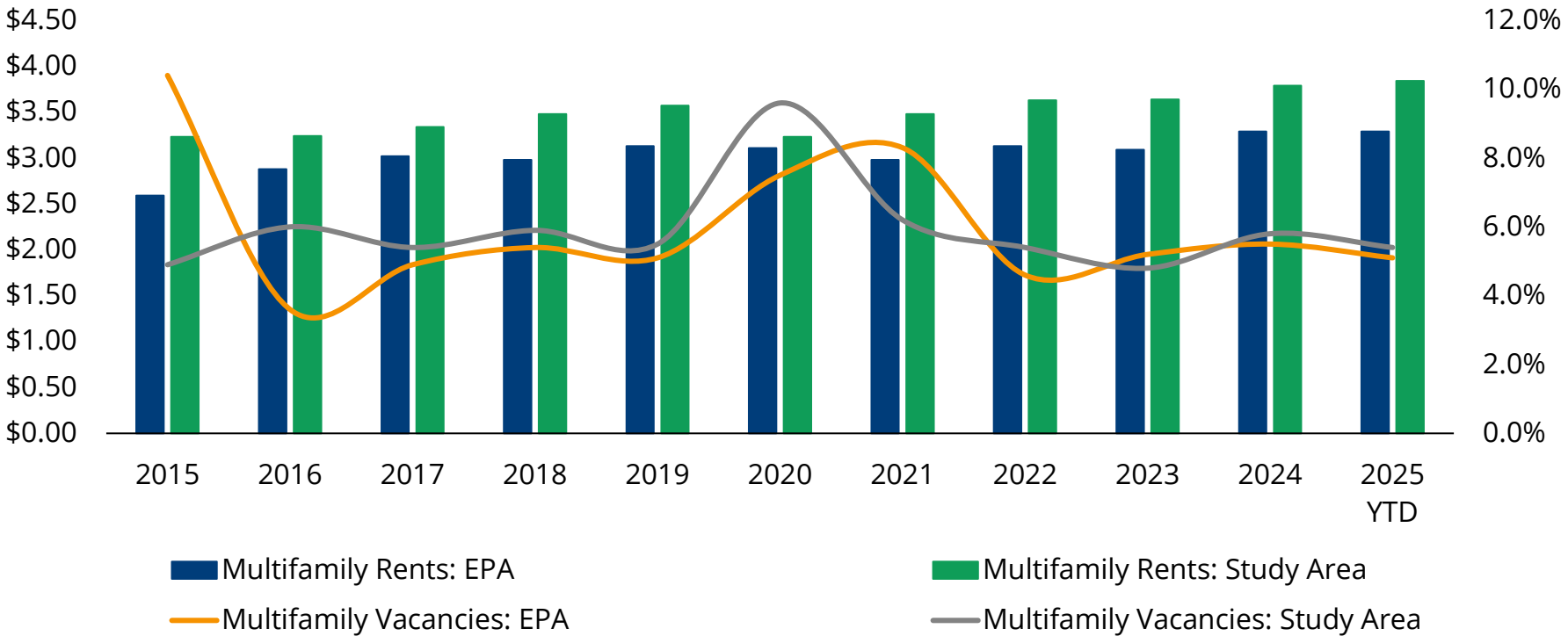


Westin Palo Alto
675 El Camino Real
Upper Upscale – 184 Rooms



Despite modest inventory growth, multifamily rents in East Palo Alto have increased by 27% since 2015. Vacancies have also been halved from 13% to 7%.

Comparative Multifamily Rents PSF & Vacancies
(2015-2025 YTD)



CHANGE IN MULTIFAMILY RENTS PSF (2015-2025 YTD)

+27%
East Palo Alto

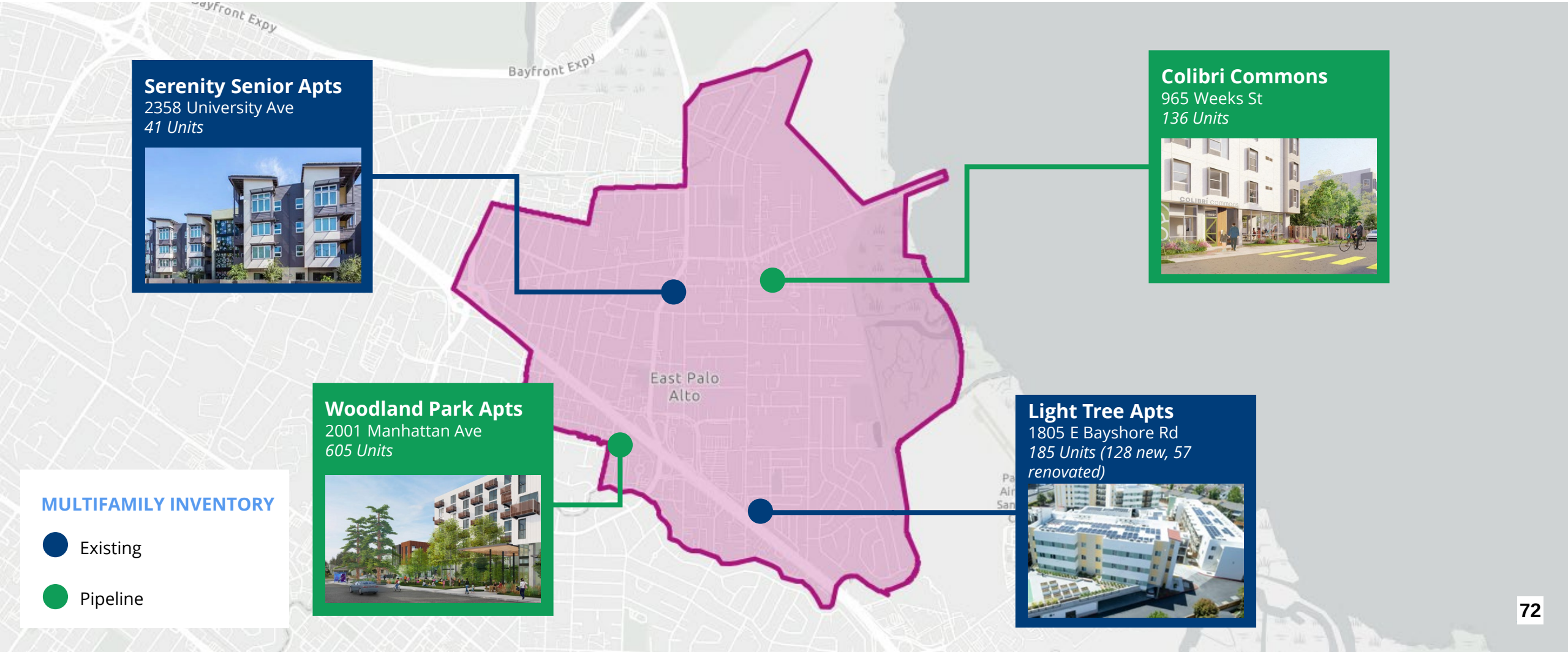
+19%
Study Area

Source(s): *CoStar*

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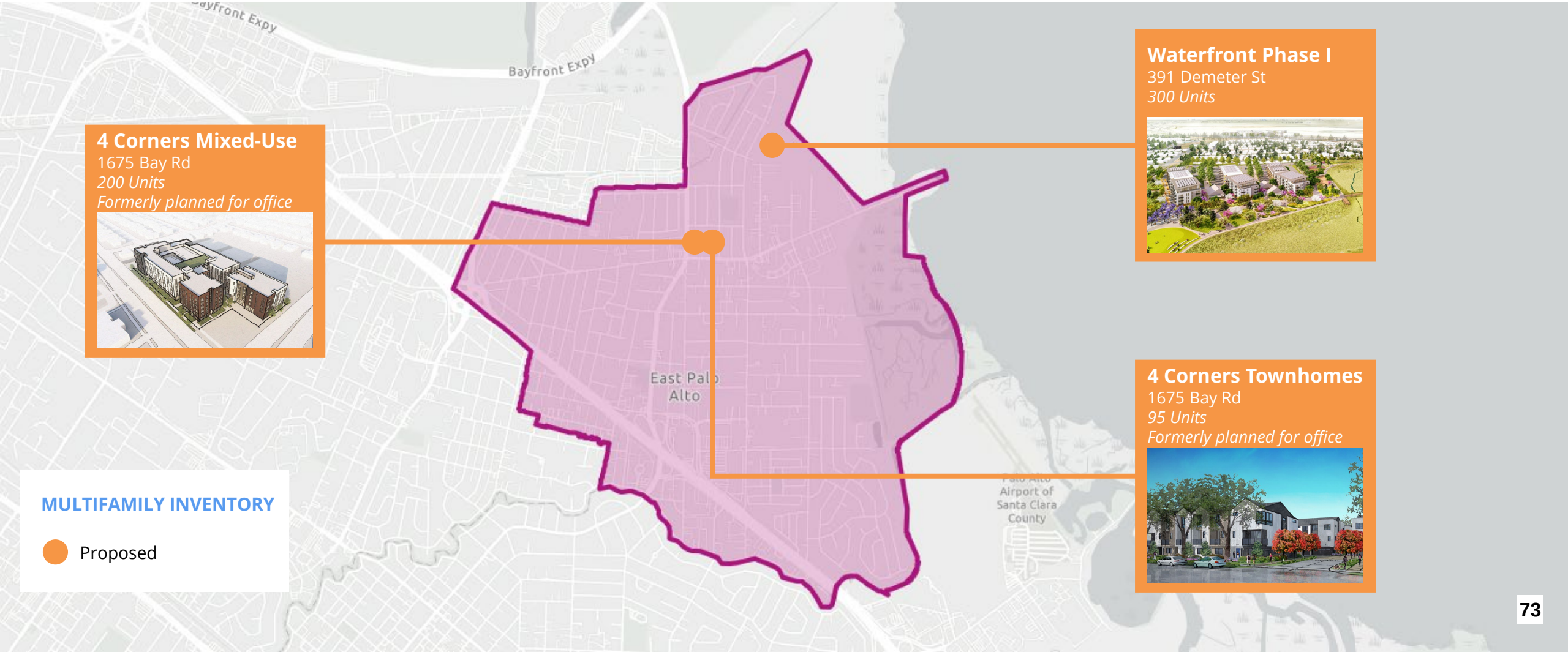
REAL ESTATE TRENDS | MULTIFAMILY RESIDENTIAL

East Palo Alto has only seen two multifamily projects delivered in the last decade, both offering affordable units. Others are nearing completion or have been approved.



REAL ESTATE TRENDS | MULTIFAMILY RESIDENTIAL

Several larger multifamily projects have been proposed but paths to delivery may be uncertain.



4 Corners Mixed-Use
1675 Bay Rd
200 Units
Formerly planned for office

Waterfront Phase I
391 Demeter St
300 Units

4 Corners Townhomes
1675 Bay Rd
95 Units
Formerly planned for office

MULTIFAMILY INVENTORY

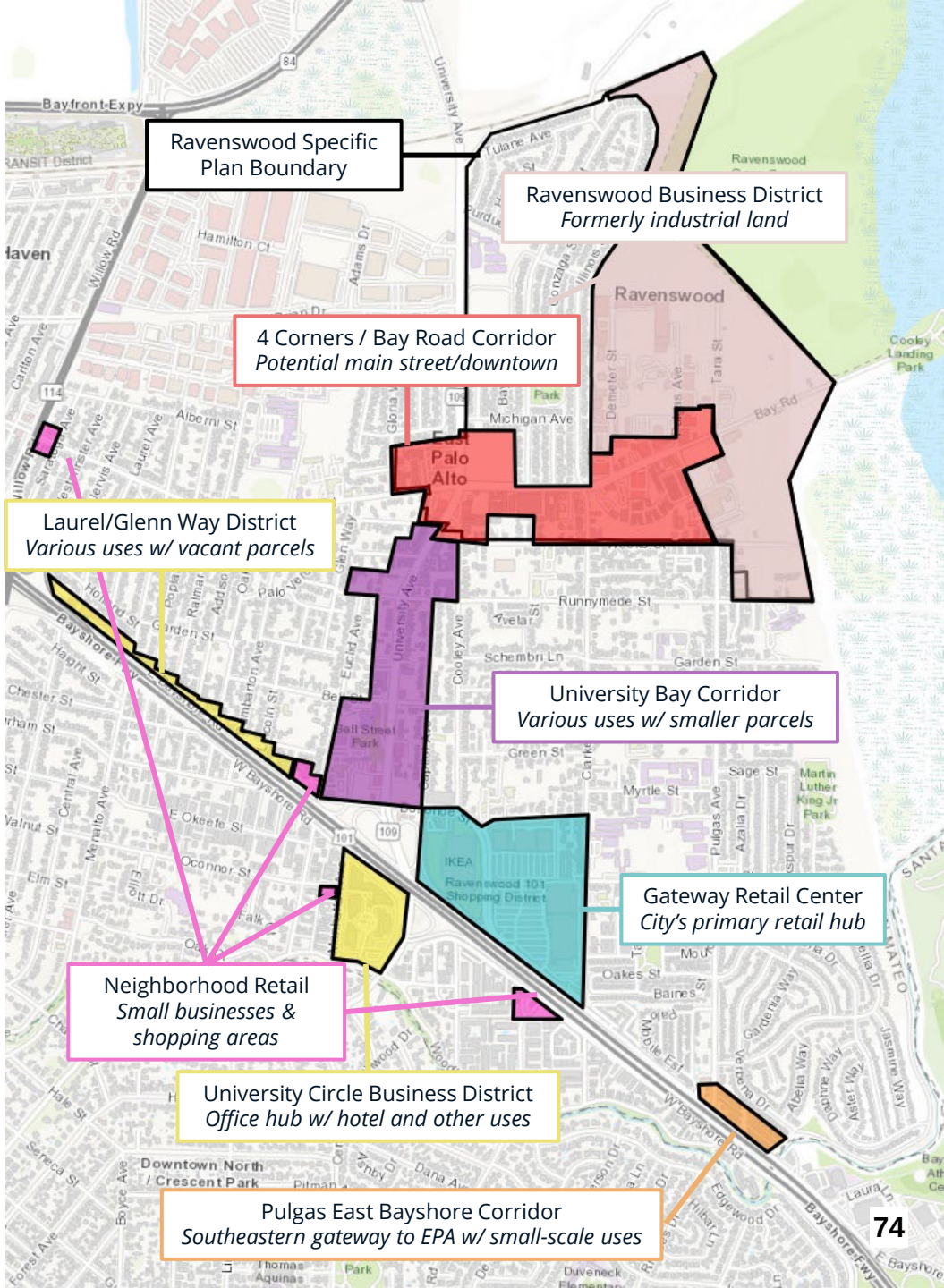
- Proposed

BUSINESS DISTRICTS

Most notable non-residential properties and developments noted above are in the City's eight business districts. Each has its own characteristics and may need differing place-based strategies for activation.

District Name	Current Business Mix / Industry Focus	Trajectory	Sense of Place	Scale of Redevelopment Opportunities
Gateway Retail Center	Big-box retail	Stable	★	Low
Ravenswood Business District	Industrial, vacant land	Growing	★ ★	High
University Bay Corridor	Office, civic	Stable	★	Medium
University Circle Business District	Office, hotel	Growing	★ ★ ★	Medium
4 Corners / Bay Road Corridor	Civic, retail, residential	Growing	★ ★	High
Pulgas East Bayshore Corridor	Warehouse, retail	Stable	★	Low
Laurel / Glen Way / East Bayshore District	Retail, vacant land	Stable	★	Low
Neighborhood Commercial	Office, retail	Stable	★	Low

Snapshot for each district is provided in the Appendix.



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07

Barriers & Opportunities for Inclusive Growth

STRENGTHS

As noted previously, East Palo Alto has notable strengths and assets that can form a strong foundation for inclusive economic growth.

History, Culture, & Community	History of resilience & self-determination; rich & diverse culture; invested civic organizations; tight-knit & entrepreneurial community.
Strategic Location	Proximity to major employment hubs & Stanford University; part of a high performing regional economy with access to strong industries (tech, advance manufacturing, education) & robust talent pool.
Industry & Economy	Strong base of small businesses invested in the community; presence of sectors (healthcare, professional services) and employers with potential to provide well-paying jobs with career pathways.
Physical Assets	Waterfront; established business districts & underutilized sites; relative affordability of space & housing; active development / investment partners.
Governance	Growth & inclusive economic development recognized as a key priority; Convergence of public and nonprofit attention to workforce development.

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CHALLENGES

Based on stakeholder input and our analysis, we have started to identify initial barriers for economic development in East Palo Alto to lay the foundation for Phase 2.

Economic / Socioeconomic	Policy, Process, & Capacity	Physical
• **Racial and income disparities -** underscoring need for inclusive growth strategies • **Labor "exporter"** - few residents work locally, and regional prosperity isn't reaching households • **Underrepresentation in regional strong sectors** like tech and advanced manufacturing • **Major employers** (e.g., Four Seasons, Amazon) could be better leveraged for broader community benefits • **Budget deficit** constraining City's ability to proactively invest in economic development (e.g. incentives, placemaking, infrastructure) • **Negative external perception** deterring investment and business attraction	• Active but **fragmented economic development efforts** - hindering City's ability to coordinate strategy, manage pipelines, or source partnerships • **Development process** perceived as unpredictable and high-risk • **Business licensing processes** burdensome for small and home-based businesses • **Growth viewed with skepticism** and raises concerns around gentrification among some stakeholders • Potential **need for a coordinated strategy** to tap County, State, or Federal resources	• **Limited transit access** constraining resident / resident / visitor mobility and investment appeal • **Infrastructure** upgrades (e.g., water, sewer) and environmental remediation needed to unlocked key development sites • Many **business districts** could benefit from a cohesive identity and street-level vibrancy • **Need for a downtown or central hub** to anchor community, capture spending, and attract companies and/or visitors • **Limited affordable space** for small businesses and entrepreneurs

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OPPORTUNITIES

Our initial analysis highlights four potential policy areas to drive impactful economic development.

Define and illustrate what **inclusive economic development** looks like

Prioritize **place-based and industry aligned** investment

Streamline City **permitting processes** & examine **feasibility** of requirements

Build internal economic development **capacity** across functions

(incl. industry recruitment, infrastructure / mobility investment, workforce development, small businesses, partnerships, marketing)

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08

Next Steps

NEXT STEPS

HR&A is currently conducting SWOT analysis and continuing to identify specific business, real estate, and workforce development opportunities. Working in collaboration with the City and Kearns & West, the Team will also continue to engage stakeholders.

Phase 1: Existing Conditions

Establish fact base about economic development in EPA

Phase 2: Synthesis

Identify business, real estate, and workforce development opportunities

Phase 3: Community Outreach

Additional targeted stakeholder interviews and broader community to validate findings and gather input on strategies

Phase 4: Final Plan

Develop economic development strategic plan

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ENGAGEMENT OVERVIEW

HR&A and Kearns & West have been engaging local stakeholders to inform this study, with additional activities planned in the coming months.

Real Estate Community	Local Businesses / Entrepreneurs	Nonprofit / Workforce Interviews	Broader Community
Interviews	**Interviews**	**Interviews & Focus Groups**	**Pop-ups & Community Workshop**
Fact-finding: • Commercial, industrial, and residential market trends • Challenges and opportunities in development / leasing • Development feasibility • City processes	*Fact-finding:* • Businesses' locational decisions • Opportunities / constraints for growth • Workforce challenges • Areas of needs & support	*Fact-finding:* • Workforce development ecosystem (players and focus) • Strategies and impact • Challenges & opportunities • Partnership with the City	• Validate concerns, challenges, and opportunities for individuals, families, and small/micro-businesses & research findings • Gather feedback on proposed strategies



Appendix

Business District Profiles

GATEWAY RETAIL CENTER

District Overview

Located near the southern end of the city, the Gateway Retail Center is East Palo Alto's primary business hub. The district contains several big box retailers—including IKEA, Nordstrom Rack, and Home Depot—and generates approximately 65% of the City's sales tax revenue.

The northeastern corner of the district contains some residential uses, with a mix of single-family homes and a condominium complex with ground-floor retail. A mortuary is located in a lot just north of the IKEA.

Opportunities

- Regional access via proximity to the 101 Freeway
- New uses, such as a Mega Mart and the City's entrepreneur center, vacant Office Depot space, and parking lot could be leveraged to boost economic development / activation

Challenges

- Not inviting or accessible to pedestrians
- According to store managers, retail theft and street vending management present challenges



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GATEWAY RETAIL CENTER

Notable Existing Properties

1

1700 E Bayshore Rd – IKEA

- *242K SF building constructed around 2000*
- *Owned by IKEA Property Inc.*

2

1731-1761 E Bayshore Rd – Gateway 101 Shopping Center

- *~100K SF of retail space constructed in 1999-2000*
- *Several owners, including Gateway 101 LLC*
- *Occupied by anchor tenants including Cardenas Markets and PGA Tour Superstore*
- *1761 building has long been vacant; most recently occupied by Office Depot*

3

1771-1781 E Bayshore Rd – Gateway 101 Shopping Center

- *~200K SF of retail space constructed in 1999-2000*
- *Several owners, including Gateway 101 LLC*
- *Occupied by anchor tenants including Nordstrom Rack and Home Depot; Mega Mart will be moving into space formerly occupied by Target*

4

1765 E Bayshore Rd

- *45K SF mixed-use building constructed in 2008 (residential condo, retail)*
- *Individual condo owners; retail space owned by Cummings Park Associates & EPA Bayshore Properties LLC*
- *Will house the **City's upcoming entrepreneur center***



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GATEWAY RETAIL CENTER

Vacant Parcels & Planned Projects

1 **660 Donohoe St**
- *Two lots combining for 0.39 acres, located next to Jones Mortuary*
- *Smaller lot owned by EPA City Redevelopment; larger lot owned by the Charles A Jones Trust*

2 **1700 Bay Rd**
- *0.27-acre lot next to IKEA*
- *Owned by the Lola Mae Clewis Trust*

3 **899 O'Connor St**
- *0.08-acre lot behind Nordstrom Rack*
- *Owned by Gateway 101 LLC*

4 **1791 E Bayshore Rd**
- *0.40-acre lot at southern tip of the district near pedestrian pathway*
- *Owned by Redevelopment Agency*



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RAVENSWOOD BUSINESS DISTRICT

District Overview

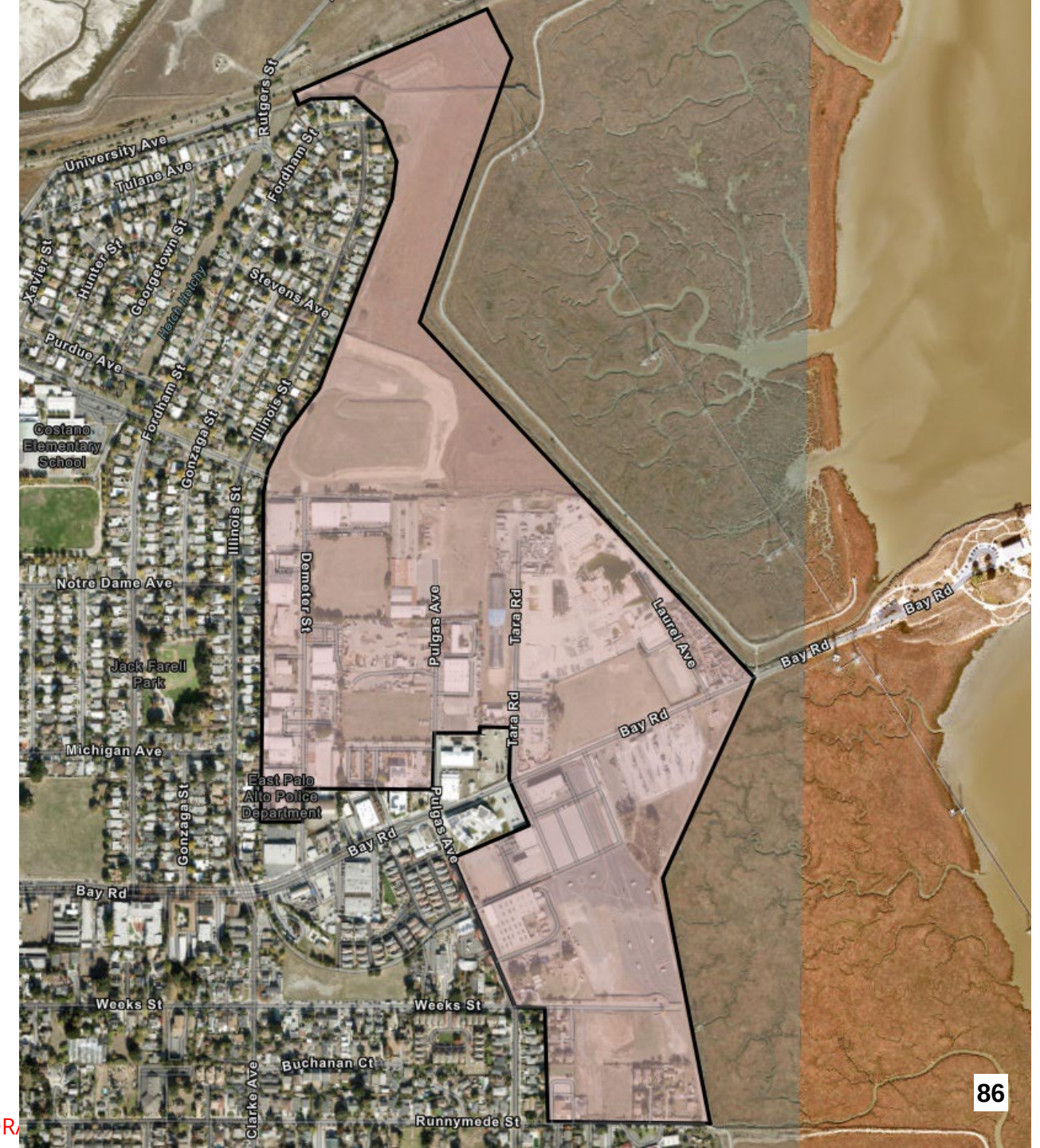
The Ravenswood Business District, located in the northern tip of the city along Bay Road, contains several vacant parcels on formerly industrial land, as well as some small-scale industrial facilities and single-family homes. As one half of the Ravenswood Business District / 4 Corners Specific Plan, this area has been envisioned as an "employment district with...new-generation industries."

Opportunities

- Recently adopted Ravenswood/4 Corners Specific Plan established a shared vision for the district
- Potential for mixed-use hub near waterfront, with existing draws like Cooley Landing, Bloomhouse/farmers market
- Large swaths of land are held by single owners, enabling transformative development guided by a coherent vision

Challenges

- Significant environmental remediation and infrastructure improvements are required to accommodate future development
- Current Low demand for office and life science uses require pivoting on previously conceived development plans



RAVENSWOOD BUSINESS DISTRICT

Notable Existing Properties

1 **2555 Pulgas Ave – Bloomhouse**
- *6,000-SF community center opened in 2019*

2 **1885 Bay Rd – Ravenswood Family Health Center**
- *38K SF building opened in 2015*

Vacant Parcels & Planned Projects

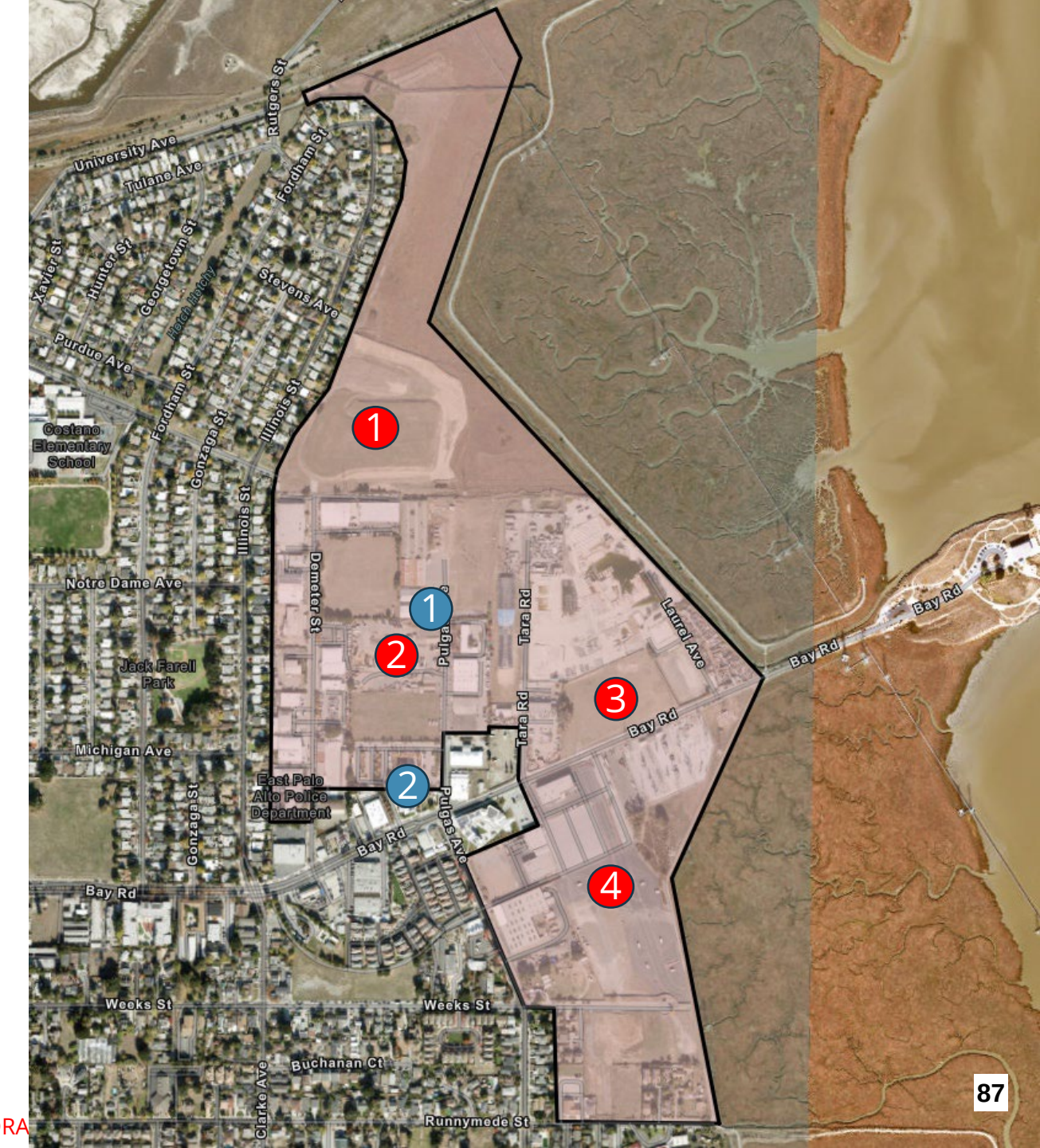
1 **Parcel 63050050**
- *29.65-acre parcel, a portion of which will be developed into Phase 1 of the EPA Waterfront Project*
- *Project will include three residential buildings with nearly 300 units*

2 **2519-2535 Pulgas Ave**
- *9-acre site owned by Emerson Collective - planning in progress*

3 **2020 Bay Rd**
- *17.2-acre site planned for 1.4M SF of office, retail, and open space*

4 **1990 Bay Rd**
- *Planned site for 918K SF of office, life science, and retail space*
- *Developed by Harvest Properties*

Note: *There are some lands within this district that cannot be developed because they are protected, under utility easements, or are still undergoing environmental mitigation, limited to commercial and, therefore, no residential can be built on certain sites.*



4 CORNERS / BAY ROAD CORRIDOR

District Overview

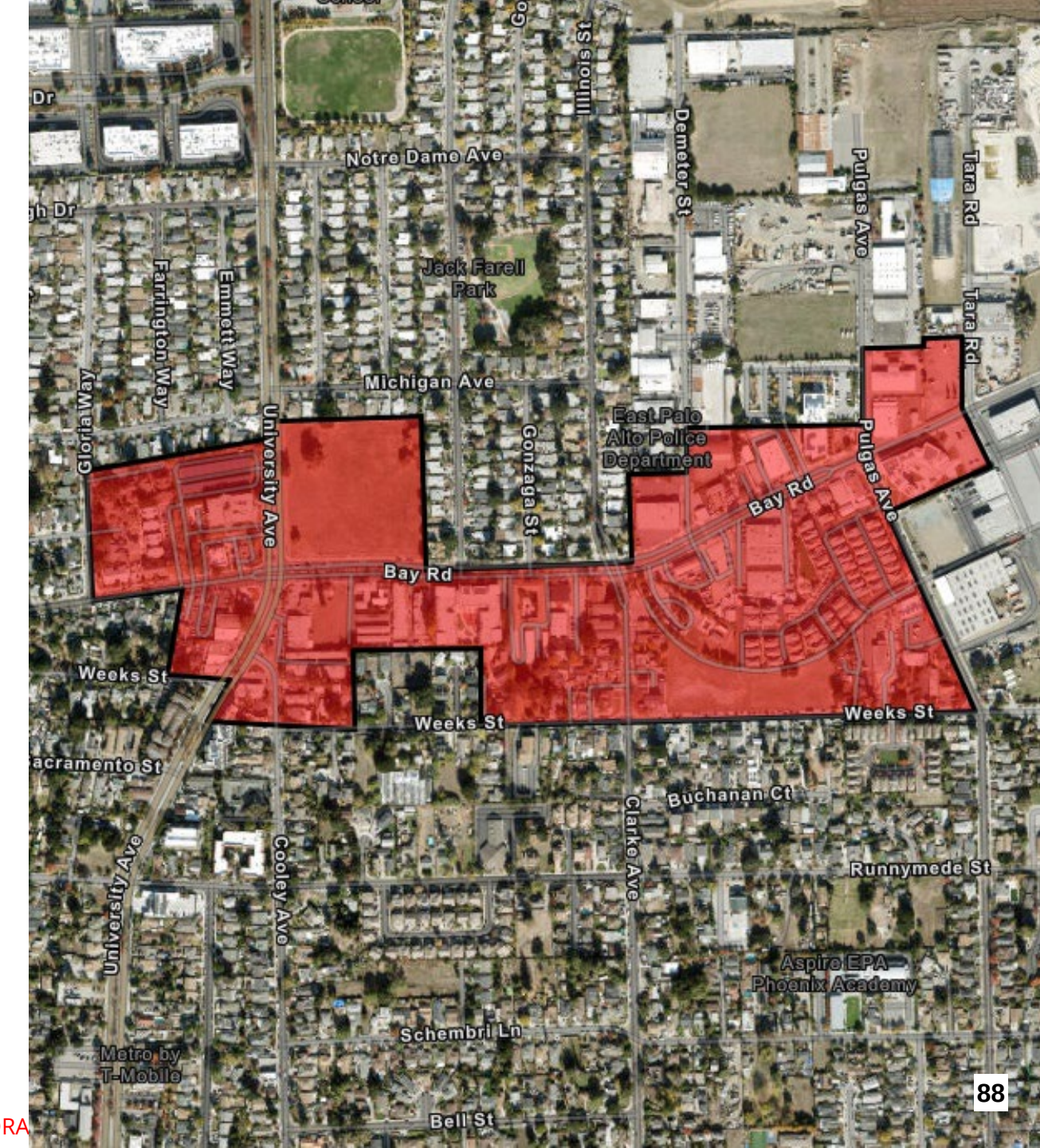
The 4 Corners / Bay Road Corridor is situated around the intersection of University Avenue and Bay Road and contains a variety of uses, including multi- and single-family residential, retail, industrial, civic, and office. The Ravenswood Business District / 4 Corners Specific Plan envisions this area as the city's downtown with "active neighborhood-serving uses...and a lively main street." City Hall and the San Mateo County Library serve as anchors, while a vacant six-acre lot across the street—former home the Nairobi Village Shopping Center—awaits redevelopment.

Opportunities

- Recently adopted Ravenswood/4 Corners Specific Plan established a shared vision for the district
- Multifamily housing and key civic and community anchors, such as City Hall and the EPACENTER, could provide a user base for additional retail / amenities
- Planned and under construction projects at 1675 Bay Rd and 965 Weeks St could activate surrounding parcels

Challenges

- As the aspirational new downtown, the District does not yet have a pedestrian friendly environment / district identity



4 CORNERS / BAY ROAD CORRIDOR

Notable Existing Properties

1. **2415 University Ave – San Mateo County Government Center**
   - *Contains East Palo Alto's City Hall and public library*

2. **1730 Bay Rd – Courtyard at Bay Road**
   - *Four-story, 77-unit multifamily building*
   - *Constructed in 2005*

3. **Montage Circle Complex**
   - *Newer looking single-family home complex*
   - *Mentioned briefly in the Ravenswood Specific Plan (Pulte Homes subdivision) and listed as vacant parcels in data from City*

4. **1950 Bay Rd - EPACENTER**
   - *Two-story, 25K SF youth development center*
   - *Opened in 2022*



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4 CORNERS / BAY ROAD CORRIDOR

Vacant Parcels & Planned Projects

1

1675 Bay Rd

- *6.0-acre parcel owned by Sand Hill Properties*
- *City owns a small adjacent parcel at the southwest corner of the site*
- *Planned for a mixed-use project with residential and retail uses*

2

1620 Bay Rd

- *Three parcels combining for 0.85 acres*
- *Potentially owned by Clarumb (to be confirmed)*

3

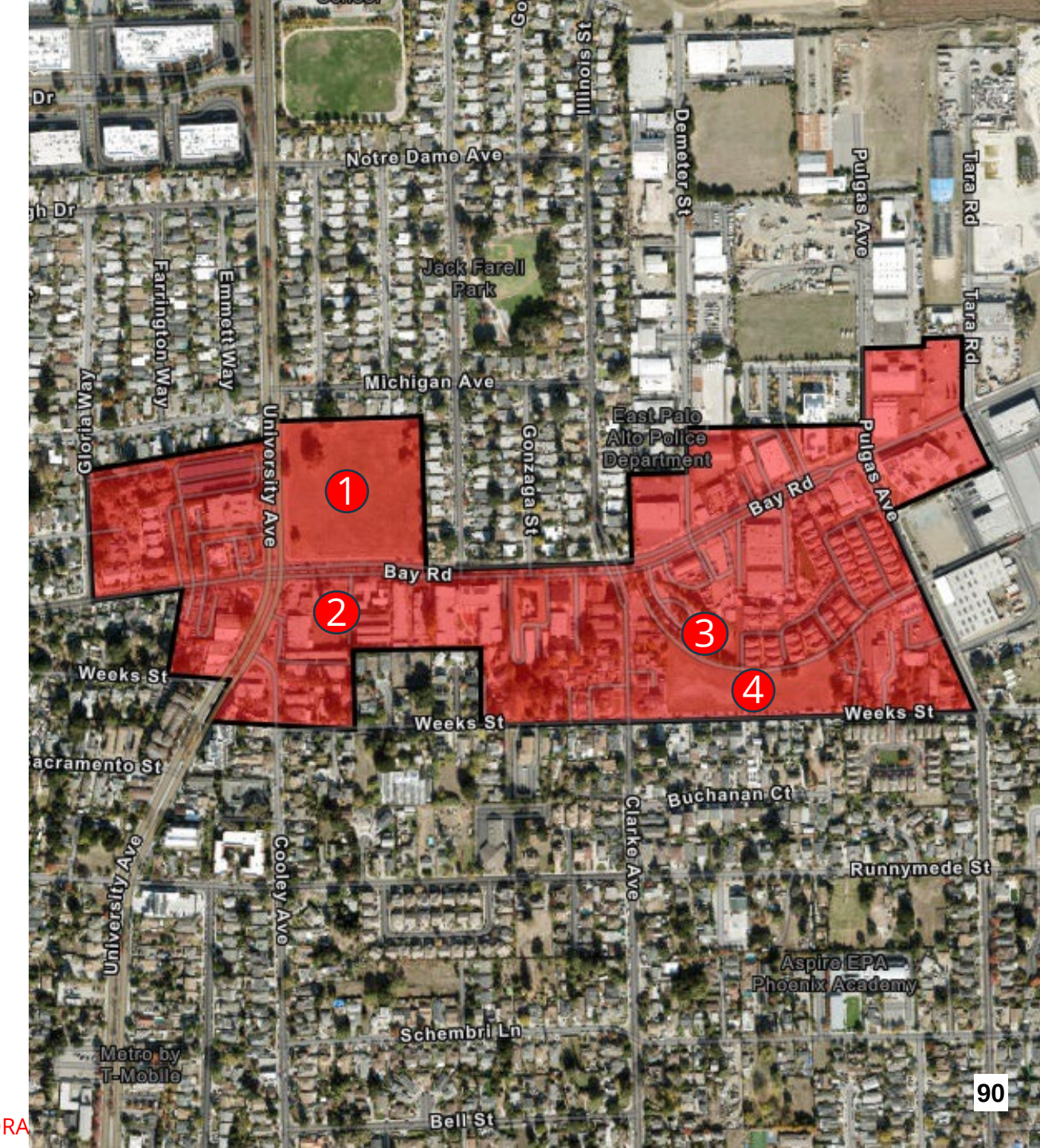
1798 Bay Rd

- *1.4-acre lot owned by the City of EPA*
- *Currently provides a safe parking lot for unhoused residents living in RVs*

4

965 Weeks St

- *2.6-acre lot planned for Colibri Commons, a 136-unit multifamily building for low-income households (studios to four-bedrooms)*



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UNIVERSITY BAY CORRIDOR

District Overview

The University Bay Corridor contains a variety of uses, including multi- and single-family housing, retail, civic, and office. The district's primary thoroughfare—University Avenue—is used as a cut-through route for traffic accessing the Dumbarton Bridge to the north and the 101 Freeway to the south.

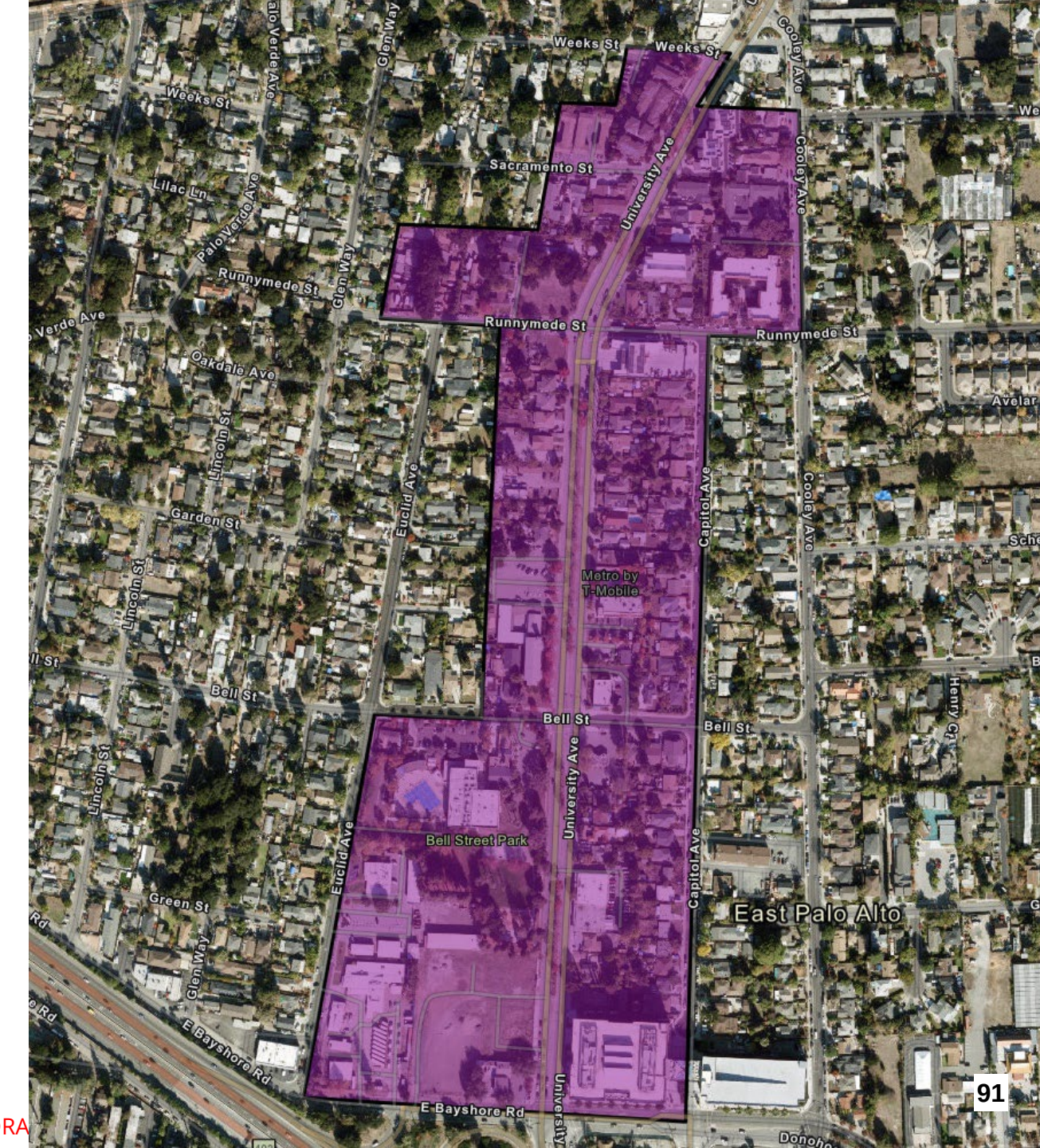
Corporate offices for Amazon, located at the southern end of the district, opened in 2016. An adjacent vacant lot was tapped for additional office space but was halted during the pandemic.

Opportunities

- Vacant Sobrato site presents opportunity to add meaningful scale to the district
- New retail - particularly dining options - could capture University Avenue commuters
- Anchors such as the Amazon office and YMCA could provide a user base for additional retail / amenities

Challenges

- Paths to realize stalled developments uncertain
- High traffic volume; not pedestrian friendly



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UNIVERSITY BAY CORRIDOR

Notable Existing Properties

1. **2361 University Ave – Nugent Square Apartments**
   - *40K, 32-unit rent-restricted multifamily building*
   - *Constructed in 2006*

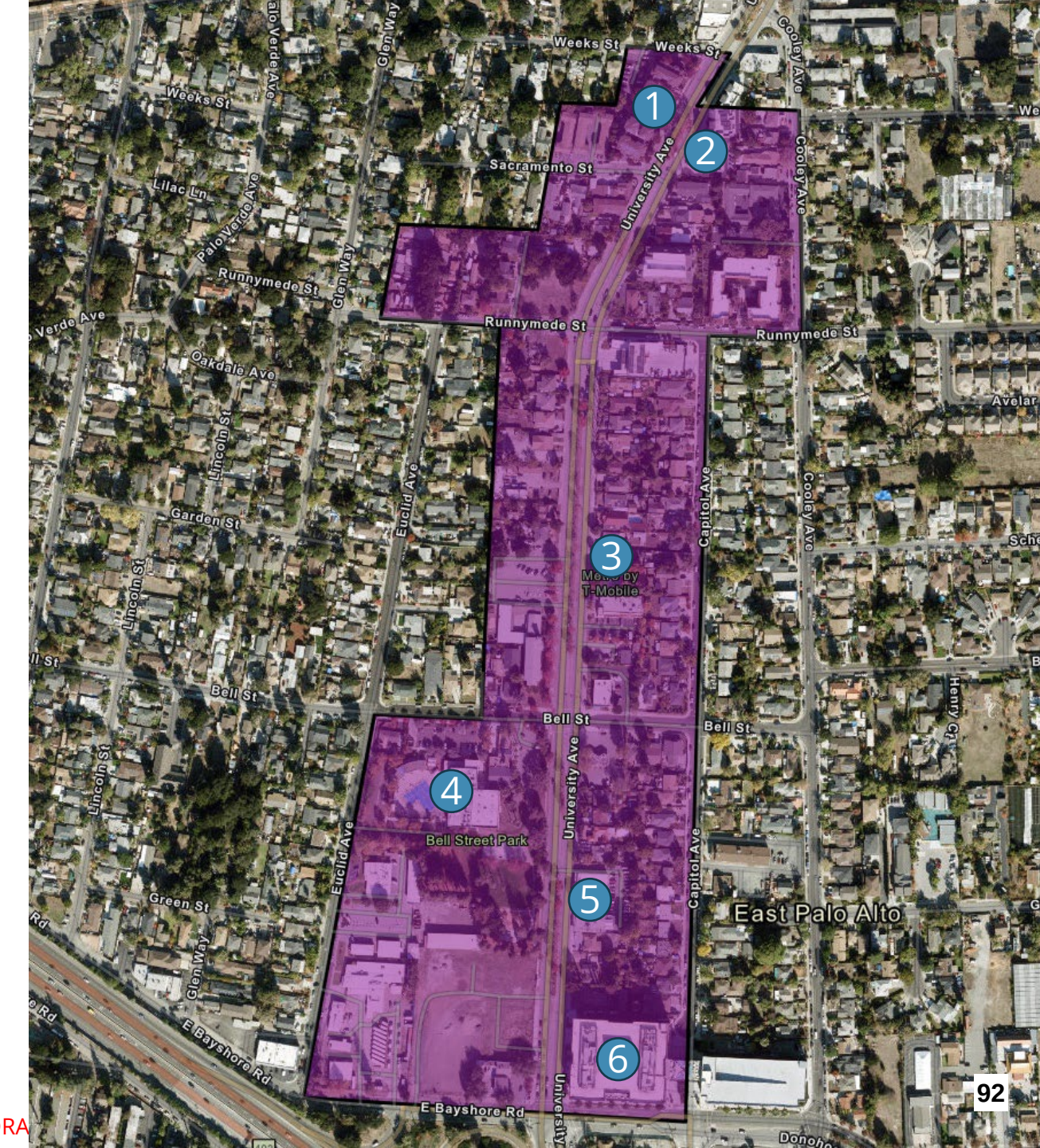
2. **2358 University Ave – Serenity Senior**
   - *160K, 41-unit rent-restricted multifamily building*
   - *Constructed in 2017*

3. **2242 University Ave – Drew Center Pharmacy**
   - *Only pharmacy currently in the City of East Palo Alto*

4. **550 Bell St – EPA Family YMCA**
   - *32K SF community center*
   - *Constructed in 2007*

5. **2160 University Ave – AutoZone Auto Parts**
   - *7K SF auto parts store*

6. **2100 University Ave - Amazon**
   - *214K office building, housing over 1,000 corporate and tech employees for Amazon Web Services*
   - *Constructed in 2016*



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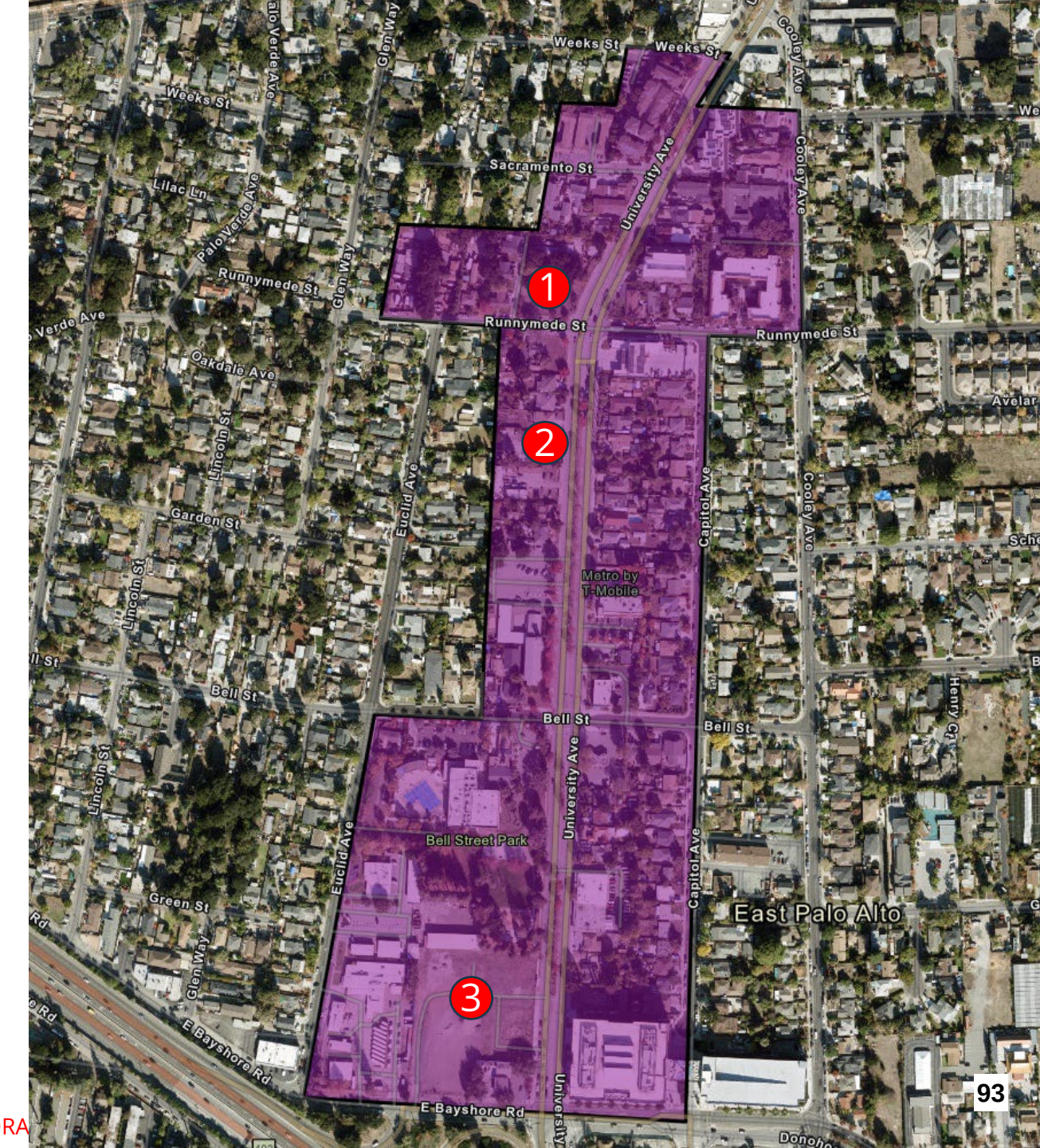
UNIVERSITY BAY CORRIDOR

Vacant Parcels & Planned Projects

1 **2331 University Ave**
- *Two parcels combining for 0.5 acres and planned for a four-story, 48K SF mixed-use building with retail and 33 residential units*
- *Entitled by Clarum Communities but project did not advance*

2 **2277 University Ave**
- *0.36-acre parcel owned by the EPA County Waterworks District*
- *A single-story government building is currently on the site*
- *City is in talks with San Mateo County about swapping the parcel for another in order to develop a park*

3 **2115 University Ave**
- *2.9-acre site planned for a 220K SF office building; project on pause*
- *Owned by The Sobrato Organization*



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UNIVERSITY CIRCLE BUSINESS DISTRICT

District Overview

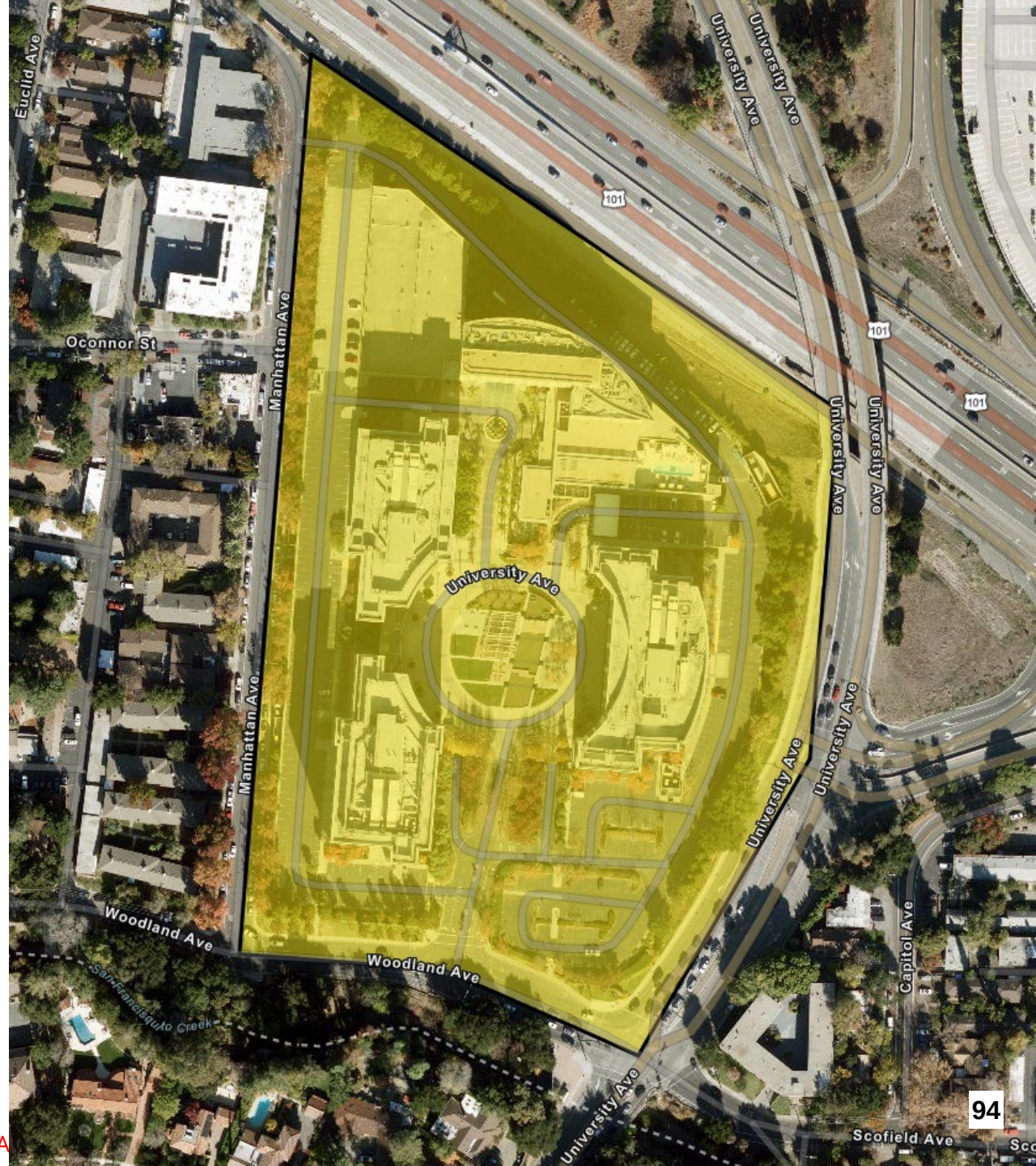
The University Circle Business District, located at the intersection of the 101 Freeway and University Avenue, is anchored by three office towers totaling 450,000 SF and a 200-room Four Seasons Hotel. This district lies on the former site of Whiskey Gulch, a collection of small businesses of which many were owned by local residents of color. A new office tower and renovations to the central plaza are planned, and there is a desire from both the City and property managers to activate the space even more.

Opportunities

- Coherent district identity with some public-space activation
- Regional access via proximity to the 101 Freeway and University Avenue
- New site improvements and tenant/community-serving uses and temporary activations could attract new tenants, community members, and visitors to the district

Challenges

- District is cut off from the rest of East Palo Alto by the 101 Freeway. Limited pedestrian access and connections for surrounding residential community
- Regionally office vacancy remains high



DRA

UNIVERSITY CIRCLE BUSINESS DISTRICT

Notable Existing Properties

1 **1900 University Ave**
- *143K SF office building constructed in 2001*
- *Owned by Columbia Property Trust Inc.*

2 **1950 University Ave**
- *165K SF office building constructed in 2002*
- *Owned by Columbia Property Trust Inc.*

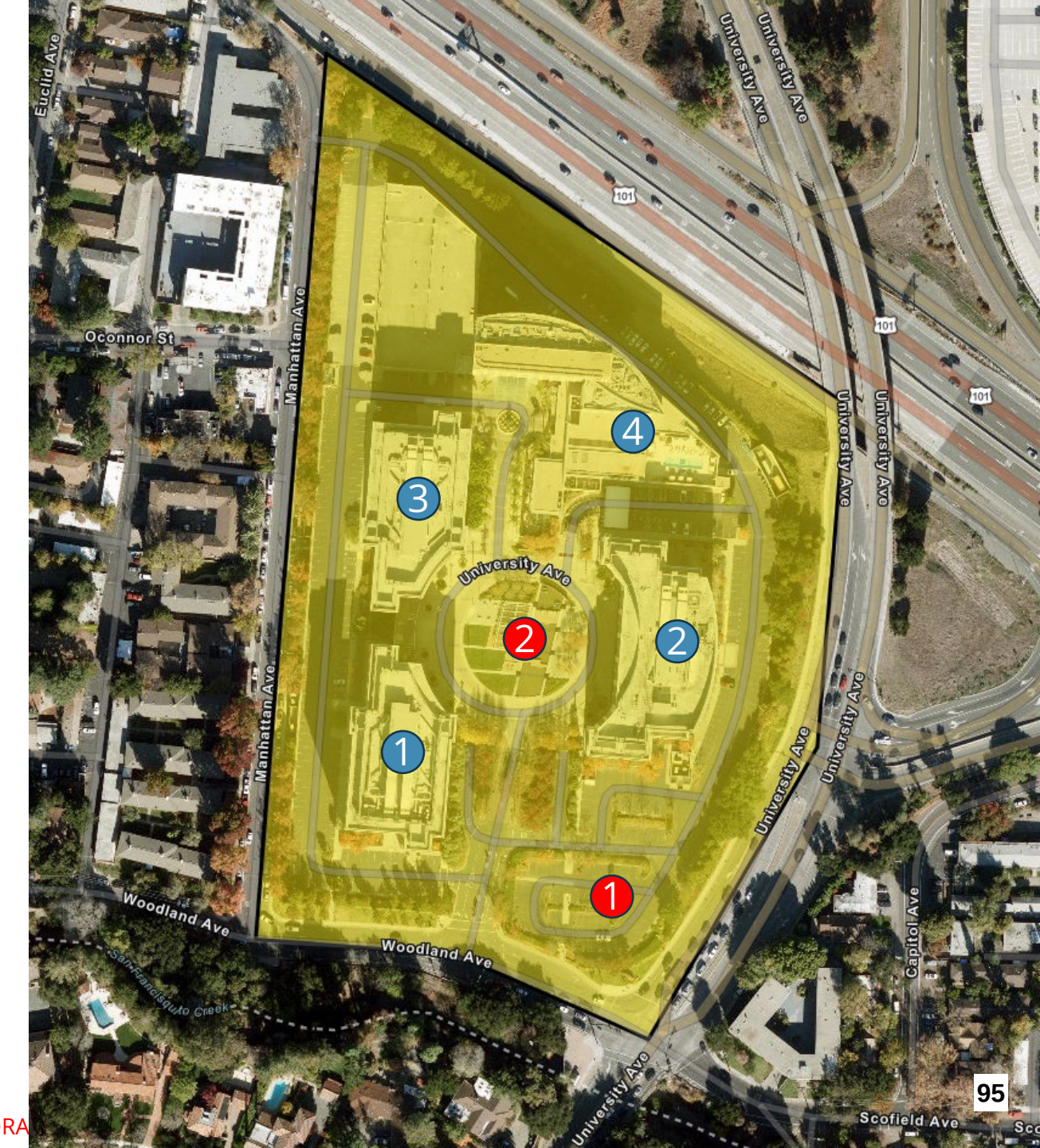
3 **2000 University Ave**
- *148K SF office building constructed in 2002*
- *Owned by Columbia Property Trust Inc.*

4 **2050 University Ave – Four Seasons Hotel**
- *190K SF hotel constructed in 2006*
- *Owned by Strategic Hotels & Resorts*

Vacant Parcels & Planned Projects

1 **Parcels 63680090, 63680110, and 63680180**
- *Planned University Circle Phase II project, approved in 2022, would allow the construction of 180,000 square feet of new offices on campus. Project timeline TBD.*

2 **1900-2050 University Ave (Inner Circle)**
- *Planned renovation to the inner circle of the complex, including reconfiguration of an existing structure into a café, landscape improvements, and façade changes to buildings 1900, 1950, and 2000 University Ave*



PULGAS EAST BAYSHORE CORRIDOR

District Overview

This business district, located at southern tip of the city, consists of a Public Storage facility, a few small shops, and an auto repair business. Section 16.4 of the General Plan 2035 envisions this area for “redevelopment and intensification of the existing neighborhood retail…including mixed-use development with ground-floor retail and office or residential on the upper floors.”

Opportunities

- Surrounding residential community provides natural customer base for community serving uses and neighborhood amenities

Challenges

- While low-density, self-storage use is typically hard to displace / redevelop
- Highway adjacency creates a physical barrier and detracts from the street-level experience due to noise, exhaust, and the absence of active storefronts across the street
- Located on the periphery and disconnected from the city’s other business districts



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PULGAS EAST BAYSHORE CORRIDOR

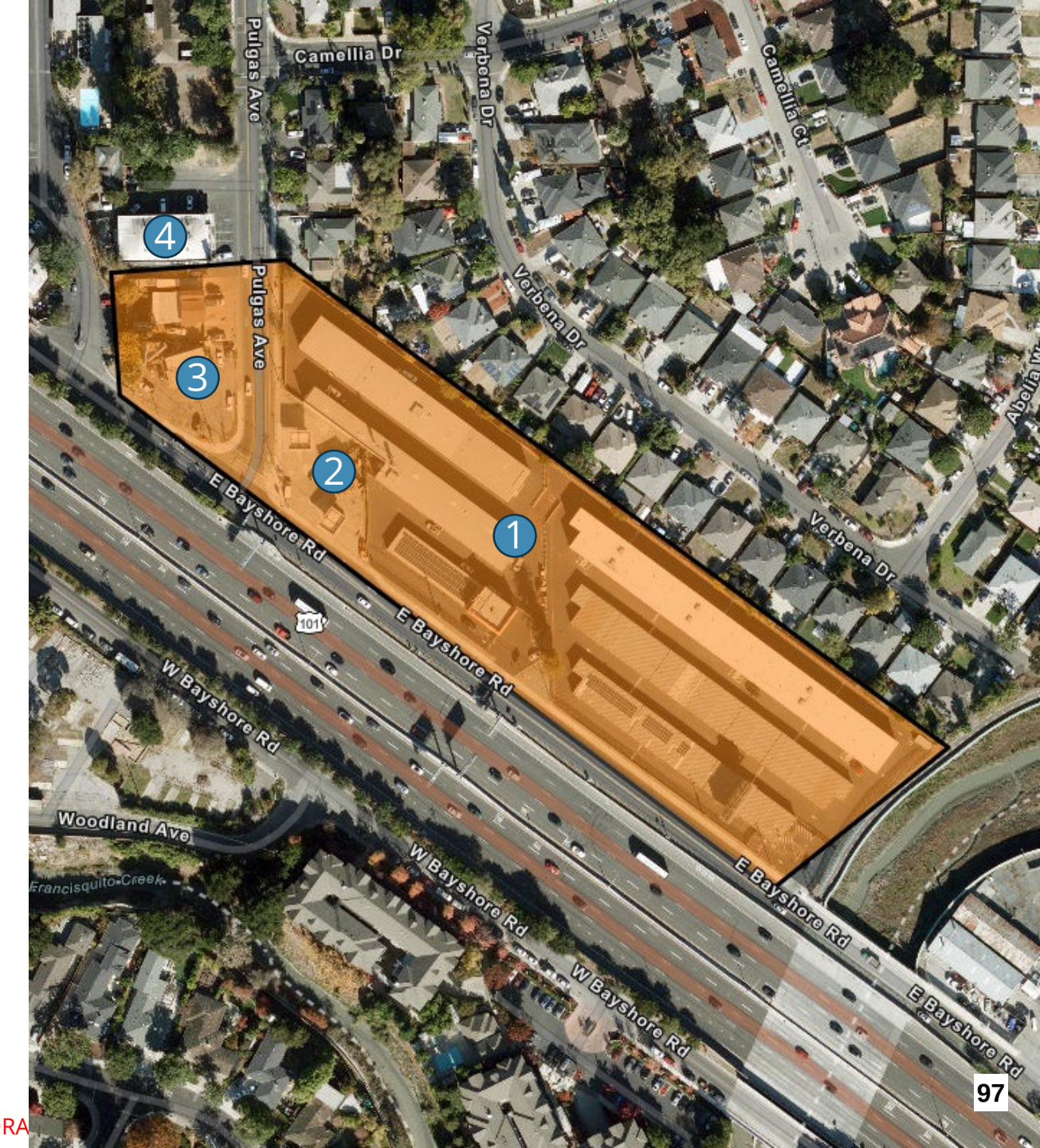
Notable Existing Properties

1 **1961 E Bayshore Rd – Public Storage**
- *Facilities spread out over three parcels combining for 3.5 acres*
- *Owned by SEI PSP II Joint Ventures and American Storage Associates*

2 **1905 E Bayshore Rd – Gonzalez Tires**
- *Auto service shop located on a 0.25-acre lot*
- *Owned by the Henry Rainer Trust*

3 **1895 E Bayshore Rd**
- *Parcel is designated as occupied by auto services, but maps show smaller retail uses on a 0.25-acre lot*
- *Owned by the Edward E. Campbell Trust*

4 **1933 Pulgas Ave – Garden Market**
- *5,300-SF general store located on a 2.23-acre lot*
- *Owned by Citystar Properties*



DRA

LAUREL / GLEN WAY / EAST BAYSHORE DISTRICT

District Overview

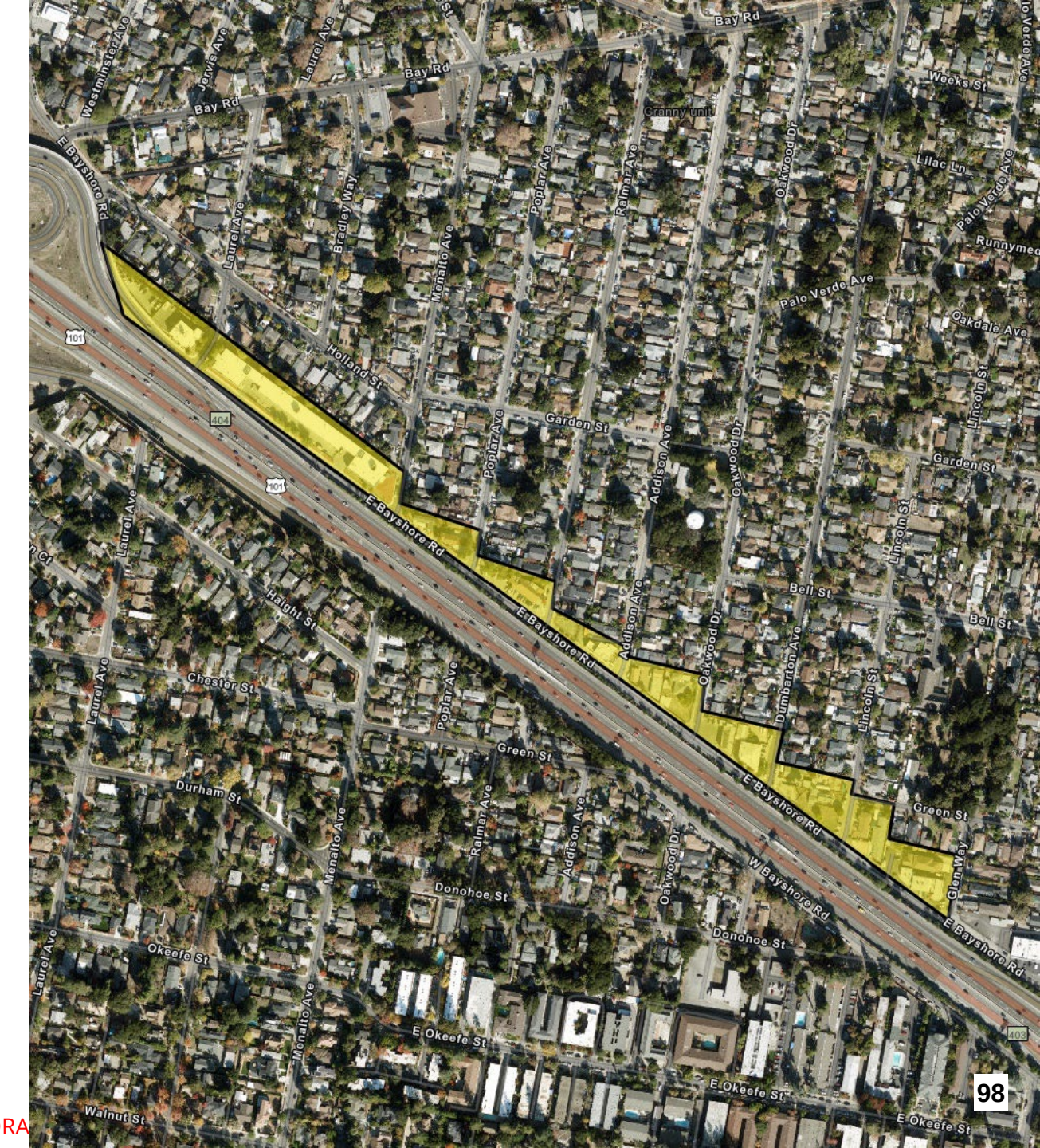
This business district, located along the western border of the city, consists of an Extra Space Storage facility, a mix of single- and multi-family homes, retail, a church, and a few vacant lots. Given the variety of uses along this corridor, this district could be well-suited for some smaller, neighborhood-serving retail spaces.

Opportunities

- Vacant parcels could provide opportunities to fill neighborhood-serving retail gaps

Challenges

- Vacant parcels are small and shallow - potentially challenging to develop
- Highway adjacency creates a physical barrier and detracts from the street-level experience due to noise, exhaust, and the absence of active storefronts across the street
- Placemaking / activation would be needed to support a more coherent sense of place that establishes the district as a more active commercial corridor



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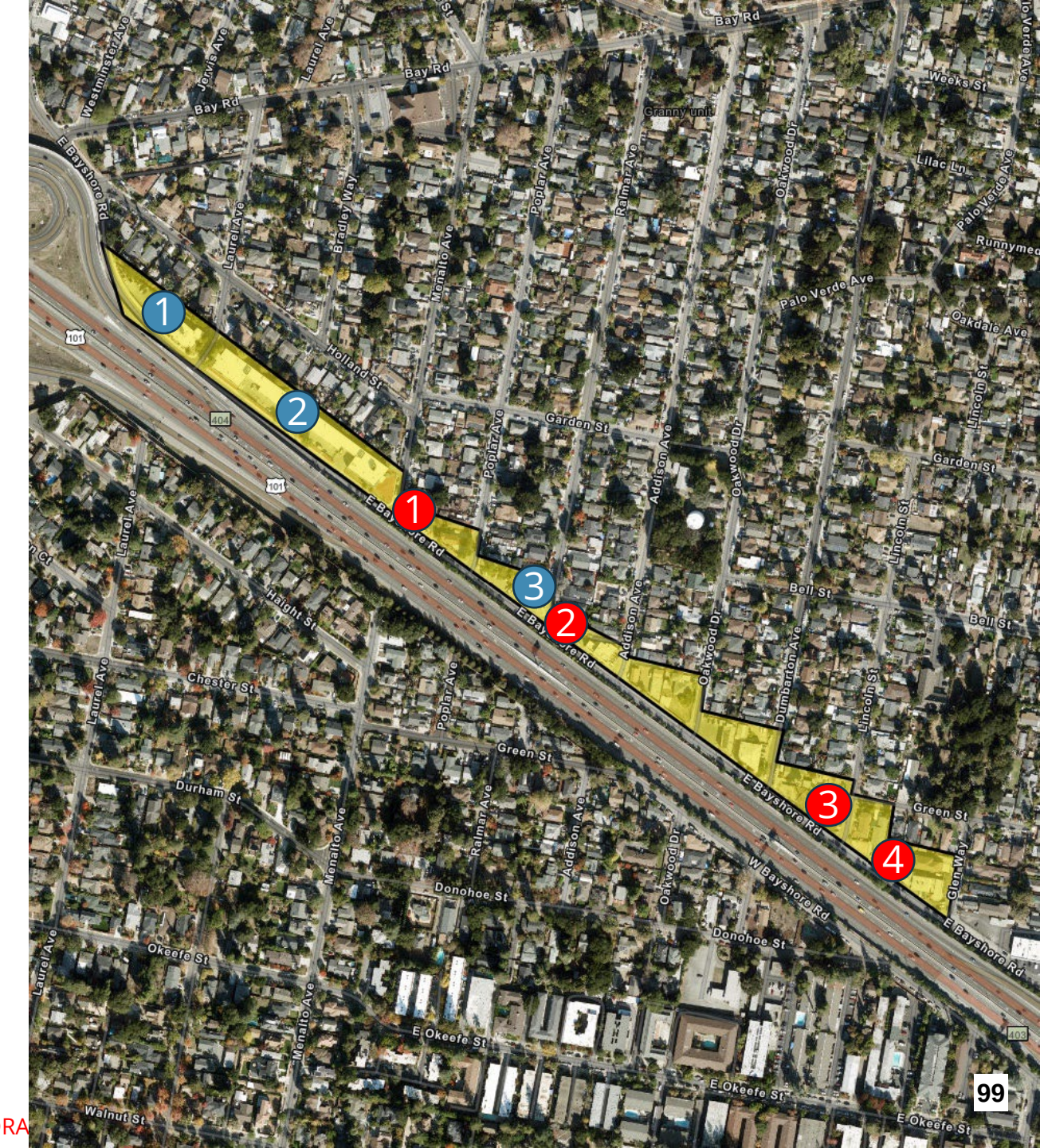
LAUREL / GLEN WAY / EAST BAYSHORE DISTRICT

Notable Existing Properties

1. **807 E Bayshore Rd**
   - *0.55-acre lot w/ warehouse*
   - *Empty lot on site but not listed as vacant*
   - *Owned by Lucky Children LLC*
2. **999 E Bayshore Rd**
   - *1.26-acre lot w/ Extra Space Storage*
   - *Owned by Storage Portfolio I LLC*
3. **1199 E Bayshore Rd**
   - *0.26-acre lot w/ St. Samuel Church*
   - *Owned by St. Samuel Church of God*

Vacant Parcels & Planned Projects

1. **1001 E Bayshore Rd**
   - *0.08-acre lot w/ single-family home*
   - *Owned by Yip Lambo*
2. **1205 E Bayshore Rd**
   - *0.12-acre lot w/ fence and billboard*
   - *Owned by Yusuf Ibrahim*
3. **1385 E Bayshore Rd**
   - *0.10-acre lot next to single-family homes*
   - *Owned by Keleta Tesfai*
4. **Parcel 063183090**
   - *0.09-acre lot w/ parking next to Emmanuel's Pizza & Bakery*
   - *Owned by the Curtis D. Duplessis Trust*



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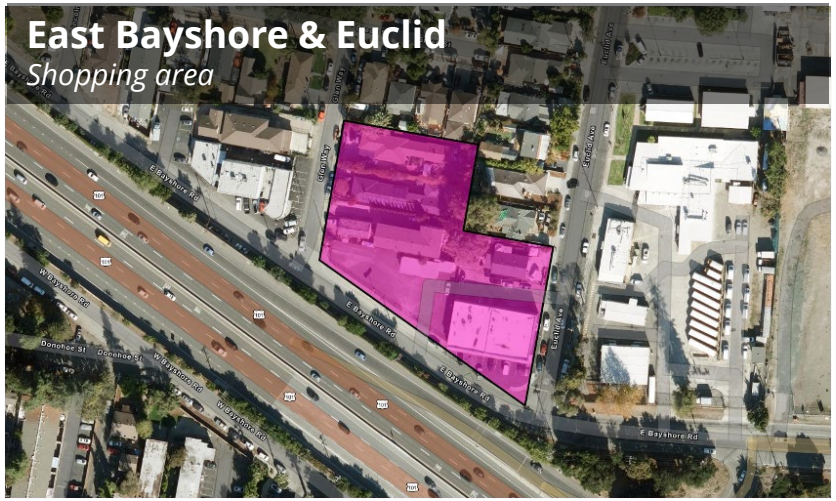
NEIGHBORHOOD COMMERCIAL

The Neighborhood Retail Business Area comprises several non-contiguous hubs of small businesses and shopping areas across East Palo Alto.









Opportunities

- Surrounding residential communities may support targeted investment in F&B, personal services, and community amenities

Challenges

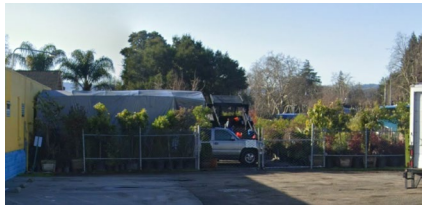
- While most parcels house active businesses, shopping areas generally lack district identity

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NC – WILLOW RD / NEWBRIDGE RETAIL HUB

Notable Existing Properties & Vacant Parcels

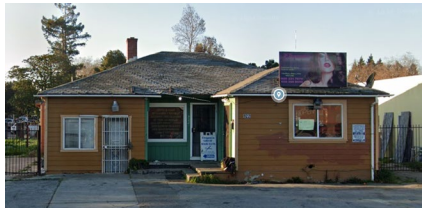
1 Hernandez' Nursery
- *910 Newbridge St*
- *0.15-acre parcel owned by Karwash Mohammed*



2 Ana's Party Store
- *910 Newbridge St*
- *0.08-acre parcel owned by Karwash Mohammed*

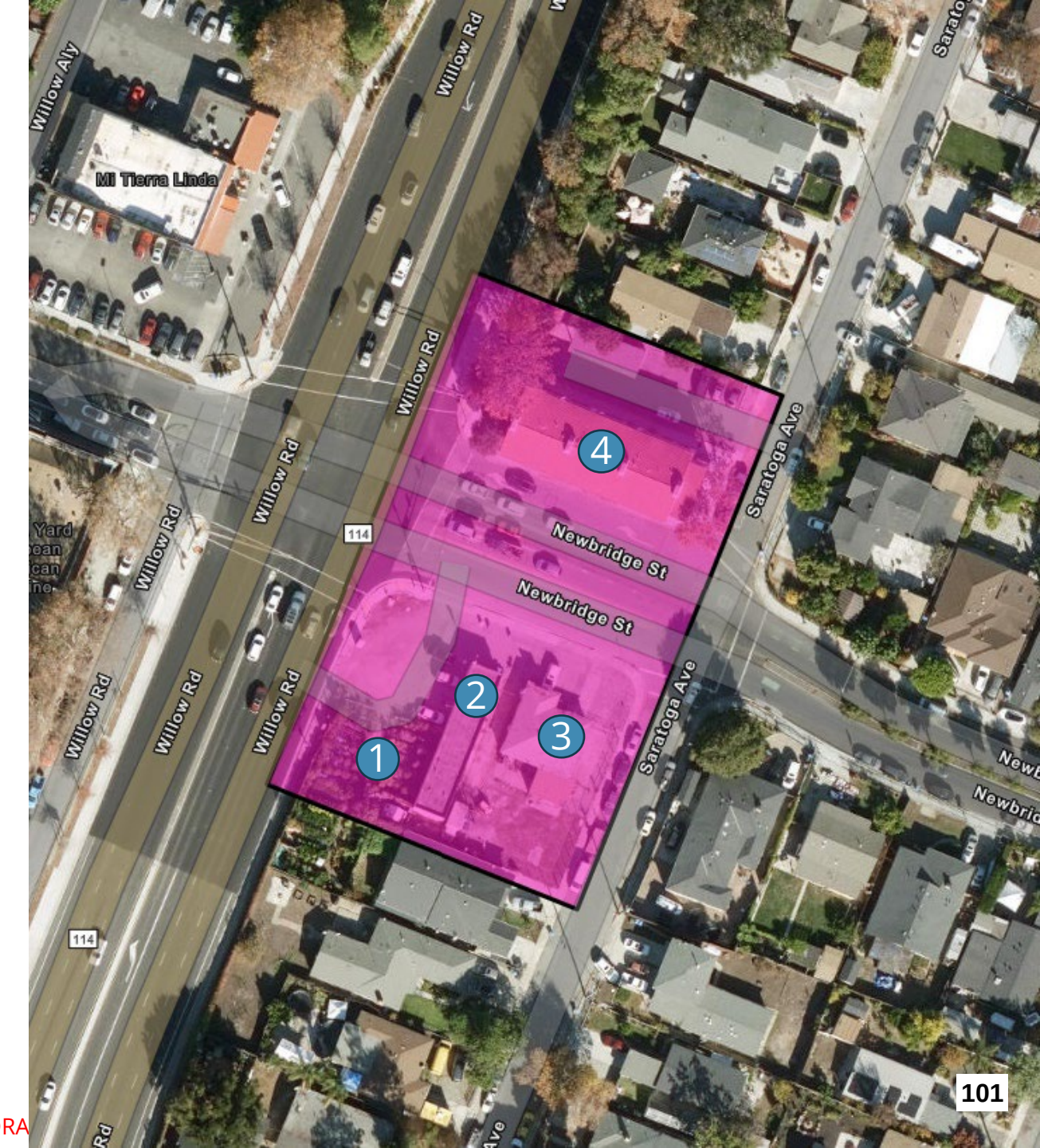


3 Elegancia Beauty Salon
- *922 Newbridge St*
- *0.16-acre parcel owned by Kibrom Berhane*



4 907 Newbridge St
- *Office building (tenants include legal services firm and a janitorial company)*
- *0.23-acre parcel owned by Karwash Mohammed*





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NC – MANHATTAN & O'CONNOR

Notable Existing Properties & Vacant Parcels

1 La Tiendita Market

- *510 O'Connor St*
- *0.23-acre parcel owned by Redus Woodland LLC*



2 LaunderLand EPA

- *1997 Manhattan Ave*
- *0.12-acre parcel owned by the Grace M. Chew Trust*

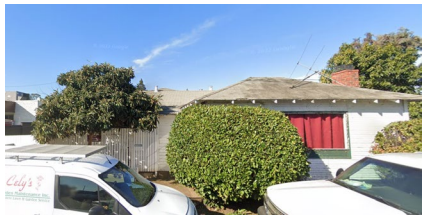




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NC – WEST BAYSHORE & NEWELL ROAD

Notable Existing Properties & Vacant Parcels



1 1750 W Bayshore Rd
- *0.15-acre parcel w/ single-family home*
- *Owned by the Toi Lung Young Trust*



2 7-Eleven
- *77 Newell Rd*
- *0.12-acre parcel owned by the Toi Lung Young Trust*



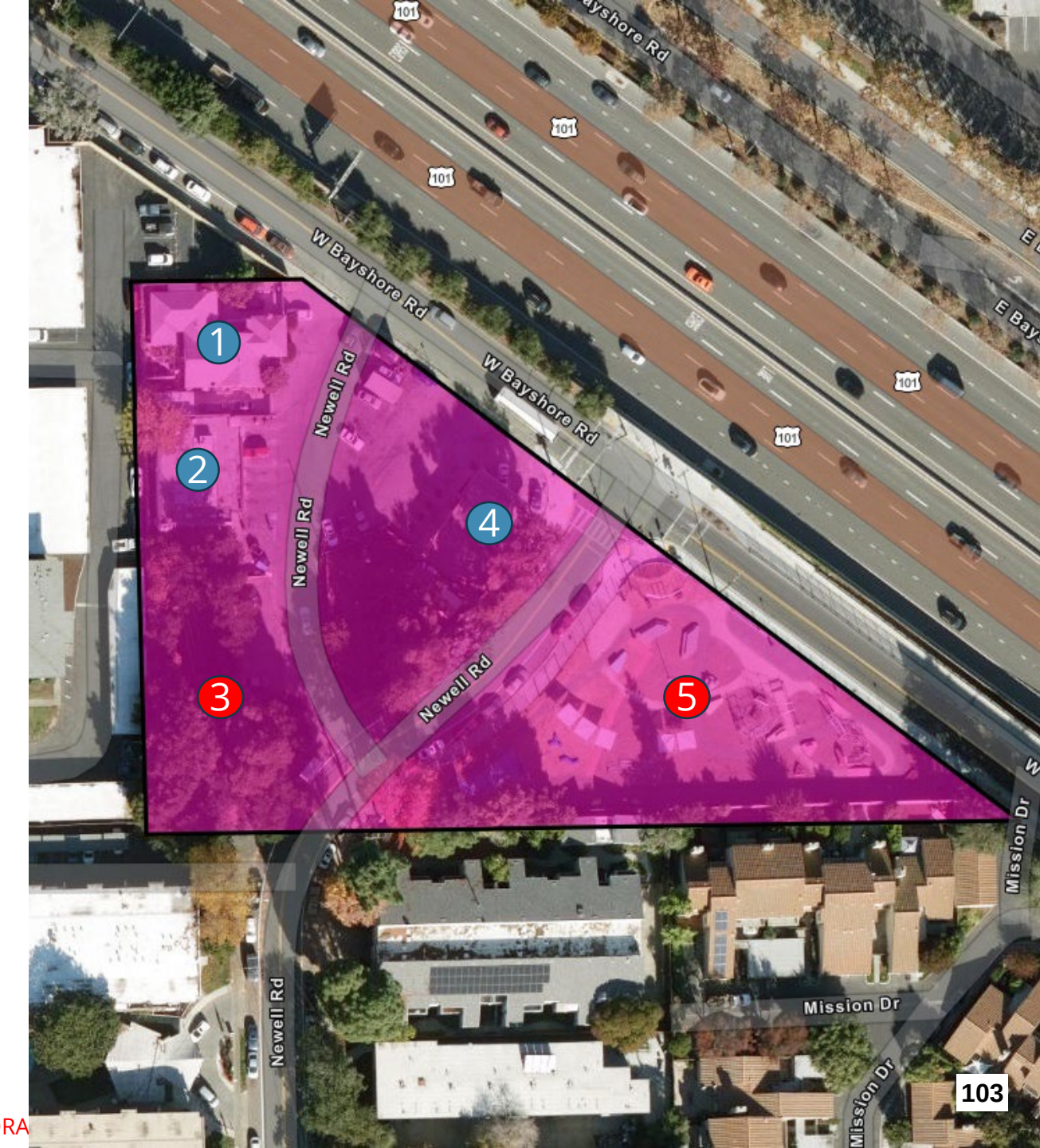
3 Parcel 063513730
- *Vacant 0.26-acre parcel used for parking*
- *Owned by the Toi Lung Young Trust*



4 Three Brothers Tacos
- *95 Newell Rd*
- *0.39-acre parcel owned by Fred Young Jr.*



5 Parcel 063515170
- *Vacant 0.63-acre parcel currently used for a pop park*
- *Owned by Gordon Young*



NC – EAST BAYSHORE & EUCLID

Notable Existing Properties & Vacant Parcels



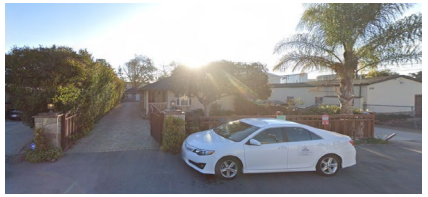
1 1489 E Bayshore Rd
- *Single-building with various retailers*
- *0.45-acre parcel owned by Sonsco LLC*



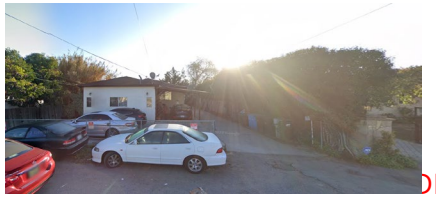
2 1475 E Bayshore Rd
- *Gated parking lot; listed as auto repair*
- *0.23-acre parcel owned by LR Land LLC*



3 2056 Glen Way
- *5+ unit apartment building built in 1960*
- *0.21-acre parcel owned by the Maude P. Hutchins Trust*



4 2070 Glen Way
- *Single-family home built in 1953*
- *0.18-acre parcel owned by an LLC*



5 2080 Glen Way
- *Duplex built in 1935*
- *0.19-acre parcel owned by Nofal Ali Abdallah*



EAST PALO ALTO SANITARY DISTRICT STAFF REPORT

DATE: July 15, 2025

TO: Honorable Members of the City of East Palo Alto City Council,
Governing Board to the East Palo Sanitary District, a Subsidiary of the City of East Palo Alto

VIA: Melvin E. Gaines, General Manager

BY: Humza Javed, District Engineer
Nancy Murguia, Management Analyst

SUBJECT: 2025 Sewer System Master Plan

Recommendation

Adopt a Resolution approving the 2025 Sanitary Sewer System Master Plan.

Alignment with City Council Strategic Plan

This recommendation is primarily aligned with:

- Public Infrastructure and Utilities

Background

On November 15, 2023, the San Mateo Local Agency Formation Commission (LAFCo) unanimously approved the City of East Palo Alto's application to designate the East Palo Alto Sanitary District (EPASD or "District") as a subsidiary district of the City. The reorganization took effect on October 1, 2024, when the City Council assumed governance of EPASD. EPASD remains a legally separate entity from the City, and its assets are kept distinct.

The City of East Palo Alto has a contract with Freyer & Laureta, Inc. (F&L) to provide engineering support services for EPASD, including development of a 2025 Sanitary Sewer System Master Plan (Master Plan). F&L has been working on the Master Plan since the beginning of this year, and they have provided progress updates on the Master Plan development at three previous EPASD Advisory Committee meetings.

At the June 25, 2025 EPASD advisory committee meeting, the Advisory Committee

recommended approval of the Master plan to the EPASD Board.

Additionally, the Planning Commission will review conformance of the projects in the Sewer System Master Plan with the City's General Plan at the July 14, 2025, Planning Commission meeting.

Analysis

The Master Plan is intended to provide the District with an overall plan for sanitary sewer infrastructure improvements over the next twenty (20) years to maintain sanitary sewer system reliability and support anticipated development within the City.

The scope of the Master Plan includes:

- Summarizing and describing the District's service area and existing sanitary sewer system.
- Assessing current and projected sanitary sewer demands, including identifying potential vulnerabilities to inflow and infiltration (I/I) during wet weather events.
- Establishing performance, operational, and reliability criteria for evaluating system capacity and identifying rehabilitation and replacement needs.
- Constructing, calibrating, and evaluating a new hydraulic model to assess the system's capacity to convey existing and future flows, including Average Dry Weather Flow (ADWF) and Peak Wet Weather Flow (PWWF), and identifying potential capital improvements.
- Preparing a comprehensive evaluation of the system's capacity, redundancy, resiliency, and rehabilitation and replacement needs over a 20-year planning horizon.
- Verifying the need, sizing, and prioritization of planned sanitary sewer system improvements.
- Developing a 20-year, risk-based Capital Improvement Program (CIP) that prioritizes existing capacity deficiencies and plans for future improvements based on system needs and risk of sanitary sewer overflows.
- Developing a preliminary cash flow analysis to support long-term financial planning and inform Board decision-making.

The Draft 2025 Master Plan is included as an attachment to this staff report.

Projects

As part of the Master Plan, projects were identified for the next 20 years. Projects are categorized as follows:

- Category 1 projects address existing capacity related deficiencies that represent the

highest priority projects.

- Category 2 projects address future development capacity related deficiencies and would be implemented as new development projects move through the City's Planning and Building approval processes.
- Category 3 projects are projects that address structural deficiencies and aging infrastructure with the highest priority projects to be addressed over a 20 year horizon with ongoing annual funding to eventually replace all of the sanitary sewer pipelines within the collection system.

Table 1 – Capital Projects

Category	Project	Opinion of Probable Project Cost
1	Existing Capacity Deficiency: Westside	$7.8 Million
1	Existing Capacity Deficiency: Eastside	$9.4 Million
2	Future Development Capacity Deficiency	$52.8 Million
3	Structural Deficiency (High Priority)	$7.7 Million

Notes

1) Category 1 projects are highest priority to address existing capacity deficiencies.
2) Category 2 projects will be grouped in phases dependent on new development building permit applications.
3) Category 3 high priority projects are those pipeline segments that were previously identified by Sierra West (EPASD's previous engineering consultant) that exhibit the worst structural conditions and can be implemented in phases. Following completion of high priority projects, the remaining pipeline segments (approximately 143,000 linear feet) will be replaced over a 20-year period.

Detailed project information is included on the project summary sheets in the SSMP.
Staff will provide a comprehensive presentation of the Master Plan during the July 15, 2025, Board meeting.

Fiscal Impact

There is no direct fiscal impact with the adoption of this plan. The EPASD Board will need to adopt a separate capital budget to proceed with the individual projects.

Public Notice

The public was provided notice by making the agenda and report available at the City's website and on a bulletin board located at City Hall: 2415 University Avenue, East Palo Alto.

Environmental

The action being considered by the City Council is exempt from the California Environmental Quality Act (CEQA) because it is not a "project" pursuant to 15378(b)(4) because it is a fiscal

activity which does not involve any commitment to any specific project which may result in a potentially significant impact on the environment.

Attachments

1. Resolution
    - Sewer System Master Plan Final Draft

RESOLUTION NO. XX – 2025

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF EAST PALO ALTO

APPROVING AND ADOPTING THE 2025 SEWER SYSTEM MASTER PLAN

WHEREAS, the purpose of the Sewer System Master Plan ("SSMP") is to assess and evaluate the City's existing sewer system facilities; and

WHEREAS, on October 1, 2024, the City Council assumed governance of the East Palo Alto Sanitary District (EPASD) and has contracted with Freyer & Laureta, Inc. (F&L) to provide engineering support services to EPASD, including development of a 2025 SSMP; and

WHEREAS, the SSMP is inclusive of the recommended Capital Improvement Projects (CIP), and currently includes a total of thirteen (13) projects with an estimated total cost of approximately $78 million slated for completion over the course of the next twenty years; and

WHEREAS, on June 25, 2025, the EPASD Advisory Committee recommended approval of the SSMP to the EPASD Board; and

WHEREAS, on July 14, 2025 the Planning Commission confirmed the conformity of the projects in the Sewer System Master Plan with the City's General Plan; and

WHEREAS, the 2025 Sewer System Master Plan has been completed and is formalized for the adoption of the EPASD Board.

NOW, THEREFORE, BE IT RESOLVED THAT THE CITY COUNCIL OF THE CITY OF EAST PALO ALTO HEREBY approve and adopt the 2025 Sewer System Master Plan.

PASSED AND ADOPTED this 15th day of July 2025**,** by the following vote:

AYES:

NOES:

ABSENT:

ABSTAIN:

Martha Barragan, Mayor

ATTEST: **APPROVED AS TO FORM:**

James Colin, City Clerk John D. Lê, City Attorney

June 20, 2025

East Palo Alto Sanitary District

Sewer System Master Plan



FINAL DRAFT

Prepared By

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Appendix F	Impact Fee Memorandum

ABBREVIATIONS

ADD	Average Day Demand
ADWF	Average Dry Weather Flow
CCTV	Closed Circuit Television
City	City of East Palo Alto
CIP	Capital Improvement Project
EDUs	Equivalent Dwelling Units
EPA	Environmental Protection Agency
EPASD	East Palo Alto Sanitary District
FAR	Floor Area Ratio
F&L	Freyer & Laureta, Inc.
ft	feet
FY	fiscal year
GIS	Geographical Information System
GPD	gallons per day
GPM	gallons per minute
HDPE	high density polyethylene
HGL	hydraulic grade line
I&I	Inflow and Infiltration
ISG	Individual Supply Guarantee
LAFco	Local Agency Formation Commission
LF	linear foot
MDD	maximum day demand
MGD	million gallons per day
O&M	Operation & Maintenance
OPPC	opinion of probable project cost
PDWF	Peak Dry Weather Flow
PWWF	Peak Wet Weather Flow
PHD	peak hour demand
PVC	polyvinyl chloride
RWQCP	Regional Water Quality Control Plant
SF	square feet
SRF	State Revolving Funds
SSOs	Sanitary Sewer Overflows
VCP	Vitrified Clay Pipe
WBSD	West Bay Sanitary District

ES EXECUTIVE SUMMARY

ES.1 Background and Introduction

The East Palo Alto Sanitation District (EPASD) was first established in 1939 in the southern corner of San Mateo County and borders Santa Clara County. Both the Cities of East Palo Alto portions of Menlo Park and are part of the EPASD's service area.

The purpose of this Master Plan was to re-establish the EPASD model in new software, provide an updated Capital Improvement Program (CIP) along with a rate and impact fee. This Master Plan is an update to EPASD's previously completed Master Plan in 2015 and its 2021 addendum.

ES.2 Land Uses

EPASD serves Cities of East Palo Alto and Menlo Park with a gravity-based sewer collection system covering approximately 1,230 acres (1.92 square miles) as shown in **Figure ES.1**. The system includes approximately 33 miles of sewer pipelines, primarily 6-inch vitrified clay pipes (VCP), with larger mains up to 30 inches in diameter. A major infrastructure component is the siphon under San Francisquito Creek, which was realigned in 2017 with two parallel 22-inch high-density polyethylene (HDPE) pipes. Downstream of the syphon, sewer system is conveyed to the Palo Alto Regional Water Quality Control Plant (RWQCP) for treatment.

EPASD operates and maintains the collection system in accordance with the requirements of the State Water Resources Control Board, as administered through the Statewide SSO Waste Discharge Requirements and RWQCB Sewer System Management Plan guidelines.

The City of East Palo Alto's 2035 General Plan, adopted in 2017, introduced land use changes to support balanced development across residential, commercial, and recreational uses. In 2024, the Ravenswood Specific Plan was adopted, which provided further refinement in the eastern portion of the city, enhancing details for mixed-use areas. These land use updates and other known developments were incorporated into system model. The land use maps are included in **Appendix A.**

ES.3 Sanitary Sewer Flow and System Analysis

Sewer flow estimates were derived using updated hydraulic modeling inputs, historic monitoring data, and land use assumptions. The methodology builds on the foundational work from the 2015 Master Plan and incorporates current Geographical Information System (GIS) data, flow monitoring studies, and zoning projections.

The flow projections for developments were calculated using a multi-step process based on billing records, zoning designations, and equivalent dwelling units (EDUs). Key elements of the process included:

- Estimating existing flows using 2019 billing data and a baseline of 200 gallons per EDU per day, consistent with WBSD practices.

- Projecting future flows using zoning densities and Floor Area Ratios (FAR) from the 2035 General Plan and Ravenswood Specific Plan.
- Based on 2011-2012 Sanitary Sewer Flow Monitoring Inflow/Infiltration Study by V&A Consulting (V&A Flow Monitoring), the peaking factors were applied to calculate peak wet weather flows (PWWF) from average dry weather flows (ADWF).

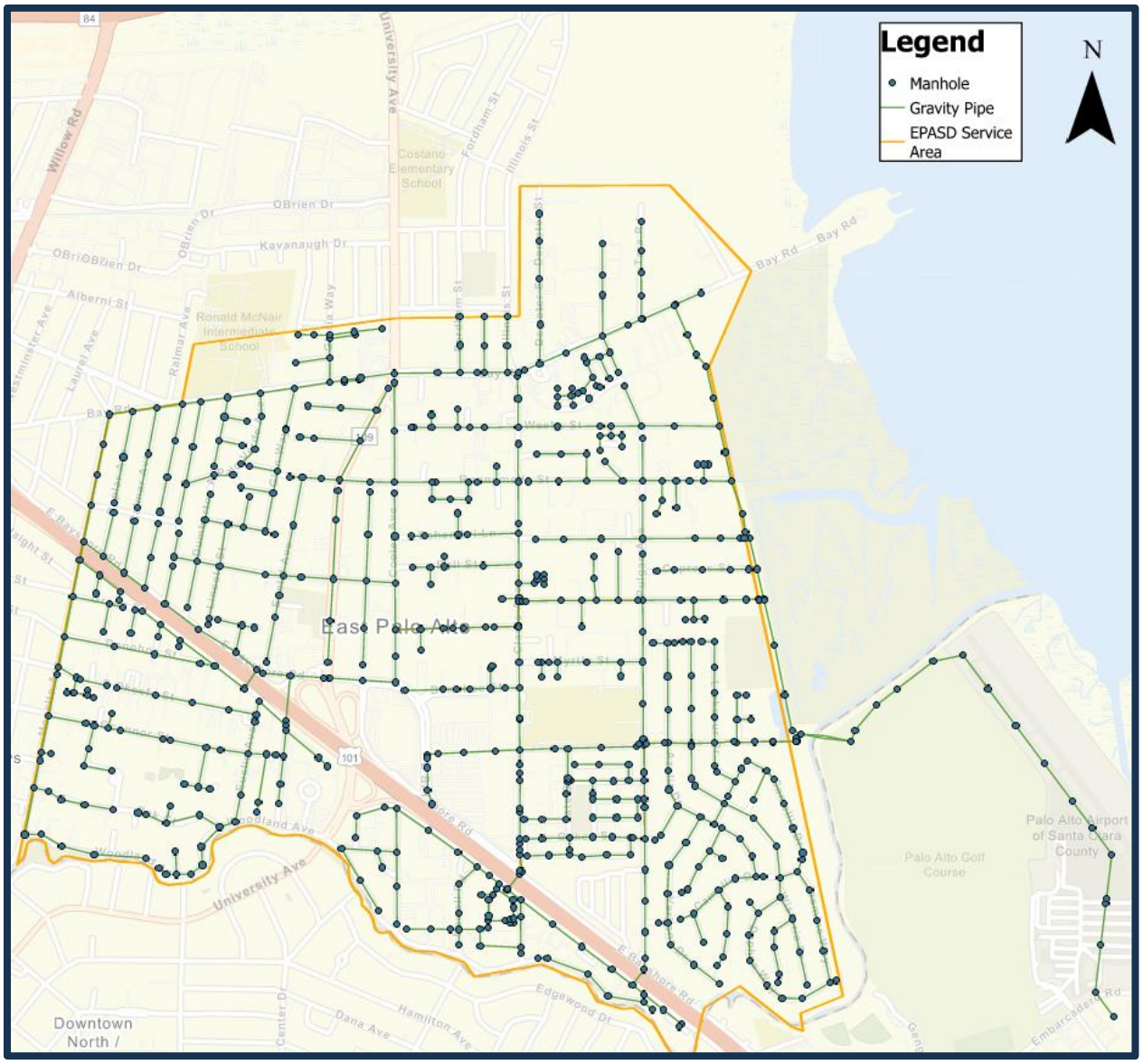


Figure ES.1 Existing Service Area

ES.4 Hydraulic Model Development

A hydraulic model was used to evaluate the current and future performance of the sewer system sewer system collection system. This model represents a tool used to support decision making for the ongoing improvement and maintenance of the system. The model incorporates physical and operational characteristics of the system and simulates key hydraulic parameters such as flow, velocity, depth, surcharge conditions, and hydraulic grade lines. The model was rebuilt from the outdated Hydra 7 platform to Bentley's SewerGEMS software. The new model was developed using EPASD's GIS database, archived field data, and updated infrastructure records. Validation against historical flow data confirmed the reliability of the SewerGEMS model, making it the analytical foundation for evaluating existing and future system capacity needs.

The three planning scenarios included the following:

- Scenario 1: 2025 Existing Conditions: The model was updated to reflect constructed developments and sewer improvements as of 2025. The projects included are Light Tree Apartments, University Plaza Phase 1, and 1950 Bay Road. The ADWF and PWWF were calculated and analyzed to assess the current system's capacity and identify deficiencies.
- Scenario 2: 2035 Conditions: Scenario 2 will be described as 2035 Conditions, which include the land use changes from the 2035 General Plan and Ravenswood Specific Plan.
- Scenario 3: 2035 Enhanced Conditions: Scenario 3 will be described as the 2035 Enhanced Conditions, which include the 2035 General Plan, Ravenswood Specific Plan, and Planned Developments. The planned developments include University Plaza Phase 2, Weeks Street Townhomes, and others.

This sanitary sewer system's performance was evaluated under wet weather conditions using a 10-year, 24-hour design storm, as defined by NOAA, to assess system capacity and predict sanitary sewer overflows (SSOs).

The 2025 Master Plan revises previous pipeline design criteria, replacing the depth-to-diameter (d/D) ratio with a freeboard-based standard. Under this updated criterion, all new or replacement pipelines are required to maintain a minimum of four feet of freeboard under design storm conditions. In instances where the pipe depth is less than four feet and the freeboard criterion cannot be applied, the system must demonstrate that no SSOs will occur under modeled conditions.

ES.5 Hydraulic Capacity Analysis Results

Hydraulic modeling was conducted for the three scenarios providing key insights into the current and future performance of the EPASD's sanitary sewer system (**Figures 5.1, 5.2,** and **5.3**). Based on the expected surcharge in current and future conditions, current and future capacity improvements are needed to accommodate peak wet weather flows.

Major observations within the model include:

- Modeled 2025 current conditions do not predict SSOs and surcharging exists in some areas exceeding the design criteria.
- Modeled 2035 Conditions and 2035 Enhanced Conditions experience SSOs with surcharging in some areas exceeding the design criteria.
- There are both existing customer and developer-related capacity improvements required
- The system has hydraulic limitations due to relatively flat existing topography, pipe slopes, and the absence of pump stations.
- Low flow velocities under both current and future dry weather conditions do not exceed 2 ft/s, which will require ongoing maintenance and monitoring.

ES.6 Pipeline Capacity and Condition Assessment

The recommended improvements for the sanitary sewer system have been grouped into four priority-based categories. These categories address both existing and future deficiencies related to hydraulic capacity, structural condition, and system longevity. A summary of each category is provided below, and results are provided in **Table ES.1** and mapping of categories 1-3 are presented in (**Figure 6.1** through **6.5**).

TABLE ES.1 PIPELINE CAPACITY AND CONDITION ASSESSMENT

Category	Description	Length (LF)	Running Total (LF)	Running Percentage of Total System[1]
1	Existing Hydraulic Deficiencies	7,285	7,285	4.2%
2	Future Hydraulic Deficiencies[2]	13,848	21,133	12.2%
3A	Structural Deficiencies	9,796	30,929	17.8%
3B	Remaining System nearing end of useful service life	142,928	173,857	100%

1. Total Pipe in System is 173,857 LF.
2, Excludes pipelines where developers and existing customers share responsibility.
Highlights: Category 1 and 3A deficiencies are grouped with the duties of current customers to fund improvements. Category 2 Improvements are developer related improvements. Category 3B lines represent ongoing maintenance needs by all customers.

ES.7 Capital Improvement Program

The CIP was developed based on the deficiency category classifications. Categories 1 and 3A represent the most urgent needs due to existing hydraulic and structural deficiencies. Category 2 projects address future capacity needs related to anticipated development and should be reviewed regularly in coordination with the EPASD as growth occurs. Where practical, structurally deficient pipes from Category 3A were incorporated into Category 1 or 2 projects to maximize efficiency and reduce construction overlap.

The CIP projects are broken down by Category, a summary can be seen in **Table ES.2**. Additional detail is found in **Tables 7.1** through **7.5** mapped out in **Figures 7.1** through **7.4**. A breakdown of each CIP project is found in **Appendix E**.

The project estimates should be evaluated alongside other infrastructure capital planning efforts within the City.

TABLE ES.2 CIP PROJECT SUMMARY

Category	Number of Projects	Pipe Replacement (LF)	OPPC ($)
1	2[1]	7,501	$17,357,000
2	7[1, 2]	17,000	$52,799,000
3A	4	6,429	$7,288,000

1. Portions of the project contain other category pipes to maximize construction efficiency. Work should be performed over the next 4 years funded by reserves and sewer service charges.
2. Principally developer-related projects.
3. The remaining portion of the sewer system 74% for existing VCP is suggested to be replaced over a 25-year period based on available funds. The OPPC for the remaining aging infrastructure will be approximately $4.3M/yr (6,000LF/yr), with an overall total of $107M. It is important to note that this cost is based on slip lining repair and partial replacement only.

ES.8 Rate and Impact Fee Study

As part of the EPASD's Master Plan update, a sewer service charge has been developed to support funding maintenance of the existing system. This rate is presently set at $660, and the addition of an annual increase of 5% be applied to the fund the extensive deferred maintenance in the system. Secondly, a revised impact fee has been developed to reflect newly identified CIP projects and current system capacity conditions. The proposed impact fee is $7,800 per EDU plus an annual 5% escalation, reduced from the previous fee of $10,621. The cost includes:

- Developer's Share of Capacity Assurance: 25 percent of the costs are associated with existing capacity assurance improvements that will benefit future developments.
- Developer's Improvement: 100 percent of the costs related to future capacity deficiencies based on new development demands.
- Buy-In Treatment Cost: A buy-in cost of $5 million per 1.0 million gallons per day (MGD) of treatment capacity.

1 Background and Introduction

1.1 Background and Project Objectives

The East Palo Alto Sanitary District (EPASD) was established in 1939 in response to the growing development in the East Palo Alto area. It was created under the Sanitary District Act of 1923 (Health and Safety Code Section 6400 et seq.), which allowed for the formation of special districts to provide sewer system collection and treatment services. Initially, the district's sewer lines were built as part of a Works Progress Administration (WPA) project during the New Deal era. Construction of these facilities began after a treatment agreement was reached with the City of Palo Alto in 1940, and EPASD's infrastructure was officially operational on September 8, 1942.

EPASD serves a portion of the cities of East Palo Alto and Menlo Park, in San Mateo County, and its sewer system collection system directs sewage to the Palo Alto Regional Water Quality Control Plant for treatment. The district historically operated as an independent special district, meaning it is governed separately from city governments. A five-member elected Board of Directors oversees its policies, while employees carry out daily operations.

As of October 1, 2024, EPASD became a subsidiary district of the City of East Palo Alto (City). The establishment of EPASD as a subsidiary district to the City was approved by the San Mateo Local Agency Formation Commission (LAFCo) on November 23, 2023, and finalized on September 16, 2024. LAFCo's approval of the subsidiary district recognized the need for improved transparency in EPASD governance and sustainable and efficient operation of EPASD.

The EPASD system includes the operation and maintenance of over 33 miles of sewer pipelines, ensuring sewer system collection for thousands of residents in its service area. As a subsidiary district of the City, EPASD will continue to operate with the City Council as the Board of Directors and the City Manager as General Manager. The City has contracted with West Bay Sanitary District (WBSD) for the day-to-day operations of EPASD.

The previous EPASD Sewer Master Plan, completed in 2015 and updated via addendum in 2021, now requires a full update. As EPASD is currently a subsidiary district, the City is initiating a new Sewer Master Plan to support a comprehensive Capital Improvement Program (CIP), including a timeline for implementation. The Master Plan update will:

- Identify areas of needed improvement within the existing sewer system as of 2025.
- Determine capacity upgrades required to serve future growth based on 2035 General Plan, the Ravenswood Specific Plan, and approved redevelopment projects.
- Confirm pipeline renewal and replacement identified by EPASD's prior condition assessment program.
- Develop potential CIP alternatives, including conceptual opinions of probable project cost and implementation timelines.

1.2 Summary of Existing Information

Existing documentation and data sources were thoroughly reviewed to support the development of the 2025 Master Plan. The reviewed materials provided critical background information and informed the development of key technical assumptions that served as the foundation for hydraulic modeling, capacity analysis, and the formulation of proposed capital improvement and operations plans.

Prior Studies, Documents, and Data

- EPASD Masterplan Update (March 2015)
- EPASD Masterplan Addendum (April 2021)
- 2011-2012 Sanitary Sewer Flow Monitoring Inflow/Infiltration Study by V&A (June 2012)
- Vista 2035 East Palo Alto General Plan (October 2016)
- Ravenswood Business District/Four Corners Specific Plan (November 2024)
- Ravenswood/Four Corners Specific Plan Update SEIR – Appendix G Utility Impact Study (June 2024)
- Sanitary Sewer Capital Improvement and Operation Plan Development Memorandum by F&L (November 2022)
- CCTV Survey Results Evaluation and Pipeline Replacement Priorities Area 2, Trunk Line, and All Areas by Sierra West (October 2023)
- Project Completion Report Areas 1, 2, 3, 4, and Trunkline Sanitary Sewer Pipeline Closed Circuit Television Inspection Project by Sierra West (March 2023)
- 2020 Urban Water Management Plan for City of East Palo Alto by EKI Environment & Water (June 2021)
- Records Review – Completed Construction Projects
    - Sewer Trunkline Realignment (2016 CIP)
    - Sanitary Sewer Replacement Project (2023 CIP)
    - Pulgas Ave – Mixed Use Project (2014 Private Improvements)
    - Light Tree Sanitary Sewer Replacement Project (2021 Private Improvements)
- Plan Review – Projects
    - 2120-2160 Euclid Ave (Mixed Use)
    - 2012-2043 Euclid Ave - Woodland Park Development (Housing)
    - 965 Weeks St - Colibri Commons (Housing)
    - 1804 Bay Road Development (Housing)
    - 2535 Pulgas Ave Development (Office)

2 Land Uses

Section 2 summarizes EPASD's existing sewer system system, service area, and land use conditions. The information was compiled through a review of previous studies, available documents, and data provided by EPASD.

2.1 Existing Sewer System

EPASD provides sewer system collection service to portions of the communities of Menlo Park and East Palo Alto, located in San Mateo County, within the San Francisco Bay Area. EPASD's service area is primarily residential with a few commercial and industrial parcels.

As shown in **Figure 2.1,** EPASD service area encompasses nearly 1,230 acres or 1.92 square miles. The collection system operates as a gravity sewer network, with approximately 61% of the existing pipelines consisting of 6-inch diameter lines. Larger collector lines range between 8-inch to 30-inches in diameter. The system includes a siphon beneath the San Francisquito Creek, which was realigned in 2017 with two parallel 22-inch high-density polyethylene (HDPE) pipes.

EPASD's sewer system collection system consists of approximately 33 miles of gravity sewer pipelines. Historically, manholes were constructed using brick and mortar, and pipelines were constructed with vitrified clay pipe (VCP).

EPASD operates and maintains the collection system in accordance with the State Water Resources Control Board, under the Statewide SSO Waste Discharge Requirements and the RWQCB Sewer System Management Plan guidelines. The collected sewer system is conveyed to the Palo Alto RWQCP for treatment and ultimate discharge to the San Francisco Bay.

All known SSOs that have been reported were due to maintenance issues. WBSD is currently conducting ongoing system maintenance and inspection efforts.

2.2 Population Served & Land Use Characteristics

As a part of the 2015 Masterplan, land use information was compiled from multiple sources for the communities served by EPASD. The following data sources were used to characterize the population and land use within the service area:

- Land Use Database – Existing land use data in Geographical Information System (GIS)
- General Plan Information – Additional land use data provided by the City
- Aerial Photographs – Reviewed to identify parcels and land use characteristics within the service area.

In 2017, the City adopted the 2035 General Plan, which outlines the City's vision for development and growth throughout the year 2035. The General plan includes a series of land use changes to balance the residential, commercial, and recreational spaces throughout the city.

The key changes within the 2035 General Plan include:

- Land use modifications occurred along University Avenue between Bay Road and Donohoe Street, as well as around the existing Target shopping center.
- Residential zoning changes within the Ravenswood Business District were modified from low-density and commercial to high-density along Maple Street.
- University Avenue west of Highway 101 include changes from commercial to office, mixed-use, and medium-density residential.

In 2024, the City adopted the Ravenswood Plan, which is the eastern portion of the city. The plan builds on the 2035 General Plan by providing a more detailed framework for future land use developments for the mixed-use areas within Ravenswood.

The land use changes in both the 2035 General Plan and Ravenswood Plan were incorporated into the 2025 Master Plan and the hydraulic model to reflect the anticipated future flows. The land use changes in both these plans are provided in **Appendix A.**

2.3 Existing Collection System Facilities

Since the completion of the 2015 Masterplan, EPASD has implemented several CIP projects to upgrade the existing sewer system. The upgrades to the system involve replacing the aging infrastructure with improved materials for both manholes and pipes. All new manholes were constructed with precast concrete, and new pipes were constructed with plastic pipe such as polyvinyl chloride (PVC) or HDPE.

The sewer system improvements completed since the 2021 Master Plan Addendum are illustrated in **Figure 2.2**. The improvements include 6,688 linear feet (LF) of newly installed sewer pipe.

The following is a summary list of the scope of work and highlight the improvements implemented across the two different projects.

1. Light Tree (2021)

   As part of a private development project in 2021, the sewer infrastructure was improved on O'Connor Street, Pulgas Avenue, and Clarke Avenue. The project improvements included:

   - Installing 9 new manholes.
   - Reconstructing 1 manhole.
   - Installed or replaced:
     - 132 LF of 6-inch PVC.
     - 76 LF of 10-inch PVC.
     - 297 LF of 12-inch PVC.
     - 1,310 LF of 16-inch PVC.
     - 1,149 LF of 18-inch PVC.

2. Sanitary Sewer Replacement Project (2023)

As a part of the 2023 CIP project, multiple areas of EPASD sewer system were replaced/repaired. The projects occurred along Beech Street, Clarke Ave, Green Street, and O'Connor Street. The improvements included:

- Installing 7 new manholes.
- Rehabilitating 21 manholes.
- Installing or replacing:
    - 764 LF of 30-inch PVC.
    - 1,021 LF of 24-inch PVC.
    - 1,323 LF of 20-inch PVC.
    - 395 LF of 14-inch PVC.
    - 486 LF of 18-inch PVC.

3 Sanitary Sewer Flow Analysis

Section 3 summarizes the background and methodology used to determine existing and future dry weather sewer system flows for input to EPASD's collection system hydraulic model.

3.1 Infiltration and Inflow

V&A Flow Monitoring Report included a sanitary sewer flow monitoring inflow/infiltration (I&I) study in 2011-2012 for East Palo Alto. The study separated the service area into different flow monitoring sites, and the results were used to identify the average dry weather flow, peak dry weather flow, and peak wet weather flow. The flow monitoring locations are shown in **Figure 3.1** with areas in **Table 3.1**. The peaking factor results from the study are provided in **Table 3.2.**

3.2 Calculation of Flows

The V&A Flow Monitoring Report provided the data used to calculate sewer system flows for EPASD's existing hydraulic system. Based on three scenarios described later in later in this report, the following method was used to calculate the estimated additional sanitary sewer flows for each parcel. The calculated injection flows were inserted into the recalibrated 2014 Sewer Map in SewerGEMs that is further described in Section 4.

The calculation of flow injections uses a similar process as described in the 2021 Master Plan. As EPASD does not monitor flows from each individual parcel, a multiple-step process was followed to calculate the incremental additional flow by parcel. The major steps taken to estimate incremental additional flow by parcel are as follows:

1. Existing flow from each parcel was estimated and key aspects included:
    a. The 2019 Tax Year Billing Charges were reviewed to identify the individual parcel billings.
    b. Based on the individual billings, the Equivalent Dwelling Units (EDU) were calculated by dividing the parcel bill by $575 per EDU.
    c. The calculated number of EDUs by parcel was then multiplied by 200 gallons per EDU to estimate the existing sanitary sewer flow from each parcel. This represents an update and decrease in flow per EDU, previously established at 240 gallons per EDU. This new value is in line with modern plumbing standards, other local water districts, and use of more water efficient products and landscaping trends.
2. Total flow from each parcel based on the 2035 General Plan and Ravenswood Plan's revised zoning was then estimated:
    a. The Maximum and Minimum Allowable Density and Floor to Area (FAR) ratio for each zoning category was identified in the 2035 General Plan and Ravenswood Plan. The land use characteristics for these calculations are included in **Appendix A**.

b. Using 50-percent of the range between maximum and minimum allowable density and FAR for each parcel, the estimated total sanitary sewer flow for non-residential was calculated using the unit flow rates from *East Palo Alto Sanitary District Standard Specifications for Design and Construction of Sanitary Collection and Conveyance Facilities* (Standard Specifications) report dated June 2002.

3. Lastly, total additional flow by parcel for both Average Dry Weather Flow (ADWF) and Peak Wet Weather Flow (PWWF) was calculated:
    a. ADWF for existing conditions presented is subtracted from ADWF for future zoning changes based on each scenario.
    b. PWWF was calculated by multiplying the ADWF for each parcel by the Sewer Basin PWWF Peaking Factor from **Table 3.2**. As there are no current-day studies for the I&I in the system, the peaking factor results from the V&A study were used to calculate the future PWWF flows.

3.3 Water Supply Service

As part of the verification of the predicted sewer model, F&L evaluated current drinking water imports into the service area. The City of EPA water supply is sourced from two primary channels: purchased water from San Francisco Public Utilities Commission (SFPUC) or groundwater extracted from wet wells. According to EPA's Supply Assurance, SFPUC is required to provide an Individual Supply Guarantee (ISG) of 3.46 MGD of drinking water to the City. As detailed in **Section 4.3**, the projected 2035 Enhanced ADWF sewer flow for the future buildout is approximately 3.3 MGD. This indicates that the anticipated water supply exceeds the projected sewer demand, demonstrating sufficiency in meeting future needs.

3.4 Sewer System Treatment Capacity.

The Palo Alto Regional Water Quality Control Plant (RWQCP) records the total sewer system flow for EPASD and neighboring cities. The RWQCP is permitted to treat an average dry weather flow of 39 MGD. EPASD has an agreement with the RWQCP, where EPASD's average annual flow capacity treatment allotment is 3.06 MGD, 7.64% of the RWQCP's total capacity.

4 Hydraulic Model Development

Section 4 summarizes assumptions, items considered during model development and calibration, and key components of the completed hydraulic model. The hydraulic model was used to perform different scenarios to assess the impacts of future developments, land use changes, and any system configuration changes.

4.1 Model Components

The hydraulic model transforms information about the physical and operational characteristics of the sewer system into a mathematical model. The modeling results provide information on flows, flow depth, velocity, surcharge, and the hydraulic grade line, which were used to analyze system performance and identify system deficiencies. The model results were used to verify the adequacy of recommended or proposed system improvements.

The hydraulic model comprises a skeletonized network of nodes and conduits, which define the physical properties within EPASD's system. The following descriptions provide information on elements used in the development of the hydraulic model.

- Nodes: Nodes represent manholes and lamp holes. All flows added into the model are attached to node structures. The data required for node structures include pipe invert elevation, manhole rim elevation, and manhole diameter.
- Conduits: Conduits represent pipes that convey sewer system from one point in the system to another. The conduits include gravity pipes and siphons. The physical data for gravity pipes include pipe invert elevation, size, length, and friction factor.

4.2 Model Calibration

The 2025 Master Plan was constructed using EPASD's GIS sewer system collection system, which includes information on the pipe material, pipe invert elevation, manhole rim elevations, pipe diameter, and pipe length. The GIS model was inserted into SewerGEMs.

As the previous sewer model developed using Hydra 7 software is outdated and no longer supported, the City approved transition to a modern platform that is better integrated with GIS. F&L rebuilt the EPASD sewer system model using SewerGEMS software using archived GIS data, databases, and field data, with a detailed ArcGIS sewer map being used as the foundation. SewerGEMS model results aligned with historical data, predicting flows, hydraulic grade lines, and surcharge locations. As the SewerGEMs model was validated, it serves as the basis for assessing system performance under current 2025 conditions and the 2035 future conditions to support updates to EPASD's Master Plan. A detailed description of the methodology and results is provided in **Appendix B**.

4.3 Model Scenarios

Scenario 1: 2025 Conditions

The first step in analyzing the system was to update the GIS Sewer Map to reflect the current conditions of 2025. The map was updated for all sewer improvements found during the records review. The sewer system flows from the known developments built to date were calculated using the method discussed in **Section 3.2**. The known developments shown in **Figure 4.1** include:

- 2485 Pulgas Avenue (Private Improvements)
- Light Tree Apartments
- Mid-Pen Housing (965 Weeks)
- University Plaza Phase 1
- 1950 Bay Road

The additional ADWF and PWWF by parcel are summarized in **Table 4.1**, with the total additional ADWF and PWWF presented at the bottom of the table. The additional ADWF is 92,574 GPD and the PWWF is 139,893 GPD. The total sewer flows for 2025 for ADWF is 1,586,080 GPD and PWWF is 5,880,153 GPD. The results from the 2025 conditions are used to assess any existing sewer capacity issues before additional development occurs within the EPASD boundaries. A detailed breakdown of the flow calculations is provided in **Appendix C**.

Scenario 2: 2035 Conditions

The next step in analyzing the system was to understand the capacity improvements that would be needed to serve new development based on the potential impact of the land use changes. The future conditions are described as the 2035 Conditions, which includes land use changes from the 2035 General Plan and Ravenswood Specific Plan.

Figure 4.2 shows the locations for the 2035 future flows to be injected into the model. The additional ADWF and PWWF by parcel are summarized in **Table 4.2**, with the total additional ADWF and PWWF presented at the bottom of the table. The additional ADWF is 1,472,639 GPD and the PWWF is 2,322,519 GPD. The total sewer flows for 2035 for ADWF is 2,966,145 GPD and for PWWF is 8,062,778 GPD.

A detailed breakdown of the flow calculations is provided in **Appendix C**.

Scenario 3: Enhanced Conditions

Once the additional flow based on the potential land use changes were inserted into the model, the next step was to update and analyze the system using known planned developments that were approved or in review by EPASD. The scenario represents the maximum buildout potential and is described as 2035 Enhanced Conditions, which include the 2035 General Plan, Ravenswood Specific Plan, and Planned Developments. The flows in these areas were recalculated based on the known and approved developments. The known developments shown in **Figure 4.3** include:

- University Plaza Phase 2
- 2331 University Avenue
- Weeks Street Townhomes
- 2519 Pulgas Avenue
- 2535 Pulgas Avenue
- 1675 Bay Road
- 2001 Manhattan
- 2101 Runnymede

The additional ADWF and PWWF by parcel are summarized in **Table 4.3**, with the total additional ADWF and PWWF presented at the bottom of the table. The additional ADWF is 1,846,104 GPD and the PWWF is 2,903,896 GPD. The total sewer flows for 2035 for ADWF are 3,339,610 GPD and PWWF are 8,644,156 GPD. A detailed breakdown of the flow calculations is provided in **Appendix C**.

The projected ADWF under Scenario 2 and Scenario 3 is approximately 3.0 MGD and 3.3 MGD, respectively. These projections are consistent with the cumulative flow estimates presented in the *Ravenswood/Four Corners Specific Plan Update SEIR – Appendix G Utility Impact Study* (Utility Impact Study) prepared by Schaaf & Wheeler. The projected future cumulative demands—ranging from 3.0 to 3.3 MGD—fall within the Utility Impact Study's estimated cumulative flow range of 3.13 to 3.33 million gallons per day (MGD).

As described earlier, EPASD's allocated dry weather treatment capacity at the RWQCP is 3.06 MGD. Although the projected cumulative flows slightly exceed this capacity, the planned capital improvements are expected to reduce I&I, thereby potentially mitigating peak flow impacts.

In order to ensure sufficient long-term treatment capacity, it is recommended that EPASD:

- Reestablish a collection system flow monitoring program similar to the sites presented in **Table 3.1** and **Figure 3.1**. Continue monitoring system flows at the treatment plant as new development occurs.
- Reassess the effectiveness of I&I reduction measures following project implementation.

These actions will align system performance with treatment capacity limits and support EPASD's planning and regulatory compliance goals.

5 System Capacity Analysis

Section 5 evaluates EPASD's sewer system collection system capacity constraints under flow conditions projected during EPASD's design storm. This section summarizes the planning and capacity criteria, identifies predicted capacity limitations, and defines the methodology used to recommend appropriate solutions and strategies to address the identified issues.

5.1 Design Storm Criteria

Design storms are simulated rainfall events used to evaluate collection system capacity under wet weather flow conditions. A specific recurrence interval and rainfall duration define each design storm. EPASD's goal is to identify predicted SSOs that occur during the 10-year, 24-hour design storm.

The master plan evaluates the ability of the system to convey flows with surcharging under the selected design storm scenario. EPASD has selected as its design storm a rainfall event of 10-year recurrence intervals and 24-hour duration (10-year, 24-hour storm), as defined by the NOAA rainfall atlas.

5.2 Pipeline Hydraulic Capacity Criteria

Hydraulic capacity assessments were conducted to establish standards for identifying when pipes exceed EPASD's acceptable surcharge limits. Under these criteria, a pipe may be considered theoretically capacity-deficient when, during PWWF conditions associated with the design storm, the water level or hydraulic grade line (HGL) rises above the top of the pipe.

While such conditions may not always result in an overflow, they indicate a potential deficiency in the pipe capacity. Exceptions to this criterion are made for siphons, which are designed to operate under surcharge conditions. All identified capacity-deficient pipelines are recommended for phased replacement, as outlined in Chapter 9, Capital Improvement Program.

In the 2015 Master Plan, pipeline capacity under projected development impacts was evaluated using the depth-to-diameter (d/D) ratio under peak dry weather flow (PDWF). This metric helped determine capital improvements needed to restore or maintain acceptable d/D values across the system. The 2025 Master Plan adopts a revised capacity deficiency criterion. The d/D method was replaced because it does not consider the effects of system aging, velocities, maintenance challenges, or non-uniform flow conditions.

In place, the revised criteria applies a freeboard-based standard that requires all pipes and manholes to maintain a minimum four-foot freeboard under design storm conditions. In areas where pipe depth is less than four feet and the freeboard criterion cannot be applied, an alternative criterion is used that no SSOs should occur under the modeled conditions.

5.3 System Capacity Deficiencies

To assess existing and future performance of EPASD's sewer system, hydraulic modeling was conducted for three planning scenarios: 2025 Existing Conditions, 2035 Base Conditions, and 2035 Enhanced Conditions. These scenarios incorporated projected PWWF and were used to identify system deficiencies and capacity limitations.

- Scenario 1: 2025 Conditions

The 2025 Conditions were first analyzed in the model to understand the existing system deficiencies. The PWWF discussed in Section 4.3 was add to the model. The results indicated no SSOs at any manholes; however, approximately 42,600 LF of pipeline were predicted to surcharge with less than four feet of freeboard. The results from the model are shown in **Figure 5.1** and model results are provided in Appendix D.

- Scenario 2: 2035 Conditions

The next scenario that was analyzed in the model was 2035 Conditions. The PWWF flows discussed in Section 4.3 was added to the model. Under this scenario, SSOs were predicted at 22 manholes and approximately 97,600 LF of pipe segments were identified as surcharging with less than four feet of freeboard. The results from the model are shown in **Figure 5.2** and model results are provided in Appendix D.

- Scenario 3: 2035 Enhanced Conditions

The final scenario evaluated incorporates 2035 Enhanced conditions, which account for planned developments and increased flow projections outlined in Section 4.3. The model predicted SSOs at 22 manholes with approximately 102,900 LF of surcharged pipe segments that do not provide four feet of freeboard. The results from the model are shown in **Figure 5.3** and model results are provided in **Appendix D**.

6 Collection System Assessment

The purpose of this section is to present an evaluation of the pipeline condition based on capacity and structural deficiencies throughout the collection system. Based on hydraulic modeling and condition assessment data, a set of recommended strategies has been developed to address identified system deficiencies. These recommendations are categorized into four groups based on the type of deficiency, each addressed in a dedicated subsection:

- Category 1: Existing Pipe Capacity Deficiencies
- Category 2: Future Pipe Capacity Deficiencies
- Category 3A: Pipe Structural Deficiencies
- Category 3B: Remaining Pipe in the Sewer System

6.1 Category 1: Existing Pipe Capacity Deficiencies

Category 1 addresses current hydraulic capacity deficiencies that exist under present-day flow conditions. As described in **Section 5**, the hydraulic modeling identified segments that fail to meet the minimum four-foot freeboard criteria for surcharging under PWWF.

To address the current deficiencies within the system, approximately 7,285 LF of pipe will require upsizing. The improvements not only improve deficiencies within the pipeline section itself but also reduce the HGL on upstream lines. The overall benefit of improving only 7,285 LF of pipe will bring approximately 21,058 LF of pipeline in compliance with the design criteria. Although there are remaining pipes that do not meet the design criteria, the pipes do not cause any concern of SSOs within the system.

The Category 1 projects will provide the hydraulic capacity and improve the operations of the present-day system. **Figure 6.1** illustrates the locations and proposed diameter increases for each of the deficient pipes. **Table 6.1** lists all the pipe segments identified and the proposed size.

6.2 Category 2: Future Pipe Capacity Deficiencies

Category 2 focuses on addressing projected capacity constraints driven by future growth and development. The analysis was conducted using the 2035 Enhanced scenario, which incorporates flows from planned and approved development flows.

Category 2 projects will provide hydraulic capacity for approximately 13,848 LF of pipe must be upsized under PPWF. **Figure 6.2** illustrates the locations, and proposed diameter increases for each of the deficient pipes. **Table 6.2** lists all the pipe segments identified and the proposed size.

6.3 Category 3A: Existing Pipe Structural Deficiencies

Category 3A addresses the physical structural defects in the system identified through closed-circuit television (CCTV). Structural deterioration, such as cracking, deformation, joint separation, and root intrusion, can lead to failures within the system and affect the operations. The pipes within this

category were identified within the *CCTV Survey Results Evaluation and Pipeline Replacement Priorities Area 2, Trunk Line, and All Areas* by Sierra West as high-priority pipes to be replaced.

WBSD is currently performing ongoing sewer system maintenance assessments through cleaning and CCTV inspections. As of the date of this report, approximately three miles of pipe have been assessed. Once WBSD field investigation is completed, the proposed improvements should be evaluated for inclusion in the annual improvement budget for aging infrastructure.

Category 3A projects will provide improved resilience for approximately 9,796 LF of pipe was identified as structurally deficient and prioritized for replacement. **Figure 6.3** illustrates the location of the high-priority structural, same size replacement segments. **Table 6.3** lists all the pipe segments identified and the proposed size.

However, approximately 5,166 LF of pipes overlap with either Category 1 or Category 2 for hydraulic capacity. **Figure 6.4** illustrates the location of the pipes with both a high-priority structural deficiency and hydraulic capacity deficiency for improvements.

6.4 Category 3B: Remaining Pipe in the Sewer System

Category 3B addresses the remaining pipes within the collection system that have not been determined to either be capacity deficient or structurally deficient. Most of the existing collection system pipe segments are nearing or exceeding their anticipated service life, typically 50 to 75 years for vitrified clay pipes.

The total remaining length of pipe recommended for phased replacement from VCP to HDPE is approximately 73% of the existing system. **Figure 6.5** illustrates the remaining system segments slated for replacement.

7 Capital Improvement Program

Section 7 summarizes the Capital Improvement Program (CIP) projects, based on the categories discussed in Section 6 – Collection System Assessment. The CIP methodology was developed to establish a prioritized timeline for each project and provide an associated Conceptual Opinion of Probable Project Cost (OPPC).

7.1 Capital Improvement Program Development

Based on the classifications outlined in Section 6, a comprehensive evaluation of system improvements was conducted. All CIP project OPPC were developed at a planning level in 2025 dollars. The OPPCs include allowances for additional project components necessary for implementation, as shown below:

- Construction Contingency: 30%
- Design: 10%
- Environmental/Permitting: 10%
- Construction Management and Inspections: 15%
- District Administration: 5%

The cost factors listed above were applied uniformly across all categories to provide a consistent and comprehensive planning-level OPPC.

CIP projects were developed and grouped primarily with their improvement category. However, in several cases, the more than one category pipeline will be addressed by projects due to overlap or immediate proximity. Below is a summary of the project Groups

7.1.1 Category 1 Existing Conditions CIP Project Group

Category 1 CIP projects address existing capacity constraints and were divided into two separate project areas. Locations and project extents are illustrated in **Figure 7.1.** Taking advantage of project proximity, some additional Category 3A pipes improvements were also added into this CIP group.

The two projects, designated as CIP 1.1 and CIP 1.2, are both scheduled to initiate the design phase during the 2025–2026 fiscal year. CIP 1.1 is anticipated to begin construction in the 2026–2027 fiscal year. Due to the need for additional environmental permitting and coordination with PG&E, the design phase for CIP 1.2 is expected to span two fiscal years, from 2025 to 2027. Construction for CIP 1.2 is scheduled to commence in the 2027–2028 fiscal year and is projected to be completed in the 2028–2029 fiscal year.

The total estimated cost for the Category 1 CIP projects is approximately $17.4 million. The project summary OPPC breakdown is presented in **Table 7.1**. These projects are funded by the existing customer base. The detailed breakdown of the OPPC is included in **Appendix E**.

7.1.2 Category 2: Developer Related CIP Project Group

Category 2 CIP projects address anticipated capacity deficiencies associated with future development and were divided into seven distinct project areas, as shown in **Figure 7.2**. Similar to the Category 1 CIP group, portions of Categories 2 and 3 deficient pipes overlap. The capacity expansion of Category 2 deficient pipes within this CIP group remains developer-related, as increasing their size would not be required by the existing customer base. Taking advantage of project proximity, small portions of both Category 1 and 3 deficient pipes were also added to this Category 2 CIP group. Approximately 93% of the Category 2 CIP projects are directly developer-related.

The specific impacts and any associated fees for each project will be evaluated on a case-by-case basis. Developers may be responsible for preparing the design and performing the construction work under the supervision of the District. In certain instances, developers may be permitted to provide design and construction services as in-kind contributions, which may be credited toward their financial obligations to the District.

Due to the dependence on future development, the implementation schedule for Category 2 CIP projects should remain flexible and be reviewed regularly in coordination with EPASD. A sewer monitoring program is recommended as well to support project prioritization. If anticipated developments are delayed or not constructed, related structural improvements incorporated may require reclassification as higher-priority projects.

The total estimated cost for developer-related and adjacent deficient pipe CIP projects is approximately $52.8 million. The project summary OPPC breakdown is presented in **Table 7.2**. The detailed breakdown of the OPPC is included in **Appendix E**.

7.1.3 Category 3A: Existing Structural Deficiency CIP Project Group

Category 3A CIP projects address structural defects identified through CCTV inspections and were divided into four project areas. The projects were divided to be approximately $2 million over the next five years. Project locations are shown in **Figure 7.3**.

The total estimated cost for remaining structural deficiency CIP projects not covered in the other groups is approximately $7.3 million. The project summary OPPC breakdown is presented in **Table 7.3**. These projects are funded by the existing customer base. The detailed breakdown of the OPPC is included in **Appendix E**.

7.1.4 Category 3B: Aging Infrastructure CIP Project Group

Category 3B encompasses the remaining sewer system assets not currently identified as hydraulically or structurally deficient but nearing the end of their expected service life. These pipes are recommended for phased replacement over a 25-year period to maintain system integrity and service reliability. The OPPC for the remaining aging infrastructure CIP projects not covered in the other groups will be approximately $4.3 million per year, with an overall total of $107 million. The cost is based on slip lining and replacement hybrid concept approach. The cost is not reflective of the complete trenching and replacement of the sewer system, which would require additional analysis. The project

summary OPPC is presented in **Table 7.5**. Fund sources evaluation is recommended to support aging infrastructure improvements, such as the California Clean Water State Revolving Funds (SRF) funded by the Environmental Protection Agency (EPA).

7.1.5 Capital Improvement Projects – All Categories

A consolidated summary of all proposed CIP projects is presented in **Table 7.4**, including brief descriptions, cost estimates, and recommended implementation priority. The combined geographic distribution of these projects is illustrated in **Figure 7.4**. Detailed project summary sheets are provided in **Appendix E**, which include the scope of work and estimated OPPC values.

An annual budget of $2 million per year is recommended for Category 3B projects to replace the existing aging infrastructure. The phasing and prioritization should be determined through the following methods:

- Yearly maintenance inspections,
- Flow monitoring, and
- Available funding.

8 Rate and Impact Fee Study

Section 7 describes the methodology and summarizes the analysis that was used to determine the impact fee for future customers.

As part of the ongoing development of the Master Plan and identification of new CIP projects, EPASD intends to update its impact fee to accurately reflect the costs associated with planned system improvements and infrastructure expansion. The estimated impact fee based on the necessary CIP for the Category 2 project is $7,800 per EDU with an annual escalation. The calculation for the impact fee is presented in **Table 8.1**.

This fee has been calculated based on the following cost components, with a comprehensive summary included in **Appendix F**:

- Developer's share of existing capacity assurance: 25 percent of the costs are associated with existing capacity assurance improvements. These improvements are anticipated to provide capacity benefits for future growth. The developer-associated cost was determined through a flow-based analysis. It evaluated the projected increase in sewer system flow contributed by new development relative to total system demand.
- Developer's Improvement: 100 percent of the costs related to capacity deficiencies that are directly attributable to new development demands.
- Buy-In Treatment Cost: A buy-in cost of $5 million per 1.0 million gallons per day (MGD) of treatment capacity, representing the proportional reimbursement by developers for the available capacity at the PAWRQCP.

Table 3.1
Flow Monitoring Locations
2025 Sewer System Master Plan

Monitoring Site (1)	Location	Basin Size (Acres)
A15	Bay Road, east of Demeter St.	118
B13	Intersection of Bay Rd and Poplar Ave	87
E1	Intersection of Cooley Ave and Green St.	101
E2	Cooley Ave, north of Donohoe St.	149
H3	Intersection of Clarke Ave and Beech St.	74
I3	East end of Beech St.	74
I12	Pulgas Ave, north of Sage St.	135
K4	Intersection O'Connor St and Larkspur Dr.	107
K28	Larkspur Dr, south of O'Connor St.	95
T20	75 feet east of end of Cypress St.	171
T13	Along north edge of Palo Alto Municipal Golf Course.	1,230

Notes
(1) Monitoring sites are identified in Table 3 of the East Palo Alto Sanitary District Sanitary Sewer Flow Monitoring and Inflow/Infiltration Study dated June 2012 prepared by V&A Consulting Engineers, Inc., referred to herein as "Flow Monitoring Study."

Table 3.2
Peaking Factor Calculations
2025 Sewer System Master Plan

Monitoring Site (1)	ADWF (MGD) (2)	PDWF (MGD) (3)	PWWF (MGD) (4)	PDWF Peaking Factor (5)	PWWF Peaking Factor (6)
A15	0.27	0.43	1.19	1.59	2.77
B13	0.06	0.11	0.52	1.83	4.73
E1	0.13	0.19	0.59	1.46	3.11
E2	0.25	0.43	1.45	1.72	3.37
H3	0.14	0.23	0.58	1.64	2.52
I3	0.83	1.22	2.76	1.47	2.26
I12	0.23	0.39	0.76	1.70	1.95
K4	0.22	0.35	0.99	1.59	2.83
K28	0.11	0.17	0.68	1.55	4.00
T20	0.40	0.60	1.55	1.50	2.58
T13	1.53	2.31	5.78	1.51	2.50

Notes
(1) Monitoring sites are identified in Table 3 of the East Palo Alto Sanitary District Sanitary Sewer Flow Monitoring and Inflow/Infiltration Study dated June 2012 prepared by V&A Consulting Engineers, Inc., referred to herein as "Flow Monitoring Study."
(2) ADWF is presented in Table 5 of the Flow Monitoring Study
(3) PDWF is presented in Table 7-3 of the East Palo Alto Sanitary District Wastewater Collection System Master Plan Update dated March 2015 prepared by Freyer & Laureta, Inc., herein referred to as "Master Plan Update."
(4) PWWF is presented in Table 7-3 of the Master Plan Update.
(5) PDWF Peaking Factor is calculated by dividing the PDWF by the Overall ADWF.
(6) PWWF Peaking Factor is calculated by dividing the PWWF by the PDWF.

Abbreviations
ADWF: Average Dry Weather Flow
MGD: Million Gallons per Day
PDWF: Peak Dry Weather Flow
PWWF: Peak Wet Weather Flow

Table 4.1
Scenario 1: 2025 Flow Injections
2025 Sewer System Master Plan

Injection Manhole	Total ADWF, CFS	Total PWWF, CFS
A16	0.0310	0.0465
A34	0.0027	0.0040
A36	0.0028	0.0042
A38	0.0018	0.0028
A41	0.0009	0.0014
A42	0.0018	0.0028
A43	0.0006	0.0009
A45	0.0009	0.0014
A46	0.0043	0.0065
F8	0.0419	0.0628
D1	0.0256	0.0374
M32	0.0280	0.0446
Total, CFS	**0.14**	**0.22**
Total, MGD	**0.09**	**0.14**

Abbreviations
ADWF: Average Dry Weather Flow
PWWF: Peak Wet Weather Flow
CFS: Cubic Feet per Second
MGD: Million Gallons per Day

Table 4.2
Scenario 2: 2035 Flow Injections
2025 Sewer System Master Plan

Injection Manhole	Total ADWF, CFS	Total PWWF, CFS
A10	0.0167	0.0267
A11	0.0145	0.0230
A12	0.0098	0.0151
A13	0.0034	0.0051
A14	0.0630	0.1000
A15	0.0068	0.0102
A16	0.0385	0.0577
A17	0.0032	0.0048
A2	0.0050	0.0079
A18	0.0191	0.0286
A19	0.0179	0.0268
A20	0.0180	0.0271
A21	0.0317	0.0475
A23	0.0127	0.0190
A24	0.0045	0.0068
A25	0.0153	0.0229
A26	0.0196	0.0295
A27	0.0353	0.0530
A28	0.0259	0.0388
A30	0.1886	0.2830
A31	0.0027	0.0041
A34	0.0014	0.0021
A36	0.0019	0.0028
A38	0.0012	0.0018
A41	0.0024	0.0036
A42	0.0012	0.0018
A43	0.0003	0.0005
A45	0.0006	0.0009
A46	0.0026	0.0039
A5	0.0219	0.0349
A8	0.0223	0.0356
B2	0.0081	0.0129
B3	0.0307	0.0490
B4	0.1638	0.2612
B40	0.0472	0.0752
C16	0.0054	0.0100
D1	0.0489	0.0842
D5	0.0126	0.0216
D17	0.0657	0.1131
D22	0.0629	0.1082
D73	0.0145	0.0249
D74	0.0232	0.0399
D8	0.0061	0.0105
E1	0.0004	0.0006
E20	0.0340	0.0497
E22	0.0373	0.0546
E25	0.0581	0.0849
E30	0.0046	0.0067
E45	0.1006	0.1471

Table 4.2
Scenario 2: 2035 Flow Injections
2025 Sewer System Master Plan

Injection Manhole	Total ADWF, CFS	Total PWWF, CFS
E47	0.0330	0.0483
F11	0.0252	0.0377
F14	0.0115	0.0172
F15	0.0085	0.0127
F20	0.0127	0.0190
F7	0.0102	0.0153
F8	0.0915	0.1373
G14	0.0056	0.0083
G17	0.0056	0.0083
G19	0.0023	0.0034
G2	0.0054	0.0081
G20	0.0006	0.0010
G21	0.0006	0.0009
G22	0.0006	0.0010
H24	0.0326	0.0479
H32	0.0098	0.0161
H33	0.0073	0.0117
H36	0.0637	0.1046
H37	0.0161	0.0264
H42	0.0047	0.0078
H44	0.0017	0.0027
M32	0.0481	0.0765
M38	0.3439	0.5832
N8	0.0711	0.1105
O16	0.0123	0.0208
O27	0.0006	0.0009
O3	0.0064	0.0102
O51	0.0110	0.0186
O58	0.0055	0.0093
T23	0.0072	0.0107
T25	0.0441	0.0661
T28	0.0363	0.0545
Total, CFS	**2.27**	**3.58**
Total, MGD	**1.47**	**2.32**

Abbreviations
ADWF: Average Dry Weather Flow
PWWF: Peak Wet Weather Flow
CFS: Cubic Feet per Second
MGD: Million Gallons per Day

Table 4.3
Scenario 3: 2035 Enhanced Flow Injections
2025 Sewer System Master Plan

Injection Manhole	Total ADWF, CFS	Total PWWF, CFS
A10	0.0196	0.0312
A11	0.0148	0.0236
A12	0.0109	0.0169
A13	0.0034	0.0051
A14	0.0634	0.1006
A15	0.0075	0.0113
A16	0.0425	0.0638
A17	0.0032	0.0048
A18	0.0198	0.0297
A19	0.0193	0.0290
A2	0.0226	0.0361
A20	0.0184	0.0276
A21	0.0324	0.0486
A23	0.0127	0.0190
A24	0.0056	0.0084
A25	0.0153	0.0229
A26	0.0196	0.0295
A27	0.0353	0.0530
A28	0.0259	0.0388
A30	0.1901	0.2852
A31	0.0037	0.0056
A34	0.0022	0.0032
A36	0.0031	0.0046
A38	0.0018	0.0028
A41	0.0028	0.0043
A42	0.0018	0.0028
A43	0.0006	0.0009
A45	0.0009	0.0014
A46	0.0043	0.0065
A5	0.0223	0.0355
A8	0.0238	0.0379
B2	0.0427	0.0680
B3	0.0455	0.0724
B4	0.2009	0.3204
B40	0.0476	0.0758
C16	0.0076	0.0140
D1	0.0526	0.0830
D5	0.0140	0.0242
D17	0.0736	0.1265
D22	0.1865	0.3208
D73	0.0215	0.0369
D74	0.0437	0.0712
D8	0.0065	0.0112
E1	0.0008	0.0011
E20	0.0444	0.0650
E22	0.0412	0.0603
E25	0.1659	0.2424
E30	0.0068	0.0100
E45	0.1122	0.1640

Table 4.3
Scenario 3: 2035 Enhanced Flow Injections
2025 Sewer System Master Plan

Injection Manhole	Total ADWF, CFS	Total PWWF, CFS
E47	0.0393	0.0574
F11	0.0344	0.0515
F14	0.0118	0.0178
F15	0.0129	0.0193
F20	0.0172	0.0258
F7	0.0132	0.0192
F8	0.1002	0.1502
G14	0.0059	0.0089
G17	0.0059	0.0089
G19	0.0030	0.0045
G2	0.0062	0.0093
G20	0.0010	0.0015
G21	0.0010	0.0015
G22	0.0010	0.0015
H24	0.0513	0.0757
H32	0.0333	0.0547
H33	0.0073	0.0117
H36	0.0772	0.1268
H37	0.0182	0.0299
H42	0.0082	0.0135
H44	0.0024	0.0039
M32	0.0481	0.0765
M38	0.3657	0.6079
N8	0.0734	0.1153
O16	0.0156	0.0265
O27	0.0016	0.0026
O3	0.0082	0.0131
O51	0.0136	0.0230
O58	0.0132	0.0224
T23	0.0083	0.0124
T25	0.0444	0.0667
T28	0.0363	0.0545
Total, CFS	**2.84**	**4.47**
Total, MGD	**1.85**	**2.90**

Abbreviations
ADWF: Average Dry Weather Flow
PWWF: Peak Wet Weather Flow
CFS: Cubic Feet per Second
MGD: Million Gallons per Day

Table 6.1
2025 Capacity Improvements for Existing Hydraulic Deficiencies Under PWWF
2025 Sewer System Master Plan
East Palo Alto, California

Segment	Length (Feet)	Existing Diameter (Inches)	Proposed Diameter (Inches)
B15+B49	331	8	12
B16+B15	327	8	12
B19+B12	500	6	10
B49+B14	328	8	12
C1+B16	402	8	12
C2+C1	204	8	10
C3+C2	398	6	10
C4+C3	436	6	10
C5+C4	328	6	10
C6+C5	87	6	10
C12+C1	265	6	10
D7+D6	398	6	10
H34+H17	269	6	10
H35+H34	322	6	10
H36+H35	474	6	10
I4+I3	243	18	30
K28+K4	242	10	16
L1+L21	223	10	16
L21+K28	68	10	16
T17+T34	407	21	30
T18+T17	540	21	30
T36+T18	494	21	30
Total	**7,285**		

Abbreviations
PWWF: Peak Wet Weather Flow

Table 6.2
2035 Enhanced Capacity Improvements for Future Hydraulic Deficiencies Under PWWF
2025 Sewer System Master Plan
East Palo Alto, California

Segment	Length (Feet)	Existing Diameter (Inches)	Proposed Diameter (Inches)
A9+A10	181	15	24
A10+A15	299	15	24
A15+A16	435	15	24
A16+A21	296	15	24
A21+A23	155	15	24
A23+A22	14	15	24
A22+A29	369	18	24
A29+T29	345	18	30
B37+B6	262	6	10
D1+E4	354	12	24
D21+D19	391	8	12
D22+D21	149	8	12
E2+E1	283	12	24
E3+E2	280	12	24
E4+E3	357	12	24
F7+T25	477	6	10
F8+F7	357	6	10
F23+F8	327	6	10
H12+H11	333	8	12
H13+H12	108	8	12
H14+H13	446	8	12
H15+H62	201	8	12
H16+H60	351	8	12
H17+H57	397	8	12
H57+H16	40	8	12
H60+H15	99	8	12
H62+H14	233	8	12
I5+I31	135	18	30
I6+I5	411	18	30
I31+I4	321	18	30
I37+I6	48	15	30
M2+M44	42	8	12
M3+M2	380	8	12
M31+M3	357	8	12
M44+I15	62	12	12
T11+T10	326	24	24
T12+T11	482	24	24
T19+T36	6	24	30

Table 6.2
2035 Enhanced Capacity Improvements for Future Hydraulic Deficiencies Under PWWF
2025 Sewer System Master Plan
East Palo Alto, California

Segment	Length (Feet)	Existing Diameter (Inches)	Proposed Diameter (Inches)
T20+T19	332	18	30
T21+T20	338	21	30
T22+T37	191	21	30
T23+T22	373	18	30
T24+T23	317	18	30
T25+T24	282	18	30
T26+T25	306	18	30
T27+T26	356	18	30
T28+T27	162	18	30
T29+T28	234	18	30
T30+T12	285	24	24
T31+T30	351	24.2	24
T32+T31	125	24.2	24
T37+T21	83	21	30
Total	**13,848**		

Abbreviations
PWWF: Peak Wet Weather Flow

Table 6.3
Structural Deficient Pipe Improvements
2025 Sewer System Master Plan
East Palo Alto, California

Segment	Length (Feet)	Existing Diameter (Inches)	Proposed Diameter (Inches)
K19+K18	272	6	8
L2+L1	179	10	12
O4+O3	277	8	10
O20+O19	116	6	8
O21+O19	394	6	8
J7+J6	441	6	8
J9+J8	401	6	8
A1+A2	80	12	16
A2+A5	244	12	16
A5+A8	124	15	18
A18+A16	442	6	8
B5+B52	176	12	16
B6+B5	158	12	16
B12+B11	277	10	12
B17+B13	501	6	8
B27+B25	318	6	8
B31+B29	257	6	8
B32+B31	254	6	8
H20+H19	271	6	8
E20+E7	504	6	8
E30+E29	502	6	8
E33+E29	455	6	8
E36+E15	420	6	8
E46+E7	501	6	8
C40+C36	257	6	8
C41+C40	191	6	8
D10+D3	489	10	12
D25+D24	301	6	8
D51+D7	458	6	8
F12+F11	355	6	8
B2+A1	181	12	16
Total	**9,796**		

Table 7.1
Category 1 - CIP Project Summary
2025 Sewer System Master Plan
East Palo Alto, California

Project #	Improvement Description	Proposed Pipe Sizes	Approximate Length of Pipe (LF)	Projected OPPC ($)	Notes
1.1 (2)	Pipeline Replacement on Menalto Avenue, Poplar Avenue, Bay Road, and Elliot Drive	8-inch, 10-inch, 12-inch HDPE DR 17	4,833	$ 6,042,000	Projects will need Encroachmen Permit with City of Menlo Park. Project will involve crossing Bayshore Freeway.
1.2	Pipeline Replacement on Trunk Line in Creek, Beech Street, Larkspur Drive, and Gardenia Ave	8-inch, 12-inch, 16-inch, 30-inch HDPE DR 17	2,668	$ 11,315,000	Environmental Permits will be required. Trunk Line improvements are located on Creek. Coordination will be required for PG&E gas line.
		Total	**7,501**	**$ 17,357,000**	

Notes
(1) See Figure 7.1 for limits of improvements.
(2) Projects include Category 3 pipes that overlap with Category 1 deficiencies.

Abbreviations
CIP: Capital Improvement Program
DR: dimension ration
HDPE: high density polyethylene
LF: linear feet
OPPC: opinion of probable project cost

Table 7.2
Category 2 - CIP Project Summary
2025 Sewer System Master Plan
East Palo Alto, California

Project #	Improvement Description	Proposed Pipe Sizes	Proposed Development (If applicable)	Project Priority	Approximate Length of Pipe (LF)	Projected OPPC ($)	Notes
2.1	Pipeline Replacement on Bayshore Road, Donohoe Street, Cooley Ave, and O'Connor Street	8-inch, 10-inch, 12-inch, 24-inch HDPE DR 17	Woodland Parks (2001 Manhattan) & 2120-60 Euclid Avenue	See Note 2	3,460	$ 7,466,000	Project will involve crossing Bayshore Freeway. Project should be continued to be re-evaluated as structural deficiencies may be moved to a higher priority project if proposed development projects are not constructed soon.
2.2	Pipeline Replacement on University Avenue, Runnymede Street, Clarke Avenue, and Beech Street	10-inch, 12-inch HDPE DR 17	Woodland Parks (2001 Manhattan) & 2120-60 Euclid Avenue	See Note 2	4,188	$ 9,795,000	Project will include coordination with PG&E on gas line on Beech Street.
2.3	Pipeline Replacement on Trunk Line in Creek	30-inch HDPE DR 17	Ravenswood Area	See Note 2	2,981	$ 17,635,000	Environmental Permits will be required. Trunk Line improvements are located on Creek.
2.4	Pipeline Replacement on Bay Road and Pulgas Avenue	8-inch, 10-inch, 24-inch, 30-inch HDPE DR 17	2485 Pulgas Avenue (3) 2535 Pulgas Ave (Office) 2519 Pulgas Ave (Office) 1804 Bay Road 1675 Bay Road	See Note 2	2,799	$ 9,293,000	Project should be continued to be re-evaluated as structural deficiencies may be moved to a higher priority project if proposed development projects are not constructed soon.
2.5	Pipeline Replacement on Maple Lane	10-inch HDPE DR 17	Mid-Pen Housing (965 Weeks Street) (3)	See Note 2	1,161	$ 1,401,000	
2.6	Pipeline Replacement on O'Connor Street. Project will also include 11 Smart Cover Meters to be installed similar to the subbasin locations notated in V&A Flow Monitoring Study.	12-inchHDPE DR 17	Light Tree Apartments (East Bayshore Road) (3)	See Note 2	841	$ 1,377,000	Project will require coordination for two 24-inch PG&E Gas Main Transmissions. Project will also reinstate City's Flow Monitoring Program.
2.7	New Parallel Trunk Line within San Francisquito Creek on Palo Alto Golf Course	24-inch HDPE DR 17	Ravenswood Area	See Note 2	1,569	$ 5,832,000	Project should be re-evaluated on a yearly basis. As project scope on developments may be reduced/removed.
				Total	**17,000**	**$ 52,799,000**	

Notes
(1) See Figure 7.2 for limits of improvements.
(2) Project timeline will be dependent on when the proposed developments are constructed. City to assess every fiscal year.
(3) Developments have already been completed or are nearing completion..

Abbreviations
CIP: Capital Improvement Program
DR: dimension ration
HDPE: high density polyethylene
LF: linear feet
OPPC: opinion of probable project cost

Table 7.3
Category 3A - CIP Project Summary
2025 Sewer System Master Plan
East Palo Alto, California

Project #	Improvement Description	Proposed Pipe Sizes	Approximate Length of Pipe (LF)	Projected OPPC ($)
3.1	Pipeline Replacements on Dumbarton Avenue, Palo Verde Way, and Lilac Lane.	8-inch HDPE DR 17	1,786	$ 1,786,000
3.2	Pipe Replacements on Garden Street, Clarke Avenue, Pulgas Avenue, Woodland Avenue, and Bayshore Road.	8-inch, 10-inch HDPE DR 17	1,899	$ 1,949,000
3.2	Pipe Replacements on Glen Way and Capitol Avenue.	8-inch HDPE DR 17	1,425	$ 1,398,000
3.2	Pipe Replacements on Bay Road and Weeks Street.	8-inch, 16-inch, 18-inch HDPE DR 17	1,138	$ 2,155,000
		Total	**6,248**	**$ 7,288,000**

Notes
(1) See Figure 7.3 for limits of improvements.
(2) Pipes within this project category are all remaining pipes that have not been included in Category 1 or Category 2. projects.

Abbreviations
CIP: Capital Improvement Program
DR: dimension ration
HDPE: high density polyethylene
LF: linear feet
OPPC: opinion of probable project cost

Table 7.4
Overall – Proposed Capital Improvement Plan
2025 Sewer System Master Plan
East Palo Alto, California

Project #	Improvement Description	Proposed Pipe Sizes	Proposed Development (If applicable)	Project Priority	Approximate Length of Pipe (LF)	Projected OPPC ($)	Notes
1.1	Pipeline Replacement on Menalto Avenue, Poplar Avenue, Bay Road, and Elliot Drive	8-inch, 10-inch, 12-inch HDPE DR 17			4,833	$ 6,042,000	Projects will need Encroachment Permit with City of Menlo Park. Project will involve crossing Bayshore Freeway.
1.2	Pipeline Replacement on Trunk Line in Creek, Beech Street, Larkspur Drive, and Gardenia Ave	8-inch, 12-inch, 16-inch, 30-inch HDPE DR 17			2,668	$ 11,315,000	Environmental Permits will be required. Trunk Line improvements are located on Creek. Coordination will be required for PG&E gas line.
2.1	Pipeline Replacement on Bayshore Road, Donohoe Street, Cooley Ave, and O'Connor Street	8-inch, 10-inch, 12-inch, 24-inch HDPE DR 17	Woodland Parks (2001 Manhattan) & 2120-60 Euclid Avenue	See Note 2	3,460	$ 7,466,000	Project will involve crossing Bayshore Freeway. Project should be continued to be re-evaluated as structural deficiencies may be moved to a higher priority project if proposed development projects are not constructed soon.
2.2	Pipeline Replacement on University Avenue, Runnymede Street, Clarke Avenue, and Beech Street	10-inch, 12-inch HDPE DR 17	Woodland Parks (2001 Manhattan) & 2120-60 Euclid Avenue	See Note 2	4,188	$ 9,795,000	Project will include coordination with PG&E on gas line on Beech Street.
2.3	Pipeline Replacement on Trunk Line in Creek	30-inch HDPE DR 17	Ravenswood Area	See Note 2	2,981	$ 17,635,000	Environmental Permits will be required. Trunk Line improvements are located on Creek.
2.4	Pipeline Replacement on Bay Road and Pulgas Avenue	8-inch, 10-inch, 24-inch, 30-inch HDPE DR 17	2485 Pulgas Avenue (3) 2535 Pulgas Ave (Office) 2519 Pulgas Ave (Office) 1804 Bay Road 1675 Bay Road	See Note 2	2,799	$ 9,293,000	Project should be continued to be re-evaluated as structural deficiencies may be moved to a higher priority project if proposed development projects are not constructed soon.
2.5	Pipeline Replacement on Maple Lane.	10-inch HDPE DR 17	Mid-Pen Housing (965 Weeks Street) (3)	See Note 2	1,161	$ 1,401,000	
2.6	Pipeline Replacement on O'Connor Street. Project will also include 11 Smart Cover Meters to be installed similar to the subbasin locations notated in V&A Flow Monitoring Study.	12-inchHDPE DR 17	Light Tree Apartments (East Bayshore Road) (3)	See Note 2	841	$ 1,377,000	Project will require coordination for two 24-inch PG&E Gas Main Transmissions. Project will also reinstate City's Flow Monitoring Program.
2.7	New Parallel Trunk Line within San Francisquito Creek on Palo Alto Golf Course	24-inch HDPE DR 17	Ravenswood Area	See Note 2	1,569	$ 5,832,000	Project should be re-evaluated on a yearly basis. As project scope on developments may be reduced/removed.
3.1	Pipeline Replacements on Dumbarton Avenue, Palo Verde Way, and Lilac Lane.	8-inch HDPE DR 17			1,786	$ 1,786,000	
3.2	Pipe Replacements on Garden Street, Clarke Avenue, Pulgas Avenue, Woodland Avenue, and Bayshore Road.	8-inch, 10-inch HDPE DR 17			1,899	$ 1,949,000	
3.3	Pipe Replacements on Glen Way and Capitol Avenue.	8-inch HDPE DR 17			1,425	$ 1,398,000	
3.4	Pipe Replacements on Bay Road and Weeks Street.	8-inch, 16-inch, 18-inch HDPE DR 17			1,138	$ 2,155,000	
				Grand Total	30,750	$ 77,444,000	

Notes
(1) See Figure 7.4 for limits of improvements.
(2) Project timeline will be dependent on when the proposed developments are constructed. City to assess every fiscal year.
(3) Developments have already been completed or are nearing completion.
(4) Category 3B projects will include the remaining portion of the sewer system 74% for existing VCP is suggested to be replaced over a 25-year period based on available funds. The OPPC for the remaining aging infrastructure will be approximately $4.3 M/yr (6,000LF/yr), with an overall total of $107 M. It is important to note that this cost is based on slip lining repair and partial replacement only.

Abbreviations
CIP: Capital Improvement Program
DR: dimension ration
HDPE: high density polyethylene
LF: linear feet
OPPC: opinion of probable project cost

Table 7.5
Category 3B - CIP Project Summary
2025 Sewer System Master Plan
East Palo Alto, California

Project #	Improvement Description	Proposed Pipe Sizes	Unit	Unit Price ($)	Approximate Length of Pipe (LF)	Projected OPPC ($)
-	Slip line, repair and replacement	8-inch through 24-inch HDPE DR 17	LF	$ 750	142,928	$ 107,196,000

Total	**142,928**	**$ 107,196,000**
Average Annual Totals (4)	**5,717**	**$ 4,287,840**

Notes
(1) Cost per LF is a general estimate based on use of predominately trenchless pipe repair systems and some as needed replacement. Use for conceptual purposes only.
(2) Cost for full replacement and manhole replacement will increase the OPPC.
(3) Project work would occur beyond the immediate timeline of CIP work presented in the Master Plan.
(4) Average annual cost is taken over a 25-year period.

Abbreviations
CIP: Capital Improvement Program
DR: dimension ration
HDPE: high density polyethylene
LF: linear feet
OPPC: opinion of probable project cost

Table 8.1
Impact Fee Calculations
2025 Sewer System Master Plan
East Palo Alto, California

AT FULL BUILDOUT		
Projected Total ADWF Increase (gpd) (1)		1,560,000
Projected Total EDU Increase (2)		7800
Development Share of Cost of Capacity Assurance (3)	$	4,380,500
Total Cost of Improvements Due to Development (4)	$	49,046,000
Total Cost of Treatment (5)	$	7,800,000
Impact Fee per EDU(6)	**$**	**7,800**

Notes

(1) Projected Total ADWF Increase is from the EPASD 2025 Sewer System Master Plan.
(2) Projected Total EDU Increase was calculated using a rate of 200 gpd/EDU.
(3) Refer to Sewer Impact Fee Memorandum, Table 2.
(4) Refer to Sewer Impact Fee Memorandum, Table 7.
(5) Total Cost of Treatment is based on EPASD reported cost of $5 million per 1.0 MGD of treatment capacity. It should be noted that EPASD current 7.96% ownership of the PARWQCP is equivalent to ADWF capacity of 3.06 MGD. The total project ADWF at full buildout is 3.3 MGD based on 200 gpd/EDU and 12,730 EDUs. Therefore, the Total Cost of Treatment presented above is for new development to buy-in to the available treatment capacity.
(6) Impact fee is calculated by dividing the total cost of improvements, capacity assurance, and treatment by the projected Total EDU increase and rounding to nearest $100.

Abbreviations

ADWF: Average Dry Weather Flow
EDUs: Equivalent Dwelling Units
gpd: gallons per day

EPASD SANITARY SEWER SERMCE AREA
2025 SEWER SYSTEM MASTER PLAN
EAST PALO ALTO, CA

LEGEND

SERVICE AREA BOUNDARY

MANHOLE

LAMPHOLE

MANHOLE/LAMPHOLE NUMBER C11

NOTE: ALL SEWERS ARE 6" IN DIAMETER, UNLESS DESIGNATED OTHERWISE.
* DIFFERENT SIZE IN MODEL

NORTH

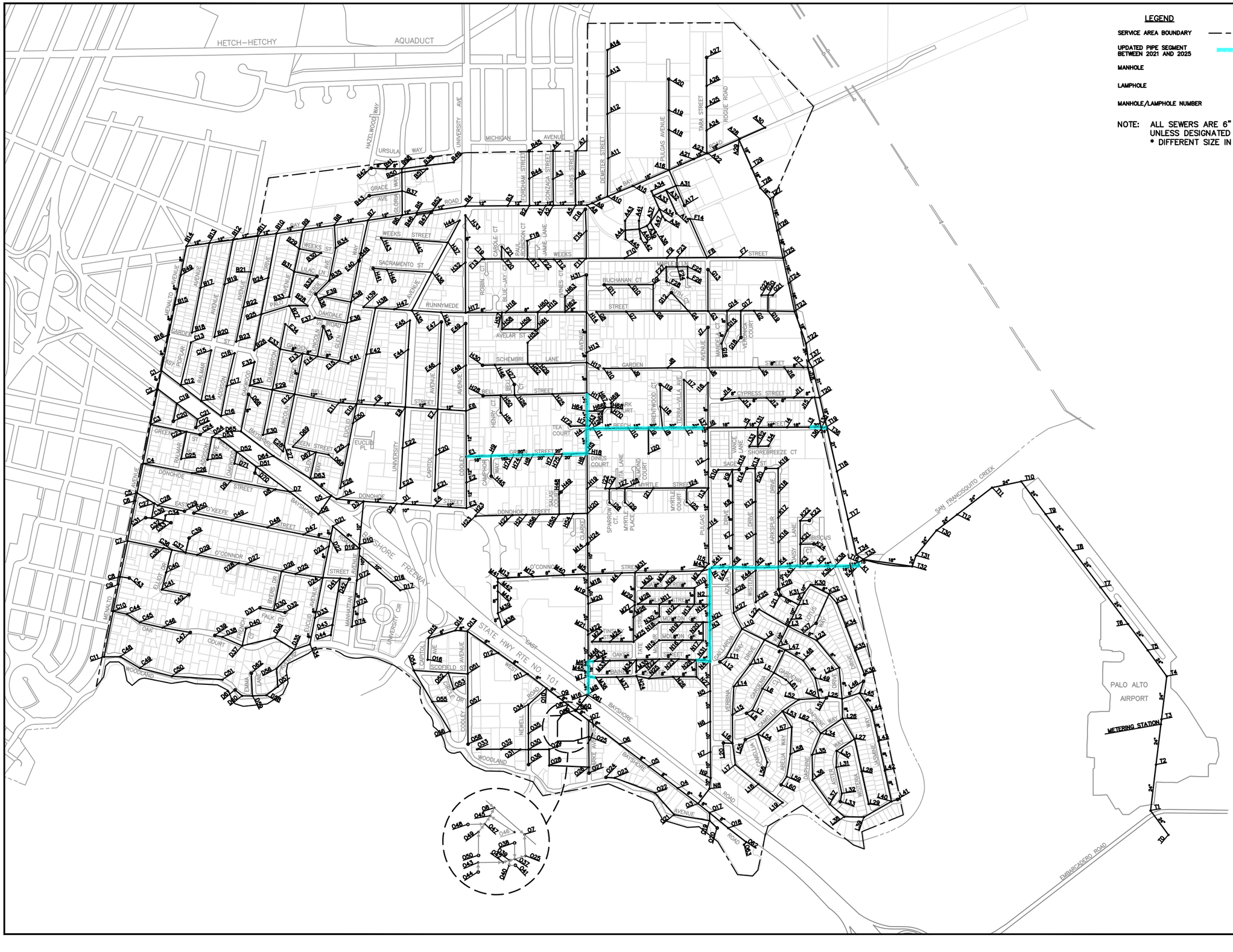
SCALE
1" = 1000'

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FIGURE
2.1

JOB NO.
221009



LEGEND

SERVICE AREA BOUNDARY

UPDATED PIPE SEGMENT BETWEEN 2021 AND 2025

MANHOLE

LAMPHOLE

MANHOLE/LAMPHOLE NUMBER C11

NOTE: ALL SEWERS ARE 6" IN DIAMETER, UNLESS DESIGNATED OTHERWISE.
* DIFFERENT SIZE IN MODEL

NORTH

SCALE
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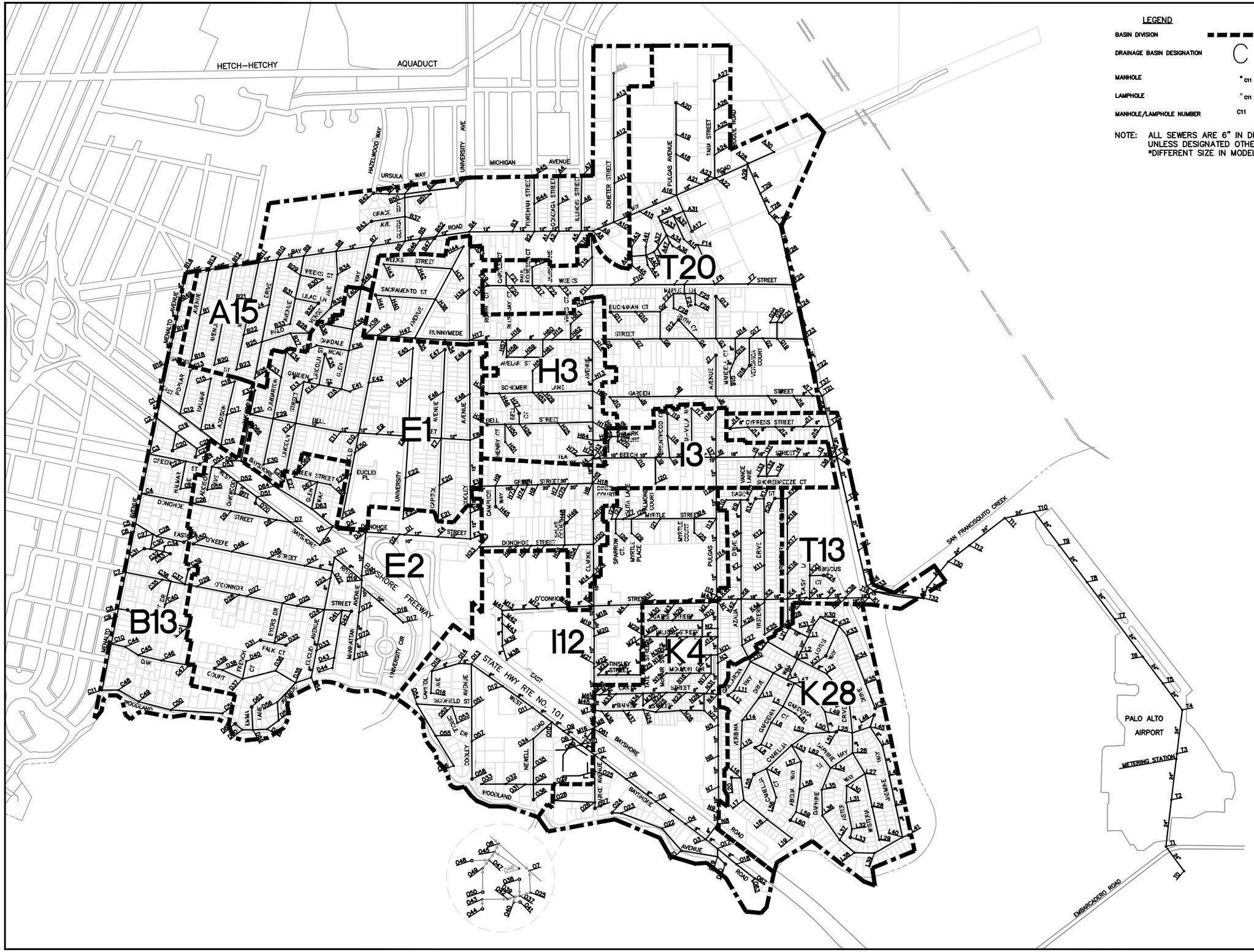
2025 SEWER MAP
2025 SEWER SYSTEM MASTER PLAN
EAST PALO ALTO, CA

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FIGURE
2.2

JOB NO.
221009



LEGEND

BASIN DIVISION

DRAINAGE BASIN DESIGNATION C

MANHOLE *C11

LAMPHOLE °C11

MANHOLE/LAMPHOLE NUMBER C11

NOTE: ALL SEWERS ARE 6" IN DIAMETER, UNLESS DESIGNATED OTHERWISE.
*DIFFERENT SIZE IN MODEL

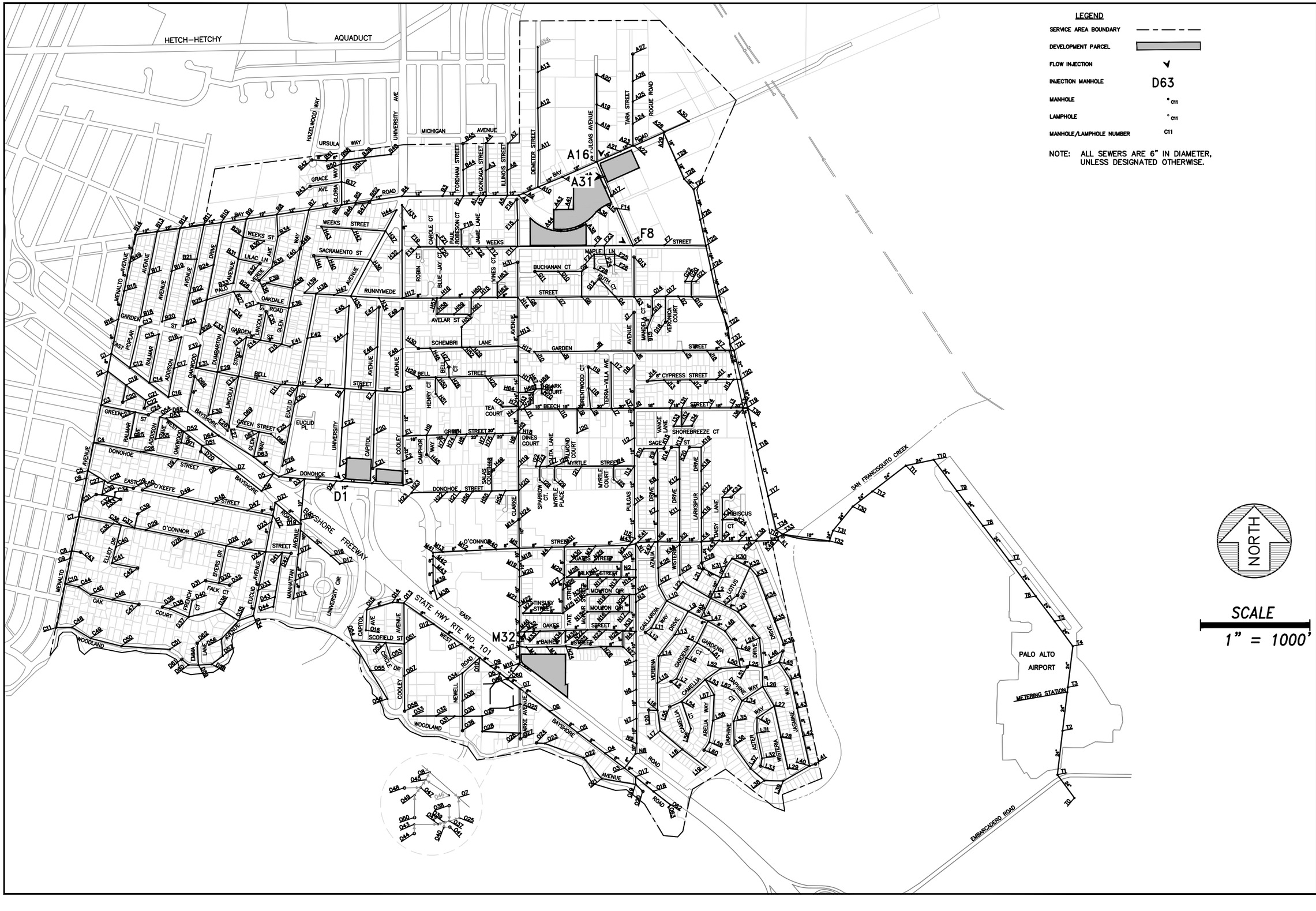
FLOW MONITORING LOCATIONS
2025 SEWER SYSTEM MASTER PLAN
EAST PALO ALTO, CA

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FIGURE 3.1

JOB NO. 221009



LEGEND

- SERVICE AREA BOUNDARY
- DEVELOPMENT PARCEL
- FLOW INJECTION
- INJECTION MANHOLE — D63
- MANHOLE — C11
- LAMPHOLE — C11
- MANHOLE/LAMPHOLE NUMBER — C11

NOTE: ALL SEWERS ARE 6" IN DIAMETER, UNLESS DESIGNATED OTHERWISE.

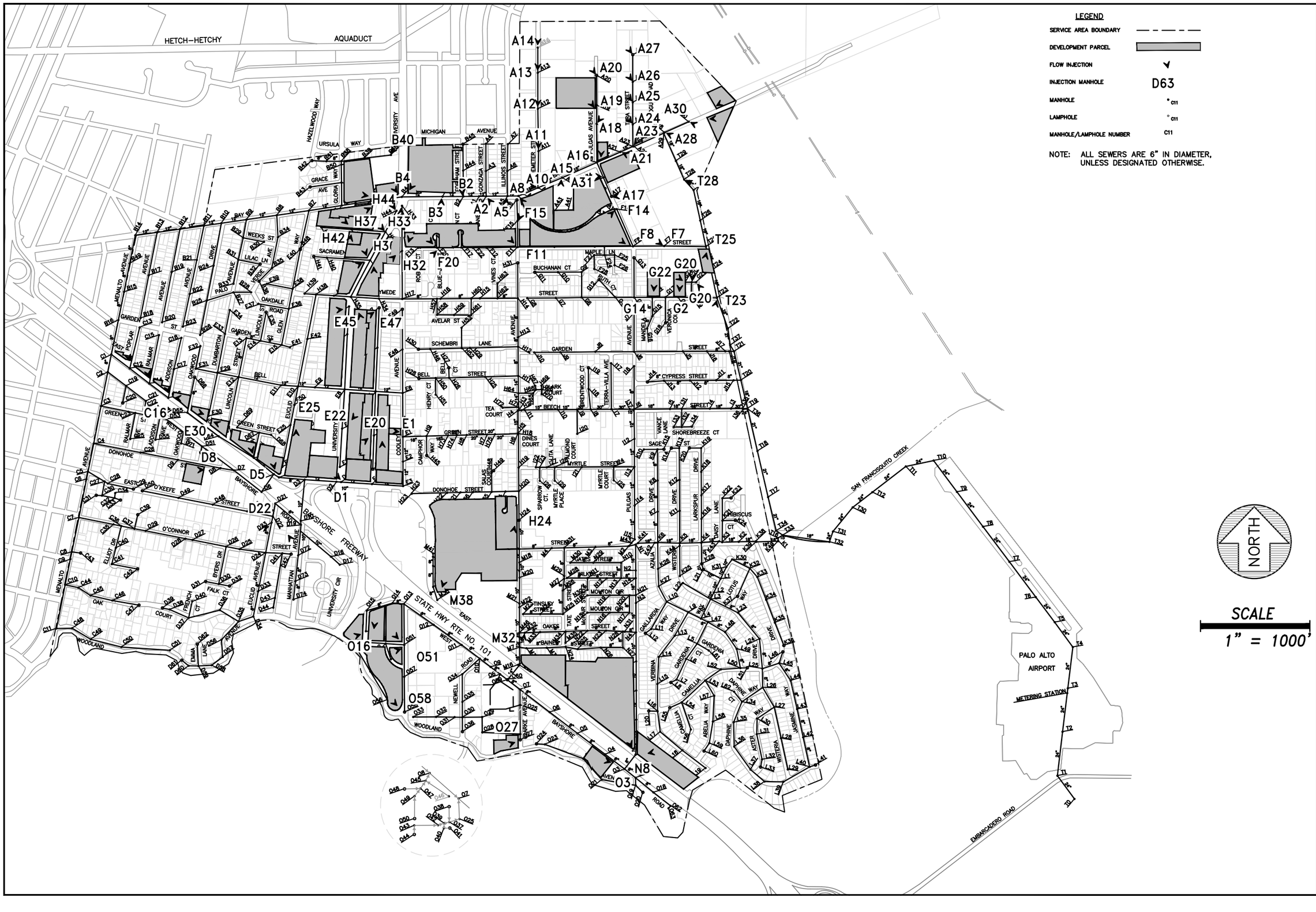
SCENARIO 1: 2025 - ADDITIONAL FLOW INJECTION LOCATIONS + BUILT DEVELOPMENTS 2025 SEWER SYSTEM MASTER PLAN EAST PALO ALTO, CA

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PROJ. ENGR:	JTT

FIGURE 4.1

JOB NO. 221009



LEGEND

SERVICE AREA BOUNDARY	
DEVELOPMENT PARCEL	
FLOW INJECTION	
INJECTION MANHOLE	D63
MANHOLE	C11
LAMPHOLE	C11
MANHOLE/LAMPHOLE NUMBER	C11

NOTE: ALL SEWERS ARE 6" IN DIAMETER, UNLESS DESIGNATED OTHERWISE.

NORTH

SCALE
1" = 1000'

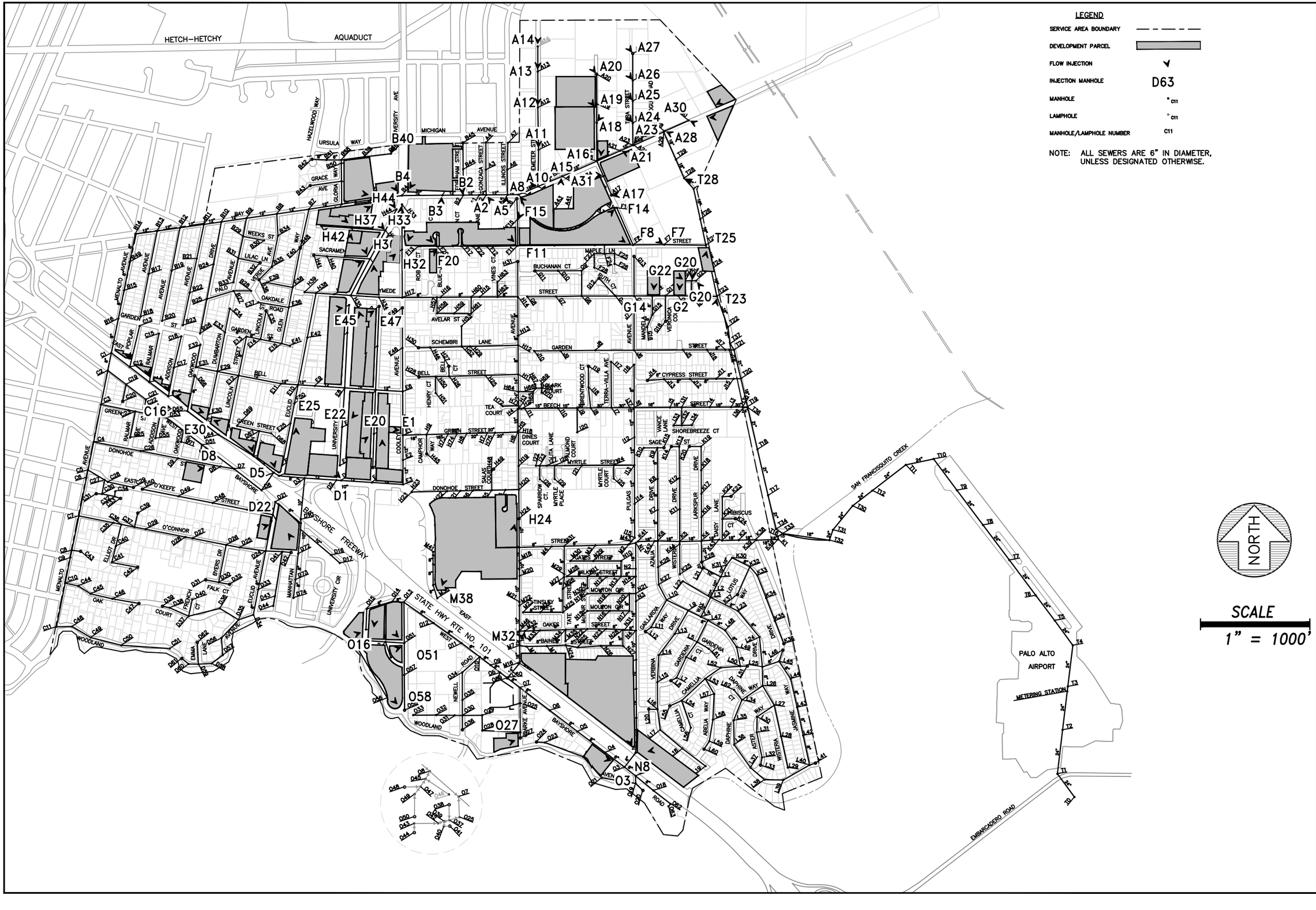
SCENARIO 2: 2035 - ADDITIONAL FLOW INJECTION LOCATIONS
2025 SEWER SYSTEM MASTER PLAN
EAST PALO ALTO, CA

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FIGURE
4.2

JOB NO.
221009



LEGEND

- SERVICE AREA BOUNDARY
- DEVELOPMENT PARCEL
- FLOW INJECTION
- INJECTION MANHOLE — D63
- MANHOLE — C11
- LAMPHOLE — C11
- MANHOLE/LAMPHOLE NUMBER — C11

NOTE: ALL SEWERS ARE 6" IN DIAMETER, UNLESS DESIGNATED OTHERWISE.

NORTH

SCALE
1" = 1000'

SCENARIO 3: 2035 ENHANCED – ADDITIONAL FLOW
INJECTION LOCATIONS + KNOWN DEVELOPMENTS
2025 SEWER SYSTEM MASTER PLAN
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PROJ. ENGR:	

FIGURE
4.3

JOB NO.
221009



LEGEND

SERVICE AREA BOUNDARY

SURCHARGED PIPE SEGMENT

MANHOLE WITH OVERFLOW D63

MANHOLE *C11

LAMPHOLE °C11

MANHOLE/LAMPHOLE NUMBER C11

NOTE: ALL SEWERS ARE 6" IN DIAMETER, UNLESS DESIGNATED OTHERWISE.
* DIFFERENT SIZE IN MODEL

SCALE
1" = 1000'

SCENARIO 1: 2025 - PWWF CONDITIONS
2025 SEWER SYSTEM MASTER PLAN
EAST PALO ALTO, CA

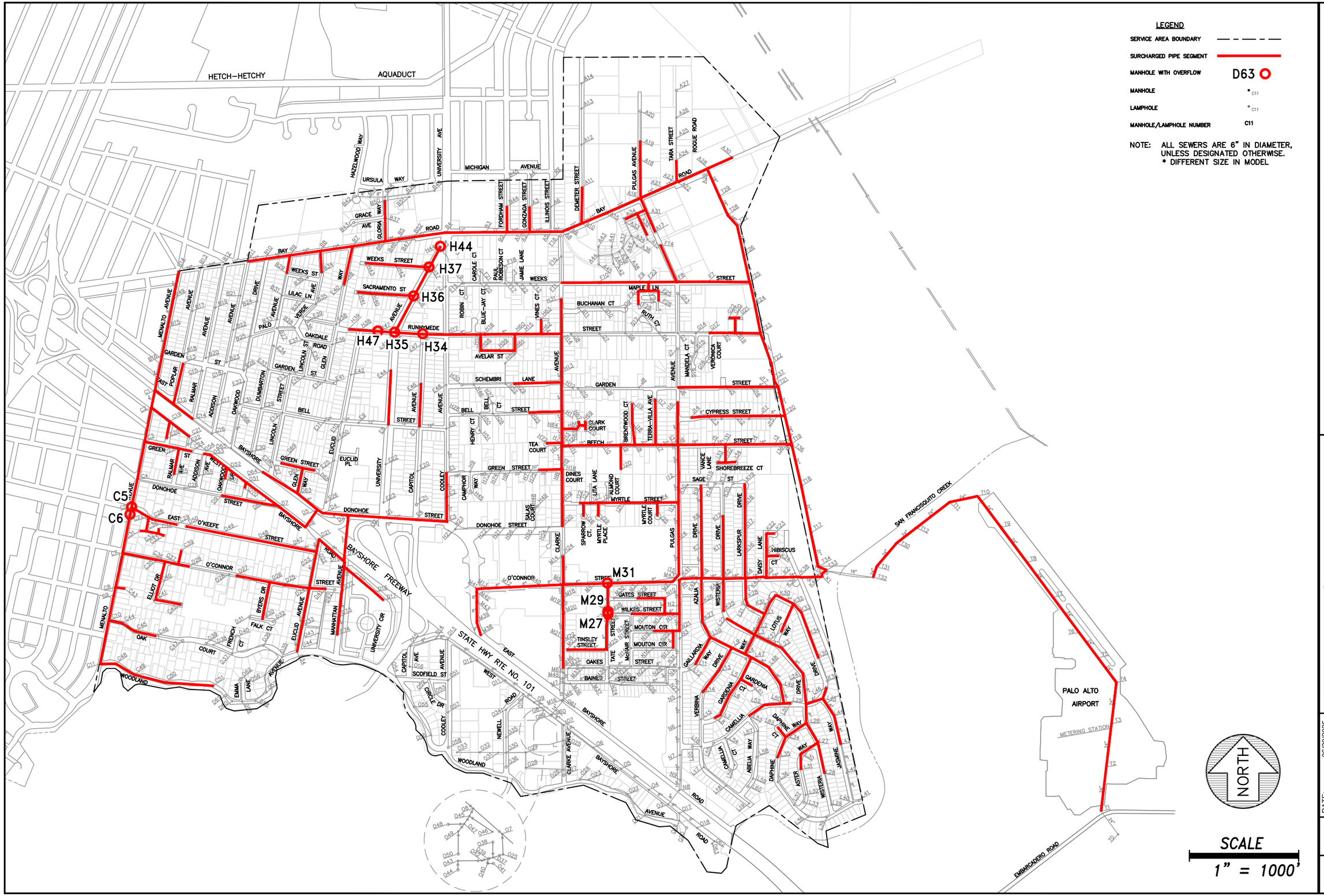
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FIGURE
5.1

JOB NO.
221009

SCENARIO 2: 2035 - PWWF CONDITIONS
2025 SEWER SYSTEM MASTER PLAN
EAST PALO ALTO, CA



LEGEND

- SERVICE AREA BOUNDARY
- SURCHARGED PIPE SEGMENT
- MANHOLE WITH OVERFLOW — D63
- MANHOLE — * C11
- LAMPHOLE — * C11
- MANHOLE/LAMPHOLE NUMBER — C11

NOTE: ALL SEWERS ARE 6" IN DIAMETER, UNLESS DESIGNATED OTHERWISE.
* DIFFERENT SIZE IN MODEL

NORTH

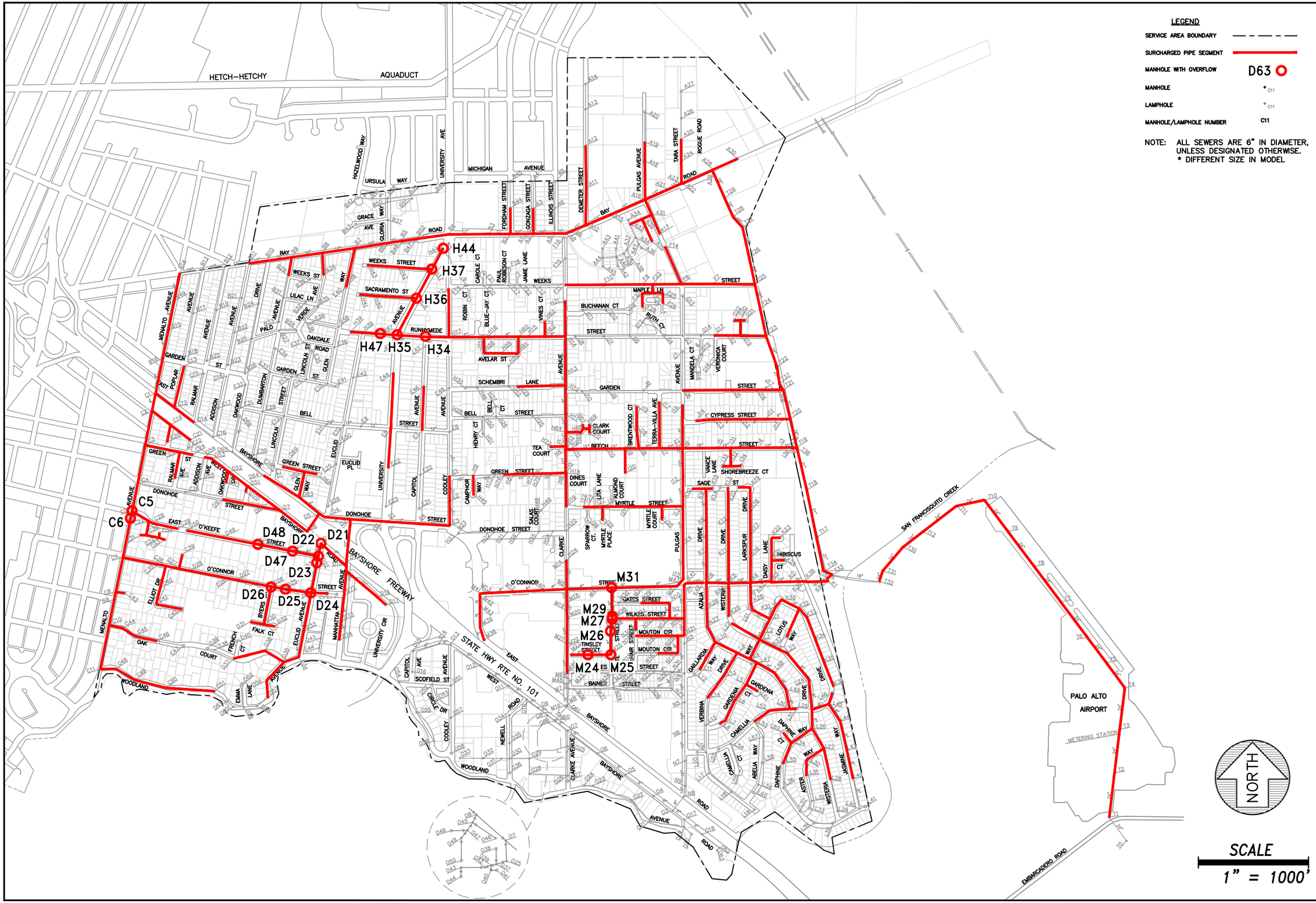
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DRAWN:	
CHECKED:	RO
PROJ. ENGR:	JTT

FIGURE
5.2

JOB NO.
221009



LEGEND

- SERVICE AREA BOUNDARY
- SURCHARGED PIPE SEGMENT
- MANHOLE WITH OVERFLOW — D63
- MANHOLE — *C11
- LAMPHOLE — °C11
- MANHOLE/LAMPHOLE NUMBER — C11

NOTE: ALL SEWERS ARE 6" IN DIAMETER, UNLESS DESIGNATED OTHERWISE.
* DIFFERENT SIZE IN MODEL

SCALE
1" = 1000'

SCENARIO 3: 2035 ENHANCED – PWWF CONDITIONS
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FIGURE
5.3

JOB NO.
221009

CATEGORY 1: EXISTING PIPE CAPACITY DEFICIENCIES
2025 SEWER SYSTEM MASTER PLAN
EAST PALO ALTO, CA

LEGEND

- SERVICE AREA BOUNDARY
- PIPE SEGMENT WITH CATEGORY 1 DEFICIENCY
- MANHOLE •C11
- LAMPHOLE °C11
- MANHOLE/LAMPHOLE NUMBER C11

NOTES:
1. ALL SEWERS ARE 6" IN DIAMETER, UNLESS DESIGNATED OTHERWISE.

HETCH–HETCHY AQUADUCT

BAYSHORE FREEWAY

STATE HWY RTE NO. 101

SAN FRANCISQUITO CREEK

PALO ALTO AIRPORT

METERING STATION

EMBARCADERO ROAD

NORTH

SCALE
1" = 1000'

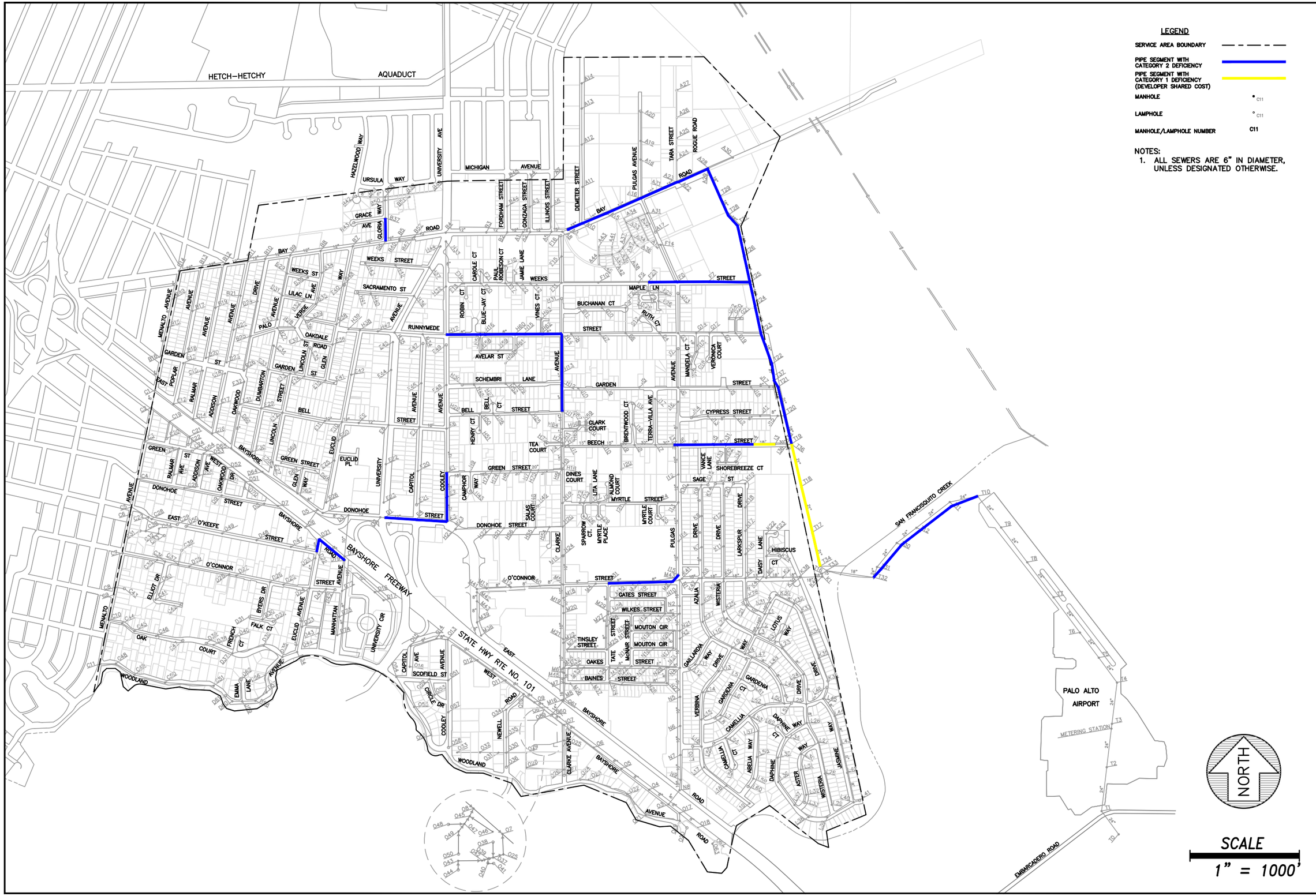
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PROJ. ENGR:	JTT

FIGURE
6.1

JOB NO.
221009

CATEGORY 2: FUTURE PIPE CAPACITY DEFICIENCIES
2025 SEWER SYSTEM MASTER PLAN
EAST PALO ALTO, CA



LEGEND

- SERVICE AREA BOUNDARY
- PIPE SEGMENT WITH CATEGORY 2 DEFICIENCY
- PIPE SEGMENT WITH CATEGORY 1 DEFICIENCY (DEVELOPER SHARED COST)
- MANHOLE • C11
- LAMPHOLE ° C11
- MANHOLE/LAMPHOLE NUMBER C11

NOTES:
1. ALL SEWERS ARE 6" IN DIAMETER, UNLESS DESIGNATED OTHERWISE.

NORTH

SCALE
1" = 1000'

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DRAWN:	
CHECKED:	RO
PROJ. ENGR:	JTT

FIGURE
6.2

JOB NO.
221009



LEGEND

- SERVICE AREA BOUNDARY
- PIPE SEGMENT WITH CATEGORY 3 DEFICIENCY
- MANHOLE •C11
- LAMPHOLE °C11
- MANHOLE/LAMPHOLE NUMBER C11

NOTES:
1. ALL SEWERS ARE 6" IN DIAMETER, UNLESS DESIGNATED OTHERWISE.

SCALE
1" = 1000'

CATEGORY 3A: EXISTING PIPE STRUCTURAL DEFICIENCIES
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DRAWN:	
CHECKED:	RO
PROJ. ENGR:	JTT

FIGURE 6.3

JOB NO. 221009



LEGEND

SERVICE AREA BOUNDARY

PIPE SEGMENT WITH CATEGORY 1 AND CATEGORY 3 DEFICIENCIES

PIPE SEGMENT WITH CATEGORY 2 AND CATEGORY 3 DEFICIENCIES

MANHOLE •C11

LAMPHOLE °C11

MANHOLE/LAMPHOLE NUMBER C11

NOTES:
1. ALL SEWERS ARE 6" IN DIAMETER, UNLESS DESIGNATED OTHERWISE.

NORTH

SCALE
1" = 1000'

CATEGORY 1, 2, AND 3A OVERLAP
2025 SEWER SYSTEM MASTER PLAN
EAST PALO ALTO, CA

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CHECKED:	RO
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FIGURE
6.4

JOB NO.
221009

CATEGORY 3B: REMAINING PIPES IN THE SEWER SYSTEM
2025 SEWER SYSTEM MASTER PLAN
EAST PALO ALTO, CA

LEGEND

- SERVICE AREA BOUNDARY
- PIPE SEGMENT WITH CATEGORY4 DEFICIENCIES
- PIPE SEGMENT IN PALO ALTO AIRPORT, SEE NOTE 2
- MANHOLE
- LAMPHOLE
- MANHOLE/LAMPHOLE NUMBER C11

NOTES:
1. ALL SEWERS ARE 6" IN DIAMETER, UNLESS DESIGNATED OTHERWISE.
2. PIPE SEGMENTS IN THE PALO ALTO AIRPORT MAY REQUIRE ADDITIONAL MEASURES TO REPLACE.

NORTH

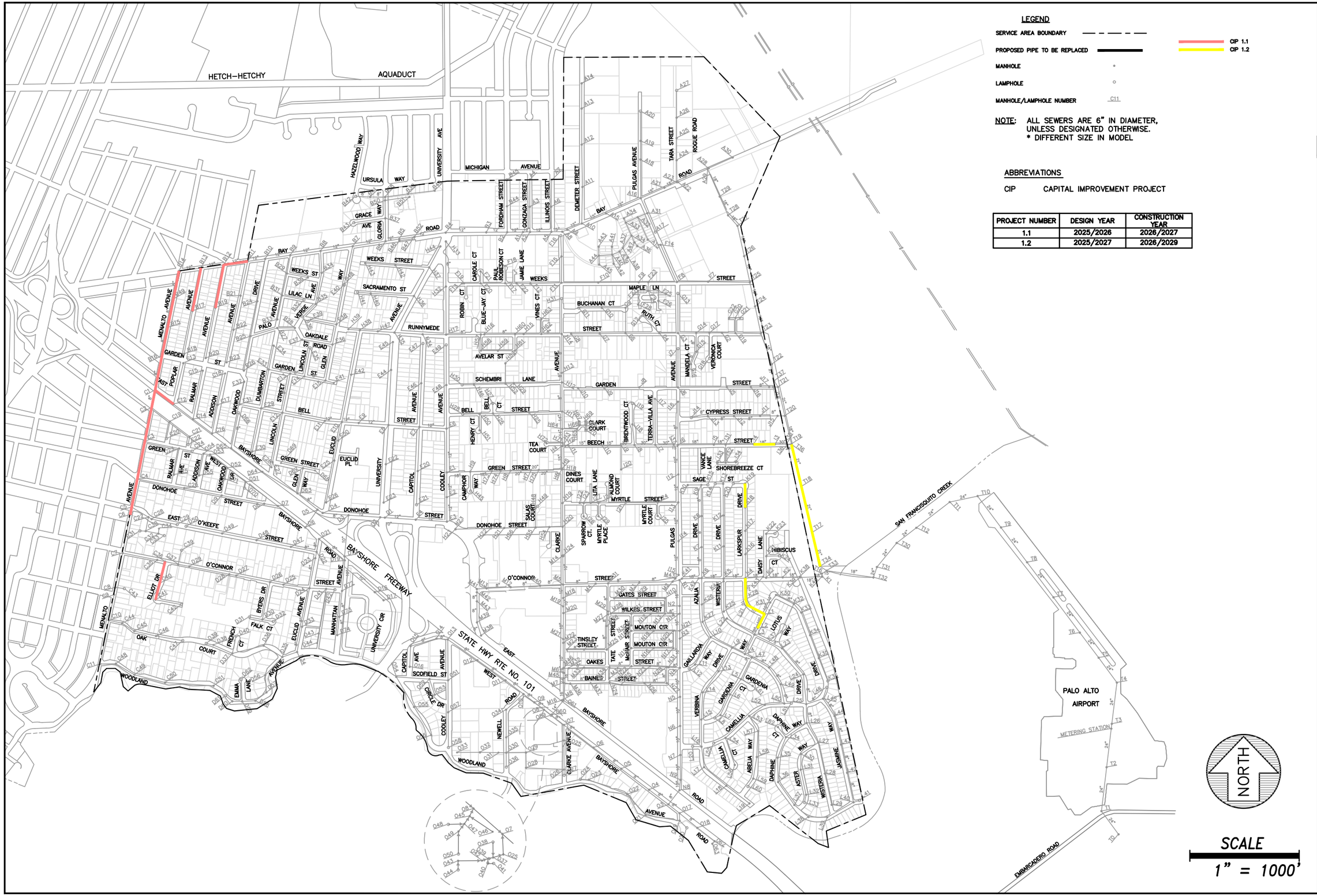
SCALE
1" = 1000'

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DATE:	06/20/2025
SCALE:	1" = 1000'
DESIGNED:	ZG
DRAWN:	
CHECKED:	RO
PROJ. ENGR:	JTT

FIGURE
6.5

JOB NO.
221009



PROJECT NUMBER	DESIGN YEAR	CONSTRUCTION YEAR
1.1	2025/2026	2026/2027
1.2	2025/2027	2026/2029

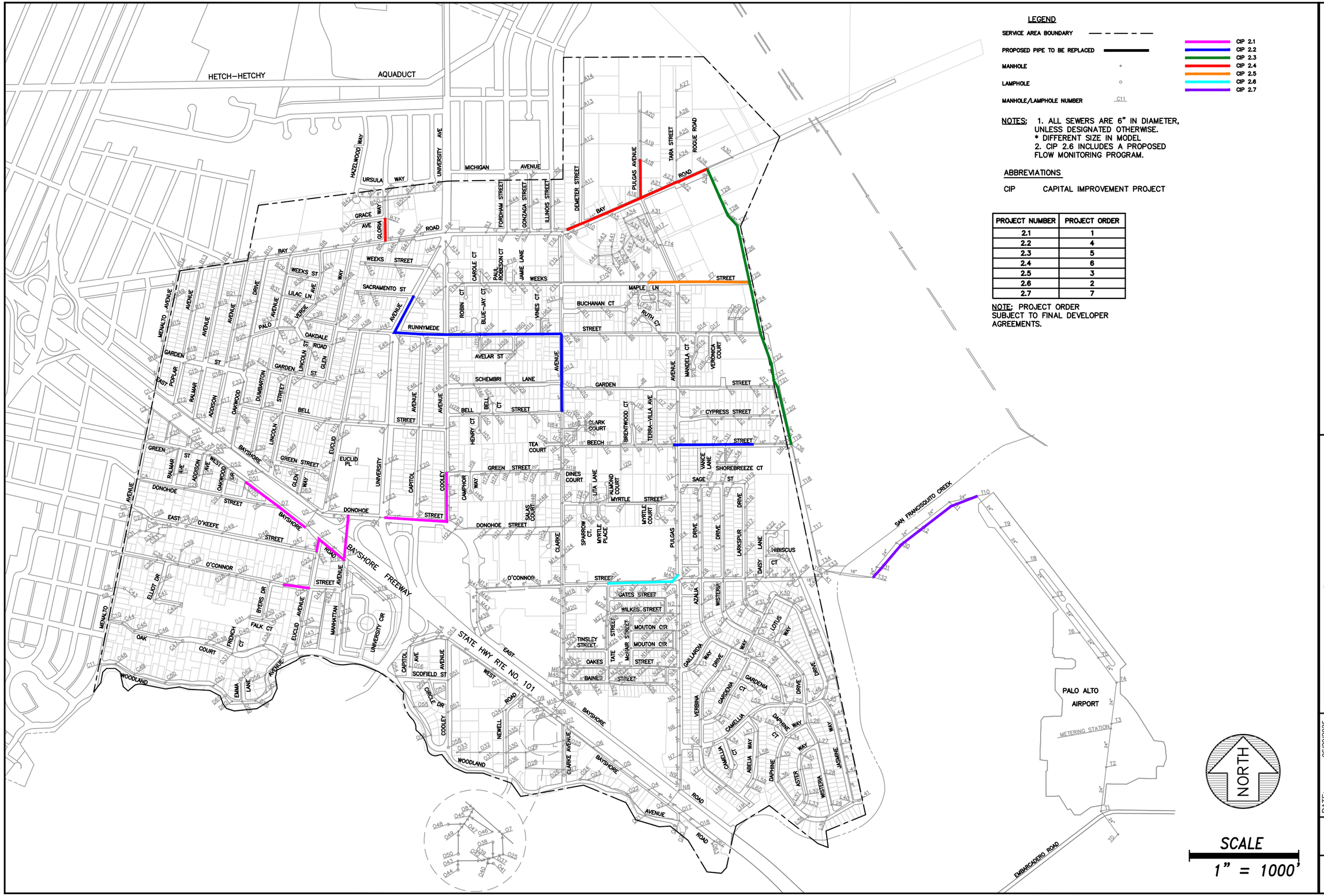
CATEGORY 1 - CIP PROJECTS
2025 SEWER SYSTEM MASTER PLAN
EAST PALO ALTO, CA

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DATE:	06/20/2025
SCALE:	1" = 1000'
DESIGNED:	ZG
DRAWN:	
CHECKED:	RO
PROJ. ENGR:	JTT

FIGURE 7.1

JOB NO. 221009



LEGEND

- SERVICE AREA BOUNDARY
- PROPOSED PIPE TO BE REPLACED
- MANHOLE
- LAMPHOLE
- MANHOLE/LAMPHOLE NUMBER C11

- CIP 2.1
- CIP 2.2
- CIP 2.3
- CIP 2.4
- CIP 2.5
- CIP 2.6
- CIP 2.7

NOTES: 1. ALL SEWERS ARE 6" IN DIAMETER, UNLESS DESIGNATED OTHERWISE.
* DIFFERENT SIZE IN MODEL
2. CIP 2.6 INCLUDES A PROPOSED FLOW MONITORING PROGRAM.

ABBREVIATIONS

CIP CAPITAL IMPROVEMENT PROJECT

PROJECT NUMBER	PROJECT ORDER
2.1	1
2.2	4
2.3	5
2.4	6
2.5	3
2.6	2
2.7	7

NOTE: PROJECT ORDER SUBJECT TO FINAL DEVELOPER AGREEMENTS.

NORTH

SCALE
1" = 1000'

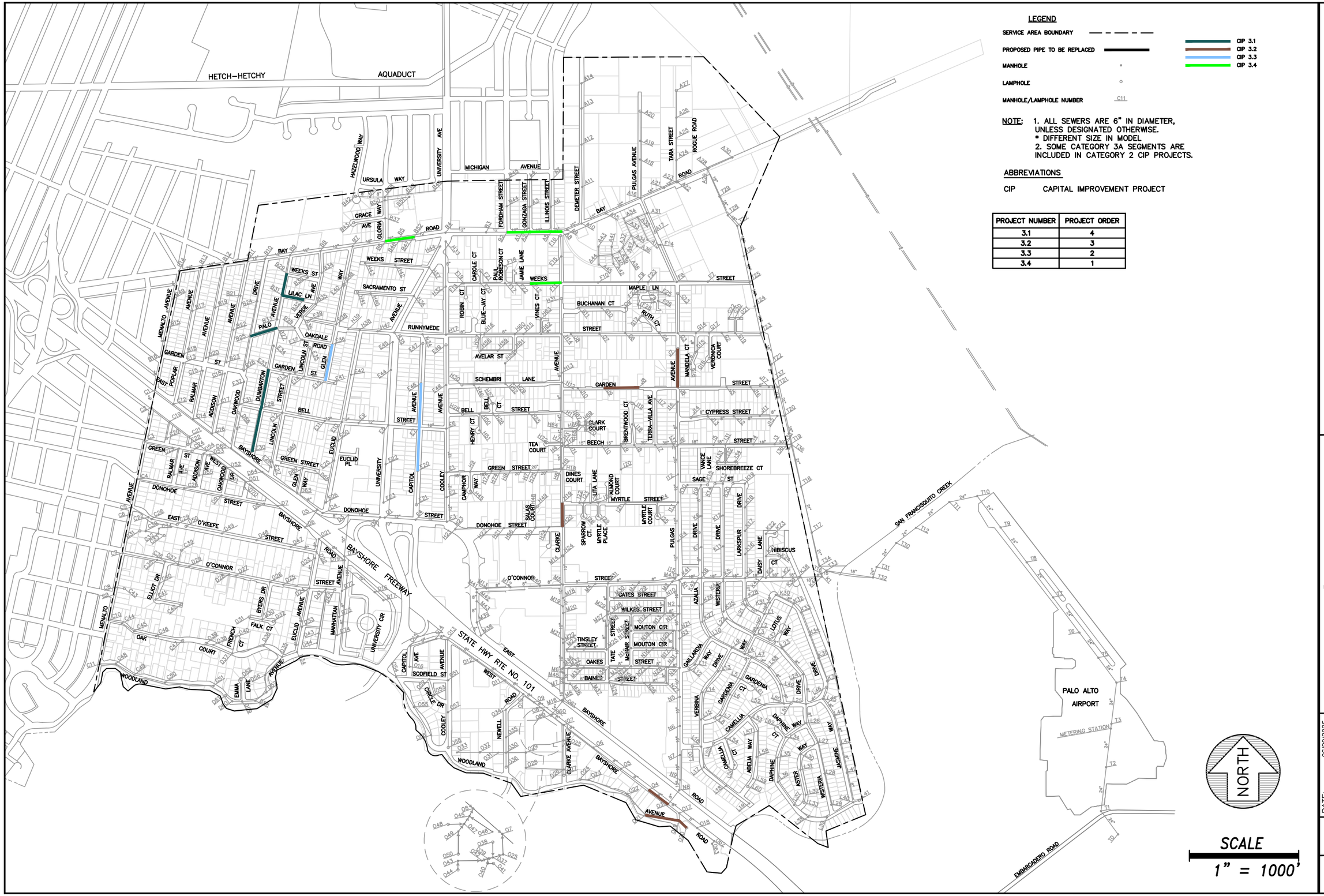
CATEGORY 2 - CIP PROJECTS
2025 SEWER SYSTEM MASTER PLAN
EAST PALO ALTO, CA

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DATE:	06/20/2025
SCALE:	1" = 1000'
DESIGNED:	ZG
DRAWN:	
CHECKED:	RO
PROJ. ENGR:	JTT

FIGURE
7.2

JOB NO.
221009



LEGEND

SERVICE AREA BOUNDARY

PROPOSED PIPE TO BE REPLACED

MANHOLE

LAMPHOLE

MANHOLE/LAMPHOLE NUMBER C11

CIP 3.1
CIP 3.2
CIP 3.3
CIP 3.4

NOTE: 1. ALL SEWERS ARE 6" IN DIAMETER, UNLESS DESIGNATED OTHERWISE.
* DIFFERENT SIZE IN MODEL
2. SOME CATEGORY 3A SEGMENTS ARE INCLUDED IN CATEGORY 2 CIP PROJECTS.

ABBREVIATIONS

CIP CAPITAL IMPROVEMENT PROJECT

PROJECT NUMBER	PROJECT ORDER
3.1	4
3.2	3
3.3	2
3.4	1

NORTH

SCALE
1" = 1000'

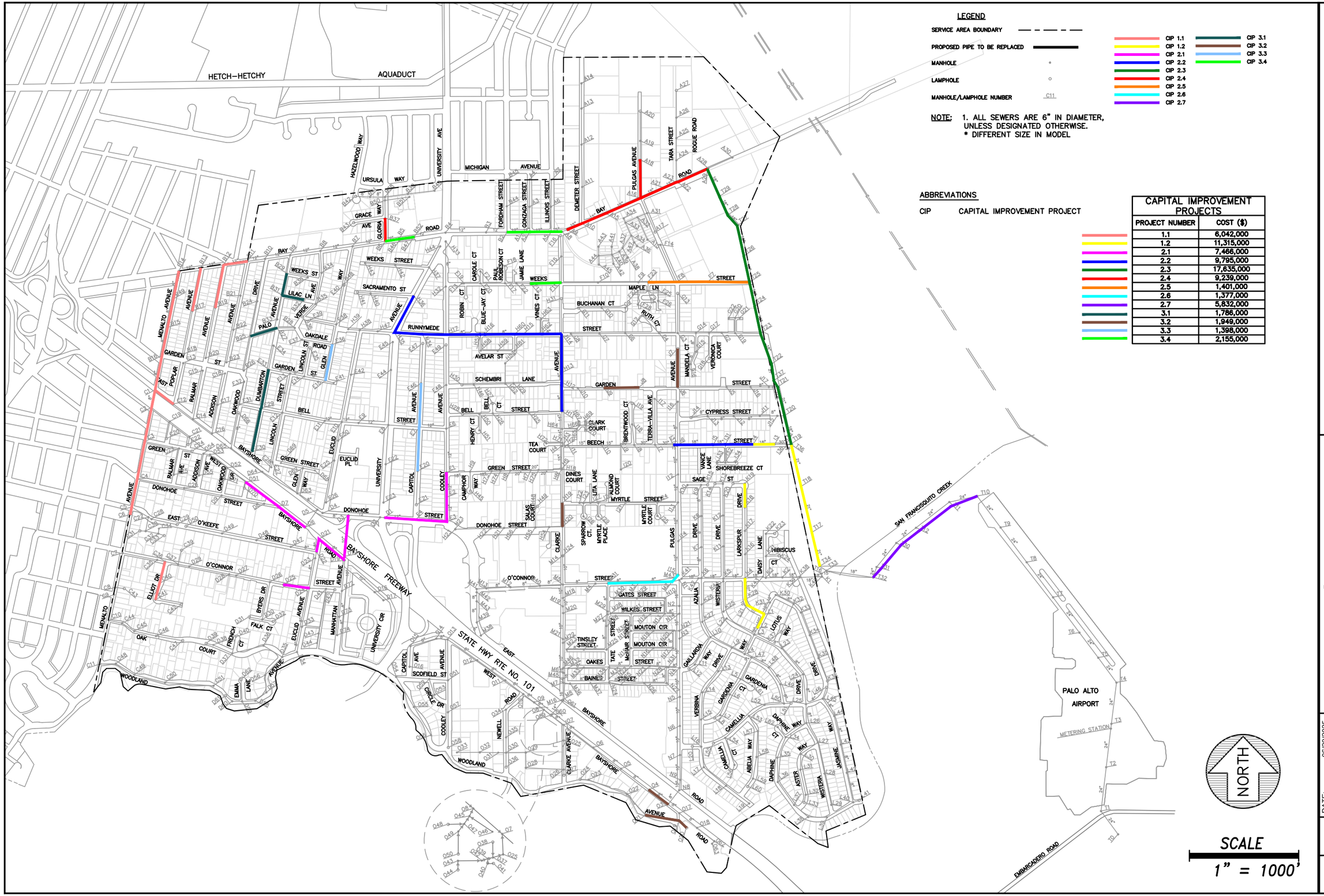
CATEGORY 3A - CIP PROJECTS
2025 SEWER SYSTEM MASTER PLAN
EAST PALO ALTO, CA

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DATE:	06/20/2025
SCALE:	1" = 1000'
DESIGNED:	ZG
DRAWN:	
CHECKED:	RO
PROJ. ENGR:	JTT

FIGURE
7.3

JOB NO.
221009



LEGEND

SERVICE AREA BOUNDARY

PROPOSED PIPE TO BE REPLACED

MANHOLE

LAMPHOLE

MANHOLE/LAMPHOLE NUMBER C11

CIP 1.1
CIP 1.2
CIP 2.1
CIP 2.2
CIP 2.3
CIP 2.4
CIP 2.5
CIP 2.6
CIP 2.7
CIP 3.1
CIP 3.2
CIP 3.3
CIP 3.4

NOTE: 1. ALL SEWERS ARE 6" IN DIAMETER, UNLESS DESIGNATED OTHERWISE.
* DIFFERENT SIZE IN MODEL

ABBREVIATIONS

CIP CAPITAL IMPROVEMENT PROJECT

CAPITAL IMPROVEMENT PROJECTS	
PROJECT NUMBER	COST ($)
1.1	6,042,000
1.2	11,315,000
2.1	7,486,000
2.2	9,795,000
2.3	17,635,000
2.4	9,239,000
2.5	1,401,000
2.6	1,377,000
2.7	5,832,000
3.1	1,786,000
3.2	1,949,000
3.3	1,398,000
3.4	2,155,000

NORTH

SCALE
1" = 1000'

OVERALL - CIP PROJECTS
2025 SEWER SYSTEM MASTER PLAN
EAST PALO ALTO, CA

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150 Executive Park Blvd • Suite 4200 • San Francisco, CA 94134
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DATE:	06/20/2025
SCALE:	1" = 1000'
DESIGNED:	ZG
DRAWN:	
CHECKED:	RO
PROJ. ENGR:	JTT

FIGURE
7.4

JOB NO.
221009

APPENDIX A

2035 General Plan and Ravenswood Business Specific Plan Land Use Excerpts

Table 4-2: Land Use Classification System			
Major Classes	**Maximum Density / FAR**	**Land Use Designation and Summary Description**	**Maximum Building Height** (see zoning code for further restrictions and standards)
RESIDENTIAL	0 – 12 du/a	**Low Density Residential** (R-LD). Single-family dwellings, with 2nd units allowed on some parcels.	Maximum height of 2 stories and 26 feet.
	12 – 22 du/a	**Medium Density Residential** (R-MD). A range of multi-family residential uses including second units, single-family, duplex, triplex, quadplex, rowhouses, courtyard buildings and small-scale multi-family buildings.	Maximum height of 3 stories and 36 feet.
	22 – 43 du/a	**High Density Residential** (R-HD). A range of multi-family housing types ranging from townhomes to multi-family apartments at moderate to high densities.	Maximum height of 5 stories and 60 feet.
	43 – 86 du/a	**Urban Residential** (R-UHD). High-density multi-family dwellings (apartments, condos, and SROs).	Maximum height of 7 stories and 75 feet.
COMMERCIAL	Up to 22 du/a; 1.0 FAR	**Neighborhood Commercial** (NC). Local-serving retail, services and related uses.	Maximum of 3 floors or 36 feet.
	Up to 2.0 FAR	**General Commercial** (GC). Regional retail, office, and service-oriented business activities serving a community-wide population or broader market.	Maximum of 3 stories and 75 feet.
	Up to 3.0 FAR	**Office** (OC). Single-tenant or multi-tenant offices that include professional, legal, medical, financial, corporate and general business offices.	Maximum of 8 stories or 100 feet, whichever is greater.
MIXED USE	Up to 22 du/a; 1.0 FAR	**Mixed Use Low** (MUL). Low-density mixed-use.	Maximum of 3 stories and 36 feet.
	Up to 65 du/a; 1.75 FAR	**Mixed Use Corridor** (MUC). Multi-story mixed-use buildings.	Maximum 5 stories or 60 feet.
	Up to 86 du/a; 2.5 FAR	**Mixed Use High** (MUH). Multi-story mixed-use buildings at a larger scale than MUC.	Maximum of 8 stories or 100 feet, whichever is greater.
INDUSTRIAL	Up to 1.0 FAR	**General Industrial** (I-G). Industrial (storage and manufacturing), and R&D (lab/medical).	Maximum of 3 stories or 30 feet.
	Ranges from 0.75 to 3.0 FAR	**Industrial Buffer** (I-B). High-quality office buildings, along with a limited range of manufacturing and repair businesses.	Maximum of 8 stories or 100 feet. Maximum height within 200 feet of University Village area is 3 stories above grade.
COMMUNITY	Determined during approval	**Parks/Recreation/Conservation** (PRC). Public recreational uses, including park and open space.	n/a
	N/A	**Resource Management** (RM). Preservation of sensitive open space lands in a natural condition.	n/a
	N/A	**Public/Institutional** (PI). Education, city buildings, fire/police stations, & other uses.	n/a

Figure 4-2: General Plan Land Use Designations

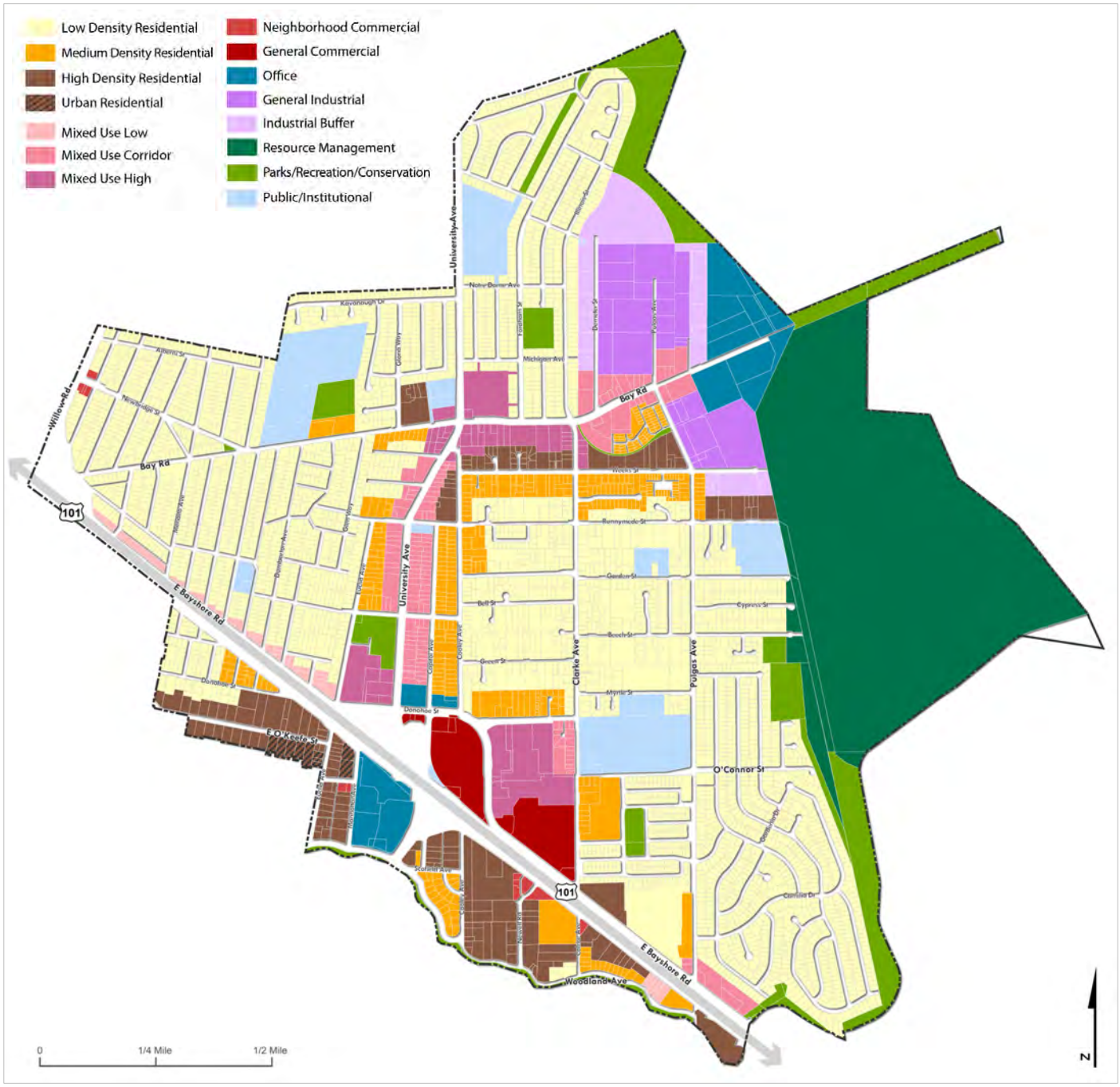
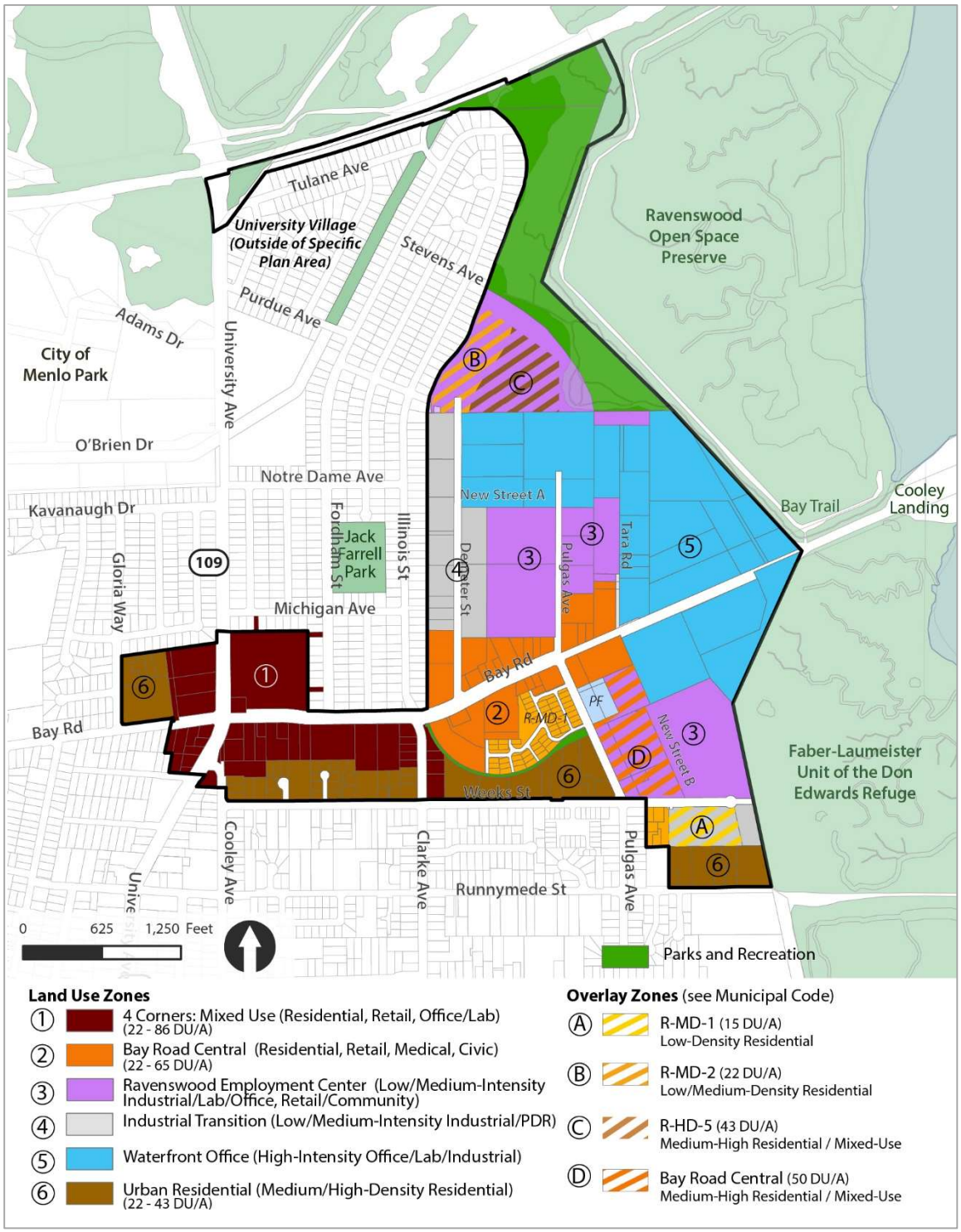


Figure 6-1. Land Use Zones Map



APPENDIX B

SANITARY SEWER MODEL CALIBRATION MEMO

FREYER & LAURETA, INC.
Civil Engineers – Surveyors – Construction Managers

Memorandum

Re: East Palo Alto – Rebuilding EPASD sewer model in SewerGEMS
Date: May 1, 2025
To: Richard Perez, City of East Palo Alto
Humza Javed, P.E. City of East Palo Alto
From: Greg Arifian P.E., Freyer & Laureta, Inc.
Rheanna Ostrea, Freyer & Laureta, Inc.
Zoe Gnass, Freyer & Laureta, Inc.
Reviewed: Jeff Tarantino, Freyer & Laureta, Inc.

1 Introduction

Freyer and Laureta, Inc. (F&L) has prepared this memorandum to document the development of a new sewer collection system model. The East Palo Alto Sanitary District's (EPASD) wastewater collection system was developed by EPASD using Hydra 7 software by Pizer Incorporated (Hydra 7). The Hydra 7 hydraulic model was first used by EPASD in the 2015 Master Plan. The hydraulic model created a mathematical representation based on the physical properties and operational information of the system and was calibrated using field data. As the initial Hydra 7 model software is no longer supported, the model needed to be rebuilt with modern software. F&L was tasked to recreate the hydraulic model using a GIS-based hydraulic model platform, which was done using SewerGEMS within OpenFlows Sewers Advanced by Bentley Systems, Incorporated. This memorandum outlines the steps that were taken to recreate and validate the model.

2 Model Methodology

F&L used a structured workflow to develop the SewerGEMS model. The legacy Hydra7 software was inaccessible, so the approach began with a research phase. This involved compiling archived and limited GIS sewer maps, PDFs, and database output files. Thereafter a series of tasks were developed, often iterative, to produce a final working model. The major tasks and sub-tasks identified became the basis of the model rebuilding approach and included:

1. Model Development
    a. Gathering archived 2014 field, model, and mapping data used in the 2015 Master plan
    b. Re-building a complete and detailed sewer map in GIS
    c. Importing sewer model and field flow data
2. SewerGEMS model Calibration
    a. Iteratively updating sewer properties through calibration
    b. Developing the Average Dry Weather Calibration buy analyzing HGL
    c. Therafter completing the Peak Wet Weather Calibration
3. Peformaing final quality checks on the SewerGEMS model results for final accuracy
4. Next steps: Model the 2025 and 2035 sewer conditions

3 Model Development

3.1 Gather Archived Model and Mapping Data

The first step in developing the updated model was to gather all available datasets from EPASD to support the construction of the ArcGIS sewer map using existing EPASD shapefiles, Microsoft Access database files, and Excel spreadsheets associated with the Hydra7 model developed for the 2015 Master Plan. Once all data sources were assembled, the information was reviewed and organized to confirm the accuracy and completeness of the sewer system inputs required for GIS mapping.

3.2 Build ArcGIS Sewer Map

The next step in the modeling process was to construct an accurate and functional ArcGIS map of EPASD's sewer system. The GIS map serves as the spatial foundation for the hydraulic model and must reflect reliable infrastructure attributes and connectivity. Archived GIS shapefiles were imported into ArcGIS and systematically compared to the Hydra7 model databases to verify the accuracy of system components, including manholes, pipes, and associated attributes.

To ensure data accuracy, key infrastructure attributes were reviewed across the archived GIS shape and model files. These features included manhole IDs, rim and invert elevations, pipe lengths, diameters, friction factors, and connectivity. The Hydra7 model contained the most recent field-verified measurements and system-wide modeling results and was used as the primary reference for validating and correcting discrepancies in the spatial data.

The following assumptions were applied in developing the ArcGIS sewer map:

1. **Hydraulic Attribute Consistency:** The Hydra7 data was assumed to represent the most accurate and current values for manhole and pipe attributes, including rim and invert elevations, lengths, diameters, and Manning's *n* values.

2. **Pipe Material and Friction Factors:** A single Manning's roughness coefficient of *n = 0.013* was applied throughout the system, consistent with vitrified clay pipe, the predominant material in EPASD's network, and validated by the *Civil Engineering Reference Manual*.

3. **Manhole Dimensions:** All manholes were modeled as 48-inch diameter circular structures, in accordance with EPASD standard design specifications.

4. **Invert Elevation Logic:** Invert elevations were assumed to match the lowest connected pipe at each manhole. Given EPASD's relatively flat topography and supporting field observations, this assumption provides a reasonable basis for establishing flowlines. The horizontal datum used is the North American Datum of 1983 (NAD83, NSR 2007), and the vertical datum is the National Geodetic Vertical Datum of 1929 (NAVD 29).

5. **Head Loss Representation:** Minor losses at manholes were incorporated using industry-standard head loss coefficients for pipe bends. These values were based on the Standard Loss Method as documented in Bentley's *OpenFlows Water Infrastructure* modeling software.

The GIS base map and associated attribute dataset formed the foundation for updating the hydraulic model and performing system capacity assessments.

3.3 SewerGEMS Model Development

Following the creation of the ArcGIS sewer map, the spatial data was imported into SewerGEMS within Bentley's OpenFlows Sewer Advanced platform to initiate hydraulic model development. Upon import, all manhole and pipe

segment attributes—including labels, elevations, and connectivity—were reviewed against the GIS map to ensure accurate data transfer.

During this verification process, several issues were identified and corrected prior to running any simulations:

1. **Duplicate and Conflicting Identifiers:** The imported GIS data contained several duplicate or conflicting manhole and pipe labels. The discrepancies were resolved by cross-referencing EPASD's official system map from the 2015 Master Plan. All naming conventions were updated within the GIS data to maintain consistency with EPASD records.

2. **Connectivity Errors:** Several manholes and pipes were found to be improperly connected or entirely disconnected within the GIS data. The GIS data was corrected to ensure continuous hydraulic flow throughout the modeled network.

To validate basic model functionality, ADWF from the Hydra7 dataset were input into the SewerGEMS model and used to run a preliminary test simulation. The test simulation served as an initial calibration step and revealed inconsistencies that required updates to certain model parameters. The following adjustments and assumptions were made:

1. **Head Loss Adjustments:** The original Hydra7 model did not account for head loss at manholes. When industry-standard head loss coefficients (as described in Section 3.2) were applied, the resulting flow levels did not align with observed average dry weather field data. To reconcile this, all head loss values at manholes (nodes) were temporarily set to zero for the purposes of model calibration.

2. **Ponding Area Assumptions:** Manholes were assigned a ponding area property value of zero. The ponding area assumption setting enabled the model to track and report the volume of predicted Sanitary Sewer Overflows (SSOs) lost during simulations. The approach was developed iteratively during the calibration process.

The updates described above resulted the SewerGEMS model accurately represented EPASD's sewer system and was properly configured for subsequent calibration and capacity analysis.

4 SewerGEMS Model Calibration

The SewerGEMS model calibration process focused on validating two critical parameters: (1) the hydraulic grade line (HGL) and (2) flow rates at model nodes. Calibration was conducted for two distinct flow scenarios: (1) Average Dry Weather Flow (ADWF) and (2) Peak Wet Weather Flow (PWWF). The methods used to validate input data for both scenarios is described in the follow sections.

4.1 Average Dry Weather Calibration

For ADWF conditions, flow inputs for all upstream manholes in the system were derived from the Hydra7 model Excel files. **Figure 1** illustrates the locations of the upstream manholes, which were designated as flow injection points. The total ADWF injection flow was cross-checked and validated against the Hydra7 model database, which reports a total system flow of 1.53 million gallons per day (MGD).

SewerGEMS model results for ADWF were compared against Hydra7 model data and available field data for flow rates and maximum HGL at each manhole. **Table 1** presents the comparison of flows and HGL values between the two models. The comparison showed good agreement, with a few outliers identified. These discrepancies are addressed in more detail in Section 5.1, *Average Dry Weather Results*.

The ADWF calibration step confirmed that the input parameters were accurately transferred to the SewerGEMS model and that base flow conditions were properly established. With ADWF successfully calibrated, the next step was to validate the model under peak wet weather conditions.

4.2 Peak Wet Weather Calibration

The calibration of the PWWF involved importing the injection flows from the Hydra7 model into SewerGEMS. The resulting predictions for surcharge and SSOs did not align with those from the Hydra7 model, likely due to insufficient information on how the Hydra7 model accounted for surcharged conditions and SSOs. The discovered discrepancy prompted an iterative process to investigate and resolve the differences in model results, leading to the following findings:

1. **Flow Losses:** Model simulations indicated flow losses within the system. To address this, a ponding property was added to capture and return the predicted SSOs, as outlined in Section 2.3. This property update was applied system-wide for both ADWF and PWWF scenarios.

2. **Surcharge and SSOs:** Hand-calculated hydraulic analyses showed that the Hydra7 model predicted surcharge and SSOs in locations where they were unlikely to occur. These predictions did not align with field observations or the EPASD's operational experience. As a result, the SewerGEMS model was found to more accurately reflect existing conditions.

3. **Flow Adjustments:** Discrepancies were observed in the injection flow rates, with high flows in single-family housing areas and low flows in multi-family dwellings. To correct this, flow injections at selected upstream manholes were adjusted to better align with EPASD's 2013 zoning data. Flow rates in single-family areas were reduced, while multi-family areas received increased flow injections. These adjustments maintained the total system flow of 5.78 MGD, as recorded in the Hydra7 database, and provided a more realistic loading scenario across the system. Table 2 summarizes the changes in injection flows and the affected manholes.

5 SewerGEMS Model Results

Following the calibration process described in the previous section, the SewerGEMS model results were compared to the original hydraulic data from the Hydra7 model from the 2015 Master Plan. The comparison between the Hydra 7 and SewerGems output was performed to assess the accuracy and reliability of the SewerGEMS model in representing the system's performance under both ADWF and PWWF conditions. The sections below detail the methods used for this comparison and summarize the key findings from each scenario.

5.1 Average Dry Weather Results

For ADWF, the maximum HGL from SewerGEMS at each manhole was compared to the HGL from the original Hydra7 model. In most cases, the predicted HGLs from SewerGEMS differed by no more than 6 inches from those predicted by the Hydra7 model, as shown in **Table 1.**

Five manholes were identified as outliers, likely due to one of the following causes:

1. Locations near manholes with split flow directions or passive bypass piping, as shown in **Figure 2**. Manhole Outliers: E33, L10, M2, M3.

2. Duplicate manhole identifications, as discussed in Section 2.2. The Hydra7 model presented multiple data points for these manholes, making it unclear which data should be used for comparison. Manhole Outlier: H29.

Figure 3 shows the manhole outliers, which exhibited HGL differences ranging from nine inches to 24 inches, with SewerGEMS predicting lower HGLs than the Hydra7 model. The discrepancies are likely due to differences in routing strategies between the two models. However, as these outliers had minimal impact on adjacent branches, the outliers were considered insignificant in terms of overall model accuracy.

The full model outputs for ADWF are included in **Attachment 1**.

5.2 Peak Wet Weather Results

As described in Section 3.2, the PWWF model results could not be fully validated using HGL comparisons due to inconsistencies in the model. To verify the PWWF results, the following methods were used:

1. Manhole flows were compared to ensure that the total system flow of 5.78 MGD matched the total flow in Hydra7.
2. Predicted SSO locations were validated within the model.
3. System segments known to be surcharged, based on historical data and field observations, were validated in the model, including previous bypass pumping plans and flow metering results.

Figure 4 presents a map of predicted SSOs and surcharged segments in SewerGEMS. The model outputs and hydraulics for PWWF are included in **Attachment 2**.

6 Conclusions and Next Steps

The SewerGEMS model recreation has been validated as an acceptable tool for analyzing flows within EPASD sewer system. Based on the calibration and validation efforts, the model is now ready for more detailed analysis and future planning. The next steps in the process include:

1. Updating the GIS map file to reflect the most current As-Built data for the 2025 sanitary sewer system.
2. Recalibrating the hydraulic model under the following scenarios:
    a. **2025 Conditions:** Incorporating flow injections from the latest developments based on As-Built data to identify potential system issues or deficiencies.
    b. **2035 Conditions:** Adding flow injections from the East Palo Alto 2035 General Plan and Ravenswood Specific Planto identify necessary system upgrades to accommodate future growth.
    c. **2035 Enhanced Conditions:** Adding flow injections from the 2035 General Plan, Ravenswood Specific Plan, and approved planned developments to identify infrastructure needs for future development.
3. Updating EPASD's Master Plan to incorporate the results of the updated calibration and system analysis.

The next steps described above will ensure the model remains accurate and relevant for both current and future sewer system management.

7 References

EPASD, 2002 *East Palo Alto Sanitary District Standard Specifications for Design and Construction of Sanitary Collection and Conveyance Facilities*. East Palo Alto Sanitary District. June 6, 2002.

F&L, 2015 *East Palo Alto Sanitary District Master Plan Update*. Freyer & Laureta, Inc. March 2015.

K/J, 2002 *East Palo Alto Sanitary District Master Plan Update*. Kennedy/Jenks Consultants. September 2002.

VA, 2012 *2011-2012 Sanitary Sewer Flow Monitoring and Inflow/Infiltration Study*. V&A Consultants. June 2012.

Attachments:

- Tables
  - Table 1: Selected Average Dry Weather HGL and Flow Comparison
  - Table 2: Peak Wet Weather Updated Injection Flows
- Figures
  - Figure 1: EPASD Sanitary Sewer Service Area and Flow Injection Manholes
  - Figure 2: Typical Bypass Manhole
  - Figure 3: Manhole Outliers
  - Figure 4: SewerGEMS PWWF Model Results
- Attachments
  - Attachment 1: Average Dry Weather Flow Model Results
  - Attachment 2: Peak Wet Weather Flow Model Results

Table 1: Selected Average Dry Weather HGL and Flow Comparison

Table 1.1 HGL Comparison

	HGL (ft)		
MANHOLE LABEL	2013 Hydra7 Model[1]	2025 SewerGEMS Model	Change from Hydra7 Model
A15	0.63	0.55	0.08
B13	9.81	9.81	0.00
E1	4.05	4.06	(-0.00)
E2	4.59	4.61	(-0.02)
H3	1.20	1.14	0.06
I12	-1.87	-1.85	(-0.02)
I3	-3.41	-3.43	0.02
K28	-3.58	-3.61	0.03
K4	-3.78	-3.81	0.04
T20	-3.54	-3.54	0.00
T13	-6.60	-6.63	0.03

Table 1.2 Flow Comparison

	Flows (MGD)		
MANHOLE LABEL	2013 Hydra7 Model[1]	2025 SewerGEMS Model	Change from Hydra7 Model
A15	0.39	0.37	0.02
B13	0.14	0.14	0.00
E1	0.40	0.41	(-0.01)
E2	0.27	0.28	(-0.01)
H3	0.58	0.55	0.03
I12	0.22	0.22	(-0.00)
I3	0.82	0.79	0.03
K28	0.14	0.13	0.02
K4	0.26	0.24	0.02
T20	0.54	0.52	0.02
T13	1.63	1.51	0.12

Notes:

1. 2013 Hydra 7 Model data is taken from the East Palo Alto Sanitary District Master Plan Update, Freyer & Laureta, Inc., March 2015.

Abbreviations:

ft	feet
HGL	Hydraulic Grade Line
MGD	Million Gallons/Day

Table 2 - Peak Wet Weather Updated Injection Flows

Manhole Label	2013 PWWF Injection Value[1] (cfs)	2025 PWWF Injection Value (cfs)	Change from Hydra7 Model
C26	0.19	0.20	(-0.01)
D50	0.23	0.35	(-0.12)
D17	0.08	0.20	(-0.12)
D55	0.07	0.12	(-0.05)
D70	0.06	0.14	(-0.08)
D71	0.06	0.12	(-0.06)
D39	0.12	0.01	0.11
D40	0.12	0.01	0.11
D28	0.18	0.17	0.01
D69	0.07	0.03	0.04
D62	0.13	0.02	0.12
D68	0.07	0.03	0.04

Notes:

1. 2013 Hydra 7 Model data is taken from the East Palo Alto Sanitary District Master Plan Update, Freyer & Laureta, Inc., March 2015.

Abbreviations:

cfs	cubic feet / second
PWWF	Peak Wet Weather Flow

FIGURE 1 EPA&D SANITARY SEWER SERVICE AREA AND FLOW INJECTION MANHOLES
EPA&D SANITARY SEWER CALIBRATION MEMORANDUM
EAST PALO ALTO, CA

HETCH–HETCHY AQUADUCT

NOT IN SERVICE AREA

BAYSHORE FREEWAY

STATE HWY RTE NO. 101

SAN FRANCISQUITO CREEK

PALO ALTO AIRPORT

LOCATION OF ABANDONED METERING STATION

LOCATION OF CURRENT METERING STATION

PALO ALTO PUMP STATION

PALO ALTO REGIONAL WATER POLLUTION CONTROL PLANT

EMBARCADERO ROAD

NORTH

SCALE 1" = 1000'

LEGEND

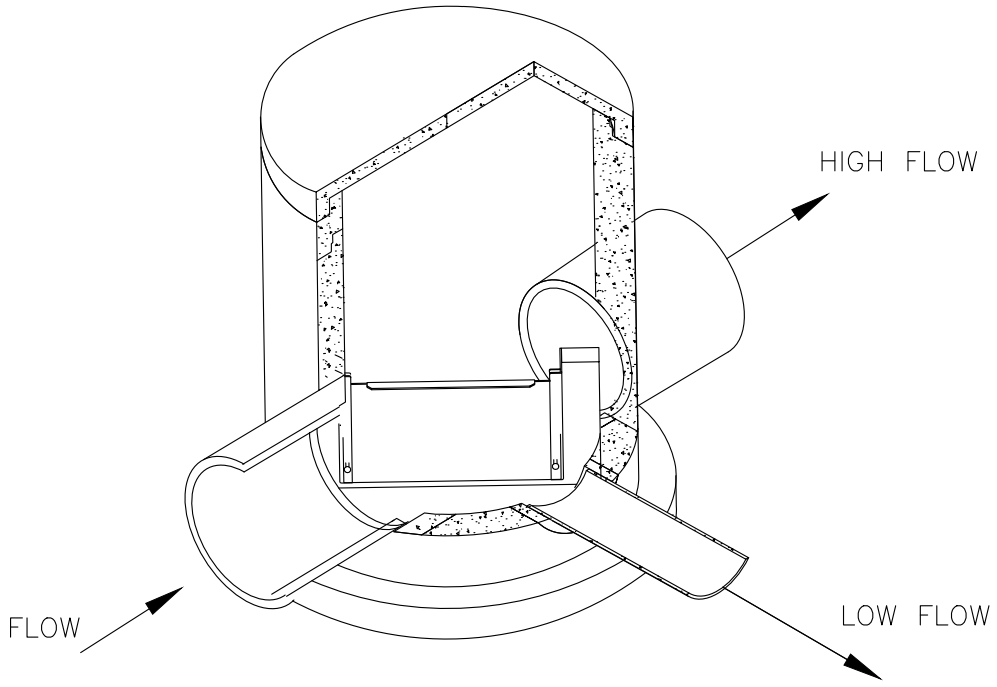
- SERVICE AREA BOUNDARY
- INJECTION MANHOLES
- MANHOLE •C11
- LAMPHOLE °C11
- MANHOLE/LAMPHOLE NUMBER C11

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DATE:	4/4/2025
SCALE:	1" = 1000'
DESIGNED:	RO
DRAWN:	RO
CHECKED:	GKA
PROJ. ENGR:	JJT

FIGURE 1

JOB NO. 221009



1 — BYPASS MANHOLE
NTS

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BYPASS MANHOLE
EPASD SANITARY SEWER CALIBRATION MEMORANDUM
EAST PALO ALTO, CA

FIGURE
2



FIGURE 3 MANHOLE OUTLIERS
EPA/SD SANITARY SEWER CALIBRATION MEMORANDUM
EAST PALO ALTO, CA

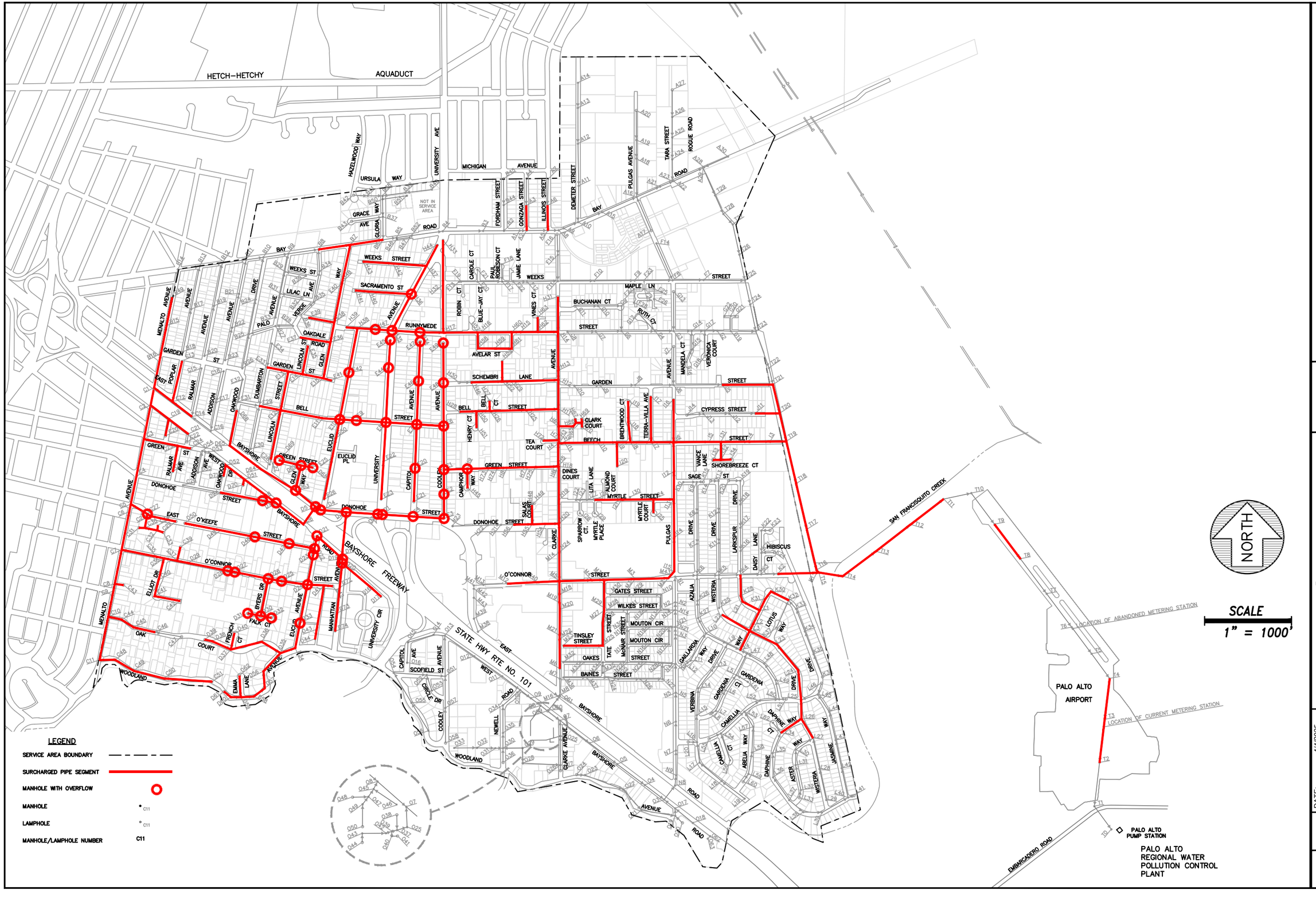
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FIGURE 3

JOB NO. 221009

FIGURE 4 SEWERGEMS PWWF MODEL RESULTS
EPA/SD SANITARY SEWER CALIBRATION MEMORANDUM
EAST PALO ALTO, CA



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CHECKED:	JJT
PROJ. ENGR:	

FIGURE 4

JOB NO. 221009

Attachement 1
Average Dry Weather Flow Model Results

Label	Start Node	Rim (Start) (ft)	Invert (Start) (ft)	Stop Node	Rim (Stop) (ft)	Invert (Stop) (ft)	Length (ft)	Slope (Calculated) (ft/ft)	Section Type	Diameter (in)	Manning's n	Flow (Middle) (cfs)	Velocity (ft/s)	Depth (Middle) (ft)	Flow (Maximum) (cfs)	Capacity (Full Flow) (cfs)	Flow / Capacity (Design) (%)	Depth/Rise (%)	Depth (Maximum) / Rise (%)	Is Ever Surcharged?	Hydraulic Grade (Maximum) (ft)
A1+A2	A1	16.28	2	A2	15.82	1.92	79.9	0.001	Circle	12	0.013	0.378	2.39	0	0.5101	1.1273	33.5	0	39.8	FALSE	2.435
A2+A5	A2	15.82	1.82	A5	14.53	1.57	244.2	0.001	Circle	12	0.013	0.395	2.56	0.02	0.5271	1.1399	34.7	1.8	46.6	FALSE	2.311
A3+A2	A3	14.86	8.76	A2	15.82	2.12	287.5	0.023	Circle	6	0.013	0.017	0.85	0.05	0.017	0.8527	2	10.7	10.1	FALSE	8.907
A4+A3	A4	14	9.48	A3	14.86	8.86	312	0.002	Circle	6	0.013	0.017	0.88	0.06	0.017	0.2501	6.8	11.7	11.7	FALSE	9.566
A5+A8	A5	14.53	1.57	A8	13.85	1.53	124.3	0	Circle	15	0.013	0.412	2.56	0	0.5441	1.1587	35.6	0	34	FALSE	2.049
A6+A5	A6	13.72	7.32	A5	14.53	5.81	286.8	0.005	Circle	6	0.013	0.017	0.9	0.06	0.017	0.4071	4.2	12.6	15	FALSE	7.429
A7+A6	A7	14	8.03	A6	13.72	7.42	306	0.002	Circle	6	0.013	0.017	0.88	0.06	0.017	0.2505	6.8	11.7	17.2	FALSE	8.116
A8+A9	A8	13.85	1.43	A9	12.82	1.16	61.2	0.004	Circle	15	0.013	0.412	2.65	0.02	0.5441	4.2904	9.6	1.5	24.6	FALSE	1.825
A9+A10	A9	12.82	0.62	A10	11.42	0.57	181.2	0	Circle	15	0.013	0.412	2.56	0	0.5441	1.073	38.4	0	36.3	FALSE	1.455
A10+A15	A10	11.42	0.47	A15	9.93	0.03	299.3	0.001	Circle	15	0.013	0.4413	2.91	0.04	0.5734	2.4767	17.8	3.3	33.7	FALSE	0.897
A11+A10	A11	11.83	2.53	A10	11.42	1.12	417.5	0.003	Circle	6	0.013	0.0293	0.72	0.01	0.0293	0.3261	9	2.9	23.9	FALSE	2.654
A12+A11	A12	9.52	4.07	A11	11.83	2.63	485.1	0.003	Circle	6	0.013	0.0293	1.05	0.08	0.0293	0.3057	9.6	16	25.4	FALSE	4.198
A13+A12	A13	7.19	5.15	A12	9.52	4.07	412.1	0.003	Circle	6	0.013	0.0293	1.05	0.08	0.0293	0.2872	10.2	16.2	25.9	FALSE	5.286
A14+A13	A14	8.06	5.91	A13	7.19	5.19	288.3	0.002	Circle	6	0.013	0.0293	1.1	0.09	0.0294	0.2804	10.4	18	26.8	FALSE	6.043
A15+A16	A15	9.93	-0.03	A16	8.08	-0.17	435.1	0	Circle	15	0.013	0.4413	2.95	0.05	0.5734	1.1587	38.1	3.9	42.6	FALSE	0.551
A16+A21	A16	8.08	-0.22	A21	7.13	-0.42	296.3	0.001	Circle	15	0.013	0.4553	2.86	0.02	0.5874	1.6782	27.1	1.3	38.7	FALSE	0.29
A17+A16	A17	8.77	1.57	A16	8.08	0.73	422.7	0.002	Circle	6	0.013	0.004	0.55	0.01	0.004	0.2501	1.6	1.1	4.3	FALSE	1.592
A18+A16	A18	7.05	1.45	A16	8.08	0.73	441.8	0.002	Circle	6	0.013	0.01	0.71	0.03	0.01	0.2265	4.4	6.4	11	FALSE	1.506
A19+A18	A19	6.77	2.98	A18	7.05	1.45	213.5	0.007	Circle	6	0.013	0.01	0.61	0.01	0.01	0.475	2.1	2.2	8.7	FALSE	3.058
A20+A19	A20	5.62	3.73	A19	6.77	3.05	339.8	0.002	Circle	6	0.013	0.01	0.74	0.04	0.01	0.251	4	7.8	10.8	FALSE	3.783
A21+A23	A21	7.13	-0.52	A23	7.01	-0.8	155.1	0.002	Circle	15	0.013	0.4553	2.89	0.02	0.5888	2.7445	16.6	1.8	31.4	FALSE	-0.115
A22+A29	A22	6.99	-0.92	A29	6.36	-1.21	369.1	0.001	Circle	18	0.013	0.463	3.02	0.04	0.5955	2.9442	15.7	2.8	30.2	FALSE	-0.452
A23+A22	A23	7.01	-0.8	A22	6.99	-0.92	13.8	0.009	Circle	15	0.013	0.463	2.91	0.02	0.5984	6.0235	7.7	1.6	32.7	FALSE	-0.45
A24+A23	A24	7.7	1.62	A23	7.01	0.37	250.6	0.005	Circle	6	0.013	0.0077	0.72	0.04	0.0077	0.3963	1.9	7.1	9	FALSE	1.66
A25+A24	A25	8.36	2.89	A24	7.7	1.62	253.1	0.005	Circle	6	0.013	0.0077	0.72	0.04	0.0077	0.3974	1.9	7.3	9	FALSE	2.93
A26+A25	A26	7.42	4.06	A25	8.36	2.89	234.1	0.005	Circle	6	0.013	0.0077	0.57	0.01	0.0077	0.3967	1.9	1.4	3.4	FALSE	4.087
A27+A26	A27	6.96	5	A26	7.42	4.06	310.9	0.003	Circle	6	0.013	0.0077	0.72	0.04	0.0077	0.3085	2.5	7.1	9.1	FALSE	5.037
A28+A29	A28	6.24	0.21	A29	6.36	-0.25	14.8	0.031	Circle	6	0.013	0.002	0.53	0	0.002	0.9892	0.2	0.9	0.9	FALSE	0.325
A29+T29	A29	6.36	-1.24	T29	4.98	-1.62	345.5	0.001	Circle	18	0.013	0.465	2.98	0.03	0.5971	3.4835	13.3	2.1	28.2	FALSE	-0.804
A30+A28	A30	6.07	1.27	A28	6.24	0.32	301	0.003	Circle	6	0.013	0.002	0.53	0	0.002	0.3152	0.6	0.9	0.9	FALSE	1.275
B2+A1	B2	16	2.46	A1	16.28	2.1	180.8	0.002	Circle	12	0.013	0.378	2.39	0	0.5101	1.5897	23.8	0	39.6	FALSE	2.87
B3+B2	B3	18.59	2.64	B2	16	2.46	239.4	0.001	Circle	12	0.013	0.361	2.43	0.03	0.4931	0.9769	37	2.5	46.2	FALSE	3.137
B4+B3	B4	20.32	3.42	B3	18.59	2.74	464.8	0.001	Circle	12	0.013	0.361	2.39	0.02	0.4931	1.3627	26.5	1.7	43	FALSE	3.871
B5+B52	B5	18.61	4.51	B52	20.58	4.29	176.2	0.001	Circle	12	0.013	0.361	2.31	0	0.4931	1.2589	28.7	0	42	FALSE	4.957
B6+B5	B6	18.29	5.6	B5	18.61	4.56	158.4	0.007	Circle	12	0.013	0.349	2.24	0	0.4811	2.8867	12.1	0	28.7	FALSE	5.893
B7+B6	B7	18.66	5.76	B6	18.29	5.6	380.1	0	Circle	12	0.013	0.305	2.03	0	0.4371	0.7309	41.7	0	50	FALSE	6.298
B8+B7	B8	20.55	6.5	B7	18.66	5.81	371	0.002	Circle	12	0.013	0.2883	1.94	0	0.4204	1.5364	18.8	0	37.3	FALSE	6.878
B9+B8	B9	18.41	7.16	B8	20.55	6.55	350.9	0.002	Circle	12	0.013	0.2755	1.9	0.01	0.4076	1.4854	18.5	0.5	37.3	FALSE	7.539
B10+B9	B10	16.86	7.61	B9	18.41	7.16	289.7	0.002	Circle	12	0.013	0.1951	1.53	0.01	0.3272	1.4041	13.9	1.1	34.6	FALSE	7.96
B11+B10	B11	16.46	8.71	B10	16.86	7.66	201.4	0.005	Circle	12	0.013	0.1695	1.35	0	0.266	2.5724	6.6	0	23	FALSE	8.967
B12+B11	B12	15.83	9.18	B11	16.46	8.76	277	0.002	Circle	12	0.013	0.1695	1.35	0	0.2231	1.3872	12.2	0	29.2	FALSE	9.475
B13+B12	B13	15.33	9.53	B12	15.83	9.18	262.7	0.001	Circle	12	0.013	0.1695	1.35	0	0.1802	1.3004	13	0	27.4	FALSE	9.807
B14+B13	B14	15.47	10.07	B13	15.33	9.53	253.1	0.002	Circle	12	0.013	0.1695	1.35	0	0.1695	1.6456	10.3	0	0	FALSE	10.289
B15+B49	B15	20.29	12.19	B49	17.11	11.21	330.9	0.003	Circle	8	0.013	0.1695	1.35	0	0.1695	0.6576	25.8	0	0	FALSE	12.424
B16+B15	B16	20.39	13.24	B15	20.29	12.19	327.3	0.003	Circle	8	0.013	0.1695	1.35	0	0.1695	0.6844	24.8	0	0	FALSE	13.469
B17+B13	B17	19.31	13.31	B13	15.33	9.73	501.1	0.007	Circle	6	0.013	0.028	1.02	0.08	0.0429	0.4742	5.9	15	27.4	FALSE	13.448
B18+B17	B18	22.26	14.3	B17	19.31	13.31	497.2	0.002	Circle	6	0.013	0.0259	0.7	0.12	0.0429	0.2504	10.3	24.2	38.3	FALSE	14.491
B19+B12	B19	20.74	14.44	B12	15.83	9.88	499.6	0.009	Circle	6	0.013	0.0382	1.16	0.09	0.043	0.536	7.1	18.7	25.7	FALSE	14.573
B20+B19	B20	23.22	19.12	B19	20.74	14.44	585	0.008	Circle	6	0.013	0.0519	1.21	0.09	0.0519	0.5018	10.3	17.9	17.9	FALSE	19.253
B21+B11	B21	18.68	13.54	B11	16.46	9.36	399.6	0.01	Circle	6	0.013	0.0297	0.92	0.05	0.0431	0.5738	5.2	11	24.9	FALSE	13.698
B22+B21	B22	24.77	18.67	B21	18.68	13.58	399.5	0.013	Circle	6	0.013	0.0288	0.8	0.03	0.0431	0.6333	4.5	6.4	23.8	FALSE	18.789
B23+B22	B23	28	23.55	B22	24.77	18.67	380.2	0.013	Circle	6	0.013	0.0363	0.9	0.04	0.0429	0.6357	5.7	8.8	24	FALSE	23.67
B24+B10	B24	22.52	15.82	B10	16.86	9.61	492.5	0.013	Circle	6	0.013	0.0284	1.02	0.08	0.0612	0.63	4.5	15.3	26.4	FALSE	15.971
B25+B24	B25	27.09	18.84	B24	22.52	15.82	406.2	0.007	Circle	6	0.013	0.0256	0.87	0.05	0.0612	0.4838	5.3	9.5	30.2	FALSE	18.993
B26+B25	B26	27.62	21.62	B25	27.09	18.84	401.5	0.007	Circle	6	0.013	0.0267	0.91	0.05	0.0356	0.4669	5.7	10.9	23.9	FALSE	21.742
B27+B25	B27	25.46	19.69	B25	27.09	18.99	318	0.002	Circle	6	0.013	0.0256	1.03	0.08	0.0256	0.2632	9.7	16.2	24.4	FALSE	19.813
B28+B27	B28	24.83	20.93	B27	25.46	19.69	202	0.006	Circle	6	0.013	0.0256	0.8	0.03	0.0256	0.4396	5.8	6.8	17.7	FALSE	21.024
B29+B9	B29	19.43	13.68	B9	18.41	7.61	211.2	0.029	Circle	6	0.013	0.0804	0.97	0.01	0.0804	0.9512	8.5	2.9	23.4	FALSE	13.822
B30+B29	B30	23.55	14.31	B29	19.43	13.83	243.2	0.002	Circle	6	0.013	0.0268	1.02	0.08	0.0268	0.2493	10.8	15.4	24.7	FALSE	14.442
B31+B29	B31	21.81	15.76	B29	19.43	13.68	256.8	0.008	Circle	6	0.013	0.0536	1.18	0.08	0.0536	0.505	10.6	16.4	28.3	FALSE	15.903
B32+B31	B32	26.3	16.37	B31	21.81	15.86	253.7	0.002	Circle	6	0.013	0.0268	1.06	0.09	0.0268	0.2516	10.7	17.2	25.9	FALSE	16.499
B33+B31	B33	25.73	19.18	B31	21.81	15.76	279.8	0.012	Circle	6	0.013	0.0268	1.01	0.08	0.0269	0.6203	4.3	15.2	16.7	FALSE	19.266
B34+B8	B34	24.69	15.24	B8	20.55	7.1	251.1	0.032	Circle	6	0.013	0.0128	0.75	0.04	0.0128	1.0102	1.3	7.5	7.1	FALSE	15.277
B35+B34	B35	26.3	20	B34	24.69	15.24	363.8	0.013	Circle	6	0.013	0.0128	0.61	0.01	0.0128	0.6418	2	2	8.2	FALSE	20.047
B36+B35	B36	24.45	20.41	B35	26.3	20	207	0.002	Circle	6	0.013	0.0128	0.77	0.04	0.0128	0.2497	5.1	8.2	12.1	FALSE	20.477
B37+B6	B37	14.71	7.31	B6	18.29	6.74	262.3	0.002	Circle	6	0.013	0.044	0.85	0.03	0.044	0.2616	16.8	5	37.7	FALSE	7.5
B38+B50	B38	12.43	7.93	B50	13.27	7.77	38.9	0.004	Circle	6	0.013	0.02	0.74	0.03	0.02	0.3598	5.6	5.6	5.6	FALSE	8.038
B39+B38	B39	13	8.56	B38	12.43	8.03	265.5	0.002	Circle	6	0.013	0.01	0.73	0.04	0.01	0.2507	4	7.1	10.7	FALSE	8.614
B40+B39	B40	13	9.17	B39	13	8.56	306.1	0.002	Circle	6	0.013	0.01	0.74	0.04	0.01	0.2505	4	7.6	10.5	FALSE	9.223

Attachement 1
Average Dry Weather Flow Model Results

Label	Start Node	Rim (Start) (ft)	Invert (Start) (ft)	Stop Node	Rim (Stop) (ft)	Invert (Stop) (ft)	Length (ft)	Slope (Calculated) (ft/ft)	Section Type	Diameter (in)	Manning's n	Flow (Middle) (cfs)	Velocity (ft/s)	Depth (Middle) (ft)	Flow (Maximum) (cfs)	Capacity (Full Flow) (cfs)	Flow / Capacity (Design) (%)	Depth/Rise (%)	Depth (Maximum) / Rise (%)	Is Ever Surcharged?	Hydraulic Grade (Maximum) (ft)
B41+B38	B41	11.68	8.37	B38	12.43	8.03	170	0.002	Circle	6	0.013	0.01	0.72	0.03	0.01	0.2509	4	6.9	10	FALSE	8.424
B42+B41	B42	11.68	8.7	B41	11.68	8.37	166.3	0.002	Circle	6	0.013	0.01	0.73	0.04	0.01	0.2499	4	7.3	7.3	FALSE	8.753
B43+B37	B43	15.97	8.74	B37	14.71	8.01	363.4	0.002	Circle	6	0.013	0.017	0.87	0.06	0.017	0.2515	6.8	11.5	17.1	FALSE	8.826
B44+B2	B44	15.76	9.16	B2	16	2.46	296.4	0.023	Circle	6	0.013	0.017	0.86	0.05	0.017	0.8436	2	10.9	10.2	FALSE	9.33
B45+B44	B45	14.05	9.86	B44	15.76	9.26	301	0.002	Circle	6	0.013	0.017	0.88	0.06	0.017	0.2505	6.8	11.6	17.2	FALSE	9.946
B46+B5	B46	19	13.75	B5	18.61	12.56	16.9	0.07	Circle	6	0.013	0.012	0.6	0.01	0.012	1.4889	0.8	1.6	3.9	FALSE	13.797
B47+B46	B47	20.58	14.06	B46	19	13.75	157.8	0.002	Circle	6	0.013	0.012	0.79	0.05	0.012	0.2487	4.8	9	12.3	FALSE	14.123
B48+B7	B48	22.9	7.11	B7	18.66	6.21	450.2	0.002	Circle	6	0.013	0.0167	0.87	0.06	0.0167	0.2509	6.7	11.5	16.8	FALSE	7.194
B49+B14	B49	17.11	11.16	B14	15.47	10.07	327.7	0.003	Circle	8	0.013	0.1695	1.35	0	0.1695	0.6969	24.3	0	0	FALSE	11.4
B50+B37	B50	13.27	7.77	B37	14.71	7.31	204.7	0.002	Circle	6	0.013	0.027	0.73	0.02	0.027	0.266	10.2	3.9	3.9	FALSE	7.9
B51+B50	B51	14.15	9.95	B50	13.27	7.97	281.7	0.007	Circle	6	0.013	0.007	0.7	0.03	0.0071	0.4704	1.5	6.7	6.9	FALSE	9.983
B52+B4	B52	20.58	4.29	B4	20.32	3.57	359.8	0.002	Circle	12	0.013	0.361	2.31	0	0.4931	1.5937	22.7	0.1	39.6	FALSE	4.688
C1+B16	C1	23.15	14.8	B16	20.39	13.24	401.9	0.004	Circle	8	0.013	0.1695	1.35	0	0.1695	0.7528	22.5	0	0	FALSE	15.02
C2+C1	C2	21.54	15.19	C1	23.15	14.85	204.3	0.002	Circle	8	0.013	0.1235	1.2	0.02	0.1235	0.4929	25.1	2.5	2.5	FALSE	15.422
C3+C2	C3	22.97	17.37	C2	21.54	15.24	397.8	0.005	Circle	6	0.013	0.1065	1.11	0.02	0.1065	0.4106	25.9	3.2	3.2	FALSE	17.554
C4+C3	C4	25.03	19.53	C3	22.97	17.42	436	0.005	Circle	6	0.013	0.0885	1.02	0.01	0.0885	0.3903	22.7	3	3	FALSE	19.695
C5+C4	C5	25.49	20.95	C4	25.03	19.53	327.7	0.004	Circle	6	0.013	0.0885	1.02	0.01	0.0885	0.3693	24	3	3	FALSE	21.121
C6+C5	C6	25.82	21.42	C5	25.49	20.99	87.5	0.005	Circle	6	0.013	0.0697	0.92	0.01	0.0697	0.3933	17.7	2.8	2.8	FALSE	21.56
C7+C6	C7	34.43	23.65	C6	25.82	21.42	447.8	0.005	Circle	6	0.013	0.0697	0.92	0.01	0.0697	0.3959	17.6	2.8	2.8	FALSE	23.791
C8+C7	C8	29.93	24.33	C7	34.43	23.65	400.9	0.002	Circle	6	0.013	0.0447	0.86	0.03	0.0447	0.2311	19.3	5.5	5.5	FALSE	24.534
C9+C8	C9	30	24.55	C8	29.93	24.38	84.1	0.002	Circle	6	0.013	0.0437	0.87	0.03	0.0437	0.2523	17.3	6.2	6.2	FALSE	24.742
C10+C9	C10	31.71	25.71	C9	30	24.55	300.8	0.004	Circle	6	0.013	0.0437	0.88	0.03	0.0437	0.3484	12.5	6.5	6.5	FALSE	25.873
C11+C10	C11	41.2	28.9	C10	31.71	25.76	508	0.006	Circle	6	0.013	0.0248	0.67	0.01	0.0248	0.4411	5.6	2	2	FALSE	28.993
C12+C1	C12	23.43	14.93	C1	23.15	14.85	264.8	0	Circle	6	0.013	0.046	0.79	0.01	0.046	0.0975	47.2	2.4	2.4	FALSE	15.237
C13+C12	C13	23	15.99	C12	23.43	15.03	480.7	0.002	Circle	6	0.013	0.01	0.73	0.04	0.01	0.2507	4	7.3	10.4	FALSE	16.042
C14+C12	C14	24.3	15.8	C12	23.43	14.97	282.1	0.003	Circle	6	0.013	0.036	0.95	0.05	0.036	0.3043	11.8	10.7	30.3	FALSE	16.092
C15+C14	C15	22.5	18.05	C14	24.3	16.1	565.3	0.003	Circle	6	0.013	0.018	0.82	0.05	0.018	0.3295	5.5	9.2	15.7	FALSE	18.129
C16+C14	C16	26.5	17.4	C14	24.3	16.05	272.9	0.005	Circle	6	0.013	0.018	0.92	0.07	0.018	0.3946	4.6	13.1	16.1	FALSE	17.477
C17+C16	C17	27.07	19.62	C16	26.5	17.4	332.8	0.007	Circle	6	0.013	0.018	0.88	0.06	0.018	0.4583	3.9	11.5	14	FALSE	19.689
C18+C17	C18	28	20.36	C17	27.07	19.62	369.6	0.002	Circle	6	0.013	0.018	0.89	0.06	0.018	0.2511	7.2	12.1	12.1	FALSE	20.45
C19+C2	C19	21.59	15.49	C2	21.54	15.24	264.1	0.001	Circle	6	0.013	0.017	0.77	0.04	0.017	0.1726	9.8	7.5	21	FALSE	15.6
C20+C19	C20	23.19	17.64	C19	21.59	15.54	198.5	0.011	Circle	6	0.013	0.0085	0.58	0.01	0.0085	0.5771	1.5	1.6	6	FALSE	17.671
C21+C19	C21	23.94	17.74	C19	21.59	15.54	284.2	0.008	Circle	6	0.013	0.0085	0.72	0.04	0.0085	0.4937	1.7	7	7.4	FALSE	17.837
C22+C21	C22	24.43	18.08	C21	23.94	17.79	91.8	0.003	Circle	6	0.013	0.0085	0.7	0.03	0.0085	0.3154	2.7	6.1	8	FALSE	18.121
C23+C3	C23	23.27	18.07	C3	22.97	17.42	400.5	0.002	Circle	6	0.013	0.018	0.74	0.03	0.018	0.226	8	6.1	19.1	FALSE	18.427
C24+C23	C24	25.53	18.72	C23	23.27	18.42	151.2	0.002	Circle	6	0.013	0.008	0.69	0.03	0.0081	0.2499	3.2	6.2	8	FALSE	18.763
C25+C23	C25	25.08	19.73	C23	23.27	18.17	303.1	0.005	Circle	6	0.013	0.01	0.59	0.01	0.01	0.4025	2.5	1.5	1.5	FALSE	19.79
C26+D9	C26	29.07	24.47	D9	27.55	21.3	435.8	0.007	Circle	6	0.013	0.0309	0.93	0.05	0.0488	0.4785	6.5	10.9	28.3	FALSE	24.612
C27+C5	C27	25	21.41	C5	25.49	20.97	221.6	0.002	Circle	6	0.013	0.0188	0.75	0.03	0.0188	0.25	7.5	6.1	17.9	FALSE	21.507
C28+C27	C28	27.89	23.34	C27	25	21.41	43	0.045	Circle	6	0.013	0.0115	0.6	0.01	0.0115	1.1887	1	1.6	4.6	FALSE	23.387
C29+C28	C29	32.14	23.94	C28	27.89	23.34	298.4	0.002	Circle	6	0.013	0.0115	0.77	0.04	0.0115	0.2516	4.6	8.5	11.9	FALSE	24
C30+C27	C30	28.53	23.63	C27	25	21.41	162.9	0.014	Circle	6	0.013	0.0073	0.57	0.01	0.0073	0.655	1.1	1.4	4.8	FALSE	23.657
C31+C30	C31	29.09	23.76	C30	28.53	23.63	67.1	0.002	Circle	6	0.013	0.0014	0.53	0	0.0014	0.247	0.6	0.8	0.8	FALSE	23.764
C32+C30	C32	30.12	24.36	C30	28.53	23.63	146.7	0.005	Circle	6	0.013	0.0059	0.56	0.01	0.0059	0.3958	1.5	1.3	1.3	FALSE	24.396
C33+C32	C33	31.26	24.53	C32	30.12	24.39	70.7	0.002	Circle	6	0.013	0.0044	0.6	0.02	0.0044	0.2497	1.8	3.3	3.3	FALSE	24.554
C34+C32	C34	30	24.5	C32	30.12	24.39	56.9	0.002	Circle	6	0.013	0.0015	0.53	0	0.0015	0.2467	0.6	0.9	0.9	FALSE	24.504
C35+C7	C35	31.98	25.2	C7	34.43	23.65	403.4	0.004	Circle	6	0.013	0.025	0.69	0.01	0.025	0.3478	7.2	2.7	2.7	FALSE	25.239
C36+C35	C36	32.58	25.7	C35	31.98	25.2	92	0.005	Circle	6	0.013	0.025	0.68	0.01	0.025	0.4136	6	2	2	FALSE	25.736
C37+C36	C37	34.3	26.67	C36	32.58	25.73	153.2	0.006	Circle	6	0.013	0.005	0.56	0.01	0.005	0.4395	1.1	1.2	1.2	FALSE	26.706
C39+C37	C39	33.37	27.03	C37	34.3	26.7	164.1	0.002	Circle	6	0.013	0.005	0.61	0.02	0.005	0.2516	2	3.5	4.9	FALSE	27.057
C40+C36	C40	32.93	26.9	C36	32.58	25.83	257.5	0.004	Circle	6	0.013	0.02	0.91	0.06	0.02	0.3617	5.5	12.2	18.3	FALSE	26.987
C41+C40	C41	33.56	27.26	C40	32.93	26.93	191.4	0.002	Circle	6	0.013	0.02	0.93	0.07	0.02	0.233	8.6	13.4	20.6	FALSE	27.365
C42+C41	C42	34.21	27.91	C41	33.56	27.31	300.1	0.002	Circle	6	0.013	0.02	0.93	0.07	0.02	0.2509	8	13.2	19.9	FALSE	28.01
C43+C8	C43	30.16	24.53	C8	29.93	24.33	101	0.002	Circle	6	0.013	0.001	0.52	0	0.001	0.2497	0.4	0.8	0.8	FALSE	24.535
C44+C10	C44	32.45	26.73	C10	31.71	25.76	154.5	0.006	Circle	6	0.013	0.0189	0.65	0.01	0.0189	0.4446	4.3	2.4	13.5	FALSE	26.836
C45+C44	C45	33.66	27.91	C44	32.45	26.77	166.1	0.007	Circle	6	0.013	0.0189	0.7	0.02	0.0189	0.4648	4.1	4.4	13.8	FALSE	27.981
C46+C45	C46	36.3	29.85	C45	33.66	27.91	255.5	0.008	Circle	6	0.013	0.0189	0.91	0.06	0.0189	0.4889	3.9	12.8	14	FALSE	30.07
C47+C46	C47	35.05	30.62	C46	36.3	30	309.1	0.002	Circle	6	0.013	0.0189	0.91	0.06	0.0189	0.2513	7.5	12.6	19	FALSE	30.715
C48+C11	C48	43.08	29.1	C11	41.2	28.98	178.7	0.001	Circle	6	0.013	0.0248	0.71	0.02	0.0248	0.1454	17.1	3.3	3.3	FALSE	29.258
C49+C48	C49	41.32	29.82	C48	43.08	29.1	247.7	0.003	Circle	6	0.013	0.0248	0.96	0.07	0.0248	0.3025	8.2	13.2	13.2	FALSE	29.932
C50+C49	C50	40.78	30.68	C49	41.32	29.82	361.2	0.002	Circle	6	0.013	0.0248	0.95	0.07	0.0248	0.2738	9.1	13.2	13.2	FALSE	30.797
C51+C50	C51	38.55	32.75	C50	40.78	30.68	556.1	0.004	Circle	6	0.013	0.0248	0.95	0.06	0.0248	0.3423	7.2	12.9	20.5	FALSE	32.853
D1+E4	D1	17.33	6.83	E4	16.28	6.08	354.5	0.002	Circle	12	0.013	0.2054	1.53	0	0.431	1.6387	12.5	0	36.5	FALSE	7.197
D2+D1	D2	17.54	6.91	D1	17.33	6.88	53.3	0.001	Circle	12	0.013	0.2054	1.53	0	0.4314	0.8452	24.3	0	36.1	FALSE	7.31
D3+D2	D3	18.91	7.46	D2	17.54	6.99	363.3	0.001	Circle	12	0.013	0.2054	1.53	0	0.4334	1.2814	16	0	41.4	FALSE	8.054
D4+D3	D4	19	8.15	D3	18.91	7.56	296.1	0.002	Circle	8	0.013	0.0595	0.86	0.01	0.1542	0.5394	11	2	41	FALSE	8.424
D5+D4	D5	19	8.29	D4	19	8.15	69.6	0.002	Circle	8	0.013	0.0595	0.86	0.01	0.1542	0.5419	11	2	38.4	FALSE	8.562
D6+D5	D6	19.87	13.77	D5	19	8.29	246.1	0.022	Circle	8	0.013	0.0324	0.72	0.01	0.0812	1.8031	1.8	1.6	16.9	FALSE	13.974
D7+D6	D7	19.85	15.5	D6	19.87	13.82	398	0.004	Circle	8	0.013	0.0324	0.72	0.01	0.0812	0.7851	4.1	1.6	25.9	FALSE	15.675

Attachement 1
Average Dry Weather Flow Model Results

Label	Start Node	Rim (Start) (ft)	Invert (Start) (ft)	Stop Node	Rim (Stop) (ft)	Invert (Stop) (ft)	Length (ft)	Slope (Calculated) (ft/ft)	Section Type	Diameter (in)	Manning's n	Flow (Middle) (cfs)	Velocity (ft/s)	Depth (Middle) (ft)	Flow (Maximum) (cfs)	Capacity (Full Flow) (cfs)	Flow / Capacity (Design) (%)	Depth/Rise (%)	Depth (Maximum) / Rise (%)	Is Ever Surcharged?	Hydraulic Grade (Maximum) (ft)
D8+D7	D8	21.51	16.11	D7	19.85	15.5	157.8	0.004	Circle	6	0.013	0.0361	1.19	0.1	0.0488	0.3488	10.4	20.3	33.1	FALSE	16.278
D9+D8	D9	27.55	21.3	D8	21.51	16.11	496	0.01	Circle	6	0.013	0.0299	1.08	0.1	0.0488	0.5739	5.2	19.8	25.8	FALSE	21.442
D10+D3	D10	21.78	10.58	D3	18.91	7.81	489.1	0.006	Circle	10	0.013	0.1459	1.32	0.02	0.2843	1.6488	8.8	2.1	29.8	FALSE	10.83
D16+D20	D16	23	13.91	D20	22	13	453.9	0.002	Circle	8	0.013	0.018	0.89	0.06	0.018	0.541	3.3	9	12.7	FALSE	13.998
D17+D16	D17	23.1	14.18	D16	23	13.91	136.3	0.002	Circle	8	0.013	0.018	0.91	0.06	0.018	0.5378	3.3	9.5	12.5	FALSE	14.265
D19+D10	D19	21.54	12.39	D10	21.78	10.63	48.1	0.037	Circle	8	0.013	0.1459	1.32	0.02	0.2861	2.3114	6.3	2.6	25.2	FALSE	12.999
D20+D19	D20	22	13	D19	21.54	12.89	52.7	0.002	Circle	8	0.013	0.036	0.89	0.04	0.036	0.5521	6.5	6.4	20.3	FALSE	13.152
D21+D19	D21	20.93	15.08	D19	21.54	12.84	390.8	0.006	Circle	8	0.013	0.1099	1.13	0.02	0.251	0.9148	12	2.4	38.4	FALSE	15.4
D22+D21	D22	22.23	15.84	D21	20.93	15.13	149	0.005	Circle	6	0.013	0.1099	1.13	0.02	0.2516	0.3873	28.4	3.2	63.9	FALSE	16.171
D23+D22	D23	22.62	16.12	D22	22.23	15.88	73.3	0.003	Circle	6	0.013	0.1099	1.13	0.02	0.1991	0.3211	34.2	3.2	60.7	FALSE	16.437
D24+D23	D24	24.01	17.46	D23	22.62	16.12	349.8	0.004	Circle	6	0.013	0.1099	1.13	0.02	0.2029	0.3473	31.7	3.2	60.6	FALSE	17.767
D25+D24	D25	24.45	18.45	D24	24.01	17.56	300.9	0.003	Circle	6	0.013	0.0348	0.73	0.01	0.0855	0.3051	11.4	2.2	43.4	FALSE	18.676
D26+D25	D26	24.79	19.26	D25	24.45	18.5	156.7	0.005	Circle	6	0.013	0.0348	0.73	0.01	0.0857	0.3907	8.9	2.2	38	FALSE	19.461
D27+D26	D27	26.68	20.86	D26	24.79	19.28	392.4	0.004	Circle	6	0.013	0	0	0	0.0622	0.356	0	0	35.7	FALSE	21.066
D28+D27	D28	27.45	21.65	D27	26.68	20.9	81.1	0.009	Circle	6	0.013	0	0	0	0.0973	0.5396	0	0	33.2	FALSE	21.827
D29+C37	D29	34.53	27.53	C37	34.3	26.7	129.5	0.006	Circle	6	0.013	0	0	0	0.0232	0.4492	0	0	20.7	FALSE	27.595
D29+D28	D29	34.53	27.53	D28	27.45	21.67	465.5	0.013	Circle	6	0.013	0	0	0	0.1352	0.6295	0	0	37.7	FALSE	27.595
D30+D26	D30	26.26	21.18	D26	24.79	19.29	436.5	0.004	Circle	6	0.013	0.0348	0.8	0.03	0.0348	0.3692	9.4	5.1	26.6	FALSE	21.468
D31+D30	D31	26.68	21.76	D30	26.26	21.46	152.5	0.002	Circle	6	0.013	0.0124	0.8	0.05	0.0124	0.2489	5	9.4	12.7	FALSE	21.824
D32+D30	D32	26.44	21.71	D30	26.26	21.46	126.2	0.002	Circle	6	0.013	0.0224	1.03	0.08	0.0224	0.2497	9	16.6	22.1	FALSE	21.821
D33+D24	D33	28.14	19.34	D24	24.01	17.51	450.4	0.004	Circle	6	0.013	0.0448	0.78	0.01	0.1103	0.3576	12.5	2.4	44.4	FALSE	19.563
D34+D33	D34	34.45	22.3	D33	28.14	19.34	293.3	0.01	Circle	6	0.013	0.0448	1.01	0.06	0.1103	0.5637	7.9	11.4	34.7	FALSE	22.491
D35+D34	D35	33.56	22.51	D34	34.45	22.3	177.8	0.001	Circle	6	0.013	0.0448	1.16	0.09	0.1103	0.1928	23.2	17.4	60.6	FALSE	22.831
D36+D35	D36	31.3	25.05	D35	33.56	22.56	250.8	0.01	Circle	6	0.013	0.0208	0.92	0.06	0.0515	0.5591	3.7	12.5	26.6	FALSE	25.195
D37+D36	D37	31.11	26.01	D36	31.3	25.05	367.8	0.003	Circle	6	0.013	0.0216	0.94	0.09	0.0515	0.2866	7.5	17.4	37.6	FALSE	26.2
D38+D37	D38	32	26.64	D37	31.11	26.16	237.7	0.002	Circle	6	0.013	0.0191	0.81	0.09	0.0307	0.2521	7.6	17.7	28.1	FALSE	26.787
D39+D38	D39	32.14	26.81	D38	32	26.64	84.1	0.002	Circle	6	0.013	0.0257	0.83	0.11	0.0307	0.2523	10.2	21.4	27.7	FALSE	26.955
D40+D37	D40	32	26.6	D37	31.11	26.21	193.6	0.002	Circle	6	0.013	0.0208	0.94	0.07	0.0208	0.2518	8.2	13.5	13.5	FALSE	26.704
D41+D24	D41	31.35	25.75	D24	24.01	17.51	190.6	0.043	Circle	6	0.013	0.0304	0.71	0.01	0.0304	1.1666	2.6	2.1	11.5	FALSE	25.823
D42+D41	D42	30	26	D41	31.35	25.8	100.2	0.002	Circle	6	0.013	0.004	0.61	0.02	0.004	0.2507	1.6	3.6	4.4	FALSE	26.022
D43+D41	D43	32	26.89	D41	31.35	25.85	517.4	0.002	Circle	6	0.013	0.0264	1.07	0.09	0.0264	0.2516	10.5	17.6	17.6	FALSE	27.019
D44+D43	D44	32	27.12	D43	32	26.89	113	0.002	Circle	6	0.013	0.0264	1	0.1	0.0264	0.2531	10.4	19.1	25.2	FALSE	27.247
D47+D22	D47	20.69	17.09	D22	22.23	15.86	299.2	0.004	Circle	6	0.013	0.0413	1.1	0.12	0.0561	0.3597	11.5	24.5	33.8	FALSE	17.263
D48+D47	D48	22.05	18.7	D47	20.69	17.09	401	0.004	Circle	6	0.013	0.0292	1.11	0.09	0.0561	0.3555	8.2	18.6	34.3	FALSE	18.873
D49+D48	D49	27.59	21.99	D48	22.05	18.7	399.7	0.008	Circle	6	0.013	0.0383	1.07	0.08	0.056	0.509	7.5	15.1	28.6	FALSE	22.135
D50+D49	D50	31.35	22.83	D49	27.59	21.99	421.6	0.002	Circle	6	0.013	0.0338	0.67	0.15	0.056	0.2504	13.5	30.3	41.7	FALSE	23.038
D51+D7	D51	23.54	18.66	D7	19.85	15.5	457.8	0.007	Circle	6	0.013	0.0324	0.81	0.03	0.0324	0.4662	7	6.1	22.3	FALSE	18.775
D52+D51	D52	27.31	20.31	D51	23.54	18.69	267	0.006	Circle	6	0.013	0.0216	0.83	0.05	0.0216	0.437	4.9	9.1	17.9	FALSE	20.398
D53+D52	D53	29.62	21.22	D52	27.31	20.31	247.8	0.004	Circle	6	0.013	0.0108	0.77	0.04	0.0108	0.34	3.2	8.8	11.3	FALSE	21.296
D54+D53	D54	29.68	21.68	D53	29.62	21.27	74.9	0.005	Circle	6	0.013	0.0108	0.68	0.02	0.0108	0.4151	2.6	4.9	8.8	FALSE	21.888
D55+D54	D55	30.37	22.39	D54	29.68	21.88	252.3	0.002	Circle	6	0.013	0.0108	0.76	0.04	0.0108	0.2523	4.3	8.3	11.3	FALSE	22.446
D56+D35	D56	35.05	23.65	D35	33.56	22.51	286.3	0.004	Circle	6	0.013	0.024	0.95	0.07	0.0588	0.354	6.8	13.4	34.5	FALSE	23.83
D57+D56	D57	37.86	26.21	D56	35.05	23.7	197.1	0.013	Circle	6	0.013	0.024	0.73	0.02	0.0588	0.6332	3.8	4.4	26	FALSE	26.512
D58+D57	D58	37.67	27.07	D57	37.86	26.36	158	0.004	Circle	6	0.013	0.024	0.86	0.05	0.0588	0.3761	6.4	9.4	33.6	FALSE	27.261
D59+D58	D59	37.27	28.53	D58	37.67	27.12	151.4	0.009	Circle	6	0.013	0.024	0.78	0.03	0.0588	0.5415	4.4	6.2	28.2	FALSE	28.673
D60+D59	D60	37.44	29.8	D59	37.27	28.57	112.6	0.011	Circle	6	0.013	0.024	0.81	0.04	0.024	0.5864	4.1	7.7	15.7	FALSE	29.934
D61+D60	D61	37.37	30.05	D60	37.44	29.84	101	0.002	Circle	6	0.013	0.024	1.02	0.09	0.024	0.2558	9.4	17.7	22.9	FALSE	30.166
D62+D59	D62	32.76	29.07	D59	37.27	28.57	247.7	0.002	Circle	6	0.013	0.0229	0.74	0.11	0.0348	0.2521	9.1	21.5	32.5	FALSE	29.233
D63+D5	D63	19.63	8.6	D5	19	8.29	296.6	0.001	Circle	8	0.013	0.0271	0.97	0.07	0.073	0.3906	6.9	10	35.8	FALSE	8.841
D64+D63	D64	24.68	17.38	D63	19.63	8.56	470.5	0.019	Circle	6	0.013	0.0263	0.68	0.01	0.035	0.7682	3.4	2	2.2	FALSE	17.497
D65+D64	D65	28.98	20.08	D64	24.68	17.38	448	0.006	Circle	6	0.013	0.0242	1.05	0.09	0.035	0.4356	5.6	17.2	25	FALSE	20.205
D66+D65	D66	29.37	20.96	D65	28.98	20.13	412.5	0.002	Circle	6	0.013	0.0222	0.74	0.11	0.035	0.2517	8.8	21	32.7	FALSE	21.124
D67+D63	D67	18.77	12.39	D63	19.63	8.6	294.1	0.013	Circle	6	0.013	0.0271	0.89	0.05	0.0271	0.6369	4.3	10.2	16.8	FALSE	12.476
D68+D67	D68	19	12.7	D67	18.77	12.42	138.9	0.002	Circle	6	0.013	0.0134	0.82	0.05	0.0134	0.2519	5.3	10.3	13.7	FALSE	12.769
D69+D67	D69	19	12.94	D67	18.77	12.42	259	0.002	Circle	6	0.013	0.0137	0.82	0.05	0.0137	0.2514	5.4	10.1	14.1	FALSE	13.01
D70+D51	D70	24	18.86	D51	23.54	18.72	70.8	0.002	Circle	6	0.013	0.0108	0.76	0.04	0.0108	0.2495	4.3	8.1	10.2	FALSE	18.916
D71+D52	D71	28.07	22.62	D52	27.31	21.11	130	0.012	Circle	6	0.013	0.0108	0.62	0.01	0.0108	0.6047	1.8	2.5	7.3	FALSE	22.658
D72+D20	D72	22.5	13.56	D20	22	13	279.6	0.002	Circle	8	0.013	0.018	0.87	0.06	0.018	0.5408	3.3	8.3	13.1	FALSE	13.646
D73+D72	D73	23	14.16	D72	22.5	13.56	297.4	0.002	Circle	8	0.013	0.018	0.9	0.06	0.018	0.5427	3.3	9.2	13.2	FALSE	14.248
D74+D73	D74	23.2	14.58	D73	23	14.16	210.2	0.002	Circle	8	0.013	0.018	0.86	0.05	0.0181	0.5401	3.3	8	11.4	FALSE	14.666
E1+H9	E1	12.09	3.59	H9	11.84	3.14	269.8	0.002	Circle	12	0.013	0.4047	2.52	0	0.5952	1.455	27.8	0	45.4	FALSE	4.056
E2+E1	E2	13.48	4.23	E1	12.09	3.64	283.2	0.002	Circle	12	0.013	0.2054	1.59	0.01	0.429	1.6261	12.6	1.4	36.5	FALSE	4.607
E3+E2	E3	15.11	4.76	E2	13.48	4.33	279.6	0.002	Circle	12	0.013	0.2054	1.63	0.02	0.4289	1.3971	14.7	2	39.3	FALSE	5.295
E4+E3	E4	16.28	6.08	E3	15.11	5.01	356.7	0.003	Circle	12	0.013	0.2054	1.58	0.01	0.4299	1.9512	10.5	1	33.2	FALSE	6.414
E6+E1	E6	11.14	4.84	E1	12.09	4.04	501	0.002	Circle	12	0.013	0.1994	1.5	0	0.1994	1.4236	14	0	0	FALSE	5.219
E7+E6	E7	11.77	6.02	E6	11.14	4.84	310.5	0.004	Circle	8	0.013	0.1844	1.54	0.02	0.1844	0.7449	24.7	3.4	3.4	FALSE	6.255
E8+E7	E8	13.72	6.77	E7	11.77	6.07	354.7	0.002	Circle	8	0.013	0.1544	1.48	0.04	0.1544	0.5368	28.8	6.3	6.3	FALSE	7.025
E9+E8	E9	13.77	7.32	E8	13.72	6.82	341.1	0.001	Circle	12	0.013	0.1294	1.23	0.02	0.1294	1.364	9.5	1.7	1.7	FALSE	7.536
E10+E9	E10	14.53	7.78	E9	13.77	7.32	192.1	0.002	Circle	12	0.013	0.1294	1.23	0.02	0.1294	1.7433	7.4	1.7	1.7	FALSE	7.972

Attachement 1
Average Dry Weather Flow Model Results

Label	Start Node	Rim (Start) (ft)	Invert (Start) (ft)	Stop Node	Rim (Stop) (ft)	Invert (Stop) (ft)	Length (ft)	Slope (Calculated) (ft/ft)	Section Type	Diameter (in)	Manning's n	Flow (Middle) (cfs)	Velocity (ft/s)	Depth (Middle) (ft)	Flow (Maximum) (cfs)	Capacity (Full Flow) (cfs)	Flow / Capacity (Design) (%)	Depth/Rise (%)	Depth (Maximum) / Rise (%)	Is Ever Surcharged?	Hydraulic Grade (Maximum) (ft)
E11+E10	E11	14.94	8.04	E10	14.53	7.93	194.9	0.001	Circle	12	0.013	0.1124	1.14	0.02	0.1124	0.8464	13.3	1.6	1.6	FALSE	8.281
E12+E11	E12	20.13	9.13	E11	14.94	8.14	494.5	0.002	Circle	12	0.013	0.1124	1.14	0.02	0.1124	1.5941	7	1.6	1.6	FALSE	9.311
E13+E12	E13	18.72	10	E12	20.13	9.18	450.3	0.002	Circle	8	0.013	0.0732	1.07	0.04	0.0732	0.5156	14.2	6.1	31.1	FALSE	10.21
E14+E13	E14	17.24	10.39	E13	18.72	10.12	185.5	0.001	Circle	8	0.013	0.0608	0.87	0.01	0.0609	0.461	13.2	2	30.8	FALSE	10.598
E15+E14	E15	15.27	10.72	E14	17.24	10.49	246.2	0.001	Circle	8	0.013	0.043	0.77	0.01	0.043	0.3693	11.6	1.8	31	FALSE	10.929
E20+E7	E20	12.61	7.71	E7	11.77	6.12	504.5	0.003	Circle	6	0.013	0.015	0.78	0.04	0.015	0.315	4.8	8.3	13.7	FALSE	7.78
E21+E20	E21	14.72	8.53	E20	12.61	7.76	385.6	0.002	Circle	6	0.013	0.015	0.83	0.05	0.015	0.2507	6	10.3	10.3	FALSE	8.606
E22+E8	E22	15.38	8.48	E8	13.72	6.87	449.9	0.004	Circle	6	0.013	0.015	0.75	0.04	0.0151	0.3356	4.5	7	13.5	FALSE	8.551
E23+E22	E23	16.82	10.42	E22	15.38	8.48	438.8	0.004	Circle	6	0.013	0.015	0.69	0.02	0.0151	0.3731	4	4.4	11.1	FALSE	10.484
E25+E50	E25	16.75	10.9	E50	16.04	9.64	231.9	0.005	Circle	6	0.013	0.017	0.68	0.02	0.017	0.4136	4.1	4	11.9	FALSE	10.965
E26+E25	E26	19.82	13.82	E25	16.75	10.9	488.2	0.006	Circle	6	0.013	0.017	0.87	0.06	0.0171	0.4339	3.9	11.6	13.5	FALSE	13.887
E27+E12	E27	21.28	15.85	E12	20.13	9.53	576.2	0.011	Circle	6	0.013	0.0137	0.65	0.02	0.0137	0.5876	2.3	3.1	9.4	FALSE	15.9
E28+E27	E28	22	15.93	E27	21.28	15.81	61.8	0.002	Circle	6	0.013	0.0137	0.81	0.05	0.0137	0.2472	5.5	9.5	12.1	FALSE	15.999
E29+E12	E29	23.08	15.79	E12	20.13	9.58	247	0.025	Circle	6	0.013	0.0255	0.68	0.01	0.0255	0.8896	2.9	2	2	FALSE	15.839
E30+E29	E30	27	20.5	E29	23.08	15.83	502.3	0.009	Circle	6	0.013	0.01	0.71	0.03	0.01	0.541	1.8	6.4	8	FALSE	20.538
E31+E29	E31	27.93	20.63	E29	23.08	15.83	252.3	0.019	Circle	6	0.013	0.0155	0.84	0.05	0.0155	0.7739	2	10.6	10	FALSE	20.75
E32+E31	E32	28	21.21	E31	27.93	20.68	263.2	0.002	Circle	6	0.013	0.0155	0.86	0.06	0.0155	0.2518	6.2	11.2	15.7	FALSE	21.289
E33+E13	E33	21.41	15.78	E13	18.72	10.02	228.9	0.025	Circle	8	0.013	0.0124	0.6	0.01	0.0126	1.9168	0.6	1.2	5.6	FALSE	15.863
E33+E29	E33	21.41	17.11	E29	23.08	15.86	455.1	0.003	Circle	6	0.013	0	0	0	0	0.2941	0	0	0	FALSE	15.863
E34+E33	E34	24.94	18.94	E33	21.41	15.83	278.9	0.011	Circle	6	0.013	0.01	0.77	0.04	0.0101	0.5925	1.7	8.9	8.3	FALSE	18.983
E35+E14	E35	19.06	11.41	E14	17.24	10.74	333	0.002	Circle	6	0.013	0.0178	0.89	0.06	0.0178	0.2517	7.1	12.1	18	FALSE	11.499
E36+E15	E36	17.4	12.35	E15	15.27	10.82	420.2	0.004	Circle	6	0.013	0.04	0.79	0.02	0.04	0.3386	11.8	3.6	30.9	FALSE	12.512
E37+E36	E37	18	13.11	E36	17.4	12.4	353.2	0.002	Circle	6	0.013	0.015	0.83	0.05	0.015	0.2516	6	10.4	15.1	FALSE	13.186
E38+E36	E38	18.78	13.33	E36	17.4	12.35	233.6	0.004	Circle	6	0.013	0.025	0.68	0.01	0.025	0.3634	6.9	2	17.1	FALSE	13.432
E39+E38	E39	19	14.13	E38	18.78	13.53	300.6	0.002	Circle	6	0.013	0.015	0.84	0.05	0.0151	0.2507	6	10.5	15.2	FALSE	14.206
E40+E38	E40	22.91	14.25	E38	18.78	13.33	458.2	0.002	Circle	6	0.013	0.01	0.73	0.04	0.01	0.2514	4	7.3	10.4	FALSE	14.302
E41+E15	E41	16	11.07	E15	15.27	10.87	98.3	0.002	Circle	6	0.013	0.003	0.54	0.01	0.003	0.2531	1.2	1.1	3.3	FALSE	11.087
E42+E10	E42	14.56	10.06	E10	14.53	7.88	550.5	0.004	Circle	6	0.013	0	0	0	0.0091	0.3531	0	0	12.8	FALSE	10.117
E44+E8	E44	12.57	8.62	E8	13.72	6.82	630.5	0.003	Circle	6	0.013	0.01	0.72	0.03	0.01	0.2998	3.3	6.6	9.8	FALSE	8.67
E45+E44	E45	13.15	9.55	E44	12.57	8.57	319.4	0.003	Circle	6	0.013	0.01	0.76	0.04	0.01	0.3108	3.2	8.5	10.9	FALSE	9.598
E46+E7	E46	11	7.4	E7	11.77	6.02	500.5	0.003	Circle	6	0.013	0.015	0.79	0.04	0.015	0.2946	5.1	8.7	14	FALSE	7.472
E47+E46	E47	11.54	8.31	E46	11	7.4	455.2	0.002	Circle	6	0.013	0.015	0.84	0.05	0.015	0.2509	6	10.5	15.2	FALSE	8.386
E48+E6	E48	11.94	7.54	E6	11.14	5.19	498.5	0.005	Circle	8	0.013	0.015	0.77	0.04	0.015	0.8296	1.8	6	9	FALSE	7.598
E49+E48	E49	11.53	8.46	E48	11.94	7.54	457.8	0.002	Circle	6	0.013	0.015	0.84	0.05	0.015	0.2515	6	10.5	15.2	FALSE	8.536
E50+E10	E50	16.04	9.64	E10	14.53	7.88	217.9	0.008	Circle	6	0.013	0.017	0.66	0.01	0.017	0.5043	3.4	2.8	12.3	FALSE	9.71
F7+T25	F7	4.65	0.3	T25	3.95	-2.2	477	0.005	Circle	8	0.013	0.064	0.89	0.01	0.0641	0.8748	7.3	2	22.8	FALSE	0.452
F8+F7	F8	8.3	1.38	F7	4.65	0.3	356.7	0.003	Circle	8	0.013	0.064	0.89	0.01	0.0641	0.6649	9.6	2	26	FALSE	1.603
F9+F23	F9	8.21	3.11	F23	8.23	2.7	110	0.004	Circle	6	0.013	0.047	0.8	0.01	0.0474	0.3425	13.7	2.4	33.2	FALSE	3.301
F10+F9	F10	11.76	4.96	F9	8.21	3.21	462.6	0.004	Circle	6	0.013	0.047	0.8	0.01	0.0471	0.3451	13.6	2.4	33.2	FALSE	5.16
F11+F10	F11	13	6.84	F10	11.76	5.06	419.8	0.004	Circle	6	0.013	0.047	0.88	0.03	0.0471	0.3654	12.9	5.8	31.9	FALSE	7.003
F12+F11	F12	13	7.65	F11	13	6.94	355.2	0.002	Circle	6	0.013	0.032	1.03	0.07	0.032	0.2509	12.8	14.6	30.3	FALSE	7.804
F13+F19	F13	15.24	10.24	F19	15.18	10.23	24.2	0	Circle	6	0.013	0.024	0.41	0.17	0.024	0.1141	21	33.9	39.6	FALSE	10.433
F14+F8	F14	9.56	5.64	F8	8.3	1.76	463.1	0.008	Circle	6	0.013	0.003	0.54	0.01	0.003	0.5136	0.6	1.1	3.4	FALSE	5.656
F15+F11	F15	13.27	7.77	F11	13	7.17	301.1	0.002	Circle	6	0.013	0.015	0.83	0.05	0.015	0.2505	6	10	15.5	FALSE	7.852
F16+F15	F16	13.27	8.24	F15	13.27	7.77	238	0.002	Circle	6	0.013	0.015	0.79	0.04	0.0152	0.2493	6	8.7	13.2	FALSE	8.317
F17+F22	F17	15.11	8.76	F22	13	8.39	130.3	0.003	Circle	6	0.013	0.032	1	0.07	0.032	0.299	10.7	13.5	27.3	FALSE	8.903
F18+F17	F18	15.34	9.94	F17	15.11	8.89	197.5	0.005	Circle	6	0.013	0.004	0.55	0.01	0.004	0.4091	1	1.1	2.3	FALSE	9.957
F19+F20	F19	15.18	10.33	F20	15.15	9.7	188.8	0.003	Circle	6	0.013	0.024	0.85	0.05	0.024	0.3241	7.4	9.4	18.5	FALSE	10.433
F20+F17	F20	15.15	9.7	F17	15.11	8.86	281.2	0.003	Circle	6	0.013	0.028	1.04	0.08	0.028	0.3067	9.1	15.9	25.4	FALSE	9.826
F21+F20	F21	15.15	10.38	F20	15.15	9.7	136.4	0.005	Circle	6	0.013	0.004	0.64	0.02	0.004	0.3962	1	5	9.1	FALSE	10.407
F22+F12	F22	13	8.39	F12	13	7.65	158.8	0.005	Circle	6	0.013	0.032	0.83	0.03	0.032	0.383	8.4	6.8	22.8	FALSE	8.512
F23+F8	F23	8.23	2.7	F8	8.3	1.48	327.4	0.004	Circle	8	0.013	0.061	0.87	0.01	0.0612	0.7376	8.3	2	24.6	FALSE	2.864
F24+F23	F24	8.23	3.19	F23	8.23	2.7	98	0.005	Circle	6	0.013	0.014	0.71	0.03	0.014	0.3967	3.5	5.5	13.5	FALSE	3.254
F25+F24	F25	8.73	3.77	F24	8.23	3.19	115	0.005	Circle	6	0.013	0.002	0.53	0	0.002	0.3985	0.5	0.9	0.9	FALSE	3.775
F26+F25	F26	8.73	4.36	F25	8.73	3.77	118	0.005	Circle	6	0.013	0.002	0.53	0	0.002	0.3967	0.5	0.9	0.9	FALSE	4.365
F27+F24	F27	8.73	3.78	F24	8.23	3.19	118	0.005	Circle	6	0.013	0.012	0.65	0.02	0.012	0.3967	3	3.7	9	FALSE	3.832
F28+F27	F28	8.73	4.57	F27	8.73	3.78	158	0.005	Circle	6	0.013	0.012	0.65	0.02	0.012	0.3967	3	3.7	8.3	FALSE	4.619
G2+G19	G2	4.2	0.05	G19	2.65	-0.76	154	0.005	Circle	6	0.013	0.0796	0.97	0.01	0.0797	0.4069	19.6	2.9	35.9	FALSE	0.295
G3+G14	G3	7	1.85	G14	6.79	1.05	208.1	0.004	Circle	6	0.013	0.0566	0.85	0.01	0.0567	0.3479	16.3	2.6	34.3	FALSE	2.027
G4+G3	G4	7.49	2.26	G3	7	1.95	212.7	0.001	Circle	6	0.013	0.0436	0.88	0.03	0.0437	0.2142	20.4	6.6	41.9	FALSE	2.476
G6+G4	G6	10.75	5.12	G4	7.49	2.36	387.6	0.007	Circle	6	0.013	0.0318	0.8	0.03	0.0319	0.4735	6.7	5.5	22.2	FALSE	5.233
G7+G6	G7	10.12	5.81	G6	10.75	5.22	294.7	0.002	Circle	6	0.013	0.0159	0.83	0.05	0.016	0.251	6.3	10.2	16.3	FALSE	5.892
G8+G7	G8	10.83	6.45	G7	10.12	5.8	326.8	0.002	Circle	6	0.013	0.0159	0.86	0.06	0.0159	0.2502	6.4	11.1	16.3	FALSE	6.531
G9+G6	G9	8.88	5.78	G6	10.75	5.2	290.8	0.002	Circle	6	0.013	0.0159	0.84	0.05	0.016	0.2506	6.3	10.2	16.3	FALSE	5.862
G10+G9	G10	11.09	6.24	G9	8.88	5.78	270.6	0.002	Circle	6	0.013	0.0159	0.86	0.06	0.0159	0.2313	6.9	11.1	16.9	FALSE	6.349
G11+G10	G11	11.78	6.87	G10	11.09	6.34	265.7	0.002	Circle	6	0.013	0.0159	0.86	0.06	0.016	0.2506	6.3	11.4	16.1	FALSE	6.951
G12+G4	G12	8.32	3.02	G4	7.49	2.47	277	0.002	Circle	6	0.013	0.0118	0.78	0.05	0.0118	0.25	4.7	9	12.4	FALSE	3.081
G13+G3	G13	8.34	2.8	G3	7	1.9	452.5	0.002	Circle	6	0.013	0.013	0.8	0.05	0.013	0.2502	5.2	9.3	13.4	FALSE	2.867
G14+G17	G14	6.79	1.05	G17	5.65	0.6	151.1	0.003	Circle	6	0.013	0.0681	0.91	0.01	0.0682	0.3062	22.2	2.7	39.9	FALSE	1.253

Attachement 1
Average Dry Weather Flow Model Results

Label	Start Node	Rim (Start) (ft)	Invert (Start) (ft)	Stop Node	Rim (Stop) (ft)	Invert (Stop) (ft)	Length (ft)	Slope (Calculated) (ft/ft)	Section Type	Diameter (in)	Manning's n	Flow (Middle) (cfs)	Velocity (ft/s)	Depth (Middle) (ft)	Flow (Maximum) (cfs)	Capacity (Full Flow) (cfs)	Flow / Capacity (Design) (%)	Depth/Rise (%)	Depth (Maximum) / Rise (%)	Is Ever Surcharged?	Hydraulic Grade (Maximum) (ft)
G15+G14	G15	6.2	2.15	G14	6.79	1.05	214.7	0.005	Circle	6	0.013	0.0115	0.66	0.02	0.0115	0.4016	2.9	4.1	25.1	FALSE	2.239
G16+G15	G16	6.21	3.21	G15	6.2	2.2	154.5	0.007	Circle	6	0.013	0.0115	0.64	0.02	0.0115	0.4536	2.5	3.3	8.8	FALSE	3.257
G17+G2	G17	5.65	0.5	G2	4.2	0.15	143.7	0.002	Circle	6	0.013	0.0796	0.97	0.01	0.0797	0.2769	28.7	2.9	44.8	FALSE	0.74
G18+G17	G18	5.86	1.15	G17	5.65	0.57	291.5	0.002	Circle	6	0.013	0.0115	0.78	0.04	0.0116	0.2503	4.6	8.9	12	FALSE	1.21
G19+T23	G19	2.65	-0.76	T23	6.87	-2.3	290.9	0.005	Circle	6	0.013	0.091	1.03	0.02	0.0911	0.4082	22.3	3	38.5	FALSE	-0.566
G20+G19	G20	2.66	0.11	G19	2.65	-0.76	173.9	0.005	Circle	6	0.013	0.0114	0.6	0.01	0.0114	0.3969	2.9	1.9	21.2	FALSE	0.18
G21+G20	G21	2.67	0.37	G20	2.66	0.11	51.4	0.005	Circle	6	0.013	0.0057	0.64	0.02	0.0057	0.399	1.4	4.3	5.3	FALSE	0.397
G22+G20	G22	2.67	0.25	G20	2.66	0.11	71.7	0.002	Circle	6	0.013	0.0057	0.64	0.02	0.0057	0.2479	2.3	4.3	8	FALSE	0.281
H2+I11	H2	7.99	0.59	I11	8.07	0.17	36.6	0.011	Circle	15	0.013	0.6282	3.69	0.01	0.8467	6.9196	9.1	0.8	24.1	FALSE	1.009
H3+H2	H3	8.2	0.7	H2	7.99	0.64	30.8	0.002	Circle	15	0.013	0.6282	3.69	0.01	0.8467	2.851	22	0.8	32.4	FALSE	1.139
H4+H3	H4	8.13	0.71	H3	8.2	0.7	7.1	0.001	Circle	15	0.013	0.4293	2.73	0.02	0.6198	2.4242	17.7	1.3	34.7	FALSE	1.141
H5+H4	H5	8.95	0.95	H4	8.13	0.71	259.3	0.001	Circle	15	0.013	0.4293	2.81	0.03	0.6198	1.9652	21.8	2.6	37.5	FALSE	1.441
H6+H5	H6	8.89	0.99	H5	8.95	0.95	9	0.004	Circle	12	0.013	0.4093	2.63	0.02	0.5998	2.3751	17.2	1.7	47.1	FALSE	1.443
H7+H75	H7	10.51	1.76	H75	10.09	1.58	89.8	0.002	Circle	12	0.013	0.4093	2.59	0.01	0.5998	1.595	25.7	0.8	40.6	FALSE	2.189
H8+H7	H8	10.95	2.05	H7	10.51	1.76	233.4	0.001	Circle	12	0.013	0.4093	2.62	0.02	0.5998	1.2558	32.6	1.5	47.3	FALSE	2.547
H9+H73	H9	11.84	3.09	H73	11.36	2.56	246.2	0.002	Circle	12	0.013	0.4093	2.55	0	0.5998	1.653	24.8	0	42.7	FALSE	3.527
H11+H64	H11	9.92	1.44	H64	9.05	0.99	198.2	0.002	Circle	8	0.013	0.1904	1.45	0	0.2184	0.5758	33.1	0	46.3	FALSE	1.756
H12+H11	H12	10.15	2.2	H11	9.92	1.54	333.5	0.002	Circle	8	0.013	0.1616	1.31	0	0.1896	0.5375	30.1	0	45.1	FALSE	2.505
H13+H12	H13	10.85	2.55	H12	10.15	2.3	107.9	0.002	Circle	8	0.013	0.1216	1.2	0.02	0.1496	0.5816	20.9	2.9	38.1	FALSE	2.845
H14+H13	H14	11.02	3.54	H13	10.85	2.65	446.5	0.002	Circle	8	0.013	0.1216	1.3	0.04	0.1496	0.5395	22.5	5.7	40.3	FALSE	3.812
H15+H62	H15	14.61	5.6	H62	12.95	4.64	201.4	0.005	Circle	8	0.013	0.1104	1.13	0.02	0.1384	0.8343	13.2	2.4	30.6	FALSE	5.89
H16+H60	H16	14.43	6.48	H60	14.57	5.9	351.2	0.002	Circle	8	0.013	0.1104	1.18	0.03	0.1384	0.4911	22.5	4	41	FALSE	6.755
H17+H57	H17	12.03	6.83	H57	14.21	6.69	396.8	0	Circle	8	0.013	0.1104	1.15	0.02	0.1353	0.227	48.6	3.1	55.7	FALSE	7.229
H18+H5	H18	8.92	1.27	H5	8.95	1.25	7.9	0.003	Circle	8	0.013	0.02	0.65	0.01	0.02	0.608	3.3	1.4	27	FALSE	1.44
H19+H18	H19	8.88	2.58	H18	8.92	1.27	386.9	0.003	Circle	8	0.013	0.02	0.71	0.02	0.02	0.7031	2.8	3.2	11.4	FALSE	2.662
H20+H19	H20	9.1	3.65	H19	8.88	2.63	270.8	0.004	Circle	8	0.013	0.02	0.84	0.05	0.02	0.7416	2.7	7.1	13	FALSE	3.733
H21+H56	H21	9.3	5.04	H56	9.2	4.75	143.8	0.002	Circle	6	0.013	0.005	0.6	0.02	0.005	0.252	2	3	5.2	FALSE	5.068
H22+H21	H22	9.3	5.34	H21	9.3	5.04	151.4	0.002	Circle	6	0.013	0.005	0.61	0.02	0.005	0.2498	2	3.3	5.1	FALSE	5.368
H23+H22	H23	9.4	6.15	H22	9.3	5.34	404.8	0.002	Circle	6	0.013	0.005	0.62	0.02	0.005	0.251	2	3.8	5.3	FALSE	6.177
H24+H20	H24	10.14	5.82	H20	9.1	3.65	332.8	0.007	Circle	6	0.013	0.01	0.77	0.04	0.01	0.4531	2.2	8.9	8.5	FALSE	5.861
H25+H11	H25	11.2	3.3	H11	9.92	1.7	378	0.004	Circle	6	0.013	0.0288	0.72	0.02	0.0288	0.365	7.9	3	21.8	FALSE	3.416
H26+H25	H26	10.63	4.58	H25	11.2	3.3	412.5	0.003	Circle	6	0.013	0.0288	0.77	0.03	0.0288	0.3125	9.2	5	24.2	FALSE	4.707
H27+H26	H27	11.38	5.66	H26	10.63	5.43	114.6	0.002	Circle	6	0.013	0.0096	0.75	0.04	0.0096	0.2514	3.8	7.9	7.9	FALSE	5.71
H28+H50	H28	10.4	5.41	H50	10.13	5.03	191.6	0.002	Circle	6	0.013	0.0096	0.71	0.03	0.0096	0.2499	3.8	6.3	9.3	FALSE	5.461
H29+H12	H29	12.43	5.83	H12	10.15	2.65	550.5	0.006	Circle	6	0.013	0.04	0.84	0.03	0.0401	0.4264	9.4	5.5	27.8	FALSE	5.972
H30+H46	H30	11.57	7.74	H46	11.27	7.47	135.4	0.002	Circle	6	0.013	0.015	0.86	0.06	0.0151	0.2505	6	11.5	15.1	FALSE	7.816
H31+H14	H31	13.28	4.5	H14	11.02	3.69	403.7	0.002	Circle	6	0.013	0.0066	0.66	0.02	0.0066	0.2513	2.6	4.9	7	FALSE	4.535
H32+H17	H32	16.06	10.26	H17	12.03	6.88	549.9	0.006	Circle	6	0.013	0.011	0.72	0.03	0.034	0.4399	2.5	6.8	27.8	FALSE	10.38
H33+H32	H33	20	11.29	H32	16.06	10.26	515	0.002	Circle	6	0.013	0.0229	0.74	0.11	0.034	0.2509	9.1	21.3	32	FALSE	11.45
H34+H17	H34	12.74	7.69	H17	12.03	6.83	268.6	0.003	Circle	6	0.013	0.1104	1.43	0.08	0.1104	0.3175	34.8	15.2	15.2	FALSE	7.92
H35+H34	H35	14.34	9.56	H34	12.74	7.69	321.9	0.006	Circle	6	0.013	0.1104	1.38	0.07	0.1104	0.4276	25.8	13.3	13.3	FALSE	9.757
H36+H35	H36	15.37	9.87	H35	14.34	9.56	473.9	0.001	Circle	6	0.013	0.0867	1.45	0.1	0.0867	0.1435	60.4	20.5	67.2	FALSE	10.22
H37+H36	H37	17.89	12.09	H36	15.37	9.87	370.1	0.006	Circle	6	0.013	0.0578	1.13	0.07	0.0579	0.4345	13.3	13.6	33.2	FALSE	12.247
H38+E42	H38	17.69	11.79	E42	14.56	10.11	518.8	0.003	Circle	6	0.013	0	0	0	0.0091	0.3193	0	0	10.5	FALSE	11.91
H38+H47	H38	17.69	11.79	H47	15.05	10.1	205.2	0.008	Circle	6	0.013	0.0237	0.75	0.03	0.0237	0.5092	4.7	5.2	5.2	FALSE	11.91
H39+H38	H39	18	12.1	H38	17.69	11.84	131.9	0.002	Circle	6	0.013	0.0187	0.95	0.07	0.0187	0.2491	7.5	14.2	18.8	FALSE	12.194
H40+H36	H40	22.17	15.97	H36	15.37	9.87	496.1	0.012	Circle	6	0.013	0.0289	0.7	0.01	0.0291	0.6222	4.6	2.1	17.9	FALSE	16.067
H41+H40	H41	24.38	16.27	H40	22.17	15.97	150.4	0.002	Circle	6	0.013	0.0289	0.94	0.11	0.029	0.2506	11.5	21.3	27.6	FALSE	16.409
H42+H37	H42	21.01	14.76	H37	17.89	12.19	387.7	0.007	Circle	6	0.013	0.0289	0.88	0.05	0.0291	0.4568	6.3	9.4	19.8	FALSE	14.867
H43+H42	H43	22.12	16.57	H42	21.01	14.76	346.3	0.005	Circle	6	0.013	0.0289	1.1	0.1	0.0289	0.4056	7.1	19	23.6	FALSE	16.677
H44+H37	H44	20.24	14.24	H37	17.89	12.14	272.4	0.008	Circle	6	0.013	0.0289	1.11	0.09	0.0291	0.4926	5.9	18.7	20.8	FALSE	14.341
H45+H9	H45	12.4	3.93	H9	11.84	3.49	222.4	0.002	Circle	6	0.013	0.0046	0.57	0.01	0.0046	0.2496	1.8	1.7	3.2	FALSE	3.954
H46+H52	H46	11.27	7.47	H52	12.58	6.18	360.9	0.004	Circle	6	0.013	0.015	0.78	0.04	0.0152	0.3354	4.5	8	12.6	FALSE	7.543
H47+H35	H47	15.05	10.1	H35	14.34	9.62	192.4	0.002	Circle	6	0.013	0.0237	0.95	0.07	0.0237	0.2802	8.5	13.2	13.2	FALSE	10.182
H48+H55	H48	9.12	6.64	H55	9.3	4.32	217.4	0.011	Circle	6	0.013	0.005	0.56	0.01	0.005	0.5796	0.9	1.2	3.6	FALSE	6.743
H49+H48	H49	8.35	6.77	H48	9.12	6.72	32.6	0.002	Circle	6	0.013	0.005	0.56	0.01	0.005	0.2197	2.3	1.2	1.2	FALSE	6.783
H50+H26	H50	10.13	5.03	H26	10.63	4.58	154.3	0.003	Circle	6	0.013	0.0192	0.71	0.02	0.0192	0.303	6.3	4.6	16.2	FALSE	5.121
H51+H50	H51	10.5	6.35	H50	10.13	5.13	189.2	0.006	Circle	6	0.013	0.0096	0.61	0.01	0.0096	0.4505	2.1	2.3	7.9	FALSE	6.391
H52+H29	H52	12.58	6.18	H29	12.43	5.83	94.4	0.004	Circle	6	0.013	0.04	0.89	0.04	0.0405	0.3416	11.7	7.6	31.4	FALSE	6.343
H53+H52	H53	12.4	8.3	H52	12.58	6.23	233.2	0.009	Circle	6	0.013	0.025	0.84	0.04	0.025	0.5286	4.7	8.7	16.6	FALSE	8.384
H54+H20	H54	9.2	4	H20	9.1	3.7	152.6	0.002	Circle	6	0.013	0.01	0.59	0.01	0.01	0.2488	4	1.5	10.3	FALSE	4.228
H55+H54	H55	9.3	4.32	H54	9.2	4.22	50	0.002	Circle	6	0.013	0.01	0.59	0.01	0.01	0.2509	4	1.5	7.9	FALSE	4.375
H56+H55	H56	9.2	4.75	H55	9.3	4.32	215.8	0.002	Circle	6	0.013	0.005	0.56	0.01	0.005	0.2505	2	1.2	3.8	FALSE	4.777
H57+H16	H57	14.21	6.69	H16	14.43	6.48	40.5	0.005	Circle	8	0.013	0.1104	1.13	0.02	0.1384	0.8701	12.7	2.4	30.1	FALSE	6.898
H58+H57	H58	15.13	7.62	H57	14.21	6.69	184.6	0.005	Circle	8	0.013	0	0	0	0	0.8577	0	0	0	FALSE	7.62
H59+H58	H59	16.1	8.59	H58	15.13	7.62	194.6	0.005	Circle	8	0.013	0	0	0	0	0.8531	0	0	0	FALSE	8.59
H59+H61	H59	16.1	8.59	H61	15.42	6.28	194.6	0.012	Circle	8	0.013	0	0	0	0	1.3165	0	0	0	FALSE	8.59
H60+H15	H60	14.57	5.9	H15	14.61	5.7	98.7	0.002	Circle	8	0.013	0.1104	1.22	0.03	0.1384	0.5439	20.3	5	37.7	FALSE	6.162
H61+H60	H61	15.42	6.28	H60	14.57	5.9	189.5	0.002	Circle	8	0.013	0	0	0	0	0.5411	0	0	0	FALSE	6.28

Attachement 1
Average Dry Weather Flow Model Results

Label	Start Node	Rim (Start) (ft)	Invert (Start) (ft)	Stop Node	Rim (Stop) (ft)	Invert (Stop) (ft)	Length (ft)	Slope (Calculated) (ft/ft)	Section Type	Diameter (in)	Manning's n	Flow (Middle) (cfs)	Velocity (ft/s)	Depth (Middle) (ft)	Flow (Maximum) (cfs)	Capacity (Full Flow) (cfs)	Flow / Capacity (Design) (%)	Depth/Rise (%)	Depth (Maximum) / Rise (%)	Is Ever Surcharged?	Hydraulic Grade (Maximum) (ft)
H62+H14	H62	12.95	4.64	H14	11.02	3.54	232.8	0.005	Circle	8	0.013	0.115	1.16	0.02	0.143	0.8306	13.8	2.4	31	FALSE	4.852
H63+H62	H63	13.79	5.49	H62	12.95	4.64	169.8	0.005	Circle	6	0.013	0.0046	0.55	0.01	0.0046	0.397	1.2	1.2	19.1	FALSE	5.539
H64+H71	H64	9.05	0.99	H71	8.35	0.77	160.6	0.001	Circle	8	0.013	0.1979	1.49	0	0.2259	0.4472	44.3	0	51.9	FALSE	1.355
H65+H64	H65	9.89	1.83	H64	9.05	0.99	168.3	0.005	Circle	6	0.013	0.0075	0.57	0.01	0.0076	0.3964	1.9	1.4	14.3	FALSE	1.888
H66+H65	H66	9.89	2.09	H65	9.89	1.83	51.4	0.005	Circle	6	0.013	0.0075	0.57	0.01	0.0075	0.399	1.9	1.4	6.7	FALSE	2.129
H67+H66	H67	9.89	2.32	H66	9.89	2.09	46	0.005	Circle	6	0.013	0.0025	0.54	0	0.0025	0.3967	0.6	1	1	FALSE	2.325
H68+H66	H68	9.89	2.42	H66	9.89	2.09	67	0.005	Circle	6	0.013	0.005	0.56	0.01	0.005	0.3938	1.3	1.2	4.8	FALSE	2.448
H69+H68	H69	9.89	2.64	H68	9.89	2.42	45.6	0.005	Circle	6	0.013	0.0025	0.54	0	0.0025	0.3897	0.6	1	1	FALSE	2.645
H70+H68	H70	9.89	2.67	H68	9.89	2.42	51.2	0.005	Circle	6	0.013	0.0025	0.54	0	0.0025	0.3921	0.6	1	1	FALSE	2.675
H71+H3	H71	8.35	0.77	H3	8.2	0.7	35	0.002	Circle	8	0.013	0.1989	1.49	0	0.2269	0.5404	36.8	0	60.5	FALSE	1.139
H72+H71	H72	9.26	1.54	H71	8.35	0.77	182.4	0.004	Circle	6	0.013	0.001	0.52	0	0.001	0.3645	0.3	0.8	0.8	FALSE	1.544
H73+H74	H73	11.36	2.56	H74	11.16	2.34	101	0.002	Circle	12	0.013	0.4093	2.55	0	0.5998	1.6627	24.6	0.1	40.5	FALSE	2.984
H74+H8	H74	11.16	2.34	H8	10.95	2.1	112.9	0.002	Circle	12	0.013	0.4093	2.56	0	0.5998	1.6426	24.9	0.2	41.1	FALSE	2.768
H75+H6	H75	10.09	1.58	H6	8.89	1.04	259.7	0.002	Circle	12	0.013	0.4093	2.61	0.01	0.5998	1.6245	25.2	1.3	43.2	FALSE	2.016
I3+T19	I3	1.69	-3.99	T19	2.23	-4.27	188.4	0.001	Circle	18	0.013	0.7435	4.3	0.02	1.2176	4.0493	18.4	1.1	35.9	FALSE	-3.425
I4+I3	I4	1.84	-3.79	I3	1.69	-3.99	242.6	0.001	Circle	18	0.013	0.7435	4.22	0	1.2176	3.0159	24.7	0	39.7	FALSE	-3.151
I5+I31	I5	3.41	-3.42	I31	2.94	-3.53	135	0.001	Circle	18	0.013	0.7375	4.19	0	1.2116	2.9983	24.6	0	40.7	FALSE	-2.793
I6+I5	I6	4.62	-3.08	I5	3.41	-3.42	410.7	0.001	Circle	18	0.013	0.7375	4.19	0	1.2116	3.0222	24.4	0	42.2	FALSE	-2.417
I7+I6	I7	5.18	-2.32	I6	4.62	-3.08	259	0.003	Circle	18	0.013	0.6452	3.73	0	0.8637	5.6899	11.3	0	26.9	FALSE	-1.91
I8+I7	I8	6.15	-1.45	I7	5.18	-2.32	238.1	0.004	Circle	15	0.013	0.6372	3.69	0	0.8557	3.9046	16.3	0	32.5	FALSE	-1.036
I9+I8	I9	5.69	-1.31	I8	6.15	-1.45	154.7	0.001	Circle	15	0.013	0.6322	3.78	0.02	0.8507	1.9432	32.5	1.8	40.3	FALSE	-0.758
I10+I9	I10	7.26	-0.74	I9	5.69	-1.31	221.1	0.003	Circle	15	0.013	0.6282	3.64	0	0.8467	3.2797	19.2	0	35.4	FALSE	-0.295
I11+I10	I11	8.07	-0.03	I10	7.26	-0.74	379.8	0.002	Circle	15	0.013	0.6282	3.74	0.02	0.8467	2.7928	22.5	1.6	38.5	FALSE	0.47
I12+I6	I12	4.46	-2.19	I6	4.62	-2.83	338.5	0.002	Circle	12	0.013	0.0873	1.01	0.01	0.3429	1.5491	5.6	1.5	33.7	FALSE	-1.852
I13+I12	I13	5.54	-1.56	I12	4.46	-2.14	319.8	0.002	Circle	12	0.013	0.0873	1.01	0.01	0.3429	1.5172	5.8	1.5	34	FALSE	-1.216
I14+I13	I14	4.22	-0.83	I13	5.54	-1.51	443.5	0.002	Circle	12	0.013	0.0025	0.54	0	0.2581	1.395	0.2	0.5	31.1	FALSE	-0.518
I15+I14	I15	5.32	-0.53	I14	4.22	-0.78	386	0.001	Circle	12	0.013	0.0025	0.54	0	0.2582	0.9067	0.3	0.5	37.5	FALSE	-0.143
I16+I6	I16	4.85	0.96	I6	4.62	-2.38	492.8	0.007	Circle	6	0.013	0.005	0.64	0.02	0.005	0.4619	1.1	4.6	4.9	FALSE	0.984
I17+I7	I17	5.54	1.51	I7	5.18	-1.27	525.8	0.005	Circle	6	0.013	0.008	0.7	0.03	0.008	0.408	2	6.3	8.1	FALSE	1.545
I18+I8	I18	5.2	1.01	I8	6.15	-0.65	236.8	0.007	Circle	6	0.013	0.005	0.56	0.01	0.005	0.4698	1.1	1.2	4.3	FALSE	1.116
I19+I18	I19	6.48	1.59	I18	5.2	1.11	238.8	0.002	Circle	6	0.013	0.005	0.56	0.01	0.005	0.2516	2	1.5	3.2	FALSE	1.616
I20+I9	I20	5.86	1.26	I9	5.69	-0.81	278.4	0.007	Circle	6	0.013	0.004	0.63	0.02	0.0041	0.4838	0.8	4.4	3.4	FALSE	1.281
I21+I24	I21	7.17	1.52	I24	7	-0.08	364.1	0.004	Circle	6	0.013	0.0636	0.95	0.03	0.0636	0.3719	17.1	5.2	5.2	FALSE	1.697
I22+I23	I22	8.69	3.44	I23	8.52	3.17	44.5	0.006	Circle	6	0.013	0.0212	0.9	0.06	0.0212	0.437	4.9	11.6	16.1	FALSE	3.521
I23+I27	I23	8.52	3.12	I27	8.3	2.86	80.1	0.003	Circle	6	0.013	0.0424	1.09	0.08	0.0424	0.3197	13.3	15	33.5	FALSE	3.29
I24+I13	I24	7	-0.08	I13	5.54	-0.56	236.9	0.002	Circle	6	0.013	0.0848	1.25	0.06	0.0848	0.2526	33.6	12.9	12.9	FALSE	0.165
I25+I24	I25	7	0.22	I24	7	-0.08	153.5	0.002	Circle	6	0.013	0.0212	0.98	0.08	0.0212	0.248	8.5	15.2	20.9	FALSE	0.326
I26+I23	I26	9.29	4.04	I23	8.52	3.27	153.5	0.005	Circle	6	0.013	0.0212	0.77	0.03	0.0212	0.3974	5.3	6.6	14.7	FALSE	4.123
I27+I28	I27	8.3	2.86	I28	8.04	2.57	89.9	0.003	Circle	6	0.013	0.0424	0.97	0.05	0.0424	0.3187	13.3	10.5	10.5	FALSE	3.029
I28+I21	I28	8.04	2.57	I21	7.17	1.57	311.5	0.003	Circle	6	0.013	0.0636	1.23	0.08	0.0636	0.3179	20	16.5	38.4	FALSE	2.763
I29+I28	I29	8.81	3.34	I28	8.04	2.57	153.5	0.005	Circle	6	0.013	0.0212	0.91	0.06	0.0212	0.3974	5.3	12	22.1	FALSE	3.431
I31+I4	I31	2.94	-3.53	I4	1.84	-3.79	321.1	0.001	Circle	18	0.013	0.7435	4.22	0	1.2176	2.9889	24.9	0	41.8	FALSE	-2.866
I32+I31	I32	3.97	-2.18	I31	2.94	-3.26	207.6	0.005	Circle	6	0.013	0.006	0.56	0.01	0.0061	0.4047	1.5	1.3	22.8	FALSE	-2.102
I33+I32	I33	4.43	-1.73	I32	3.97	-2.18	90.2	0.005	Circle	6	0.013	0.002	0.53	0	0.002	0.3963	0.5	0.9	0.9	FALSE	-1.725
I34+I32	I34	4.56	-1.6	I32	3.97	-2.18	117.2	0.005	Circle	6	0.013	0.004	0.57	0.01	0.0041	0.3947	1	1.9	3.5	FALSE	-1.579
I43+I15	I43	5.62	0.12	I15	5.32	-0.53	61.7	0.011	Circle	12	0.013	0.0025	0.54	0	0.2604	3.6566	0.1	0.5	19.3	FALSE	0.451
J5+T21	J5	4.44	-1.06	T21	3.07	-3.03	585.4	0.003	Circle	6	0.013	0.0417	0.77	0.01	0.0417	0.3255	12.8	2.4	33	FALSE	-0.894
J6+J5	J6	5.85	0.6	J5	4.44	-0.96	558.5	0.003	Circle	6	0.013	0.0417	0.8	0.02	0.0417	0.2965	14.1	3.6	34.7	FALSE	0.775
J7+J6	J7	5.96	1.9	J6	5.85	1.02	441.1	0.002	Circle	6	0.013	0.0133	0.8	0.05	0.0133	0.2506	5.3	9.4	13.6	FALSE	1.968
J8+J6	J8	7.5	2.81	J6	5.85	0.7	442.1	0.005	Circle	6	0.013	0.0284	0.85	0.04	0.0284	0.3876	7.3	8.2	20.7	FALSE	2.92
J9+J8	J9	8.19	3.23	J8	7.5	2.81	400.5	0.001	Circle	6	0.013	0.0284	1.04	0.1	0.0284	0.1817	15.6	19.6	19.6	FALSE	3.397
J10+J9	J10	9.91	4.26	J9	8.19	3.34	299.8	0.003	Circle	6	0.013	0.0284	1.04	0.08	0.0284	0.3108	9.1	16	25.1	FALSE	4.383
J11+T20	J11	1.31	-2.3	T20	2.72	-3.58	282.4	0.005	Circle	8	0.013	0.0145	0.8	0.04	0.0145	0.8135	1.8	6.7	9.7	FALSE	-2.192
J12+J11	J12	1.94	-1.61	J11	1.31	-2.2	299.4	0.002	Circle	8	0.013	0.0145	0.8	0.05	0.0145	0.5364	2.7	6.9	10.8	FALSE	-1.502
J13+J12	J13	2.73	-0.51	J12	1.94	-1.51	298.6	0.003	Circle	8	0.013	0.0145	0.85	0.06	0.0145	0.6993	2.1	8.4	10.3	FALSE	-0.402
J14+J13	J14	3.27	-0.03	J13	2.73	-0.41	190	0.002	Circle	8	0.013	0.0145	0.8	0.05	0.0145	0.5404	2.7	6.8	9.8	FALSE	0.041
K1+T15	K1	2.02	-6.28	T15	2.75	-6.5	20.4	0.011	Circle	14	0.013	0.3785	2.39	0	0.3785	5.5807	6.8	0	0	FALSE	-6.05
K2+K1	K2	3.35	-5.2	K1	2.02	-6.28	451.1	0.002	Circle	14	0.013	0.3785	2.46	0.01	0.3785	2.6295	14.4	1.2	1.2	FALSE	-4.914
K3+K2	K3	4.05	-4.8	K2	3.35	-5.2	189.7	0.002	Circle	12	0.013	0.3785	2.39	0	0.3785	1.6359	23.1	0	0	FALSE	-4.484
K4+K3	K4	3.55	-4.1	K3	4.05	-4.8	238.3	0.003	Circle	12	0.013	0.3765	2.38	0	0.3765	1.9309	19.5	0	0	FALSE	-3.814
K5+K4	K5	3.31	-3.39	K4	3.55	-4.1	248.1	0.003	Circle	12	0.013	0.1743	1.37	0	0.1743	1.9058	9.1	0	0	FALSE	-3.205
K6+K5	K6	4.44	-2.86	K5	3.31	-3.39	251.1	0.002	Circle	12	0.013	0.1606	1.3	0	0.1606	1.6368	9.8	0	0	FALSE	-2.669
K7+K6	K7	3.35	-1.85	K6	4.44	-2.66	362.1	0.002	Circle	8	0.013	0.0076	0.57	0.01	0.0076	0.5715	1.3	1	5.8	FALSE	-1.809
K8+K7	K8	2.87	-1.18	K7	3.35	-1.85	355.5	0.002	Circle	8	0.013	0.0076	0.57	0.01	0.0076	0.5246	1.4	1	1	FALSE	-1.138
K9+K8	K9	3.87	-0.58	K8	2.87	-1.18	355.9	0.002	Circle	8	0.013	0.0076	0.57	0.01	0.0076	0.4961	1.5	1	6.4	FALSE	-0.475
K10+K9	K10	4.11	0.11	K9	3.87	-0.48	155.5	0.004	Circle	6	0.013	0.0046	0.55	0.01	0.0046	0.3456	1.3	1.2	2.5	FALSE	0.131
K11+K5	K11	3.67	-2.23	K5	3.31	-2.99	369.8	0.002	Circle	6	0.013	0.0077	0.64	0.02	0.0077	0.2544	3	4	4	FALSE	-2.073
K12+K11	K12	3.54	-0.86	K11	3.67	-2.08	353.5	0.003	Circle	6	0.013	0.0077	0.63	0.02	0.0078	0.3296	2.4	3.5	6.5	FALSE	-0.821
K13+K12	K13	2.97	0.27	K12	3.54	-0.86	362	0.003	Circle	6	0.013	0.0077	0.65	0.02	0.0078	0.3135	2.5	4.3	6.8	FALSE	0.309

Attachement 1
Average Dry Weather Flow Model Results

Label	Start Node	Rim (Start) (ft)	Invert (Start) (ft)	Stop Node	Rim (Stop) (ft)	Invert (Stop) (ft)	Length (ft)	Slope (Calculated) (ft/ft)	Section Type	Diameter (in)	Manning's n	Flow (Middle) (cfs)	Velocity (ft/s)	Depth (Middle) (ft)	Flow (Maximum) (cfs)	Capacity (Full Flow) (cfs)	Flow / Capacity (Design) (%)	Depth/Rise (%)	Depth (Maximum) / Rise (%)	Is Ever Surcharged?	Hydraulic Grade (Maximum) (ft)
K14+K13	K14	3.19	0.45	K13	2.97	0.27	90.4	0.002	Circle	6	0.013	0.0077	0.7	0.03	0.0078	0.2504	3.1	6.5	8.1	FALSE	0.491
K15+K9	K15	3.43	-0.33	K9	3.87	-0.48	73.9	0.002	Circle	6	0.013	0.003	0.54	0.01	0.003	0.2528	1.2	1.1	2.9	FALSE	-0.313
K16+K4	K16	3.55	-2.65	K4	3.55	-3.45	273.7	0.003	Circle	6	0.013	0.008	0.77	0.05	0.008	0.3033	2.6	9	9	FALSE	-2.593
K17+K16	K17	2.92	-1.88	K16	3.55	-2.6	267.2	0.003	Circle	6	0.013	0.0062	0.71	0.04	0.0062	0.2913	2.1	7	7.6	FALSE	-1.846
K18+K17	K18	3.64	-1.31	K17	2.92	-1.88	268.7	0.002	Circle	6	0.013	0.0062	0.68	0.03	0.0062	0.2584	2.4	5.9	7.2	FALSE	-1.276
K19+K18	K19	3.25	-0.65	K18	3.64	-1.31	272	0.002	Circle	6	0.013	0.0062	0.67	0.03	0.0062	0.2764	2.2	5.7	7.4	FALSE	-0.593
K20+K19	K20	2.67	-0.53	K19	3.25	-0.6	134.6	0.001	Circle	6	0.013	0.0062	0.56	0.01	0.0062	0.128	4.8	1.3	1.3	FALSE	-0.504
K21+K3	K21	3.15	-2.1	K3	4.05	-4.25	246.4	0.009	Circle	6	0.013	0.002	0.53	0	0.002	0.5241	0.4	0.9	0.9	FALSE	-2.046
K22+K21	K22	3.29	-1.16	K21	3.15	-2.05	256.2	0.003	Circle	6	0.013	0.001	0.52	0	0.001	0.3307	0.3	0.8	0.8	FALSE	-1.106
K23+K22	K23	3.52	-0.91	K22	3.29	-1.11	99.5	0.002	Circle	6	0.013	0.001	0.52	0	0.001	0.2516	0.4	0.8	0.8	FALSE	-0.906
K24+K21	K24	3.55	-1.7	K21	3.15	-2	148.6	0.002	Circle	6	0.013	0.001	0.52	0	0.001	0.2521	0.4	0.8	0.8	FALSE	-1.696
K25+K5	K25	3.6	-1.7	K5	3.31	-3.09	376.2	0.004	Circle	6	0.013	0.006	0.59	0.01	0.006	0.3411	1.8	2.6	4.7	FALSE	-1.669
K26+K6	K26	4.36	-1.29	K6	4.44	-2.76	293.6	0.005	Circle	6	0.013	0.0208	0.51	0.13	0.0208	0.397	5.2	25.9	25.9	FALSE	-1.184
K27+K26	K27	3.95	-0.6	K26	4.36	-1.29	199.5	0.003	Circle	6	0.013	0	0	0	0	0.33	0	0	0	FALSE	-0.55
K28+K4	K28	3.27	-4	K4	3.55	-4.1	242	0	Circle	10	0.013	0.196	1.48	0	0.196	0.4454	44	0	0	FALSE	-3.611
K30+K31	K30	3.78	-3.21	K31	3.08	-3.43	108.2	0.002	Circle	8	0.013	0.028	0.69	0.01	0.028	0.5449	5.1	1.6	18.3	FALSE	-3.087
K31+L1	K31	3.08	-3.43	L1	2.82	-3.73	147.8	0.002	Circle	8	0.013	0.028	0.69	0.01	0.028	0.5444	5.1	1.6	27.4	FALSE	-3.307
K32+K30	K32	3.16	-2.76	K30	3.78	-3.21	226.9	0.002	Circle	8	0.013	0.028	0.69	0.01	0.028	0.5381	5.2	1.6	17.4	FALSE	-2.635
K33+K32	K33	2.74	-2.37	K32	3.16	-2.76	130.8	0.003	Circle	6	0.013	0.011	0.67	0.02	0.011	0.3064	3.6	4.8	9.6	FALSE	-2.316
K34+K33	K34	3.08	-1.54	K33	2.74	-2.37	278.4	0.003	Circle	6	0.013	0.011	0.77	0.04	0.011	0.3064	3.6	8.7	11.9	FALSE	-1.485
K35+K34	K35	2.78	-0.7	K34	3.08	-1.54	279.8	0.003	Circle	6	0.013	0.011	0.79	0.05	0.011	0.3074	3.6	9.5	12	FALSE	-0.645
K36+K35	K36	2.75	0.15	K35	2.78	-0.7	281.5	0.003	Circle	6	0.013	0.011	0.79	0.05	0.0111	0.3083	3.6	9.5	11.9	FALSE	0.204
K37+K32	K37	2.51	-1.01	K32	3.16	-2.76	350.2	0.005	Circle	6	0.013	0.017	0.83	0.05	0.017	0.3966	4.3	9.7	14.4	FALSE	-0.941
L1+L21	L1	2.82	-3.73	L21	2.74	-3.95	223.2	0.001	Circle	10	0.013	0.196	1.65	0.03	0.196	0.6878	28.5	4	4	FALSE	-3.398
L2+L1	L2	2.72	-3.28	L1	2.82	-3.73	178.7	0.003	Circle	10	0.013	0.168	1.39	0.01	0.168	1.0994	15.3	1.1	1.1	FALSE	-3.037
L3+L2	L3	2.93	-3.17	L2	2.72	-3.28	83.4	0.001	Circle	10	0.013	0.168	1.45	0.02	0.168	0.7957	21.1	2.5	2.5	FALSE	-2.89
L4+L3	L4	3.39	-2.3	L3	2.93	-3.12	247.6	0.003	Circle	10	0.013	0.1123	1.15	0.02	0.1123	1.2608	8.9	2.1	2.1	FALSE	-2.106
L5+L47	L5	4.17	-1.38	L47	3.21	-2.04	276.3	0.002	Circle	6	0.013	0.021	0.87	0.05	0.021	0.2742	7.7	10.8	19.7	FALSE	-1.278
L6+L5	L6	4.69	-0.51	L5	4.17	-1.38	214.9	0.004	Circle	6	0.013	0.015	0.65	0.02	0.015	0.357	4.2	3.1	9.2	FALSE	-0.45
L7+L6	L7	5.31	-0.39	L6	4.69	-0.51	260.6	0	Circle	6	0.013	0.015	0.88	0.06	0.015	0.1204	12.5	12	17.3	FALSE	-0.281
L8+L7	L8	5.39	-0.24	L7	5.31	-0.39	72.8	0.002	Circle	6	0.013	0.015	0.86	0.06	0.015	0.2547	5.9	11.4	14.2	FALSE	-0.165
L9+L4	L9	3.42	-1.78	L4	3.39	-2.05	162.3	0.002	Circle	6	0.013	0.0409	0.92	0.04	0.0409	0.2288	17.9	8.7	8.7	FALSE	-1.58
L10+K27	L10	3.59	0.24	K27	3.95	-0.55	197.2	0.004	Circle	6	0.013	0	0	0	0	0.3551	0	0	0	FALSE	-0.552
L10+L9	L10	3.59	-0.76	L9	3.42	-1.78	274.7	0.004	Circle	6	0.013	0.01	0.78	0.05	0.01	0.3419	2.9	9.4	9.4	FALSE	-0.552
L11+L10	L11	4.97	0.57	L10	3.59	-0.56	359.8	0.003	Circle	6	0.013	0.01	0.69	0.03	0.01	0.3144	3.2	5.5	8.9	FALSE	0.619
L12+L11	L12	4.97	0.62	L11	4.97	0.57	81.8	0.001	Circle	6	0.013	0.01	0.6	0.01	0.01	0.1387	7.2	2.1	4.8	FALSE	0.653
L13+L9	L13	4.47	-0.58	L9	3.42	-1.73	310.9	0.004	Circle	6	0.013	0.0309	0.71	0.01	0.0309	0.3412	9.1	2.1	26.1	FALSE	-0.454
L14+L13	L14	5.25	0.6	L13	4.47	-0.58	301.6	0.004	Circle	6	0.013	0.0309	0.71	0.01	0.0309	0.351	8.8	2.1	25.8	FALSE	0.724
L15+L14	L15	6.17	1.92	L14	5.25	0.6	310.2	0.004	Circle	6	0.013	0.0309	0.86	0.04	0.0309	0.366	8.4	8.4	25.4	FALSE	2.042
L16+L15	L16	7.37	2.67	L15	6.17	1.92	311.1	0.002	Circle	6	0.013	0.0309	1.06	0.08	0.0309	0.2755	11.2	16.2	28.2	FALSE	2.814
L17+L16	L17	7.38	3.53	L16	7.37	2.67	236.3	0.004	Circle	6	0.013	0.0294	0.79	0.03	0.0294	0.3385	8.7	5.8	20.2	FALSE	3.647
L18+L17	L18	8.22	4.37	L17	7.38	3.53	330.9	0.003	Circle	6	0.013	0.0294	1.1	0.09	0.0294	0.2827	10.4	18.2	27	FALSE	4.507
L19+L18	L19	9.56	5.51	L18	8.22	4.37	332.7	0.003	Circle	6	0.013	0.0294	1.09	0.09	0.0295	0.3284	9	17.6	25.3	FALSE	5.633
L20+L16	L20	8.52	2.97	L16	7.37	2.77	101.4	0.002	Circle	6	0.013	0.0015	0.53	0	0.0015	0.2492	0.6	0.9	0.9	FALSE	2.974
L21+K28	L21	2.74	-3.95	K28	3.27	-4	68.3	0.001	Circle	10	0.013	0.196	1.5	0	0.196	0.5928	33.1	0.6	0.6	FALSE	-3.611
L22+L3	L22	3.32	-0.13	L3	2.93	-2.72	365.6	0.007	Circle	6	0.013	0.013	0.71	0.03	0.013	0.4722	2.8	5.7	9.8	FALSE	-0.078
L23+L3	L23	3.05	-2.75	L3	2.93	-3.02	351.1	0.001	Circle	8	0.013	0.0427	0.77	0.01	0.0427	0.3351	12.7	1.8	32.5	FALSE	-2.531
L24+L23	L24	2.38	-2.17	L23	3.05	-2.75	386.3	0.002	Circle	8	0.013	0.0427	0.77	0.01	0.0427	0.4682	9.1	1.8	27.5	FALSE	-1.986
L25+L24	L25	3.54	-1.91	L24	2.38	-2.17	342	0.001	Circle	8	0.013	0.0427	0.77	0.01	0.0427	0.3332	12.8	1.8	32.5	FALSE	-1.69
L26+L25	L26	3.77	-1.38	L25	3.54	-1.91	215.6	0.002	Circle	8	0.013	0.037	0.74	0.01	0.037	0.5991	6.2	1.7	20.6	FALSE	-1.231
L27+L26	L27	3.7	-0.86	L26	3.77	-1.38	260.1	0.002	Circle	8	0.013	0.028	0.87	0.05	0.028	0.5403	5.2	6.9	18.6	FALSE	-0.735
L28+L27	L28	3.81	0.26	L27	3.7	-0.86	362.9	0.003	Circle	6	0.013	0.014	0.73	0.03	0.014	0.3117	4.5	6.4	12.3	FALSE	0.326
L29+L28	L29	4.59	1.14	L28	3.81	0.26	366	0.002	Circle	6	0.013	0.014	0.79	0.04	0.014	0.2751	5.1	9	13.5	FALSE	1.209
L30+L27	L30	3.71	-0.19	L27	3.7	-0.86	236	0.003	Circle	6	0.013	0.014	0.69	0.02	0.014	0.299	4.7	4.8	12.3	FALSE	-0.124
L31+L30	L31	4.39	0.64	L30	3.71	-0.19	178.8	0.005	Circle	6	0.013	0.014	0.66	0.02	0.014	0.3823	3.7	3.6	9.1	FALSE	0.696
L32+L31	L32	5.42	1.62	L31	4.39	0.64	293.5	0.003	Circle	6	0.013	0.014	0.86	0.06	0.014	0.3242	4.3	11.5	14.8	FALSE	1.688
L33+L32	L33	5.85	1.8	L32	5.42	1.62	90.7	0.002	Circle	6	0.013	0.014	0.85	0.06	0.014	0.25	5.6	11	14	FALSE	1.872
L34+L26	L34	4.66	-0.24	L26	3.77	-1.28	287.3	0.004	Circle	6	0.013	0.009	0.58	0.01	0.009	0.3376	2.7	1.5	1.5	FALSE	-0.192
L35+L34	L35	5.3	0.7	L34	4.66	-0.24	253.5	0.004	Circle	6	0.013	0	0	0	0	0.3417	0	0	0	FALSE	0.7
L36+L35	L36	5.75	1.65	L35	5.3	0.7	277.7	0.003	Circle	6	0.013	0	0	0	0	0.3282	0	0	0	FALSE	1.65
L37+L36	L37	6.21	2.76	L36	5.75	1.65	322.8	0.003	Circle	6	0.013	0	0	0	0	0.329	0	0	0	FALSE	2.76
L37+L38	L37	6.21	2.76	L38	5.64	2.24	210.4	0.002	Circle	6	0.013	0	0	0	0	0.2789	0	0	0	FALSE	2.76
L38+L39	L38	5.64	2.24	L39	4.89	1.54	215.2	0.003	Circle	6	0.013	0	0	0	0	0.32	0	0	0	FALSE	2.24
L39+L40	L39	4.89	1.54	L40	4.16	0.81	345.7	0.002	Circle	6	0.013	0	0	0	0	0.2578	0	0	0	FALSE	1.54
L40+L42	L40	4.16	0.61	L42	3.25	0.2	345.8	0.001	Circle	8	0.013	0.0017	0.53	0	0.0017	0.4161	0.4	0.7	0.7	FALSE	0.814
L41+L40	L41	6.09	0.95	L40	4.16	0.81	70.6	0.002	Circle	6	0.013	0.0017	0.53	0	0.0017	0.2499	0.7	0.9	0.9	FALSE	0.954
L42+L43	L42	3.25	0.2	L43	2.56	-0.34	330.1	0.002	Circle	8	0.013	0.0017	0.53	0	0.0017	0.4887	0.3	0.7	0.7	FALSE	0.204
L43+L44	L43	2.56	-0.34	L44	3.5	-0.85	334.4	0.002	Circle	8	0.013	0.0017	0.53	0	0.0017	0.4719	0.4	0.7	0.7	FALSE	-0.336
L44+L45	L44	3.5	-0.85	L45	2.57	-1.33	238.4	0.002	Circle	8	0.013	0.0017	0.53	0	0.0017	0.5422	0.3	0.7	0.7	FALSE	-0.846

Attachement 1
Average Dry Weather Flow Model Results

Label	Start Node	Rim (Start) (ft)	Invert (Start) (ft)	Stop Node	Rim (Stop) (ft)	Invert (Stop) (ft)	Length (ft)	Slope (Calculated) (ft/ft)	Section Type	Diameter (in)	Manning's n	Flow (Middle) (cfs)	Velocity (ft/s)	Depth (Middle) (ft)	Flow (Maximum) (cfs)	Capacity (Full Flow) (cfs)	Flow / Capacity (Design) (%)	Depth/Rise (%)	Depth (Maximum) / Rise (%)	Is Ever Surcharged?	Hydraulic Grade (Maximum) (ft)
L45+L25	L45	2.57	-1.38	L25	3.54	-1.76	201.8	0.002	Circle	8	0.013	0.0057	0.56	0.01	0.0062	0.5244	1.1	1	4.3	FALSE	-1.326
L46+L45	L46	2.92	-0.93	L45	2.57	-1.23	136	0.002	Circle	6	0.013	0.004	0.59	0.01	0.004	0.2635	1.5	2.9	4	FALSE	-0.908
L47+L4	L47	3.21	-2.04	L4	3.39	-2.3	88	0.003	Circle	8	0.013	0.0714	0.93	0.01	0.0714	0.6568	10.9	2.1	27.2	FALSE	-1.856
L48+L47	L48	3.22	-1.35	L47	3.21	-2.04	228.9	0.003	Circle	8	0.013	0.0504	0.81	0.01	0.0504	0.6634	7.6	1.9	23.6	FALSE	-1.189
L49+L48	L49	4.08	-1.2	L48	3.22	-1.35	233.3	0.001	Circle	8	0.013	0.0504	0.81	0.01	0.0504	0.3064	16.4	1.9	34.5	FALSE	-0.962
L50+L49	L50	4.26	-0.68	L49	4.08	-1.2	223.6	0.002	Circle	8	0.013	0.0504	0.81	0.01	0.0504	0.5827	8.6	1.9	25.5	FALSE	-0.506
L51+L50	L51	3.85	-0.28	L50	4.26	-0.68	79.7	0.005	Circle	6	0.013	0.0013	0.53	0	0.0013	0.3975	0.3	0.8	0.8	FALSE	-0.276
L52+L50	L52	4.54	-0.36	L50	4.26	-0.68	223.9	0.001	Circle	6	0.013	0.0491	1.06	0.06	0.0491	0.2121	23.1	12.4	43.7	FALSE	-0.14
L53+L52	L53	5.4	0.6	L52	4.54	-0.36	218.4	0.004	Circle	6	0.013	0.0491	0.82	0.02	0.0491	0.372	13.2	3.1	31.5	FALSE	0.762
L54+L53	L54	6.47	2.07	L53	5.4	0.6	369.4	0.004	Circle	6	0.013	0.037	0.91	0.04	0.037	0.3539	10.5	9	27.9	FALSE	2.218
L55+L54	L55	6.53	2.37	L54	6.47	2.07	148.7	0.002	Circle	6	0.013	0.0177	0.91	0.06	0.0177	0.252	7	12.9	17.7	FALSE	2.459
L56+L54	L56	7.59	3.34	L54	6.47	2.17	326.7	0.004	Circle	6	0.013	0.0193	0.93	0.07	0.0193	0.3358	5.7	13.3	18.3	FALSE	3.424
L57+L53	L57	5.49	1.29	L53	5.4	0.65	202.8	0.003	Circle	6	0.013	0.0121	0.63	0.01	0.0121	0.3152	3.8	2.8	8.4	FALSE	1.345
L58+L57	L58	6.75	2.35	L57	5.49	1.29	295.3	0.004	Circle	6	0.013	0.0121	0.82	0.05	0.0121	0.3362	3.6	10.6	13.1	FALSE	2.409
L59+L58	L59	7.91	3.31	L58	6.75	2.35	250	0.004	Circle	6	0.013	0.0121	0.81	0.05	0.0121	0.3477	3.5	10	12.5	FALSE	3.368
L60+L59	L60	8.08	3.53	L59	7.91	3.31	108.8	0.002	Circle	6	0.013	0.0121	0.8	0.05	0.0121	0.2523	4.8	9.7	12.5	FALSE	3.592
L61+L5	L61	4.57	-0.73	L5	4.17	-1.13	152.5	0.003	Circle	6	0.013	0.006	0.61	0.02	0.006	0.2874	2.1	3.2	4.9	FALSE	-0.7
L62+L34	L62	4.95	0.45	L34	4.66	-0.19	146.7	0.004	Circle	6	0.013	0.009	0.62	0.02	0.009	0.3706	2.4	3	6.7	FALSE	0.49
M2+I43	M2	5.62	0.3	I43	5.62	0.22	42.2	0.002	Circle	10	0.013	0.0025	0.54	0	0.2603	0.9539	0.3	0.6	33.7	FALSE	0.604
M2+N1	M2	5.62	2.62	N1	5.32	2.32	82	0.004	Circle	12	0.013	0	0	0	0	2.1549	0	0	0	FALSE	0.604
M3+M2	M3	6.98	1.33	M2	5.62	0.3	379.8	0.003	Circle	8	0.013	0.0015	0.53	0	0.2575	0.6293	0.2	0.6	47.9	FALSE	1.652
M4+M31	M4	9.9	3	M31	7	2.52	142.5	0.003	Circle	8	0.013	0.0122	0.73	0.03	0.2022	0.7013	1.7	5	40.1	FALSE	3.271
M5+M4	M5	11.95	3.9	M4	9.9	3.05	372.5	0.002	Circle	8	0.013	0.0519	0.85	0.15	0.2018	0.5772	9	23	44.6	FALSE	4.379
M6+M22	M6	12.3	6.22	M22	12.3	5.54	341.1	0.002	Circle	10	0.013	0.0744	0.85	0.18	0.1443	0.9782	7.6	21.8	29	FALSE	6.463
M7+M6	M7	12.4	6.45	M6	12.3	6.22	115.5	0.002	Circle	10	0.013	0.0979	1.02	0.19	0.1445	0.9777	10	23.2	28.6	FALSE	6.692
M8+M7	M8	14.41	7.71	M7	12.4	6.45	192.5	0.007	Circle	10	0.013	0.1057	1.62	0.12	0.1447	1.7725	6	14.2	21.5	FALSE	7.976
M12+M40	M12	14.95	7.4	M40	13.27	5.72	338.8	0.005	Circle	8	0.013	0.041	0.86	0.13	0.0567	0.8509	4.8	19.3	22.4	FALSE	7.548
M13+M12	M13	16.33	8.78	M12	14.95	7.4	275.6	0.005	Circle	8	0.013	0.0368	0.89	0.12	0.0568	0.8551	4.3	17.5	22.4	FALSE	8.928
M14+M5	M14	10.14	5.82	M5	11.95	3.95	327.8	0.006	Circle	6	0.013	0.001	0.52	0	0.001	0.4238	0.2	0.8	0.8	FALSE	5.824
M16+M8	M16	14.85	8.05	M8	14.41	7.81	19.7	0.012	Circle	6	0.013	0.0005	0.45	0	0.0005	0.6193	0.1	0.6	0.6	FALSE	8.053
M18+M5	M18	12	4.51	M5	11.95	4.2	153.9	0.002	Circle	10	0.013	0.0696	0.85	0.17	0.1445	0.9833	7.1	20.8	28.8	FALSE	4.753
M19+M18	M19	12.1	4.7	M18	12	4.51	94.8	0.002	Circle	10	0.013	0.063	0.8	0.17	0.1449	0.9808	6.4	20.2	28.3	FALSE	4.942
M20+M19	M20	12.2	4.86	M19	12.1	4.7	78	0.002	Circle	10	0.013	0.0706	0.88	0.17	0.145	0.9923	7.1	20.5	27.9	FALSE	5.1
M21+M20	M21	12.3	5.45	M20	12.2	4.86	296.6	0.002	Circle	10	0.013	0.074	0.85	0.18	0.1444	0.9771	7.6	21.6	29	FALSE	5.694
M22+M21	M22	12.3	5.54	M21	12.3	5.45	43.3	0.002	Circle	10	0.013	0.0885	1.13	0.17	0.146	0.9988	8.9	20.1	26.6	FALSE	5.774
M23+M24	M23	7.5	4.92	M24	7.4	4.53	195	0.002	Circle	8	0.013	0.0387	0.66	0.15	0.0557	0.5404	7.2	22.4	27.6	FALSE	5.105
M24+M25	M24	7.4	4.56	M25	7.3	4.04	260	0.002	Circle	8	0.013	0.0327	0.67	0.13	0.0557	0.5404	6	19.8	27.7	FALSE	4.745
M25+M26	M25	7.3	4.04	M26	7.3	3.5	270	0.002	Circle	8	0.013	0.0371	0.71	0.14	0.0557	0.5404	6.9	20.7	27.7	FALSE	4.225
M26+M27	M26	7.3	3.5	M27	7.2	3.25	124.9	0.002	Circle	8	0.013	0.022	0.65	0.1	0.0557	0.5406	4.1	15.3	27.7	FALSE	3.685
M27+M29	M27	7.2	3.25	M29	7.1	3.18	35.2	0.002	Circle	8	0.013	0.0237	1.01	0.08	0.0557	0.5389	4.4	11.7	25.7	FALSE	3.431
M28+N11	M28	7.3	0.37	N11	7.2	-0.1	236.4	0.002	Circle	8	0.013	0.0031	0.54	0.01	0.0031	0.5388	0.6	0.8	1.1	FALSE	0.389
M29+M31	M29	7.1	3.18	M31	7	2.52	328.8	0.002	Circle	8	0.013	0.0373	0.76	0.13	0.0557	0.5414	6.9	19.8	27.7	FALSE	3.365
M30+N29	M30	7.3	0.64	N29	7.2	0.13	255.2	0.002	Circle	8	0.013	0.006	0.68	0.03	0.006	0.5402	1.1	4.4	5.5	FALSE	0.675
M31+M3	M31	7	2.52	M3	6.98	1.33	357.1	0.003	Circle	8	0.013	0.0033	0.58	0.01	0.2575	0.6975	0.5	1.9	45.2	FALSE	2.827
M32+M33	M32	7.3	2.88	M33	7.3	2.49	195	0.002	Circle	8	0.013	0.0062	0.63	0.02	0.0062	0.5404	1.1	2.9	4.1	FALSE	2.915
M33+M34	M33	7.3	2.49	M34	7.2	1.91	287.6	0.002	Circle	8	0.013	0.0062	0.68	0.03	0.0062	0.5426	1.1	4.6	5.9	FALSE	2.526
M34+N22	M34	7.2	1.91	N22	7.1	1.4	253.5	0.002	Circle	8	0.013	0.011	0.69	0.03	0.011	0.542	2	4.1	8.7	FALSE	1.968
M35+M34	M35	7.2	2.16	M34	7.2	1.91	123.6	0.002	Circle	8	0.013	0.0048	0.64	0.02	0.0048	0.5434	0.9	3.5	4.3	FALSE	2.189
M36+M37	M36	7.3	3.24	M37	7.4	2.73	256.6	0.002	Circle	8	0.013	0.0108	0.77	0.04	0.0108	0.5387	2	6.5	8.5	FALSE	3.295
M37+N24	M37	7.4	2.73	N24	7.3	2.21	259.3	0.002	Circle	8	0.013	0.0108	0.76	0.04	0.0108	0.5411	2	6.1	8.6	FALSE	2.786
M38+M39	M38	19.58	12.03	M39	18.79	11.24	153	0.005	Circle	8	0.013	0.0532	1.28	0.1	0.0568	0.8683	6.1	15.4	21.7	FALSE	12.176
M39+M43	M39	18.79	11.24	M43	17.59	10.04	240	0.005	Circle	8	0.013	0.0367	0.89	0.04	0.0567	0.8544	4.3	6.2	21.6	FALSE	11.387
M40+M5	M40	13.27	5.72	M5	11.95	4.4	265.2	0.005	Circle	8	0.013	0.0284	0.86	0.1	0.0567	0.8525	3.3	15	22.4	FALSE	5.869
M41+M13	M41	16.89	9.34	M13	16.33	8.78	109.7	0.005	Circle	8	0.013	0.0449	1.2	0.1	0.0568	0.8633	5.2	14.4	21.9	FALSE	9.487
M42+M41	M42	17.07	9.82	M41	16.89	9.34	37	0.013	Circle	8	0.013	0.0401	0.92	0.04	0.0568	1.3763	2.9	6.6	17.4	FALSE	9.958
M43+M42	M43	17.59	10.04	M42	17.07	9.82	103	0.002	Circle	8	0.013	0.0458	0.7	0.16	0.0568	0.5585	8.2	24.3	27.3	FALSE	10.223
METERING STATION+T2	METERING STATION	0	-14.66	T2	3.04	-14.76	444.9	0	Circle	24	0.013	1.7982	9.49	0	2.3358	3.3914	53	0	43	FALSE	-13.703
N1+K6	N1	5.32	-2.08	K6	4.44	-2.86	253.3	0.003	Circle	12	0.013	0.153	1.26	0	0.153	1.977	7.7	0	0	FALSE	-1.912
N2+N1	N2	5.71	-1.39	N1	5.32	-2.08	295.7	0.002	Circle	10	0.013	0.153	1.26	0	0.153	1.0583	14.5	0	0	FALSE	-1.175
N3+N21	N3	6	-0.64	N21	6	-0.82	88.8	0.002	Circle	10	0.013	0.1316	1.24	0.02	0.1316	0.9864	13.3	2	2	FALSE	-0.434
N4+N3	N4	6.14	0.24	N3	6	-0.64	334.7	0.003	Circle	10	0.013	0.1316	1.24	0.02	0.1316	1.1234	11.7	2	2	FALSE	0.435
N5+N4	N5	7.28	1.13	N4	6.14	0.29	332.5	0.003	Circle	10	0.013	0.1098	1.13	0.02	0.1098	1.1012	10	1.9	1.9	FALSE	1.309
N6+N5	N6	8.64	1.99	N5	7.28	1.13	332.5	0.003	Circle	10	0.013	0.1098	1.13	0.02	0.1098	1.1142	9.9	1.9	1.9	FALSE	2.168
N7+N6	N7	9.69	2.84	N6	8.64	1.99	332.7	0.003	Circle	10	0.013	0.1098	1.13	0.02	0.1098	1.1074	9.9	1.9	1.9	FALSE	3.018
N8+N9	N8	13.8	4.05	N9	11.48	3.68	118.7	0.003	Circle	10	0.013	0.1098	1.13	0.02	0.1098	1.2232	9	1.9	1.9	FALSE	4.22
N9+N7	N9	11.48	3.68	N7	9.69	2.84	284	0.003	Circle	10	0.013	0.1098	1.13	0.02	0.1098	1.1915	9.2	1.9	1.9	FALSE	3.852
N10+N13	N10	7.1	-0.52	N13	7	-0.88	176	0.002	Circle	8	0.013	0.006	0.62	0.02	0.006	0.5465	1.1	2.7	4.8	FALSE	-0.485
N11+N12	N11	7.2	-0.1	N12	7.1	-0.56	227.2	0.002	Circle	8	0.013	0.0062	0.56	0.01	0.0062	0.5437	1.1	1	3.5	FALSE	-0.065
N12+N13	N12	7.1	-0.56	N13	7	-0.88	157.9	0.002	Circle	8	0.013	0.0062	0.56	0.01	0.0062	0.544	1.1	1	4.7	FALSE	-0.524

Attachement 1
Average Dry Weather Flow Model Results

Label	Start Node	Rim (Start) (ft)	Invert (Start) (ft)	Stop Node	Rim (Stop) (ft)	Invert (Stop) (ft)	Length (ft)	Slope (Calculated) (ft/ft)	Section Type	Diameter (in)	Manning's n	Flow (Middle) (cfs)	Velocity (ft/s)	Depth (Middle) (ft)	Flow (Maximum) (cfs)	Capacity (Full Flow) (cfs)	Flow / Capacity (Design) (%)	Depth/Rise (%)	Depth (Maximum) / Rise (%)	Is Ever Surcharged?	Hydraulic Grade (Maximum) (ft)
N13+N14	N13	7	-0.88	N14	6	-1.21	167	0.002	Circle	8	0.013	0.0122	0.6	0.01	0.0122	0.5371	2.3	1.2	9.2	FALSE	-0.817
N14+N2	N14	6	-1.21	N2	5.71	-1.39	88.4	0.002	Circle	10	0.013	0.153	1.26	0	0.153	0.9886	15.5	0	0	FALSE	-0.986
N15+N16	N15	7.3	0.75	N16	7.2	0.25	251.8	0.002	Circle	8	0.013	0.0046	0.65	0.02	0.0046	0.5385	0.9	3.7	4.5	FALSE	0.778
N16+N17	N16	7.2	0.25	N17	7.1	-0.21	228.2	0.002	Circle	8	0.013	0.0046	0.57	0.01	0.0046	0.5425	0.8	1.3	2.5	FALSE	0.277
N17+N20	N17	7.1	-0.27	N20	7	-0.67	197	0.002	Circle	8	0.013	0.0046	0.55	0.01	0.0046	0.5445	0.8	0.9	3.7	FALSE	-0.204
N18+N19	N18	7.2	0.29	N19	7.1	-0.22	255.9	0.002	Circle	8	0.013	0.0046	0.65	0.02	0.0046	0.5394	0.9	3.7	4.6	FALSE	0.318
N19+N20	N19	7.1	-0.22	N20	7	-0.67	224.1	0.002	Circle	8	0.013	0.0046	0.57	0.01	0.0046	0.5415	0.8	1.4	2.6	FALSE	-0.192
N20+N21	N20	7	-0.67	N21	6	-0.82	72	0.002	Circle	8	0.013	0.0092	0.65	0.02	0.0092	0.5515	1.7	3	21.2	FALSE	-0.604
N21+N14	N21	6	-0.82	N14	6	-1.21	195.8	0.002	Circle	10	0.013	0.1408	1.29	0.02	0.1408	0.9778	14.4	2.1	2.1	FALSE	-0.604
N22+N23	N22	7.1	1.4	N23	7.1	0.98	212	0.002	Circle	8	0.013	0.011	0.59	0.01	0.011	0.5378	2	1.2	7.2	FALSE	1.456
N23+N28	N23	7.1	0.98	N28	7	0.59	193.2	0.002	Circle	8	0.013	0.011	0.59	0.01	0.011	0.5429	2	1.2	7.4	FALSE	1.036
N24+N25	N24	7.3	2.21	N25	7.3	1.98	116.3	0.002	Circle	8	0.013	0.0108	0.74	0.04	0.0108	0.5374	2	5.6	8.3	FALSE	2.266
N25+N26	N25	7.3	1.98	N26	7.2	1.46	262.5	0.002	Circle	8	0.013	0.0108	0.73	0.04	0.0108	0.5378	2	5.4	8.6	FALSE	2.036
N26+N27	N26	7.2	1.46	N27	7.1	0.96	247.5	0.002	Circle	8	0.013	0.0108	0.59	0.01	0.0108	0.5431	2	1.2	6.3	FALSE	1.514
N27+N28	N27	7.1	0.96	N28	7	0.59	183	0.002	Circle	8	0.013	0.0108	0.59	0.01	0.0108	0.5433	2	1.2	8	FALSE	1.016
N28+N4	N28	7	0.59	N4	6.14	0.29	150.3	0.002	Circle	8	0.013	0.0218	0.66	0.01	0.0218	0.5398	4	1.4	14.9	FALSE	0.692
N29+N10	N29	7.2	0.13	N10	7.1	-0.52	325.6	0.002	Circle	8	0.013	0.006	0.67	0.03	0.006	0.5399	1.1	4.2	5.6	FALSE	0.165
N30+N11	N30	7.3	0.17	N11	7.2	-0.1	134	0.002	Circle	8	0.013	0.0031	0.54	0.01	0.0031	0.5424	0.6	0.8	3	FALSE	0.191
O3+N8	O3	17.6	8.2	N8	13.8	4.1	205.1	0.02	Circle	8	0.013	0.1098	1.13	0.02	0.1098	1.7084	6.4	2.4	2.4	FALSE	8.347
O4+O3	O4	15.39	9.13	O3	17.6	8.3	277.4	0.003	Circle	8	0.013	0.0912	1.03	0.02	0.0912	0.661	13.8	2.3	2.3	FALSE	9.299
O5+O4	O5	14.73	10.25	O4	15.39	9.13	398.6	0.003	Circle	8	0.013	0.0912	1.03	0.02	0.0912	0.6405	14.2	2.3	2.3	FALSE	10.421
O6+O5	O6	13.82	11.05	O5	14.73	10.25	399.4	0.002	Circle	8	0.013	0.0912	1.03	0.02	0.0912	0.5408	16.9	2.3	2.3	FALSE	11.236
O7+O6	O7	15.16	11.56	O6	13.82	11.05	426.9	0.001	Circle	8	0.013	0.0912	1.03	0.02	0.0912	0.4177	21.8	2.3	2.3	FALSE	11.774
O8+O59	O8	16.28	12.23	O59	16.36	11.92	102.7	0.003	Circle	8	0.013	0.0788	0.97	0.01	0.0788	0.6639	11.9	2.2	2.2	FALSE	12.387
O9+O8	O9	17.01	12.76	O8	16.28	12.23	139.7	0.004	Circle	6	0.013	0.0711	0.92	0.01	0.0711	0.3456	20.6	2.8	2.8	FALSE	12.906
O10+O9	O10	17.95	13.1	O9	17.01	12.76	156.6	0.002	Circle	8	0.013	0.0711	0.92	0.01	0.0711	0.563	12.6	2.1	2.1	FALSE	13.265
O11+O10	O11	19.41	14.01	O10	17.95	13.15	259.2	0.003	Circle	8	0.013	0.0543	0.84	0.01	0.0549	0.696	7.8	1.9	24.5	FALSE	14.173
O12+O11	O12	19.9	14.5	O11	19.41	14.01	394.2	0.001	Circle	8	0.013	0.0543	0.84	0.01	0.0548	0.426	12.7	1.9	31.2	FALSE	14.708
O13+O12	O13	22.22	16.47	O12	19.9	14.5	414.6	0.005	Circle	8	0.013	0.0543	0.86	0.02	0.0551	0.8329	6.5	2.6	22.1	FALSE	16.878
O14+O13	O14	21.75	17.35	O13	22.22	16.87	129.7	0.004	Circle	8	0.013	0.0105	0.66	0.02	0.0105	0.7351	1.4	3.3	5.8	FALSE	17.395
O15+O14	O15	24.85	19.05	O14	21.75	17.35	307.9	0.006	Circle	8	0.013	0.0105	0.75	0.04	0.0105	0.8979	1.2	6.1	6.8	FALSE	19.233
O16+O15	O16	28.01	22.56	O15	24.85	19.2	234.7	0.014	Circle	6	0.013	0.0105	0.59	0.01	0.0105	0.6713	1.6	1.5	6.5	FALSE	22.594
O17+O3	O17	10.93	8.62	O3	17.6	8.3	161.2	0.002	Circle	8	0.013	0.0186	0.68	0.02	0.0187	0.5384	3.5	2.7	12.6	FALSE	8.71
O18+O17	O18	15.83	11.93	O17	10.93	8.62	264	0.013	Circle	8	0.013	0.0051	0.58	0.01	0.0051	1.353	0.4	1.6	1.5	FALSE	11.953
O19+O17	O19	17.6	10.75	O17	10.93	8.62	85.9	0.025	Circle	6	0.013	0.0135	0.61	0.01	0.0135	0.8835	1.5	1.7	6.8	FALSE	10.788
O20+O19	O20	17	10.98	O19	17.6	10.75	115.6	0.002	Circle	6	0.013	0.0042	0.61	0.02	0.0042	0.2503	1.7	3.7	4.6	FALSE	11.003
O21+O19	O21	20.09	12.64	O19	17.6	10.75	393.6	0.005	Circle	6	0.013	0.0093	0.61	0.01	0.0093	0.3888	2.4	2.5	7.3	FALSE	12.684
O22+O21	O22	20	13.27	O21	20.09	12.64	318.2	0.002	Circle	6	0.013	0.0093	0.7	0.03	0.0093	0.2497	3.7	6.3	10.1	FALSE	13.32
O23+O22	O23	21.65	15.65	O22	20	13.27	469.8	0.005	Circle	6	0.013	0.0093	0.73	0.04	0.0093	0.3993	2.3	7.2	8.6	FALSE	15.692
O24+O23	O24	21.18	15.84	O23	21.65	15.65	96.7	0.002	Circle	6	0.013	0.0093	0.74	0.04	0.0093	0.2487	3.7	7.7	9.6	FALSE	15.889
O25+O7	O25	16.12	12.07	O7	15.16	11.61	177.4	0.003	Circle	6	0.013	0.0124	0.6	0.01	0.0124	0.2857	4.3	1.6	10.5	FALSE	12.133
O26+O25	O26	18.86	13.26	O25	16.12	12.12	332.8	0.003	Circle	6	0.013	0.0031	0.54	0.01	0.0031	0.3284	0.9	1.1	5.1	FALSE	13.315
O27+O26	O27	19.94	13.44	O26	18.86	13.31	65.4	0.002	Circle	6	0.013	0.0031	0.54	0.01	0.0031	0.2502	1.2	1.1	1.1	FALSE	13.457
O28+O26	O28	19	14.28	O26	18.86	13.41	434.3	0.002	Circle	6	0.013	0	0	0	0	0.2511	0	0	0	FALSE	14.28
O29+O28	O29	23	19.53	O28	19	14.28	174	0.03	Circle	6	0.013	0	0	0	0	0.9746	0	0	0	FALSE	19.53
O29+O30	O29	23	19.53	O30	22.78	19.08	226	0.002	Circle	6	0.013	0	0	0	0	0.2504	0	0	0	FALSE	19.53
O30+O35	O30	22.78	17.63	O35	21.74	16.44	175.9	0.007	Circle	6	0.013	0.0168	0.63	0.01	0.0168	0.4615	3.6	1.9	1.9	FALSE	17.687
O31+O30	O31	23	18.76	O30	22.78	18.58	89.5	0.002	Circle	6	0.013	0.009	0.7	0.03	0.009	0.2516	3.6	6.2	9.2	FALSE	18.809
O32+O31	O32	24	19.18	O31	23	18.76	210.5	0.002	Circle	6	0.013	0.009	0.67	0.02	0.009	0.2506	3.6	4.8	8.3	FALSE	19.232
O33+O32	O33	25	19.71	O32	24	19.18	262.5	0.002	Circle	6	0.013	0.009	0.72	0.04	0.0091	0.2521	3.6	7.2	9.6	FALSE	19.758
O34+O10	O34	23.33	14.69	O10	17.95	13.35	267.7	0.005	Circle	6	0.013	0.0168	0.76	0.03	0.0168	0.397	4.2	6.9	6.9	FALSE	14.725
O35+O34	O35	21.74	16.44	O34	23.33	14.69	316.4	0.006	Circle	6	0.013	0.0168	0.79	0.04	0.0168	0.4173	4	8.1	8.1	FALSE	16.458
O36+O30	O36	24.12	18.01	O30	22.78	17.68	164.4	0.002	Circle	6	0.013	0.0077	0.68	0.03	0.0077	0.2514	3.1	5.6	5.6	FALSE	18.051
O37+O25	O37	16.63	12.23	O25	16.12	12.07	80.9	0.002	Circle	6	0.013	0.0093	0.58	0.01	0.0093	0.2495	3.7	1.5	12.7	FALSE	12.283
O38+O37	O38	17.23	12.46	O37	16.63	12.23	117.5	0.002	Circle	6	0.013	0.0031	0.54	0.01	0.0031	0.2482	1.2	1.1	1.1	FALSE	12.477
O39+O37	O39	16.48	12.31	O37	16.63	12.23	40.8	0.002	Circle	6	0.013	0.0062	0.56	0.01	0.0062	0.2484	2.5	1.3	3.1	FALSE	12.344
O40+O39	O40	16.65	12.38	O39	16.48	12.31	37.3	0.002	Circle	6	0.013	0.0031	0.54	0.01	0.0031	0.2431	1.3	1.1	16.1	FALSE	12.428
O41+O40	O41	16.5	12.47	O40	16.65	12.38	44.5	0.002	Circle	6	0.013	0.0031	0.54	0.01	0.0031	0.2523	1.2	1.1	1.1	FALSE	12.485
O42+O39	O42	16.78	12.41	O39	16.48	12.31	47.6	0.002	Circle	6	0.013	0.0031	0.54	0.01	0.0031	0.2572	1.2	1.1	1.6	FALSE	12.428
O43+O42	O43	17.92	13.6	O42	16.78	12.41	181.9	0.007	Circle	6	0.013	0.0031	0.54	0.01	0.0031	0.4538	0.7	1.1	3.2	FALSE	13.645
O44+O43	O44	18.13	13.78	O43	17.92	13.64	69.2	0.002	Circle	6	0.013	0.0031	0.54	0.01	0.0031	0.2524	1.2	1.1	1.1	FALSE	13.797
O45+O8	O45	17.06	12.55	O8	16.28	12.23	65.8	0.005	Circle	6	0.013	0.0078	0.62	0.02	0.0078	0.3913	2	3.2	7.2	FALSE	12.59
O46+O45	O46	18	13.61	O45	17.06	12.55	212.5	0.005	Circle	6	0.013	0.0016	0.53	0	0.0016	0.3963	0.4	0.9	0.9	FALSE	13.614
O47+O45	O47	16.84	12.91	O45	17.06	12.55	71.5	0.005	Circle	6	0.013	0.0062	0.6	0.01	0.0062	0.3981	1.6	2.6	5.3	FALSE	12.943
O48+O47	O48	17.43	13.52	O47	16.84	12.91	122	0.005	Circle	6	0.013	0.0016	0.53	0	0.0016	0.3967	0.4	0.9	0.9	FALSE	13.524
O49+O47	O49	17.41	13.27	O47	16.84	12.91	72.6	0.005	Circle	6	0.013	0.0047	0.59	0.01	0.0047	0.3951	1.2	2.5	4.1	FALSE	13.294
O50+O49	O50	17.95	14.13	O49	17.41	13.27	172.1	0.005	Circle	6	0.013	0.0047	0.55	0.01	0.0047	0.3966	1.2	1.2	2.6	FALSE	14.15
O51+O13	O51	24.5	18.4	O13	22.22	16.57	467.6	0.004	Circle	6	0.013	0.0438	0.91	0.04	0.0441	0.351	12.5	7.5	31.8	FALSE	18.563
O52+O51	O52	26.81	19.11	O51	24.5	18.4	213.3	0.003	Circle	6	0.013	0.029	0.7	0.01	0.029	0.3237	9	2.1	22.5	FALSE	19.234

Attachement 1
Average Dry Weather Flow Model Results

Label	Start Node	Rim (Start) (ft)	Invert (Start) (ft)	Stop Node	Rim (Stop) (ft)	Invert (Stop) (ft)	Length (ft)	Slope (Calculated) (ft/ft)	Section Type	Diameter (in)	Manning's n	Flow (Middle) (cfs)	Velocity (ft/s)	Depth (Middle) (ft)	Flow (Maximum) (cfs)	Capacity (Full Flow) (cfs)	Flow / Capacity (Design) (%)	Depth/Rise (%)	Depth (Maximum) / Rise (%)	Is Ever Surcharged?	Hydraulic Grade (Maximum) (ft)
O53+O52	O53	27	19.48	O52	26.81	19.11	188.5	0.002	Circle	6	0.013	0.0145	0.83	0.05	0.0145	0.2486	5.8	10.1	14.5	FALSE	19.554
O54+O52	O54	31.19	20.39	O52	26.81	19.11	380.1	0.003	Circle	6	0.013	0.0145	0.69	0.02	0.0145	0.3256	4.5	4.9	12.2	FALSE	20.457
O55+O54	O55	28.75	20.95	O54	31.19	20.44	399.4	0.001	Circle	6	0.013	0.0145	0.83	0.05	0.0145	0.2005	7.2	10.1	10.1	FALSE	21.035
O56+O55	O56	27.04	22.24	O55	28.75	20.95	376.5	0.003	Circle	6	0.013	0.0145	0.74	0.03	0.0145	0.3284	4.4	6.8	12.1	FALSE	22.306
O57+O51	O57	25.61	19.76	O51	24.5	18.4	365.2	0.004	Circle	6	0.013	0.0148	0.71	0.03	0.0148	0.3424	4.3	5.6	12.1	FALSE	19.827
O58+O57	O58	26.81	20.57	O57	25.61	19.76	403.4	0.002	Circle	6	0.013	0.0148	0.83	0.05	0.0148	0.2514	5.9	10.4	15	FALSE	20.645
O59+O7	O59	16.36	11.92	O7	15.16	11.56	182.3	0.002	Circle	8	0.013	0.0788	0.97	0.01	0.0788	0.537	14.7	2.2	2.2	FALSE	12.094
O60+O61	O60	15.68	9.18	O61	14.55	7.85	199	0.007	Circle	14	0.013	0.1346	1.68	0.1	0.1436	4.3933	3.1	8.8	13.7	FALSE	9.341
O61+M8	O61	14.55	7.85	M8	14.41	7.81	11.8	0.003	Circle	14	0.013	0.1272	1.78	0.14	0.1458	3.1288	4.1	11.9	15	FALSE	8.033
O62+O18	O62	17.08	13.18	O18	15.83	11.93	249	0.005	Circle	6	0.013	0.0051	0.68	0.03	0.0051	0.3975	1.3	6.1	6.1	FALSE	13.209
O63+O62	O63	17.27	13.37	O62	17.08	13.18	38	0.005	Circle	6	0.013	0.0051	0.63	0.02	0.0051	0.3967	1.3	4.2	4.9	FALSE	13.395
T1+T0	T1	4.57	-15.43	T0	#N/A	-17.68	329.2	0.007	Circle	24	0.013	1.7982	9.65	0.03	2.3358	18.7015	9.6	1.6	24	FALSE	-14.895
T2+T1	T2	3.04	-14.76	T1	4.57	-15.43	505.8	0.001	Circle	24	0.013	1.7982	9.6	0.02	2.3358	8.2331	21.8	1.1	35.9	FALSE	-14.023
T3+METERING STATION	T3	2.52	-14.63	METERING STATION	0	-14.66	55	0.001	Circle	24	0.013	1.7982	9.49	0	2.3358	5.2832	34	0	47.2	FALSE	-13.694
T4+T3	T4	1.41	-12.09	T3	2.52	-14.63	474.9	0.005	Circle	24	0.013	1.7982	9.49	0	2.3358	16.5436	10.9	0	25.6	FALSE	-11.455
T5+T4	T5	0.16	-11.76	T4	1.41	-11.99	352.3	0.001	Circle	24	0.013	1.7982	9.49	0	2.3358	5.7799	31.1	0	39	FALSE	-10.928
T6+T5	T6	0.17	-11.38	T5	0.16	-11.66	382.1	0.001	Circle	24	0.013	1.7982	9.49	0	2.3358	6.1236	29.4	0	39.3	FALSE	-10.552
T7+T6	T7	-0.07	-10.42	T6	0.17	-11.28	480.8	0.002	Circle	24	0.013	1.7982	9.49	0	2.3358	9.5671	18.8	0	33.8	FALSE	-9.737
T8+T7	T8	0.14	-10.08	T7	-0.07	-10.32	501.9	0	Circle	24	0.013	1.7982	9.49	0	2.3358	4.9467	36.4	0	41.2	FALSE	-9.181
T9+T8	T9	0.14	-9.67	T8	0.14	-9.98	497.7	0.001	Circle	24	0.013	1.7982	9.49	0	2.3358	5.6456	31.9	0	41.2	FALSE	-8.799
T10+T9	T10	0.07	-9.12	T9	0.14	-9.57	446.9	0.001	Circle	24	0.013	1.7982	9.6	0.02	2.3358	7.1782	25.1	1	38	FALSE	-8.333
T11+T10	T11	-0.24	-8.44	T10	0.07	-9.02	325.8	0.002	Circle	24	0.013	1.7982	9.49	0	2.3358	9.5445	18.8	0	33.3	FALSE	-7.758
T12+T11	T12	0.55	-8.25	T11	-0.24	-8.49	482.2	0	Circle	24	0.013	1.7982	9.49	0	2.3358	5.0467	35.6	0	41.9	FALSE	-7.355
T13+T12	T13	2.14	-7.3	T12	0.55	-8.25	504	0.002	Circle	24	0.013	1.7982	9.49	0	2.3358	9.8211	18.3	0	33.8	FALSE	-6.626
T14+T13	T14	7.1	-7.1	T13	2.14	-7.3	478.1	0	Circle	24	0.013	1.7982	9.49	0	2.3358	4.6267	38.9	0	42	FALSE	-6.193
T15+T14	T15	2.75	-12.9	T14	7.1	-7.9	93	-0.054	Circle	24	0.013	1.7982	0.57	2	2.3358	52.4516	3.4	100	100	TRUE	-5.864
T16+T15	T16	1.34	-6.26	T15	2.75	-6.38	34.4	0.003	Circle	21	0.013	1.4197	7.6	0	2.0261	9.358	15.2	0	30.4	FALSE	-5.712
T17+T16	T17	0.96	-5.84	T16	1.34	-6.26	481.7	0.001	Circle	21	0.013	1.4197	7.6	0	2.0261	4.6785	30.3	0	43.6	FALSE	-5.042
T18+T17	T18	1.12	-5.23	T17	0.96	-5.79	540.4	0.001	Circle	21	0.013	1.4197	7.6	0	2.0261	5.1004	27.8	0	42.9	FALSE	-4.457
T19+T18	T19	2.23	-4.72	T18	1.12	-5.23	500	0.001	Circle	21	0.013	1.4197	7.79	0.04	2.0261	5.0602	28.1	2.2	43	FALSE	-3.939
T20+T19	T20	2.72	-3.98	T19	2.23	-4.62	331.9	0.002	Circle	18	0.013	0.6762	4.14	0.05	0.8085	4.6124	14.7	3.4	29.7	FALSE	-3.539
T21+T20	T21	3.07	-3.43	T20	2.72	-3.98	338.4	0.002	Circle	18	0.013	0.6617	4.01	0.04	0.794	4.2346	15.6	2.7	29.8	FALSE	-2.974
T22+T21	T22	2.81	-3.39	T21	3.07	-3.43	197.4	0	Circle	18	0.013	0.62	3.71	0.02	0.7523	1.4952	41.5	1.5	33.6	FALSE	-2.825
T23+T22	T23	6.87	-3.03	T22	2.81	-3.29	446	0.001	Circle	18	0.013	0.62	3.98	0.08	0.7523	2.5361	24.4	5.1	35.3	FALSE	-2.468
T24+T23	T24	3.66	-2.69	T23	6.87	-2.93	316.7	0.001	Circle	18	0.013	0.529	3.47	0.06	0.6612	2.8915	18.3	4.3	31.4	FALSE	-2.197
T25+T24	T25	3.95	-2.59	T24	3.66	-2.62	282.2	0	Circle	18	0.013	0.529	3.14	0	0.6612	1.083	48.8	0	35.3	FALSE	-2.008
T26+T25	T26	7.03	-2.32	T25	3.95	-2.52	305.6	0.001	Circle	18	0.013	0.465	3.18	0.07	0.5971	2.6871	17.3	4.7	31.1	FALSE	-1.835
T27+T26	T27	7.85	-2.05	T26	7.03	-2.22	355.8	0	Circle	18	0.013	0.465	3.11	0.06	0.5971	2.296	20.3	3.8	32.2	FALSE	-1.539
T28+T27	T28	8.67	-1.93	T27	7.85	-1.95	162.1	0	Circle	18	0.013	0.465	2.82	0	0.5971	1.1667	39.9	0	29.8	FALSE	-1.425
T29+T28	T29	4.98	-1.62	T28	8.67	-1.93	233.8	0.001	Circle	18	0.013	0.465	2.82	0	0.5971	3.8248	12.2	0	27.3	FALSE	-1.206

Abbreviations
CFS: Cubic Feet per Second
ft: Feet
s: Seconds
in: Inches

Attachment 2
Peak Wet Weather Flow Model Results

Label	Start Node	Rim (Start) (ft)	Invert (Start) (ft)	Stop Node	Rim (Stop) (ft)	Invert (Stop) (ft)	Length (ft)	Slope (Calculated) (ft/ft)	Section Type	Diameter (in)	Manning's n	Flow (Middle) (cfs)	Velocity (ft/s)	Depth (Middle) (ft)	Flow (Maximum) (cfs)	Capacity (Full Flow) (cfs)	Flow / Capacity (Design) (%)	Depth/Rise (%)	Depth (Maximum) / Rise (%)	Is Ever Surcharged?	Hydraulic Grade (Maximum) (ft)
A1+A2	A1	16.28	2	A2	15.82	1.92	79.9	0.001	Circle	12	0.013	0.378	1.536	2.2	0.83	1.536	1.1273	136.3	83.3	FALSE	2.85
A2+A5	A2	15.82	1.82	A5	14.53	1.57	244.2	0.001	Circle	12	0.013	0.395	1.57	2.21	0.85	1.57	1.1399	137.7	84.8	FALSE	2.79
A3+A2	A3	14.86	8.76	A2	15.82	2.12	287.5	0.023	Circle	6	0.013	0.017	0.034	1.11	0.09	0.034	0.8527	4	17.5	TRUE	8.848
A4+A3	A4	14	9.48	A3	14.86	8.86	312	0.002	Circle	6	0.013	0.017	0.034	0.62	0.16	0.034	0.2501	13.6	32.1	FALSE	9.64
A5+A8	A5	14.53	1.57	A8	13.85	1.53	124.3	0	Circle	15	0.013	0.412	1.604	2.35	0.68	1.604	1.1587	138.4	54.5	FALSE	2.351
A6+A5	A6	13.72	7.32	A5	14.53	5.81	286.8	0.005	Circle	6	0.013	0.017	0.034	0.82	0.13	0.034	0.4071	8.4	26.3	FALSE	7.449
A7+A6	A7	14	8.03	A6	13.72	7.42	306	0.002	Circle	6	0.013	0.017	0.034	0.63	0.16	0.034	0.2505	13.6	32	FALSE	8.19
A8+A9	A8	13.85	1.43	A9	12.82	1.16	61.2	0.004	Circle	15	0.013	0.412	1.604	3.28	0.52	1.604	4.2904	37.4	42	FALSE	1.966
A9+A10	A9	12.82	0.62	A10	11.42	0.57	181.2	0	Circle	15	0.013	0.412	1.604	2.08	0.75	1.604	1.073	149.5	60.1	FALSE	1.465
A10+A15	A10	11.42	0.47	A15	9.93	0.03	299.3	0.001	Circle	15	0.013	0.4413	1.6685	2.01	0.8	1.6685	2.4767	67.4	64.1	FALSE	1.261
A11+A10	A11	11.83	2.53	A10	11.42	1.12	417.5	0.003	Circle	6	0.013	0.0293	0.0645	0.95	0.19	0.0646	0.3261	19.8	37.8	FALSE	2.72
A12+A11	A12	9.52	4.07	A11	11.83	2.63	485.1	0.003	Circle	6	0.013	0.0293	0.0645	0.9	0.2	0.0646	0.3057	21.1	39.2	FALSE	4.268
A13+A12	A13	7.19	5.15	A12	9.52	4.07	412.1	0.003	Circle	6	0.013	0.0293	0.0645	0.86	0.2	0.0646	0.2872	22.5	40.6	FALSE	5.355
A14+A13	A14	8.06	5.91	A13	7.19	5.19	288.3	0.002	Circle	6	0.013	0.0293	0.0644	0.84	0.21	0.0647	0.2804	23	41.2	FALSE	6.116
A15+A16	A15	9.93	-0.03	A16	8.08	-0.17	435.1	0	Circle	15	0.013	0.4413	1.6685	1.72	0.92	1.6685	1.1587	144	73.7	FALSE	0.997
A16+A21	A16	8.08	-0.22	A21	7.13	-0.42	296.3	0.001	Circle	15	0.013	0.4553	1.7392	2.05	0.81	1.7392	1.6782	103.6	65.2	FALSE	0.67
A17+A16	A17	8.77	1.57	A16	8.08	0.73	422.7	0.002	Circle	6	0.013	0.004	0.0259	0.67	0.13	0.0259	0.2501	10.4	25.2	FALSE	1.696
A18+A16	A18	7.05	1.45	A16	8.08	0.73	441.8	0.002	Circle	6	0.013	0.01	0.0448	0.59	0.2	0.0448	0.2265	19.8	41	FALSE	1.656
A19+A18	A19	6.77	2.98	A18	7.05	1.45	213.5	0.007	Circle	6	0.013	0.01	0.0448	1.01	0.14	0.0448	0.475	9.4	27.7	FALSE	3.119
A20+A19	A20	5.62	3.73	A19	6.77	3.05	339.8	0.002	Circle	6	0.013	0.01	0.0448	0.64	0.19	0.0448	0.251	17.8	38.7	FALSE	3.924
A21+A23	A21	7.13	-0.52	A23	7.01	-0.8	155.1	0.002	Circle	15	0.013	0.4553	1.7392	2.65	0.66	1.7392	2.7445	63.4	52.8	FALSE	0.183
A22+A29	A22	6.99	-0.92	A29	6.36	-1.21	369.1	0.001	Circle	18	0.013	0.463	1.7791	1.94	0.77	1.7791	2.9442	60.4	51.6	FALSE	-0.109
A23+A22	A23	7.01	-0.8	A22	6.99	-0.92	13.8	0.009	Circle	15	0.013	0.463	1.7791	2.3	0.75	1.7791	6.0235	29.5	60.4	FALSE	-0.102
A24+A23	A24	7.7	1.62	A23	7.01	0.37	250.6	0.005	Circle	6	0.013	0.0077	0.0399	0.81	0.15	0.0399	0.3963	10.1	29.8	FALSE	1.767
A25+A24	A25	8.36	2.89	A24	7.7	1.62	253.1	0.005	Circle	6	0.013	0.0077	0.0399	0.81	0.15	0.0399	0.3974	10	29.7	FALSE	3.037
A26+A25	A26	7.42	4.06	A25	8.36	2.89	234.1	0.005	Circle	6	0.013	0.0077	0.0399	0.95	0.13	0.0399	0.3967	10.1	26.7	FALSE	4.202
A27+A26	A27	6.96	5	A26	7.42	4.06	310.9	0.003	Circle	6	0.013	0.0077	0.0399	0.69	0.17	0.0399	0.3085	12.9	33.5	FALSE	5.165
A28+A29	A28	6.24	0.21	A29	6.36	-0.25	14.8	0.031	Circle	6	0.013	0.002	0.0129	0.72	0.03	0.0129	0.9892	1.3	6.4	FALSE	0.248
A29+T29	A29	6.36	-1.24	T29	4.98	-1.62	345.5	0.001	Circle	18	0.013	0.465	1.792	2.11	0.73	1.792	3.4835	51.4	48.5	FALSE	-0.474
A30+A28	A30	6.07	1.27	A28	6.24	0.32	301	0.003	Circle	6	0.013	0.002	0.0129	0.83	0.07	0.0129	0.3152	4.1	13.3	FALSE	1.33
B2+A1	B2	16	2.46	A1	16.28	2.1	180.8	0.002	Circle	12	0.013	0.378	1.536	2.5	0.73	1.536	1.5897	96.6	72.9	FALSE	3.245
B3+B2	B3	18.59	2.64	B2	16	2.46	239.4	0.001	Circle	12	0.013	0.361	1.5017	2.1	0.86	1.5017	0.9769	153.7	85.6	FALSE	3.614
B4+B3	B4	20.32	3.42	B3	18.59	2.74	464.8	0.001	Circle	12	0.013	0.361	1.5017	2.07	0.87	1.5017	1.3627	110.2	87.1	FALSE	4.336
B5+B52	B5	18.61	4.51	B52	20.58	4.29	176.2	0.001	Circle	12	0.013	0.361	1.5017	2.28	0.78	1.5017	1.2589	119.3	78.2	FALSE	5.372
B6+B5	B6	18.29	5.6	B5	18.61	4.56	158.4	0.007	Circle	12	0.013	0.349	1.492	3.57	0.53	1.492	2.8867	51.7	52.5	FALSE	6.14
B7+B6	B7	18.66	5.76	B6	18.29	5.6	380.1	0	Circle	12	0.013	0.305	1.358	1.83	0.9	1.358	0.7309	185.8	89.7	TRUE	6.839
B8+B7	B8	20.55	6.5	B7	18.66	5.81	371	0.002	Circle	12	0.013	0.2883	1.3252	1.96	0.8	1.3252	1.5364	86.3	80.5	TRUE	7.276
B9+B8	B9	18.41	7.16	B8	20.55	6.55	350.9	0.002	Circle	12	0.013	0.2755	1.2725	2.15	0.71	1.2725	1.4854	85.7	70.6	FALSE	7.895
B10+B9	B10	16.86	7.61	B9	18.41	7.16	289.7	0.002	Circle	12	0.013	0.1951	1.1735	2.03	0.69	1.1735	1.4041	83.6	69.1	FALSE	8.327
B11+B10	B11	16.46	8.71	B10	16.86	7.66	201.4	0.005	Circle	12	0.013	0.1695	1.0403	3.03	0.45	1.0403	2.5724	40.4	45.1	FALSE	9.174
B12+B11	B12	15.83	9.18	B11	16.46	8.76	277	0.002	Circle	12	0.013	0.1695	0.9383	1.94	0.59	0.9383	1.3872	67.6	59	FALSE	9.798
B13+B12	B13	15.33	9.53	B12	15.83	9.18	262.7	0.001	Circle	12	0.013	0.1695	0.8363	1.77	0.58	0.8363	1.3004	64.3	57.9	FALSE	10.129
B14+B13	B14	15.47	10.07	B13	15.33	9.53	253.1	0.002	Circle	12	0.013	0.1695	0.7343	1.96	0.48	0.7343	1.6456	44.6	48.1	FALSE	10.553
B15+B49	B15	20.29	12.19	B49	17.11	11.21	330.9	0.003	Circle	8	0.013	0.1695	0.7343	2.12	0.65	0.7343	0.6576	111.7	96.9	TRUE	13.012
B16+B15	B16	20.39	13.24	B15	20.29	12.19	327.3	0.003	Circle	8	0.013	0.1695	0.7343	2.1	0.67	0.7343	0.6844	107.3	100	TRUE	14.239
B17+B13	B17	19.31	13.31	B13	15.33	9.73	501.1	0.007	Circle	6	0.013	0.028	0.102	1.62	0.18	0.102	0.4742	21.5	35.7	FALSE	13.495
B18+B17	B18	22.26	14.3	B17	19.31	13.31	497.2	0.002	Circle	6	0.013	0.0259	0.102	0.97	0.26	0.102	0.2504	40.7	52.7	FALSE	14.564
B19+B12	B19	20.74	14.44	B12	15.83	9.88	499.6	0.009	Circle	6	0.013	0.0382	0.102	1.7	0.17	0.1023	0.536	19	34.5	FALSE	14.614
B20+B19	B20	23.22	19.12	B19	20.74	14.44	585	0.008	Circle	6	0.013	0.0519	0.102	1.62	0.18	0.1023	0.5018	20.3	35.7	FALSE	19.298
B21+B11	B21	18.68	13.54	B11	16.46	9.36	399.6	0.01	Circle	6	0.013	0.0297	0.102	1.78	0.17	0.1023	0.5738	17.8	33.2	FALSE	13.707
B22+B21	B22	24.77	18.67	B21	18.68	13.58	399.5	0.013	Circle	6	0.013	0.0288	0.102	1.8	0.16	0.1023	0.6333	16.1	31.6	FALSE	18.829
B23+B22	B23	28	23.55	B22	24.77	18.67	380.2	0.013	Circle	6	0.013	0.0363	0.102	1.8	0.16	0.102	0.6357	16	31.5	FALSE	23.708
B24+B10	B24	22.52	15.82	B10	16.86	9.61	492.5	0.013	Circle	6	0.013	0.0284	0.1332	2.05	0.18	0.1332	0.63	21.1	35.3	FALSE	15.998
B25+B24	B25	27.09	18.84	B24	22.52	15.82	406.2	0.007	Circle	6	0.013	0.0256	0.1332	1.77	0.2	0.1332	0.4838	27.5	40.7	FALSE	19.047
B26+B25	B26	27.62	21.62	B25	27.09	18.84	401.5	0.007	Circle	6	0.013	0.0267	0.0666	1.24	0.16	0.0666	0.4669	14.3	31.7	FALSE	21.778
B27+B25	B27	25.46	19.69	B25	27.09	18.99	318	0.002	Circle	6	0.013	0.0256	0.0666	0.82	0.22	0.0666	0.2632	25.3	43.1	FALSE	19.906
B28+B27	B28	24.83	20.93	B27	25.46	19.69	202	0.006	Circle	6	0.013	0.0256	0.0666	1.2	0.16	0.0742	0.4396	15.2	32.5	FALSE	21.093
B29+B9	B29	19.43	13.68	B9	18.41	7.61	211.2	0.029	Circle	6	0.013	0.0804	0.099	1.63	0.13	0.099	0.9512	10.4	25.3	FALSE	13.809
B30+B29	B30	23.55	14.31	B29	19.43	13.83	243.2	0.002	Circle	6	0.013	0.0268	0.033	0.66	0.15	0.033	0.2493	13.2	30.3	FALSE	14.468
B31+B29	B31	21.81	15.76	B29	19.43	13.68	256.8	0.008	Circle	6	0.013	0.0536	0.066	1.31	0.15	0.066	0.505	13.1	30.3	FALSE	15.913
B32+B31	B32	26.3	16.37	B31	21.81	15.86	253.7	0.002	Circle	6	0.013	0.0268	0.033	0.63	0.16	0.033	0.2516	13.1	31.1	FALSE	16.525
B33+B31	B33	25.73	19.18	B31	21.81	15.76	279.8	0.012	Circle	6	0.013	0.0268	0.033	1.16	0.1	0.0372	0.6203	5.3	19.9	FALSE	19.281
B34+B8	B34	24.69	15.24	B8	20.55	7.1	251.1	0.032	Circle	6	0.013	0.0128	0.0527	1.27	0.1	0.0531	1.0102	5.2	20.1	FALSE	15.342
B35+B34	B35	26.3	20	B34	24.69	15.24	363.8	0.013	Circle	6	0.013	0.0128	0.0527	1.37	0.12	0.0527	0.6418	8.2	24.9	FALSE	20.126
B36+B35	B36	24.45	20.41	B35	26.3	20	207	0.002	Circle	6	0.013	0.0128	0.0527	0.7	0.2	0.0527	0.2497	21.1	40.9	FALSE	20.614
B37+B6	B37	14.71	7.31	B6	18.29	6.74	262.3	0.002	Circle	6	0.013	0.044	0.134	1.12	0.29	0.134	0.2616	51.2	58.5	FALSE	7.607
B38+B50	B38	12.43	7.93	B50	13.27	7.77	38.9	0.004	Circle	6	0.013	0.02	0.072	1.1	0.18	0.072	0.3598	20	36.7	FALSE	8.121
B39+B38	B39	13	8.56	B38	12.43	8.03	265.5	0.002	Circle	6	0.013	0.01	0.036	0.62	0.17	0.036	0.2507	14.4	33.7	FALSE	8.73
B40+B39	B40	13	9.17	B39	13	8.56	306.1	0.002	Circle	6	0.013	0.01	0.036	0.62	0.17	0.036	0.2505	14.4	33.7	FALSE	9.338

Attachment 2
Peak Wet Weather Flow Model Results

Label	Start Node	Rim (Start) (ft)	Invert (Start) (ft)	Stop Node	Rim (Stop) (ft)	Invert (Stop) (ft)	Length (ft)	Slope (Calculated) (ft/ft)	Section Type	Diameter (in)	Manning's n	Flow (Middle) (cfs)	Velocity (ft/s)	Depth (Middle) (ft)	Flow (Maximum) (cfs)	Capacity (Full Flow) (cfs)	Flow / Capacity (Design) (%)	Depth/Rise (%)	Depth (Maximum) / Rise (%)	Is Ever Surcharged?	Hydraulic Grade (Maximum) (ft)
B41+B38	B41	11.68	8.37	B38	12.43	8.03	170	0.002	Circle	6	0.013	0.01	0.036	0.62	0.17	0.036	0.2509	14.3	33.7	FALSE	8.54
B42+B41	B42	11.68	8.7	B41	11.68	8.37	166.3	0.002	Circle	6	0.013	0.01	0.036	0.62	0.17	0.036	0.2499	14.4	33.8	FALSE	8.869
B43+B37	B43	15.97	8.74	B37	14.71	8.01	363.4	0.002	Circle	6	0.013	0.017	0.036	0.62	0.17	0.036	0.2515	14.3	33.6	FALSE	8.908
B44+B2	B44	15.76	9.16	B2	16	2.46	296.4	0.023	Circle	6	0.013	0.017	0.0343	1.11	0.09	0.0343	0.8436	4.1	17.7	TRUE	9.249
B45+B44	B45	14.05	9.86	B44	15.76	9.26	301	0.002	Circle	6	0.013	0.017	0.0343	0.62	0.16	0.0343	0.2505	13.7	32.3	FALSE	10.021
B46+B5	B46	19	13.75	B5	18.61	12.56	16.9	0.07	Circle	6	0.013	0.012	0.0097	0.63	0.02	0.0097	1.4889	0.7	3.1	FALSE	13.769
B47+B46	B47	20.58	14.06	B46	19	13.75	157.8	0.002	Circle	6	0.013	0.012	0.0097	0.8	0.05	0.0097	0.2487	3.9	10	FALSE	14.112
B48+B7	B48	22.9	7.11	B7	18.66	6.21	450.2	0.002	Circle	6	0.013	0.0167	0.0328	0.59	0.16	0.0328	0.2509	13.1	32.5	TRUE	7.265
B49+B14	B49	17.11	11.16	B14	15.47	10.07	327.7	0.003	Circle	8	0.013	0.1695	0.7343	2.23	0.6	0.7343	0.6969	105.4	89.4	FALSE	11.8
B50+B37	B50	13.27	7.77	B37	14.71	7.31	204.7	0.002	Circle	6	0.013	0.027	0.098	1	0.25	0.098	0.266	36.8	50	FALSE	8.023
B51+B50	B51	14.15	9.95	B50	13.27	7.97	281.7	0.007	Circle	6	0.013	0.007	0.026	1.03	0.09	0.026	0.4704	5.5	18.6	FALSE	10.043
B52+B4	B52	20.58	4.29	B4	20.32	3.57	359.8	0.002	Circle	12	0.013	0.361	1.5017	2.34	0.76	1.5017	1.5937	94.2	76.1	FALSE	5.073
C1+B16	C1	23.15	14.8	B16	20.39	13.24	401.9	0.004	Circle	8	0.013	0.1695	0.7343	2.1	0.67	0.7343	0.7528	97.5	100	TRUE	15.781
C2+C1	C2	21.54	15.19	C1	23.15	14.85	204.3	0.002	Circle	8	0.013	0.1235	0.5727	1.64	0.67	0.5727	0.4929	116.2	100	TRUE	16.204
C3+C2	C3	22.97	17.37	C2	21.54	15.24	397.8	0.005	Circle	6	0.013	0.1065	0.5067	2.58	0.5	0.5067	0.4106	123.4	100	TRUE	19.837
C4+C3	C4	25.03	19.53	C3	22.97	17.42	436	0.005	Circle	6	0.013	0.0885	0.4501	2.29	0.5	0.4501	0.3903	115.3	100	TRUE	23.013
C5+C4	C5	25.49	20.95	C4	25.03	19.53	327.7	0.004	Circle	6	0.013	0.0885	0.4501	2.29	0.5	0.4501	0.3693	121.9	100	TRUE	25.383
C6+C5	C6	25.82	21.42	C5	25.49	20.99	87.5	0.005	Circle	6	0.013	0.0697	0.3822	1.95	0.5	0.3822	0.3933	97.2	100	TRUE	25.779
C7+C6	C7	34.43	23.65	C6	25.82	21.42	447.8	0.005	Circle	6	0.013	0.0697	0.3822	1.95	0.5	0.3822	0.3959	96.5	100	TRUE	28.169
C8+C7	C8	29.93	24.33	C7	34.43	23.65	400.9	0.002	Circle	6	0.013	0.0447	0.2797	1.42	0.5	0.2797	0.2311	121.1	100	TRUE	29.337
C9+C8	C9	30	24.55	C8	29.93	24.38	84.1	0.002	Circle	6	0.013	0.0437	0.2665	1.36	0.5	0.2665	0.2523	105.7	100	TRUE	29.485
C10+C9	C10	31.71	25.71	C9	30	24.55	300.8	0.004	Circle	6	0.013	0.0437	0.2665	1.36	0.5	0.2665	0.3484	76.5	100	TRUE	30.26
C11+C10	C11	41.2	28.9	C10	31.71	25.76	508	0.006	Circle	6	0.013	0.0248	0.1754	0.89	0.5	0.176	0.4411	39.8	100	TRUE	30.876
C12+C1	C12	23.43	14.93	C1	23.15	14.85	264.8	0	Circle	6	0.013	0.046	0.1616	0.82	0.5	0.1616	0.0975	165.7	100	TRUE	16.057
C13+C12	C13	23	15.99	C12	23.43	15.03	480.7	0.002	Circle	6	0.013	0.01	0.0472	0.24	0.5	0.0472	0.2507	18.8	99.9	TRUE	16.19
C14+C12	C14	24.3	15.8	C12	23.43	14.97	282.1	0.003	Circle	6	0.013	0.036	0.1144	0.58	0.5	0.1144	0.3043	37.6	100	TRUE	16.155
C15+C14	C15	22.5	18.05	C14	24.3	16.1	565.3	0.003	Circle	6	0.013	0.018	0.0572	0.89	0.18	0.0572	0.3295	17.4	36.1	FALSE	18.231
C16+C14	C16	26.5	17.4	C14	24.3	16.05	272.9	0.005	Circle	6	0.013	0.018	0.0572	1	0.17	0.0572	0.3946	14.5	33.2	FALSE	17.566
C17+C16	C17	27.07	19.62	C16	26.5	17.4	332.8	0.007	Circle	6	0.013	0.018	0.0572	1.13	0.15	0.0572	0.4583	12.5	30.4	FALSE	19.773
C18+C17	C18	28	20.36	C17	27.07	19.62	369.6	0.002	Circle	6	0.013	0.018	0.0572	0.73	0.21	0.0572	0.2511	22.8	41.9	FALSE	20.57
C19+C2	C19	21.59	15.49	C2	21.54	15.24	264.1	0.001	Circle	6	0.013	0.017	0.066	0.34	0.5	0.0757	0.1726	38.2	100	TRUE	16.238
C20+C19	C20	23.19	17.64	C19	21.59	15.54	198.5	0.011	Circle	6	0.013	0.0085	0.033	1.16	0.1	0.0342	0.5771	5.7	20.2	TRUE	17.743
C21+C19	C21	23.94	17.74	C19	21.59	15.54	284.2	0.008	Circle	6	0.013	0.0085	0.033	0.65	0.15	0.0331	0.4937	6.7	30.4	TRUE	17.881
C22+C21	C22	24.43	18.08	C21	23.94	17.79	91.8	0.003	Circle	6	0.013	0.0085	0.033	0.75	0.14	0.033	0.3154	10.5	27.5	FALSE	18.218
C23+C3	C23	23.27	18.07	C3	22.97	17.42	400.5	0.002	Circle	6	0.013	0.018	0.0566	0.29	0.5	0.0566	0.226	25	100	TRUE	19.892
C24+C23	C24	25.53	18.72	C23	23.27	18.42	151.2	0.002	Circle	6	0.013	0.008	0.0283	0.14	0.5	0.0283	0.2499	11.3	100	TRUE	19.892
C25+C23	C25	25.08	19.73	C23	23.27	18.17	303.1	0.005	Circle	6	0.013	0.01	0.0283	0.14	0.5	0.0283	0.4025	7	100	TRUE	19.893
C26+D9	C26	29.07	24.47	D9	27.55	21.3	435.8	0.007	Circle	6	0.013	0.0309	0.2	2.06	0.25	0.2	0.4785	41.8	49.5	FALSE	24.718
C27+C5	C27	25	21.41	C5	25.49	20.97	221.6	0.002	Circle	6	0.013	0.0188	0.0679	0.35	0.5	0.068	0.25	27.2	100	TRUE	25.406
C28+C27	C28	27.89	23.34	C27	25	21.41	43	0.045	Circle	6	0.013	0.0115	0.0195	0.1	0.5	0.0196	1.1887	1.6	100	TRUE	25.407
C29+C28	C29	32.14	23.94	C28	27.89	23.34	298.4	0.002	Circle	6	0.013	0.0115	0.0195	0.1	0.5	0.0195	0.2516	7.7	100	TRUE	25.407
C30+C27	C30	28.53	23.63	C27	25	21.41	162.9	0.014	Circle	6	0.013	0.0073	0.0484	0.25	0.5	0.0486	0.655	7.4	100	TRUE	25.407
C31+C30	C31	29.09	23.76	C30	28.53	23.63	67.1	0.002	Circle	6	0.013	0.0014	0.0195	0.1	0.5	0.0195	0.247	7.9	100	TRUE	25.407
C32+C30	C32	30.12	24.36	C30	28.53	23.63	146.7	0.005	Circle	6	0.013	0.0059	0.029	0.15	0.5	0.029	0.3958	7.3	100	TRUE	25.407
C33+C32	C33	31.26	24.53	C32	30.12	24.39	70.7	0.002	Circle	6	0.013	0.0044	0.0195	0.1	0.5	0.0195	0.2497	7.8	100	TRUE	25.407
C34+C32	C34	30	24.5	C32	30.12	24.39	56.9	0.002	Circle	6	0.013	0.0015	0.0095	0.05	0.5	0.0095	0.2467	3.8	100	TRUE	25.407
C35+C7	C35	31.98	25.2	C7	34.43	23.65	403.4	0.004	Circle	6	0.013	0.025	0.1025	0.52	0.5	0.1028	0.3478	29.5	100	TRUE	28.169
C36+C35	C36	32.58	25.7	C35	31.98	25.2	92	0.005	Circle	6	0.013	0.025	0.1025	0.52	0.5	0.1026	0.4136	24.8	100	TRUE	28.17
C37+C36	C37	34.3	26.67	C36	32.58	25.73	153.2	0.006	Circle	6	0.013	0.005	0.0572	0.29	0.5	0.0891	0.4395	13	100	TRUE	28.17
C39+C37	C39	33.37	27.03	C37	34.3	26.7	164.1	0.002	Circle	6	0.013	0.005	0.0459	0.23	0.5	0.0459	0.2516	18.2	100	TRUE	28.171
C40+C36	C40	32.93	26.9	C36	32.58	25.83	257.5	0.004	Circle	6	0.013	0.02	0.0458	0.23	0.5	0.0458	0.3617	12.7	100	TRUE	28.17
C41+C40	C41	33.56	27.26	C40	32.93	26.93	191.4	0.002	Circle	6	0.013	0.02	0.0458	0.23	0.5	0.0458	0.233	19.7	100	TRUE	28.171
C42+C41	C42	34.21	27.91	C41	33.56	27.31	300.1	0.002	Circle	6	0.013	0.02	0.0458	0.23	0.5	0.0458	0.2509	18.3	100	TRUE	28.171
C43+C8	C43	30.16	24.53	C8	29.93	24.33	101	0.002	Circle	6	0.013	0.001	0.0132	0.07	0.5	0.0132	0.2497	5.3	100	TRUE	29.337
C44+C10	C44	32.45	26.73	C10	31.71	25.76	154.5	0.006	Circle	6	0.013	0.0189	0.0911	0.46	0.5	0.0914	0.4446	20.5	100	TRUE	30.261
C45+C44	C45	33.66	27.91	C44	32.45	26.77	166.1	0.007	Circle	6	0.013	0.0189	0.0911	0.46	0.5	0.0911	0.4648	19.6	100	TRUE	30.261
C46+C45	C46	36.3	29.85	C45	33.66	27.91	255.5	0.008	Circle	6	0.013	0.0189	0.0911	0.46	0.5	0.0911	0.4889	18.6	100	TRUE	30.262
C47+C46	C47	35.05	30.62	C46	36.3	30	309.1	0.002	Circle	6	0.013	0.0189	0.0911	0.92	0.25	0.0911	0.2513	36.3	50.1	FALSE	30.87
C48+C11	C48	43.08	29.1	C11	41.2	28.98	178.7	0.001	Circle	6	0.013	0.0248	0.1755	0.89	0.5	0.1755	0.1454	120.7	100	TRUE	31.03
C49+C48	C49	41.32	29.82	C48	43.08	29.1	247.7	0.003	Circle	6	0.013	0.0248	0.1755	0.89	0.5	0.1755	0.3025	58	100	TRUE	31.28
C50+C49	C50	40.78	30.68	C49	41.32	29.82	361.2	0.002	Circle	6	0.013	0.0248	0.1755	0.89	0.5	0.1755	0.2738	64.1	100	TRUE	31.689
C51+C50	C51	38.55	32.75	C50	40.78	30.68	556.1	0.004	Circle	6	0.013	0.0248	0.1755	1.52	0.28	0.1755	0.3423	51.3	56.8	TRUE	33.033
D1+E4	D1	17.33	6.83	E4	16.28	6.08	354.5	0.002	Circle	12	0.013	0.2054	2.1273	2.71	1	2.1273	1.6387	129.8	100	TRUE	18.603
D2+D1	D2	17.54	6.91	D1	17.33	6.88	53.3	0.001	Circle	12	0.013	0.2054	2.1275	2.71	1	2.1275	0.8452	251.7	100	TRUE	18.692
D3+D2	D3	18.91	7.46	D2	17.54	6.99	363.3	0.001	Circle	12	0.013	0.2054	2.1276	2.71	1	2.1276	1.2814	166	100	TRUE	19.941
D4+D3	D4	19	8.15	D3	18.91	7.56	296.1	0.002	Circle	8	0.013	0.0595	0.8383	2.4	0.67	0.8383	0.5394	155.4	100	TRUE	21.448
D5+D4	D5	19	8.29	D4	19	8.15	69.6	0.002	Circle	8	0.013	0.0595	0.8385	2.4	0.67	0.8385	0.5419	154.7	100	TRUE	21.729
D6+D5	D6	19.87	13.77	D5	19	8.29	246.1	0.022	Circle	8	0.013	0.0324	0.58	1.66	0.67	0.58	1.8031	32.2	100	TRUE	21.731
D7+D6	D7	19.85	15.5	D6	19.87	13.82	398	0.004	Circle	8	0.013	0.0324	0.58	1.66	0.67	0.58	0.7851	73.9	100	TRUE	21.736

Attachment 2
Peak Wet Weather Flow Model Results

Label	Start Node	Rim (Start) (ft)	Invert (Start) (ft)	Stop Node	Rim (Stop) (ft)	Invert (Stop) (ft)	Length (ft)	Slope (Calculated) (ft/ft)	Section Type	Diameter (in)	Manning's n	Flow (Middle) (cfs)	Velocity (ft/s)	Depth (Middle) (ft)	Flow (Maximum) (cfs)	Capacity (Full Flow) (cfs)	Flow / Capacity (Design) (%)	Depth/Rise (%)	Depth (Maximum) / Rise (%)	Is Ever Surcharged?	Hydraulic Grade (Maximum) (ft)
D8+D7	D8	21.51	16.11	D7	19.85	15.5	157.8	0.004	Circle	6	0.013	0.0361	0.2	1.02	0.5	0.2001	0.3488	57.3	100	TRUE	21.737
D9+D8	D9	27.55	21.3	D8	21.51	16.11	496	0.01	Circle	6	0.013	0.0299	0.2	1.02	0.5	0.2001	0.5739	34.8	100	TRUE	21.739
D10+D3	D10	21.78	10.58	D3	18.91	7.81	489.1	0.006	Circle	10	0.013	0.1459	1.2894	2.36	0.83	1.2894	1.6488	78.2	100	TRUE	21.639
D16+D20	D16	23	13.91	D20	22	13	453.9	0.002	Circle	8	0.013	0.018	0.1999	0.57	0.67	0.2003	0.541	37	100	TRUE	22.221
D17+D16	D17	23.1	14.18	D16	23	13.91	136.3	0.002	Circle	8	0.013	0.018	0.2	0.57	0.67	0.2003	0.5378	37.2	100	TRUE	22.222
D19+D10	D19	21.54	12.39	D10	21.78	10.63	48.1	0.037	Circle	8	0.013	0.1459	1.2895	3.69	0.67	1.2895	2.3114	55.8	100	TRUE	22.164
D20+D19	D20	22	13	D19	21.54	12.89	52.7	0.002	Circle	8	0.013	0.036	0.2767	0.79	0.67	0.2771	0.5521	50.1	100	TRUE	22.165
D21+D19	D21	20.93	15.08	D19	21.54	12.84	390.8	0.006	Circle	8	0.013	0.1099	1.013	2.9	0.67	1.013	0.9148	110.7	100	TRUE	22.171
D22+D21	D22	22.23	15.84	D21	20.93	15.13	149	0.005	Circle	6	0.013	0.1099	1.013	5.16	0.5	1.013	0.3873	261.5	100	TRUE	22.244
D23+D22	D23	22.62	16.12	D22	22.23	15.88	73.3	0.003	Circle	6	0.013	0.1099	0.663	3.37	0.5	0.663	0.3211	206.5	100	TRUE	23.318
D24+D23	D24	24.01	17.46	D23	22.62	16.12	349.8	0.004	Circle	6	0.013	0.1099	0.663	3.37	0.5	0.663	0.3473	190.9	100	TRUE	28.649
D25+D24	D25	24.45	18.45	D24	24.01	17.56	300.9	0.003	Circle	6	0.013	0.0348	0.323	1.64	0.5	0.323	0.3051	105.9	100	TRUE	28.651
D26+D25	D26	24.79	19.26	D25	24.45	18.5	156.7	0.005	Circle	6	0.013	0.0348	0.323	1.64	0.5	0.323	0.3907	82.7	100	TRUE	28.652
D27+D26	D27	26.68	20.86	D26	24.79	19.28	392.4	0.004	Circle	6	0.013	0	0.17	0.87	0.5	0.1701	0.356	47.7	100	TRUE	28.653
D28+D27	D28	27.45	21.65	D27	26.68	20.9	81.1	0.009	Circle	6	0.013	0	0.17	0.87	0.5	0.17	0.5396	31.5	100	TRUE	28.654
D29+C37	D29	34.53	27.53	C37	34.3	26.7	129.5	0.006	Circle	6	0.013	0	0	0	0.5	0	0.4492	0	100	TRUE	28.655
D29+D28	D29	34.53	27.53	D28	27.45	21.67	465.5	0.013	Circle	6	0.013	0	0	0	0.5	0	0.6295	0	100	TRUE	28.655
D30+D26	D30	26.26	21.18	D26	24.79	19.29	436.5	0.004	Circle	6	0.013	0.0348	0.153	0.78	0.5	0.1531	0.3692	41.4	100	TRUE	28.653
D31+D30	D31	26.68	21.76	D30	26.26	21.46	152.5	0.002	Circle	6	0.013	0.0124	0.0765	0.39	0.5	0.0765	0.2489	30.7	100	TRUE	28.654
D32+D30	D32	26.44	21.71	D30	26.26	21.46	126.2	0.002	Circle	6	0.013	0.0224	0.0765	0.39	0.5	0.0765	0.2497	30.6	100	TRUE	28.654
D33+D24	D33	28.14	19.34	D24	24.01	17.51	450.4	0.004	Circle	6	0.013	0.0448	0.1686	0.86	0.5	0.1686	0.3576	47.1	100	TRUE	29.143
D34+D33	D34	34.45	22.3	D33	28.14	19.34	293.3	0.01	Circle	6	0.013	0.0448	0.1686	0.86	0.5	0.2011	0.5637	29.9	100	TRUE	29.431
D35+D34	D35	33.56	22.51	D34	34.45	22.3	177.8	0.001	Circle	6	0.013	0.0448	0.1686	0.86	0.5	0.1686	0.1928	87.4	100	TRUE	29.567
D36+D35	D36	31.3	25.05	D35	33.56	22.56	250.8	0.01	Circle	6	0.013	0.0208	0.02	0.1	0.5	0.02	0.5591	3.6	100	TRUE	29.568
D37+D36	D37	31.11	26.01	D36	31.3	25.05	367.8	0.003	Circle	6	0.013	0.0216	0.02	0.1	0.5	0.02	0.2866	7	100	TRUE	29.568
D38+D37	D38	32	26.64	D37	31.11	26.16	237.7	0.002	Circle	6	0.013	0.0191	0.01	0.05	0.5	0.01	0.2521	4	100	TRUE	29.569
D39+D38	D39	32.14	26.81	D38	32	26.64	84.1	0.002	Circle	6	0.013	0.0257	0.01	0.05	0.5	0.01	0.2523	4	100	TRUE	29.569
D40+D37	D40	32	26.6	D37	31.11	26.21	193.6	0.002	Circle	6	0.013	0.0208	0.01	0.05	0.5	0.01	0.2518	4	100	TRUE	29.569
D41+D24	D41	31.35	25.75	D24	24.01	17.51	190.6	0.043	Circle	6	0.013	0.0304	0.1714	0.87	0.5	0.1714	1.1666	14.7	100	TRUE	28.649
D42+D41	D42	30	26	D41	31.35	25.8	100.2	0.002	Circle	6	0.013	0.004	0.0214	0.11	0.5	0.0214	0.2507	8.5	100	TRUE	28.65
D43+D41	D43	32	26.89	D41	31.35	25.85	517.4	0.002	Circle	6	0.013	0.0264	0.15	0.76	0.5	0.15	0.2516	59.6	100	TRUE	28.651
D44+D43	D44	32	27.12	D43	32	26.89	113	0.002	Circle	6	0.013	0.0264	0.15	0.76	0.5	0.1501	0.2531	59.3	100	TRUE	28.652
D47+D22	D47	20.69	17.09	D22	22.23	15.86	299.2	0.004	Circle	6	0.013	0.0413	0.35	1.78	0.5	0.35	0.3597	97.3	100	TRUE	22.246
D48+D47	D48	22.05	18.7	D47	20.69	17.09	401	0.004	Circle	6	0.013	0.0292	0.35	1.78	0.5	0.35	0.3555	98.4	100	TRUE	22.249
D49+D48	D49	27.59	21.99	D48	22.05	18.7	399.7	0.008	Circle	6	0.013	0.0383	0.35	1.78	0.5	0.3507	0.509	68.8	100	TRUE	22.32
D50+D49	D50	31.35	22.83	D49	27.59	21.99	421.6	0.002	Circle	6	0.013	0.0338	0.35	1.78	0.5	0.35	0.2504	139.8	100	TRUE	24.376
D51+D7	D51	23.54	18.66	D7	19.85	15.5	457.8	0.007	Circle	6	0.013	0.0324	0.38	1.93	0.5	0.38	0.4662	81.5	100	TRUE	21.739
D52+D51	D52	27.31	20.31	D51	23.54	18.69	267	0.006	Circle	6	0.013	0.0216	0.24	1.22	0.5	0.24	0.437	54.9	100	TRUE	21.741
D53+D52	D53	29.62	21.22	D52	27.31	20.31	247.8	0.004	Circle	6	0.013	0.0108	0.12	0.61	0.5	0.12	0.34	35.3	100	TRUE	21.741
D54+D53	D54	29.68	21.68	D53	29.62	21.27	74.9	0.005	Circle	6	0.013	0.0108	0.12	1.12	0.27	0.12	0.4151	28.9	53.4	FALSE	21.894
D55+D54	D55	30.37	22.39	D54	29.68	21.88	252.3	0.002	Circle	6	0.013	0.0108	0.12	1.05	0.28	0.12	0.2523	47.6	56.6	FALSE	22.673
D56+D35	D56	35.05	23.65	D35	33.56	22.51	286.3	0.004	Circle	6	0.013	0.024	0.1486	0.76	0.5	0.1499	0.354	42	100	TRUE	29.775
D57+D56	D57	37.86	26.21	D56	35.05	23.7	197.1	0.013	Circle	6	0.013	0.024	0.1486	0.76	0.5	0.1629	0.6332	23.5	100	TRUE	29.887
D58+D57	D58	37.67	27.07	D57	37.86	26.36	158	0.004	Circle	6	0.013	0.024	0.1486	0.76	0.5	0.1489	0.3761	39.5	100	TRUE	29.957
D59+D58	D59	37.27	28.53	D58	37.67	27.12	151.4	0.009	Circle	6	0.013	0.024	0.1486	0.76	0.5	0.1497	0.5415	27.4	100	TRUE	30.021
D60+D59	D60	37.44	29.8	D59	37.27	28.57	112.6	0.011	Circle	6	0.013	0.024	0.1336	0.68	0.5	0.1344	0.5864	22.8	100	TRUE	30.041
D61+D60	D61	37.37	30.05	D60	37.44	29.84	101	0.002	Circle	6	0.013	0.024	0.1336	1.17	0.28	0.1336	0.2558	52.2	56.4	FALSE	30.343
D62+D59	D62	32.76	29.07	D59	37.27	28.57	247.7	0.002	Circle	6	0.013	0.0229	0.015	0.08	0.5	0.0156	0.2521	6	100	TRUE	30.022
D63+D5	D63	19.63	8.6	D5	19	8.29	296.6	0.001	Circle	8	0.013	0.0271	0.2587	0.74	0.67	0.2587	0.3906	66.2	100	TRUE	21.804
D64+D63	D64	24.68	17.38	D63	19.63	8.56	470.5	0.019	Circle	6	0.013	0.0263	0.1988	1.01	0.5	0.211	0.7682	25.9	100	TRUE	22.523
D65+D64	D65	28.98	20.08	D64	24.68	17.38	448	0.006	Circle	6	0.013	0.0242	0.1988	1.01	0.5	0.1993	0.4356	45.6	100	TRUE	23.204
D66+D65	D66	29.37	20.96	D65	28.98	20.13	412.5	0.002	Circle	6	0.013	0.0222	0.1989	1.01	0.5	0.1989	0.2517	79	100	TRUE	23.817
D67+D63	D67	18.77	12.39	D63	19.63	8.6	294.1	0.013	Circle	6	0.013	0.0271	0.06	0.31	0.5	0.0602	0.6369	9.4	100	TRUE	21.805
D68+D67	D68	19	12.7	D67	18.77	12.42	138.9	0.002	Circle	6	0.013	0.0134	0.03	0.15	0.5	0.0301	0.2519	11.9	100	TRUE	21.805
D69+D67	D69	19	12.94	D67	18.77	12.42	259	0.002	Circle	6	0.013	0.0137	0.0301	0.15	0.5	0.0301	0.2514	12	100	TRUE	21.805
D70+D51	D70	24	18.86	D51	23.54	18.72	70.8	0.002	Circle	6	0.013	0.0108	0.14	0.71	0.5	0.14	0.2495	56.1	100	TRUE	21.74
D71+D52	D71	28.07	22.62	D52	27.31	21.11	130	0.012	Circle	6	0.013	0.0108	0.12	1.96	0.17	0.121	0.6047	19.8	34.5	TRUE	22.793
D72+D20	D72	22.5	13.56	D20	22	13	279.6	0.002	Circle	8	0.013	0.018	0.0769	0.22	0.67	0.0772	0.5408	14.2	100	TRUE	22.165
D73+D72	D73	23	14.16	D72	22.5	13.56	297.4	0.002	Circle	8	0.013	0.018	0.0769	0.22	0.67	0.0774	0.5427	14.2	100	TRUE	22.166
D74+D73	D74	23.2	14.58	D73	23	14.16	210.2	0.002	Circle	8	0.013	0.018	0.0769	0.22	0.67	0.0776	0.5401	14.2	100	TRUE	22.166
E1+H9	E1	12.09	3.59	H9	11.84	3.14	269.8	0.002	Circle	12	0.013	0.4047	3.0914	3.94	1	3.0914	1.455	212.5	100	TRUE	14.341
E2+E1	E2	13.48	4.23	E1	12.09	3.64	283.2	0.002	Circle	12	0.013	0.2054	2.1269	2.71	1	2.1269	1.6261	130.8	100	TRUE	15.276
E3+E2	E3	15.11	4.76	E2	13.48	4.33	279.6	0.002	Circle	12	0.013	0.2054	2.1271	2.71	1	2.1271	1.3971	152.2	100	TRUE	16.198
E4+E3	E4	16.28	6.08	E3	15.11	5.01	356.7	0.003	Circle	12	0.013	0.2054	2.1272	2.71	1	2.1272	1.9512	109	100	TRUE	17.405
E6+E1	E6	11.14	4.84	E1	12.09	4.04	501	0.002	Circle	12	0.013	0.1994	0.9646	1.23	1	0.9646	1.4236	67.8	100	TRUE	14.681
E7+E6	E7	11.77	6.02	E6	11.14	4.84	310.5	0.004	Circle	8	0.013	0.1844	0.9041	2.59	0.67	0.9041	0.7449	121.4	100	TRUE	14.687
E8+E7	E8	13.72	6.77	E7	11.77	6.07	354.7	0.002	Circle	8	0.013	0.1544	0.7823	2.24	0.67	0.7823	0.5368	145.7	100	TRUE	14.692
E9+E8	E9	13.77	7.32	E8	13.72	6.82	341.1	0.001	Circle	12	0.013	0.1294	0.6605	0.84	1	0.6605	1.364	48.4	100	TRUE	14.696
E10+E9	E10	14.53	7.78	E9	13.77	7.32	192.1	0.002	Circle	12	0.013	0.1294	0.6605	0.84	1	0.6605	1.7433	37.9	100	TRUE	14.699

Attachment 2
Peak Wet Weather Flow Model Results

Label	Start Node	Rim (Start) (ft)	Invert (Start) (ft)	Stop Node	Rim (Stop) (ft)	Invert (Stop) (ft)	Length (ft)	Slope (Calculated) (ft/ft)	Section Type	Diameter (in)	Manning's n	Flow (Middle) (cfs)	Velocity (ft/s)	Depth (Middle) (ft)	Flow (Maximum) (cfs)	Capacity (Full Flow) (cfs)	Flow / Capacity (Design) (%)	Depth/Rise (%)	Depth (Maximum) / Rise (%)	Is Ever Surcharged?	Hydraulic Grade (Maximum) (ft)
E11+E10	E11	14.94	8.04	E10	14.53	7.93	194.9	0.001	Circle	12	0.013	0.1124	0.5237	0.67	1	0.5237	0.8464	61.9	100	TRUE	14.701
E12+E11	E12	20.13	9.13	E11	14.94	8.14	494.5	0.002	Circle	12	0.013	0.1124	0.5237	0.67	1	0.5237	1.5941	32.9	100	TRUE	14.706
E13+E12	E13	18.72	10	E12	20.13	9.18	450.3	0.002	Circle	8	0.013	0.0732	0.3879	1.11	0.67	0.388	0.5156	75.2	100	TRUE	14.709
E14+E13	E14	17.24	10.39	E13	18.72	10.12	185.5	0.001	Circle	8	0.013	0.0608	0.2317	0.66	0.67	0.2317	0.461	50.3	100	TRUE	14.71
E15+E14	E15	15.27	10.72	E14	17.24	10.49	246.2	0.001	Circle	8	0.013	0.043	0.201	0.58	0.67	0.201	0.3693	54.4	100	TRUE	14.711
E20+E7	E20	12.61	7.71	E7	11.77	6.12	504.5	0.003	Circle	6	0.013	0.015	0.0609	0.31	0.5	0.061	0.315	19.3	100	TRUE	14.688
E21+E20	E21	14.72	8.53	E20	12.61	7.76	385.6	0.002	Circle	6	0.013	0.015	0.0609	0.31	0.5	0.0609	0.2507	24.3	100	TRUE	14.688
E22+E8	E22	15.38	8.48	E8	13.72	6.87	449.9	0.004	Circle	6	0.013	0.015	0.0609	0.31	0.5	0.061	0.3356	18.1	100	TRUE	14.693
E23+E22	E23	16.82	10.42	E22	15.38	8.48	438.8	0.004	Circle	6	0.013	0.015	0.0609	0.31	0.5	0.0619	0.3731	16.3	100	TRUE	14.694
E25+E50	E25	16.75	10.9	E50	16.04	9.64	231.9	0.005	Circle	6	0.013	0.017	0.067	0.34	0.5	0.067	0.4136	16.2	100	TRUE	14.7
E26+E25	E26	19.82	13.82	E25	16.75	10.9	488.2	0.006	Circle	6	0.013	0.017	0.067	0.34	0.5	0.0678	0.4339	15.4	100	TRUE	14.701
E27+E12	E27	21.28	15.85	E12	20.13	9.53	576.2	0.011	Circle	6	0.013	0.0137	0.0427	0.22	0.5	0.0477	0.5876	7.3	100	TRUE	15.973
E28+E27	E28	22	15.93	E27	21.28	15.81	61.8	0.002	Circle	6	0.013	0.0137	0.0427	0.71	0.17	0.0429	0.2472	17.3	34.4	FALSE	16.12
E29+E12	E29	23.08	15.79	E12	20.13	9.58	247	0.025	Circle	6	0.013	0.0255	0.0931	0.47	0.5	0.0931	0.8896	10.5	100	TRUE	15.92
E30+E29	E30	27	20.5	E29	23.08	15.83	502.3	0.009	Circle	6	0.013	0.01	0.067	1.39	0.15	0.067	0.541	12.4	29.4	FALSE	20.647
E31+E29	E31	27.93	20.63	E29	23.08	15.83	252.3	0.019	Circle	6	0.013	0.0155	0.061	1.4	0.12	0.061	0.7739	7.9	23.8	FALSE	20.75
E32+E31	E32	28	21.21	E31	27.93	20.68	263.2	0.002	Circle	6	0.013	0.0155	0.061	0.76	0.21	0.061	0.2518	24.2	42.8	FALSE	21.424
E33+E13	E33	21.41	15.78	E13	18.72	10.02	228.9	0.025	Circle	8	0.013	0.0124	0.0911	0.26	0.67	0.0911	1.9168	4.8	100	TRUE	15.978
E33+E29	E33	21.41	17.11	E29	23.08	15.86	455.1	0.003	Circle	6	0.013	0	0	0	0	0	0.2941	0	0	FALSE	17.11
E34+E33	E34	24.94	18.94	E33	21.41	15.83	278.9	0.011	Circle	6	0.013	0.01	0.04	1.12	0.12	0.0413	0.5925	6.8	23.7	FALSE	19.061
E35+E14	E35	19.06	11.41	E14	17.24	10.74	333	0.002	Circle	6	0.013	0.0178	0.0306	0.16	0.5	0.0306	0.2517	12.1	100	TRUE	14.711
E36+E15	E36	17.4	12.35	E15	15.27	10.82	420.2	0.004	Circle	6	0.013	0.04	0.1827	0.93	0.5	0.1827	0.3386	54	100	TRUE	14.712
E37+E36	E37	18	13.11	E36	17.4	12.4	353.2	0.002	Circle	6	0.013	0.015	0.0609	0.31	0.5	0.0609	0.2516	24.2	100	TRUE	14.713
E38+E36	E38	18.78	13.33	E36	17.4	12.35	233.6	0.004	Circle	6	0.013	0.025	0.1218	0.62	0.5	0.1218	0.3634	33.5	100	TRUE	14.713
E39+E38	E39	19	14.13	E38	18.78	13.53	300.6	0.002	Circle	6	0.013	0.015	0.0609	0.31	0.5	0.0609	0.2507	24.3	100	TRUE	14.713
E40+E38	E40	22.91	14.25	E38	18.78	13.33	458.2	0.002	Circle	6	0.013	0.01	0.0609	0.31	0.5	0.0609	0.2514	24.2	100	TRUE	14.714
E41+E15	E41	16	11.07	E15	15.27	10.87	98.3	0.002	Circle	6	0.013	0.003	0.0183	0.09	0.5	0.0183	0.2531	7.2	100	TRUE	14.711
E42+E10	E42	14.56	10.06	E10	14.53	7.88	550.5	0.004	Circle	6	0.013	0	0.0698	0.36	0.5	0.0699	0.3531	19.8	100	TRUE	14.699
E44+E8	E44	12.57	8.62	E8	13.72	6.82	630.5	0.003	Circle	6	0.013	0.01	0.0609	0.31	0.5	0.0609	0.2998	20.3	100	TRUE	14.693
E45+E44	E45	13.15	9.55	E44	12.57	8.57	319.4	0.003	Circle	6	0.013	0.01	0.0609	0.31	0.5	0.0611	0.3108	19.6	100	TRUE	14.694
E46+E7	E46	11	7.4	E7	11.77	6.02	500.5	0.003	Circle	6	0.013	0.015	0.0609	0.31	0.5	0.0618	0.2946	20.7	100	TRUE	14.688
E47+E46	E47	11.54	8.31	E46	11	7.4	455.2	0.002	Circle	6	0.013	0.015	0.0609	0.31	0.5	0.0609	0.2509	24.3	100	TRUE	14.689
E48+E6	E48	11.94	7.54	E6	11.14	5.19	498.5	0.005	Circle	8	0.013	0.015	0.0607	0.17	0.67	0.0623	0.8296	7.3	100	TRUE	14.682
E49+E48	E49	11.53	8.46	E48	11.94	7.54	457.8	0.002	Circle	6	0.013	0.015	0.0608	0.31	0.5	0.0611	0.2515	24.2	100	TRUE	14.683
E50+E10	E50	16.04	9.64	E10	14.53	7.88	217.9	0.008	Circle	6	0.013	0.017	0.067	0.34	0.5	0.067	0.5043	13.3	100	TRUE	14.699
F7+T25	F7	4.65	0.3	T25	3.95	-2.2	477	0.005	Circle	8	0.013	0.064	0.1876	1.75	0.23	0.1876	0.8748	21.4	34.6	FALSE	0.53
F8+F7	F8	8.3	1.38	F7	4.65	0.3	356.7	0.003	Circle	8	0.013	0.064	0.1876	1.45	0.27	0.1876	0.6649	28.2	39.8	FALSE	1.65
F9+F23	F9	8.21	3.11	F23	8.23	2.7	110	0.004	Circle	6	0.013	0.047	0.1428	1.42	0.26	0.1428	0.3425	41.7	51	FALSE	3.368
F10+F9	F10	11.76	4.96	F9	8.21	3.21	462.6	0.004	Circle	6	0.013	0.047	0.1428	1.42	0.25	0.1428	0.3451	41.4	50.9	FALSE	5.216
F11+F10	F11	13	6.84	F10	11.76	5.06	419.8	0.004	Circle	6	0.013	0.047	0.1428	1.48	0.25	0.1428	0.3654	39.1	49.2	FALSE	7.091
F12+F11	F12	13	7.65	F11	13	6.94	355.2	0.002	Circle	6	0.013	0.032	0.078	0.86	0.24	0.078	0.2509	31.1	47	FALSE	7.886
F13+F19	F13	15.24	10.24	F19	15.18	10.23	24.2	0	Circle	6	0.013	0.024	0.026	0.34	0.21	0.026	0.1141	22.8	41.1	FALSE	10.441
F14+F8	F14	9.56	5.64	F8	8.3	1.76	463.1	0.008	Circle	6	0.013	0.003	0.019	0.94	0.07	0.019	0.5136	3.7	13.7	FALSE	5.708
F15+F11	F15	13.27	7.77	F11	13	7.17	301.1	0.002	Circle	6	0.013	0.015	0.0648	0.78	0.22	0.0651	0.2505	25.9	43.9	FALSE	7.992
F16+F15	F16	13.27	8.24	F15	13.27	7.77	238	0.002	Circle	6	0.013	0.015	0.065	0.78	0.22	0.065	0.2493	26.1	43.9	FALSE	8.46
F17+F22	F17	15.11	8.76	F22	13	8.39	130.3	0.003	Circle	6	0.013	0.032	0.078	0.98	0.21	0.078	0.299	26.1	42.6	FALSE	8.976
F18+F17	F18	15.34	9.94	F17	15.11	8.89	197.5	0.005	Circle	6	0.013	0.004	0.026	1.07	0.09	0.0261	0.4091	6.4	17.8	FALSE	10.037
F19+F20	F19	15.18	10.33	F20	15.15	9.7	188.8	0.003	Circle	6	0.013	0.024	0.026	0.94	0.1	0.026	0.3241	8	19.8	FALSE	10.44
F20+F17	F20	15.15	9.7	F17	15.11	8.86	281.2	0.003	Circle	6	0.013	0.028	0.052	0.8	0.18	0.052	0.3067	17	36.7	FALSE	9.884
F21+F20	F21	15.15	10.38	F20	15.15	9.7	136.4	0.005	Circle	6	0.013	0.004	0.026	0.8	0.11	0.026	0.3962	6.6	22.2	FALSE	10.484
F22+F12	F22	13	8.39	F12	13	7.65	158.8	0.005	Circle	6	0.013	0.032	0.078	1.19	0.18	0.078	0.383	20.4	36.8	FALSE	8.577
F23+F8	F23	8.23	2.7	F8	8.3	1.48	327.4	0.004	Circle	8	0.013	0.061	0.1686	1.49	0.24	0.1686	0.7376	22.9	36	FALSE	2.943
F24+F23	F24	8.23	3.19	F23	8.23	2.7	98	0.005	Circle	6	0.013	0.014	0.0258	0.97	0.1	0.0259	0.3967	6.5	19.3	FALSE	3.295
F25+F24	F25	8.73	3.77	F24	8.23	3.19	115	0.005	Circle	6	0.013	0.002	0.0129	0.84	0.06	0.0129	0.3985	3.2	11.2	FALSE	3.826
F26+F25	F26	8.73	4.36	F25	8.73	3.77	118	0.005	Circle	6	0.013	0.002	0.0129	0.8	0.05	0.0129	0.3967	3.3	9.6	FALSE	4.415
F27+F24	F27	8.73	3.78	F24	8.23	3.19	118	0.005	Circle	6	0.013	0.012	0.0129	0.8	0.05	0.0129	0.3967	3.3	9.6	FALSE	3.835
F28+F27	F28	8.73	4.57	F27	8.73	3.78	158	0.005	Circle	6	0.013	0.012	0.0129	0.79	0.04	0.0129	0.3967	3.3	8.8	FALSE	4.623
G2+G19	G2	4.2	0.05	G19	2.65	-0.76	154	0.005	Circle	6	0.013	0.0796	0.1265	1.54	0.22	0.1265	0.4069	31.1	43.5	FALSE	0.271
G3+G14	G3	7	1.85	G14	6.79	1.05	208.1	0.004	Circle	6	0.013	0.0566	0.1071	1.29	0.22	0.1071	0.3479	30.8	43.9	FALSE	2.076
G4+G3	G4	7.49	2.26	G3	7	1.95	212.7	0.001	Circle	6	0.013	0.0436	0.0881	0.82	0.27	0.0881	0.2142	41.1	53.7	FALSE	2.534
G6+G4	G6	10.75	5.12	G4	7.49	2.36	387.6	0.007	Circle	6	0.013	0.0318	0.0764	1.35	0.16	0.0765	0.4735	16.1	33	FALSE	5.289
G7+G6	G7	10.12	5.81	G6	10.75	5.22	294.7	0.002	Circle	6	0.013	0.0159	0.0383	0.62	0.18	0.0383	0.251	15.3	35.4	FALSE	5.993
G8+G7	G8	10.83	6.45	G7	10.12	5.8	326.8	0.002	Circle	6	0.013	0.0159	0.0381	0.61	0.18	0.0384	0.2502	15.2	35.6	FALSE	6.628
G9+G6	G9	8.88	5.78	G6	10.75	5.2	290.8	0.002	Circle	6	0.013	0.0159	0.0382	0.61	0.18	0.0383	0.2506	15.2	35.7	FALSE	5.963
G10+G9	G10	11.09	6.24	G9	8.88	5.78	270.6	0.002	Circle	6	0.013	0.0159	0.0381	0.57	0.19	0.0384	0.2313	16.5	37.2	FALSE	6.432
G11+G10	G11	11.78	6.87	G10	11.09	6.34	265.7	0.002	Circle	6	0.013	0.0159	0.0383	0.61	0.18	0.0383	0.2506	15.3	35.4	FALSE	7.047
G12+G4	G12	8.32	3.02	G4	7.49	2.47	277	0.002	Circle	6	0.013	0.0118	0.0116	0.83	0.06	0.0116	0.25	4.6	12.4	FALSE	3.08
G13+G3	G13	8.34	2.8	G3	7	1.9	452.5	0.002	Circle	6	0.013	0.013	0.019	0.73	0.09	0.019	0.2502	7.6	19	FALSE	2.895
G14+G17	G14	6.79	1.05	G17	5.65	0.6	151.1	0.003	Circle	6	0.013	0.0681	0.1168	1.2	0.25	0.1168	0.3062	38.1	49.7	FALSE	1.303

Attachment 2
Peak Wet Weather Flow Model Results

Label	Start Node	Rim (Start) (ft)	Invert (Start) (ft)	Stop Node	Rim (Stop) (ft)	Invert (Stop) (ft)	Length (ft)	Slope (Calculated) (ft/ft)	Section Type	Diameter (in)	Manning's n	Flow (Middle) (cfs)	Velocity (ft/s)	Depth (Middle) (ft)	Flow (Maximum) (cfs)	Capacity (Full Flow) (cfs)	Flow / Capacity (Design) (%)	Depth/Rise (%)	Depth (Maximum) / Rise (%)	Is Ever Surcharged?	Hydraulic Grade (Maximum) (ft)
G15+G14	G15	6.2	2.15	G14	6.79	1.05	214.7	0.005	Circle	6	0.013	0.0115	0.0097	0.2	0.15	0.0097	0.4016	2.4	29.7	FALSE	2.24
G16+G15	G16	6.21	3.21	G15	6.2	2.2	154.5	0.007	Circle	6	0.013	0.0115	0.0097	0.75	0.04	0.0097	0.4536	2.1	8	FALSE	3.252
G17+G2	G17	5.65	0.5	G2	4.2	0.15	143.7	0.002	Circle	6	0.013	0.0796	0.1265	1.16	0.27	0.1265	0.2769	45.7	54.4	FALSE	0.779
G18+G17	G18	5.86	1.15	G17	5.65	0.57	291.5	0.002	Circle	6	0.013	0.0115	0.0097	0.8	0.05	0.0097	0.2503	3.9	10.2	FALSE	1.201
G19+T23	G19	2.65	-0.76	T23	6.87	-2.3	290.9	0.005	Circle	6	0.013	0.091	0.1365	1.62	0.22	0.1365	0.4082	33.4	44.3	FALSE	-0.53
G20+G19	G20	2.66	0.11	G19	2.65	-0.76	173.9	0.005	Circle	6	0.013	0.0114	0.01	0.29	0.11	0.01	0.3969	2.5	22.9	FALSE	0.18
G21+G20	G21	2.67	0.37	G20	2.66	0.11	51.4	0.005	Circle	6	0.013	0.0057	0.005	0.64	0.02	0.005	0.399	1.3	4.7	FALSE	0.394
G22+G20	G22	2.67	0.25	G20	2.66	0.11	71.7	0.002	Circle	6	0.013	0.0057	0.005	0.67	0.04	0.005	0.2479	2	8	FALSE	0.277
H2+I11	H2	7.99	0.59	I11	8.07	0.17	36.6	0.011	Circle	15	0.013	0.6282	4.0105	3.27	1.25	4.0104	6.9196	58	100	TRUE	4.428
H3+H2	H3	8.2	0.7	H2	7.99	0.64	30.8	0.002	Circle	15	0.013	0.6282	4.0105	3.27	1.25	4.0104	2.851	140.7	100	TRUE	4.454
H4+H3	H4	8.13	0.71	H3	8.2	0.7	7.1	0.001	Circle	15	0.013	0.4293	3.1211	2.54	1.25	3.1211	2.4242	128.7	100	TRUE	4.466
H5+H4	H5	8.95	0.95	H4	8.13	0.71	259.3	0.001	Circle	15	0.013	0.4293	3.1211	2.54	1.25	3.1211	1.9652	158.8	100	TRUE	4.864
H6+H5	H6	8.89	0.99	H5	8.95	0.95	9	0.004	Circle	12	0.013	0.4093	3.1012	3.95	1	3.1012	2.3751	130.6	100	TRUE	4.876
H7+H75	H7	10.51	1.76	H75	10.09	1.58	89.8	0.002	Circle	12	0.013	0.4093	3.1012	3.95	1	3.1012	1.595	194.4	100	TRUE	7.337
H8+H7	H8	10.95	2.05	H7	10.51	1.76	233.4	0.001	Circle	12	0.013	0.4093	3.1012	3.95	1	3.1012	1.2558	247	100	TRUE	9.044
H9+H73	H9	11.84	3.09	H73	11.36	2.56	246.2	0.002	Circle	12	0.013	0.4093	3.1013	3.95	1	3.1013	1.653	187.6	100	TRUE	12.335
H11+H64	H11	9.92	1.44	H64	9.05	0.99	198.2	0.002	Circle	8	0.013	0.1904	0.8515	2.44	0.67	0.8514	0.5758	147.9	100	TRUE	6.448
H12+H11	H12	10.15	2.2	H11	9.92	1.54	333.5	0.002	Circle	8	0.013	0.1616	0.747	2.14	0.67	0.747	0.5375	139	100	TRUE	7.758
H13+H12	H13	10.85	2.55	H12	10.15	2.3	107.9	0.002	Circle	8	0.013	0.1216	0.6412	1.84	0.67	0.6412	0.5816	110.2	100	TRUE	7.999
H14+H13	H14	11.02	3.54	H13	10.85	2.65	446.5	0.002	Circle	8	0.013	0.1216	0.6412	1.84	0.67	0.6412	0.5395	118.9	100	TRUE	9.306
H15+H62	H15	14.61	5.6	H62	12.95	4.64	201.4	0.005	Circle	8	0.013	0.1104	0.5888	1.69	0.67	0.5888	0.8343	70.6	100	TRUE	10.295
H16+H60	H16	14.43	6.48	H60	14.57	5.9	351.2	0.002	Circle	8	0.013	0.1104	0.5484	1.57	0.67	0.5484	0.4911	111.7	100	TRUE	11.185
H17+H57	H17	12.03	6.83	H57	14.21	6.69	396.8	0	Circle	8	0.013	0.1104	0.5079	1.45	0.67	0.5079	0.227	223.8	100	TRUE	11.891
H18+H5	H18	8.92	1.27	H5	8.95	1.25	7.9	0.003	Circle	8	0.013	0.02	0.02	0.06	0.67	0.0332	0.608	3.3	100	TRUE	4.864
H19+H18	H19	8.88	2.58	H18	8.92	1.27	386.9	0.003	Circle	8	0.013	0.02	0.02	0.06	0.67	0.0334	0.7031	2.8	100	TRUE	4.865
H20+H19	H20	9.1	3.65	H19	8.88	2.63	270.8	0.004	Circle	8	0.013	0.02	0.02	0.06	0.67	0.0337	0.7416	2.7	100	TRUE	4.865
H21+H56	H21	9.3	5.04	H56	9.2	4.75	143.8	0.002	Circle	6	0.013	0.005	0.01	0.81	0.05	0.01	0.252	4	10.3	FALSE	5.093
H22+H21	H22	9.3	5.34	H21	9.3	5.04	151.4	0.002	Circle	6	0.013	0.005	0.01	0.81	0.05	0.01	0.2498	4	10.3	FALSE	5.394
H23+H22	H23	9.4	6.15	H22	9.3	5.34	404.8	0.002	Circle	6	0.013	0.005	0.01	0.81	0.05	0.01	0.251	4	10.4	FALSE	6.202
H24+H20	H24	10.14	5.82	H20	9.1	3.65	332.8	0.007	Circle	6	0.013	0.01	0	0	0.13	0	0.4531	0	26.2	TRUE	5.82
H25+H11	H25	11.2	3.3	H11	9.92	1.7	378	0.004	Circle	6	0.013	0.0288	0.1045	0.53	0.5	0.1047	0.365	28.6	100	TRUE	6.449
H26+H25	H26	10.63	4.58	H25	11.2	3.3	412.5	0.003	Circle	6	0.013	0.0288	0.1045	0.53	0.5	0.1045	0.3125	33.4	100	TRUE	6.45
H27+H26	H27	11.38	5.66	H26	10.63	5.43	114.6	0.002	Circle	6	0.013	0.0096	0.0371	0.19	0.5	0.0372	0.2514	14.8	100	TRUE	6.45
H28+H50	H28	10.4	5.41	H50	10.13	5.03	191.6	0.002	Circle	6	0.013	0.0096	0.0302	0.15	0.5	0.0304	0.2499	12.1	100	TRUE	6.45
H29+H12	H29	12.43	5.83	H12	10.15	2.65	550.5	0.006	Circle	6	0.013	0.04	0.1059	0.54	0.5	0.1061	0.4264	24.8	100	TRUE	7.759
H30+H46	H30	11.57	7.74	H46	11.27	7.47	135.4	0.002	Circle	6	0.013	0.015	0.0529	0.7	0.2	0.0529	0.2505	21.1	40.8	FALSE	7.944
H31+H14	H31	13.28	4.5	H14	11.02	3.69	403.7	0.002	Circle	6	0.013	0.0066	0.0415	0.21	0.5	0.0415	0.2513	16.5	100	TRUE	9.327
H32+H17	H32	16.06	10.26	H17	12.03	6.88	549.9	0.006	Circle	6	0.013	0.011	0.1118	0.57	0.5	0.1119	0.4399	25.4	100	TRUE	11.892
H33+H32	H33	20	11.29	H32	16.06	10.26	515	0.002	Circle	6	0.013	0.0229	0.1119	0.57	0.5	0.1119	0.2509	44.6	100	TRUE	11.893
H34+H17	H34	12.74	7.69	H17	12.03	6.83	268.6	0.003	Circle	6	0.013	0.1104	0.3961	2.02	0.5	0.3961	0.3175	124.8	100	TRUE	13.389
H35+H34	H35	14.34	9.56	H34	12.74	7.69	321.9	0.006	Circle	6	0.013	0.1104	0.3963	2.02	0.5	0.3963	0.4276	92.7	100	TRUE	15.206
H36+H35	H36	15.37	9.87	H35	14.34	9.56	473.9	0.001	Circle	6	0.013	0.0867	0.2857	1.45	0.5	0.2857	0.1435	199.1	100	TRUE	16.714
H37+H36	H37	17.89	12.09	H36	15.37	9.87	370.1	0.006	Circle	6	0.013	0.0578	0.1939	0.99	0.5	0.1952	0.4345	44.6	100	TRUE	17.233
H38+E42	H38	17.69	11.79	E42	14.56	10.11	518.8	0.003	Circle	6	0.013	0	0.0698	0.36	0.5	0.0706	0.3193	21.9	100	TRUE	14.699
H38+H47	H38	17.69	11.79	H47	15.05	10.1	205.2	0.008	Circle	6	0.013	0.0237	0.1111	0.57	0.5	0.1665	0.5092	21.8	100	TRUE	15.277
H39+H38	H39	18	12.1	H38	17.69	11.84	131.9	0.002	Circle	6	0.013	0.0187	0.102	0.52	0.5	0.102	0.2491	40.9	100	TRUE	15.277
H40+H36	H40	22.17	15.97	H36	15.37	9.87	496.1	0.012	Circle	6	0.013	0.0289	0.092	0.47	0.5	0.0925	0.6222	14.8	100	TRUE	16.715
H41+H40	H41	24.38	16.27	H40	22.17	15.97	150.4	0.002	Circle	6	0.013	0.0289	0.092	0.47	0.5	0.092	0.2506	36.7	100	TRUE	16.715
H42+H37	H42	21.01	14.76	H37	17.89	12.19	387.7	0.007	Circle	6	0.013	0.0289	0.092	0.47	0.5	0.0921	0.4568	20.1	100	TRUE	17.233
H43+H42	H43	22.12	16.57	H42	21.01	14.76	346.3	0.005	Circle	6	0.013	0.0289	0.092	0.47	0.5	0.0921	0.4056	22.7	100	TRUE	17.234
H44+H37	H44	20.24	14.24	H37	17.89	12.14	272.4	0.008	Circle	6	0.013	0.0289	0.102	0.52	0.5	0.1025	0.4926	20.7	100	TRUE	17.293
H45+H9	H45	12.4	3.93	H9	11.84	3.49	222.4	0.002	Circle	6	0.013	0.0046	0.01	0.05	0.5	0.0124	0.2496	4	100	TRUE	12.335
H46+H52	H46	11.27	7.47	H52	12.58	6.18	360.9	0.004	Circle	6	0.013	0.015	0.0529	0.27	0.5	0.0529	0.3354	15.8	100	TRUE	7.76
H47+H35	H47	15.05	10.1	H35	14.34	9.62	192.4	0.002	Circle	6	0.013	0.0237	0.1108	0.56	0.5	0.1472	0.2802	39.5	100	TRUE	15.237
H48+H55	H48	9.12	6.64	H55	9.3	4.32	217.4	0.011	Circle	6	0.013	0.005	0.01	0.72	0.03	0.01	0.5796	1.7	6.9	TRUE	6.677
H49+H48	H49	8.35	6.77	H48	9.12	6.72	32.6	0.002	Circle	6	0.013	0.005	0.01	0.66	0.02	0.01	0.2197	4.6	4.4	FALSE	6.807
H50+H26	H50	10.13	5.03	H26	10.63	4.58	154.3	0.003	Circle	6	0.013	0.0192	0.0671	0.34	0.5	0.0676	0.303	22.1	100	TRUE	6.45
H51+H50	H51	10.5	6.35	H50	10.13	5.13	189.2	0.006	Circle	6	0.013	0.0096	0.0371	0.19	0.5	0.0373	0.4505	8.2	100	TRUE	6.479
H52+H29	H52	12.58	6.18	H29	12.43	5.83	94.4	0.004	Circle	6	0.013	0.04	0.1059	0.54	0.5	0.1059	0.3416	31	100	TRUE	7.759
H53+H52	H53	12.4	8.3	H52	12.58	6.23	233.2	0.009	Circle	6	0.013	0.025	0.0529	0.27	0.49	0.053	0.5286	10	98.9	TRUE	8.438
H54+H20	H54	9.2	4	H20	9.1	3.7	152.6	0.002	Circle	6	0.013	0.01	0.02	0.1	0.5	0.0203	0.2488	8	100	TRUE	4.866
H55+H54	H55	9.3	4.32	H54	9.2	4.22	50	0.002	Circle	6	0.013	0.01	0.02	0.1	0.5	0.02	0.2509	8	100	TRUE	4.866
H56+H55	H56	9.2	4.75	H55	9.3	4.32	215.8	0.002	Circle	6	0.013	0.005	0.01	0.07	0.33	0.01	0.2505	4	66.3	TRUE	4.867
H57+H16	H57	14.21	6.69	H16	14.43	6.48	40.5	0.005	Circle	8	0.013	0.1104	0.5485	1.57	0.67	0.5485	0.8701	63	100	TRUE	11.188
H58+H57	H58	15.13	7.62	H57	14.21	6.69	184.6	0.005	Circle	8	0.013	0	0.0406	0.12	0.67	0.0409	0.8577	4.7	100	TRUE	11.188
H59+H58	H59	16.1	8.59	H58	15.13	7.62	194.6	0.005	Circle	8	0.013	0	0	0	0.67	0	0.8531	0	100	TRUE	11.188
H59+H61	H59	16.1	8.59	H61	15.42	6.28	194.6	0.012	Circle	8	0.013	0	0	0	0.67	0.0352	1.3165	0	100	TRUE	10.465
H60+H15	H60	14.57	5.9	H15	14.61	5.7	98.7	0.002	Circle	8	0.013	0.1104	0.5888	1.69	0.67	0.5888	0.5439	108.3	100	TRUE	10.465
H61+H60	H61	15.42	6.28	H60	14.57	5.9	189.5	0.002	Circle	8	0.013	0	0.0406	0.12	0.67	0.0782	0.5411	7.5	100	TRUE	10.465

Attachment 2
Peak Wet Weather Flow Model Results

Label	Start Node	Rim (Start) (ft)	Invert (Start) (ft)	Stop Node	Rim (Stop) (ft)	Invert (Stop) (ft)	Length (ft)	Slope (Calculated) (ft/ft)	Section Type	Diameter (in)	Manning's n	Flow (Middle) (cfs)	Velocity (ft/s)	Depth (Middle) (ft)	Flow (Maximum) (cfs)	Capacity (Full Flow) (cfs)	Flow / Capacity (Design) (%)	Depth/Rise (%)	Depth (Maximum) / Rise (%)	Is Ever Surcharged?	Hydraulic Grade (Maximum) (ft)
H62+H14	H62	12.95	4.64	H14	11.02	3.54	232.8	0.005	Circle	8	0.013	0.115	0.5997	1.72	0.67	0.5997	0.8306	72.2	100	TRUE	9.856
H63+H62	H63	13.79	5.49	H62	12.95	4.64	169.8	0.005	Circle	6	0.013	0.0046	0.011	0.06	0.5	0.0115	0.397	2.8	100	TRUE	9.856
H64+H71	H64	9.05	0.99	H71	8.35	0.77	160.6	0.001	Circle	8	0.013	0.1979	0.8804	2.52	0.67	0.8804	0.4472	196.9	100	TRUE	5.463
H65+H64	H65	9.89	1.83	H64	9.05	0.99	168.3	0.005	Circle	6	0.013	0.0075	0.029	0.15	0.5	0.0296	0.3964	7.3	100	TRUE	5.464
H66+H65	H66	9.89	2.09	H65	9.89	1.83	51.4	0.005	Circle	6	0.013	0.0075	0.029	0.15	0.5	0.029	0.399	7.3	100	TRUE	5.464
H67+H66	H67	9.89	2.32	H66	9.89	2.09	46	0.005	Circle	6	0.013	0.0025	0.01	0.05	0.5	0.01	0.3967	2.5	100	TRUE	5.465
H68+H66	H68	9.89	2.42	H66	9.89	2.09	67	0.005	Circle	6	0.013	0.005	0.019	0.1	0.5	0.019	0.3938	4.8	100	TRUE	5.465
H69+H68	H69	9.89	2.64	H68	9.89	2.42	45.6	0.005	Circle	6	0.013	0.0025	0.01	0.05	0.5	0.01	0.3897	2.6	100	TRUE	5.465
H70+H68	H70	9.89	2.67	H68	9.89	2.42	51.2	0.005	Circle	6	0.013	0.0025	0.009	0.05	0.5	0.009	0.3921	2.3	100	TRUE	5.465
H71+H3	H71	8.35	0.77	H3	8.2	0.7	35	0.002	Circle	8	0.013	0.1989	0.8894	2.55	0.67	0.8894	0.5404	164.6	100	TRUE	4.622
H72+H71	H72	9.26	1.54	H71	8.35	0.77	182.4	0.004	Circle	6	0.013	0.001	0.009	0.05	0.5	0.0095	0.3645	2.5	100	TRUE	4.623
H73+H74	H73	11.36	2.56	H74	11.16	2.34	101	0.002	Circle	12	0.013	0.4093	3.1013	3.95	1	3.1013	1.6627	186.5	100	TRUE	10.498
H74+H8	H74	11.16	2.34	H8	10.95	2.1	112.9	0.002	Circle	12	0.013	0.4093	3.1013	3.95	1	3.1012	1.6426	188.8	100	TRUE	9.817
H75+H6	H75	10.09	1.58	H6	8.89	1.04	259.7	0.002	Circle	12	0.013	0.4093	3.1012	3.95	1	3.1012	1.6245	190.9	100	TRUE	6.743
I3+T19	I3	1.69	-3.99	T19	2.23	-4.27	188.4	0.001	Circle	18	0.013	0.7435	5.2299	2.96	1.5	5.2299	4.0493	129.2	100	TRUE	-1.601
I4+I3	I4	1.84	-3.79	I3	1.69	-3.99	242.6	0.001	Circle	18	0.013	0.7435	5.2299	2.96	1.5	5.2299	3.0159	173.4	100	TRUE	-1.136
I5+I31	I5	3.41	-3.42	I31	2.94	-3.53	135	0.001	Circle	18	0.013	0.7375	5.2199	2.95	1.5	5.2199	2.9983	174.1	100	TRUE	-0.25
I6+I5	I6	4.62	-3.08	I5	3.41	-3.42	410.7	0.001	Circle	18	0.013	0.7375	5.2199	2.95	1.5	5.2199	3.0222	172.7	100	TRUE	0.662
I7+I6	I7	5.18	-2.32	I6	4.62	-3.08	259	0.003	Circle	18	0.013	0.6452	4.0421	2.29	1.5	4.0421	5.6899	71	100	TRUE	0.934
I8+I7	I8	6.15	-1.45	I7	5.18	-2.32	238.1	0.004	Circle	15	0.013	0.6372	4.0354	3.29	1.25	4.0353	3.9046	103.3	100	TRUE	1.785
I9+I8	I9	5.69	-1.31	I8	6.15	-1.45	154.7	0.001	Circle	15	0.013	0.6322	4.0227	3.28	1.25	4.0226	1.9432	207	100	TRUE	2.3
I10+I9	I10	7.26	-0.74	I9	5.69	-1.31	221.1	0.003	Circle	15	0.013	0.6282	4.0104	3.27	1.25	4.0104	3.2797	122.3	100	TRUE	3.043
I11+I10	I11	8.07	-0.03	I10	7.26	-0.74	379.8	0.002	Circle	15	0.013	0.6282	4.0105	3.27	1.25	4.0104	2.7928	143.6	100	TRUE	4.409
I12+I6	I12	4.46	-2.19	I6	4.62	-2.83	338.5	0.002	Circle	12	0.013	0.0873	1.1728	1.49	1	1.1728	1.5491	75.7	100	TRUE	0.985
I13+I12	I13	5.54	-1.56	I12	4.46	-2.14	319.8	0.002	Circle	12	0.013	0.0873	1.1728	1.49	1	1.1728	1.5172	77.3	100	TRUE	1.25
I14+I13	I14	4.22	-0.83	I13	5.54	-1.51	443.5	0.002	Circle	12	0.013	0.0025	0.897	1.14	1	0.897	1.395	64.3	100	TRUE	1.447
I15+I14	I15	5.32	-0.53	I14	4.22	-0.78	386	0.001	Circle	12	0.013	0.0025	0.897	1.14	1	0.897	0.9067	98.9	100	TRUE	1.603
I16+I6	I16	4.85	0.96	I6	4.62	-2.38	492.8	0.007	Circle	6	0.013	0.005	0.005	0.03	0.5	0.0058	0.4619	1.1	100	TRUE	1.018
I17+I7	I17	5.54	1.51	I7	5.18	-1.27	525.8	0.005	Circle	6	0.013	0.008	0.005	0.03	0.5	0.0051	0.408	1.2	100	TRUE	1.546
I18+I8	I18	5.2	1.01	I8	6.15	-0.65	236.8	0.007	Circle	6	0.013	0.005	0.0088	0.05	0.5	0.015	0.4698	1.9	100	TRUE	1.785
I19+I18	I19	6.48	1.59	I18	5.2	1.11	238.8	0.002	Circle	6	0.013	0.005	0.005	0.03	0.44	0.005	0.2516	2	87.1	TRUE	1.785
I20+I9	I20	5.86	1.26	I9	5.69	-0.81	278.4	0.007	Circle	6	0.013	0.004	0.005	0.03	0.5	0.0081	0.4838	1	100	TRUE	2.301
I21+I24	I21	7.17	1.52	I24	7	-0.08	364.1	0.004	Circle	6	0.013	0.0636	0.197	1	0.5	0.1972	0.3719	53	100	TRUE	2.456
I22+I23	I22	8.69	3.44	I23	8.52	3.17	44.5	0.006	Circle	6	0.013	0.0212	0.059	1.11	0.16	0.0605	0.437	13.5	31.5	FALSE	3.597
I23+I27	I23	8.52	3.12	I27	8.3	2.86	80.1	0.003	Circle	6	0.013	0.0424	0.128	1.31	0.25	0.128	0.3197	40	49.8	FALSE	3.379
I24+I13	I24	7	-0.08	I13	5.54	-0.56	236.9	0.002	Circle	6	0.013	0.0848	0.2759	1.4	0.5	0.2759	0.2526	109.2	100	TRUE	1.933
I25+I24	I25	7	0.22	I24	7	-0.08	153.5	0.002	Circle	6	0.013	0.0212	0.0789	0.4	0.5	0.0817	0.248	31.8	100	TRUE	1.945
I26+I23	I26	9.29	4.04	I23	8.52	3.27	153.5	0.005	Circle	6	0.013	0.0212	0.069	1.15	0.17	0.0705	0.3974	17.4	34.5	FALSE	4.214
I27+I28	I27	8.3	2.86	I28	8.04	2.57	89.9	0.003	Circle	6	0.013	0.0424	0.128	1.29	0.25	0.1289	0.3187	40.2	50.4	FALSE	3.117
I28+I21	I28	8.04	2.57	I21	7.17	1.57	311.5	0.003	Circle	6	0.013	0.0636	0.197	1	0.5	0.197	0.3179	62	100	TRUE	2.909
I29+I28	I29	8.81	3.34	I28	8.04	2.57	153.5	0.005	Circle	6	0.013	0.0212	0.069	1.11	0.18	0.069	0.3974	17.4	35.4	FALSE	3.516
I31+I4	I31	2.94	-3.53	I4	1.84	-3.79	321.1	0.001	Circle	18	0.013	0.7435	5.2299	2.96	1.5	5.2299	2.9889	175	100	TRUE	-0.445
I32+I31	I32	3.97	-2.18	I31	2.94	-3.26	207.6	0.005	Circle	6	0.013	0.006	0.01	0.05	0.5	0.012	0.4047	2.5	100	TRUE	-0.444
I33+I32	I33	4.43	-1.73	I32	3.97	-2.18	90.2	0.005	Circle	6	0.013	0.002	0.005	0.03	0.5	0.005	0.3963	1.3	100	TRUE	-0.444
I34+I32	I34	4.56	-1.6	I32	3.97	-2.18	117.2	0.005	Circle	6	0.013	0.004	0.005	0.03	0.5	0.0051	0.3947	1.3	100	TRUE	-0.444
I43+I15	I43	5.62	0.12	I15	5.32	-0.53	61.7	0.011	Circle	12	0.013	0.0025	0.897	1.14	1	0.897	3.6566	24.5	100	TRUE	1.607
J5+T21	J5	4.44	-1.06	T21	3.07	-3.03	585.4	0.003	Circle	6	0.013	0.0417	0.0772	1.02	0.2	0.0772	0.3255	23.7	40.8	TRUE	-0.857
J6+J5	J6	5.85	0.6	J5	4.44	-0.96	558.5	0.003	Circle	6	0.013	0.0417	0.0772	0.97	0.21	0.0772	0.2965	26	42.6	FALSE	0.816
J7+J6	J7	5.96	1.9	J6	5.85	1.02	441.1	0.002	Circle	6	0.013	0.0133	0.0227	0.7	0.11	0.0227	0.2506	9.1	22.2	FALSE	2.012
J8+J6	J8	7.5	2.81	J6	5.85	0.7	442.1	0.005	Circle	6	0.013	0.0284	0.0545	0.99	0.16	0.0545	0.3876	14.1	32.4	FALSE	2.974
J9+J8	J9	8.19	3.23	J8	7.5	2.81	400.5	0.001	Circle	6	0.013	0.0284	0.0545	0.56	0.25	0.0545	0.1817	30	49.3	FALSE	3.478
J10+J9	J10	9.91	4.26	J9	8.19	3.34	299.8	0.003	Circle	6	0.013	0.0284	0.0545	0.83	0.18	0.0546	0.3108	17.5	36.9	FALSE	4.444
J11+T20	J11	1.31	-2.3	T20	2.72	-3.58	282.4	0.005	Circle	8	0.013	0.0145	0.029	0.08	0.67	0.0293	0.8135	3.6	100	TRUE	-1.982
J12+J11	J12	1.94	-1.61	J11	1.31	-2.2	299.4	0.002	Circle	8	0.013	0.0145	0.029	0.62	0.13	0.029	0.5364	5.4	19.1	FALSE	-1.48
J13+J12	J13	2.73	-0.51	J12	1.94	-1.51	298.6	0.003	Circle	8	0.013	0.0145	0.0291	0.72	0.11	0.0291	0.6993	4.2	17.2	FALSE	-0.397
J14+J13	J14	3.27	-0.03	J13	2.73	-0.41	190	0.002	Circle	8	0.013	0.0145	0.029	0.65	0.12	0.0292	0.5404	5.4	18.6	FALSE	0.097
K1+T15	K1	2.02	-6.28	T15	2.75	-6.5	20.4	0.011	Circle	14	0.013	0.3785	1.5059	1.41	1.17	1.5092	5.5807	27	100	TRUE	-5.086
K2+K1	K2	3.35	-5.2	K1	2.02	-6.28	451.1	0.002	Circle	14	0.013	0.3785	1.5059	2.51	0.64	1.5059	2.6295	57.3	54.8	TRUE	-4.555
K3+K2	K3	4.05	-4.8	K2	3.35	-5.2	189.7	0.002	Circle	12	0.013	0.3785	1.5059	2.6	0.69	1.5059	1.6359	92.1	69.2	FALSE	-4.044
K4+K3	K4	3.55	-4.1	K3	4.05	-4.8	238.3	0.003	Circle	12	0.013	0.3765	1.4959	2.69	0.67	1.4959	1.9309	77.5	66.7	FALSE	-3.424
K5+K4	K5	3.31	-3.39	K4	3.55	-4.1	248.1	0.003	Circle	12	0.013	0.1743	0.3979	1.77	0.33	0.398	1.9058	20.9	32.8	FALSE	-3.062
K6+K5	K6	4.44	-2.86	K5	3.31	-3.39	251.1	0.002	Circle	12	0.013	0.1606	0.3614	1.57	0.33	0.3615	1.6368	22.1	33.5	FALSE	-2.52
K7+K6	K7	3.35	-1.85	K6	4.44	-2.66	362.1	0.002	Circle	8	0.013	0.0076	0.02	0.72	0.09	0.02	0.5715	3.5	13.4	FALSE	-1.759
K8+K7	K8	2.87	-1.18	K7	3.35	-1.85	355.5	0.002	Circle	8	0.013	0.0076	0.02	0.67	0.09	0.02	0.5246	3.8	14	FALSE	-1.085
K9+K8	K9	3.87	-0.58	K8	2.87	-1.18	355.9	0.002	Circle	8	0.013	0.0076	0.02	0.64	0.1	0.02	0.4961	4	14.4	FALSE	-0.481
K10+K9	K10	4.11	0.11	K9	3.87	-0.48	155.5	0.004	Circle	6	0.013	0.0046	0.01	0.73	0.04	0.01	0.3456	2.9	7.3	FALSE	0.155
K11+K5	K11	3.67	-2.23	K5	3.31	-2.99	369.8	0.002	Circle	6	0.013	0.0077	0.0205	0.72	0.1	0.0205	0.2544	8.1	20.1	FALSE	-2.128
K12+K11	K12	3.54	-0.86	K11	3.67	-2.08	353.5	0.003	Circle	6	0.013	0.0077	0.0205	0.91	0.09	0.0205	0.3296	6.2	17.1	FALSE	-0.77
K13+K12	K13	2.97	0.27	K12	3.54	-0.86	362	0.003	Circle	6	0.013	0.0077	0.0205	0.87	0.09	0.0205	0.3135	6.5	17.7	FALSE	0.362

Attachment 2
Peak Wet Weather Flow Model Results

Label	Start Node	Rim (Start) (ft)	Invert (Start) (ft)	Stop Node	Rim (Stop) (ft)	Invert (Stop) (ft)	Length (ft)	Slope (Calculated) (ft/ft)	Section Type	Diameter (in)	Manning's n	Flow (Middle) (cfs)	Velocity (ft/s)	Depth (Middle) (ft)	Flow (Maximum) (cfs)	Capacity (Full Flow) (cfs)	Flow / Capacity (Design) (%)	Depth/Rise (%)	Depth (Maximum) / Rise (%)	Is Ever Surcharged?	Hydraulic Grade (Maximum) (ft)
K14+K13	K14	3.19	0.45	K13	2.97	0.27	90.4	0.002	Circle	6	0.013	0.0077	0.0205	0.75	0.1	0.0205	0.2504	8.2	19.7	FALSE	0.551
K15+K9	K15	3.43	-0.33	K9	3.87	-0.48	73.9	0.002	Circle	6	0.013	0.003	0.01	0.79	0.05	0.01	0.2528	4	9.7	FALSE	-0.278
K16+K4	K16	3.55	-2.65	K4	3.55	-3.45	273.7	0.003	Circle	6	0.013	0.008	0.0205	0.75	0.1	0.0205	0.3033	6.8	19.7	FALSE	-2.555
K17+K16	K17	2.92	-1.88	K16	3.55	-2.6	267.2	0.003	Circle	6	0.013	0.0062	0.0205	0.75	0.1	0.0205	0.2913	7	19.7	FALSE	-1.784
K18+K17	K18	3.64	-1.31	K17	2.92	-1.88	268.7	0.002	Circle	6	0.013	0.0062	0.0205	0.72	0.1	0.0205	0.2584	7.9	20.3	FALSE	-1.209
K19+K18	K19	3.25	-0.65	K18	3.64	-1.31	272	0.002	Circle	6	0.013	0.0062	0.0205	0.73	0.1	0.0207	0.2764	7.4	20	FALSE	-0.552
K20+K19	K20	2.67	-0.53	K19	3.25	-0.6	134.6	0.001	Circle	6	0.013	0.0062	0.0205	0.94	0.07	0.0205	0.128	16	13.5	FALSE	-0.407
K21+K3	K21	3.15	-2.1	K3	4.05	-4.25	246.4	0.009	Circle	6	0.013	0.002	0.01	0.73	0.04	0.01	0.5241	1.9	7.3	FALSE	-2.061
K22+K21	K22	3.29	-1.16	K21	3.15	-2.05	256.2	0.003	Circle	6	0.013	0.001	0.005	0.69	0.03	0.005	0.3307	1.5	6.7	FALSE	-1.132
K23+K22	K23	3.52	-0.91	K22	3.29	-1.11	99.5	0.002	Circle	6	0.013	0.001	0.005	0.66	0.03	0.005	0.2516	2	5.4	FALSE	-0.883
K24+K21	K24	3.55	-1.7	K21	3.15	-2	148.6	0.002	Circle	6	0.013	0.001	0.005	0.65	0.03	0.005	0.2521	2	5.1	FALSE	-1.673
K25+K5	K25	3.6	-1.7	K5	3.31	-3.09	376.2	0.004	Circle	6	0.013	0.006	0.016	0.91	0.07	0.016	0.3411	4.7	13.2	FALSE	-1.629
K26+K6	K26	4.36	-1.29	K6	4.44	-2.76	293.6	0.005	Circle	6	0.013	0.0208	0	0	0	0.0093	0.397	0	0	FALSE	-1.156
K27+K26	K27	3.95	-0.6	K26	4.36	-1.29	199.5	0.003	Circle	6	0.013	0	0	0	0	0.0241	0.33	0	0	FALSE	-0.474
K28+K4	K28	3.27	-4	K4	3.55	-4.1	242	0	Circle	10	0.013	0.196	1.0776	1.98	0.83	1.0776	0.4454	242	100	TRUE	-2.84
K30+K31	K30	3.78	-3.21	K31	3.08	-3.43	108.2	0.002	Circle	8	0.013	0.028	0.119	0.34	0.67	0.1197	0.5449	21.8	100	TRUE	-2.286
K31+L1	K31	3.08	-3.43	L1	2.82	-3.73	147.8	0.002	Circle	8	0.013	0.028	0.119	0.34	0.67	0.1197	0.5444	21.9	100	TRUE	-2.287
K32+K30	K32	3.16	-2.76	K30	3.78	-3.21	226.9	0.002	Circle	8	0.013	0.028	0.119	0.34	0.67	0.1195	0.5381	22.1	100	TRUE	-2.286
K33+K32	K33	2.74	-2.37	K32	3.16	-2.76	130.8	0.003	Circle	6	0.013	0.011	0.0595	0.53	0.28	0.0595	0.3064	19.4	55.9	FALSE	-2.178
K34+K33	K34	3.08	-1.54	K33	2.74	-2.37	278.4	0.003	Circle	6	0.013	0.011	0.0595	0.86	0.19	0.0595	0.3064	19.4	38.3	FALSE	-1.349
K35+K34	K35	2.78	-0.7	K34	3.08	-1.54	279.8	0.003	Circle	6	0.013	0.011	0.0595	0.86	0.19	0.0595	0.3074	19.4	38.2	FALSE	-0.509
K36+K35	K36	2.75	0.15	K35	2.78	-0.7	281.5	0.003	Circle	6	0.013	0.011	0.0595	0.86	0.19	0.0596	0.3083	19.3	38.2	FALSE	0.34
K37+K32	K37	2.51	-1.01	K32	3.16	-2.76	350.2	0.005	Circle	6	0.013	0.017	0.0595	1.01	0.17	0.0595	0.3966	15	33.9	FALSE	-0.844
L1+L21	L1	2.82	-3.73	L21	2.74	-3.95	223.2	0.001	Circle	10	0.013	0.196	1.0776	1.98	0.83	1.0776	0.6878	156.7	100	TRUE	-2.287
L2+L1	L2	2.72	-3.28	L1	2.82	-3.73	178.7	0.003	Circle	10	0.013	0.168	0.9586	1.76	0.83	0.9586	1.0994	87.2	100	TRUE	-2.025
L3+L2	L3	2.93	-3.17	L2	2.72	-3.28	83.4	0.001	Circle	10	0.013	0.168	0.9586	1.76	0.83	0.9586	0.7957	120.5	100	TRUE	-1.955
L4+L3	L4	3.39	-2.3	L3	2.93	-3.12	247.6	0.003	Circle	10	0.013	0.1123	0.5071	1.07	0.67	0.5071	1.2608	40.2	80.9	TRUE	-1.862
L5+L47	L5	4.17	-1.38	L47	3.21	-2.04	276.3	0.002	Circle	6	0.013	0.021	0.068	0.86	0.21	0.068	0.2742	24.8	42.5	FALSE	-1.165
L6+L5	L6	4.69	-0.51	L5	4.17	-1.38	214.9	0.004	Circle	6	0.013	0.015	0.034	0.95	0.12	0.034	0.357	9.5	23.7	FALSE	-0.379
L7+L6	L7	5.31	-0.39	L6	4.69	-0.51	260.6	0	Circle	6	0.013	0.015	0.034	0.47	0.2	0.034	0.1204	28.2	39.5	FALSE	-0.158
L8+L7	L8	5.39	-0.24	L7	5.31	-0.39	72.8	0.002	Circle	6	0.013	0.015	0.034	0.64	0.16	0.034	0.2547	13.3	31.5	FALSE	-0.082
L9+L4	L9	3.42	-1.78	L4	3.39	-2.05	162.3	0.002	Circle	6	0.013	0.0409	0.2351	1.36	0.41	0.2351	0.2288	102.7	82.5	FALSE	-1.318
L10+K27	L10	3.59	0.24	K27	3.95	-0.55	197.2	0.004	Circle	6	0.013	0	0	0	0	0.0032	0.3551	0	0	FALSE	0.24
L10+L9	L10	3.59	-0.76	L9	3.42	-1.78	274.7	0.004	Circle	6	0.013	0.01	0.0694	1	0.19	0.0694	0.3419	20.3	38.3	FALSE	-0.568
L11+L10	L11	4.97	0.57	L10	3.59	-0.56	359.8	0.003	Circle	6	0.013	0.01	0.0696	0.96	0.2	0.0697	0.3144	22.1	39.7	FALSE	0.771
L12+L11	L12	4.97	0.62	L11	4.97	0.57	81.8	0.001	Circle	6	0.013	0.01	0.0536	0.88	0.17	0.0542	0.1387	38.6	34.9	FALSE	0.864
L13+L9	L13	4.47	-0.58	L9	3.42	-1.73	310.9	0.004	Circle	6	0.013	0.0309	0.1657	1.49	0.28	0.1657	0.3412	48.6	55.2	FALSE	-0.302
L14+L13	L14	5.25	0.6	L13	4.47	-0.58	301.6	0.004	Circle	6	0.013	0.0309	0.1657	1.52	0.27	0.1657	0.351	47.2	54.2	FALSE	0.873
L15+L14	L15	6.17	1.92	L14	5.25	0.6	310.2	0.004	Circle	6	0.013	0.0309	0.1657	1.57	0.26	0.1657	0.366	45.3	52.9	FALSE	2.186
L16+L15	L16	7.37	2.67	L15	6.17	1.92	311.1	0.002	Circle	6	0.013	0.0309	0.1657	1.26	0.32	0.1658	0.2755	60.2	63.3	FALSE	2.992
L17+L16	L17	7.38	3.53	L16	7.37	2.67	236.3	0.004	Circle	6	0.013	0.0294	0.16	1.48	0.27	0.16	0.3385	47.3	54.1	FALSE	3.804
L18+L17	L18	8.22	4.37	L17	7.38	3.53	330.9	0.003	Circle	6	0.013	0.0294	0.16	1.27	0.31	0.16	0.2827	56.6	61	FALSE	4.677
L19+L18	L19	9.56	5.51	L18	8.22	4.37	332.7	0.003	Circle	6	0.013	0.0294	0.16	1.43	0.28	0.16	0.3284	48.7	55.5	FALSE	5.787
L20+L16	L20	8.52	2.97	L16	7.37	2.77	101.4	0.002	Circle	6	0.013	0.0015	0.0058	0.15	0.12	0.0058	0.2492	2.3	24.5	FALSE	3.001
L21+K28	L21	2.74	-3.95	K28	3.27	-4	68.3	0.001	Circle	10	0.013	0.196	1.0776	1.98	0.83	1.0776	0.5928	181.8	100	TRUE	-2.769
L22+L3	L22	3.32	-0.13	L3	2.93	-2.72	365.6	0.007	Circle	6	0.013	0.013	0.0255	0.68	0.01	0.0261	0.4722	5.4	2	TRUE	0.003
L23+L3	L23	3.05	-2.75	L3	2.93	-3.02	351.1	0.001	Circle	8	0.013	0.0427	0.4197	1.2	0.67	0.4197	0.3351	125.3	100	TRUE	-1.508
L24+L23	L24	2.38	-2.17	L23	3.05	-2.75	386.3	0.002	Circle	8	0.013	0.0427	0.4197	1.2	0.67	0.4197	0.4682	89.6	100	TRUE	-1.062
L25+L24	L25	3.54	-1.91	L24	2.38	-2.17	342	0.001	Circle	8	0.013	0.0427	0.4197	1.2	0.67	0.4197	0.3332	126	100	TRUE	-0.676
L26+L25	L26	3.77	-1.38	L25	3.54	-1.91	215.6	0.002	Circle	8	0.013	0.037	0.282	0.81	0.67	0.282	0.5991	47.1	100	TRUE	-0.627
L27+L26	L27	3.7	-0.86	L26	3.77	-1.38	260.1	0.002	Circle	8	0.013	0.028	0.158	0.64	0.44	0.158	0.5403	29.2	66.2	TRUE	-0.57
L28+L27	L28	3.81	0.26	L27	3.7	-0.86	362.9	0.003	Circle	6	0.013	0.014	0.079	1.01	0.21	0.079	0.3117	25.3	41.8	FALSE	0.47
L29+L28	L29	4.59	1.14	L28	3.81	0.26	366	0.002	Circle	6	0.013	0.014	0.079	0.92	0.22	0.079	0.2751	28.7	44.8	FALSE	1.364
L30+L27	L30	3.71	-0.19	L27	3.7	-0.86	236	0.003	Circle	6	0.013	0.014	0.079	0.98	0.22	0.079	0.299	26.4	43	FALSE	0.025
L31+L30	L31	4.39	0.64	L30	3.71	-0.19	178.8	0.005	Circle	6	0.013	0.014	0.079	1.2	0.18	0.079	0.3823	20.7	36.9	FALSE	0.828
L32+L31	L32	5.42	1.62	L31	4.39	0.64	293.5	0.003	Circle	6	0.013	0.014	0.079	1.04	0.21	0.079	0.3242	24.4	41.2	FALSE	1.828
L33+L32	L33	5.85	1.8	L32	5.42	1.62	90.7	0.002	Circle	6	0.013	0.014	0.079	0.9	0.23	0.0796	0.25	31.6	45.8	FALSE	2.035
L34+L26	L34	4.66	-0.24	L26	3.77	-1.28	287.3	0.004	Circle	6	0.013	0.009	0.124	1.36	0.24	0.124	0.3376	36.7	47.2	TRUE	0.005
L35+L34	L35	5.3	0.7	L34	4.66	-0.24	253.5	0.004	Circle	6	0.013	0	0.11	1.26	0.23	0.11	0.3417	32.2	45.6	FALSE	0.929
L36+L35	L36	5.75	1.65	L35	5.3	0.7	277.7	0.003	Circle	6	0.013	0	0.11	1.22	0.23	0.11	0.3282	33.5	46.6	FALSE	1.884
L37+L36	L37	6.21	2.76	L36	5.75	1.65	322.8	0.003	Circle	6	0.013	0	0	0	0	0	0.329	0	0	FALSE	2.76
L37+L38	L37	6.21	2.76	L38	5.64	2.24	210.4	0.002	Circle	6	0.013	0	0	0	0	0	0.2789	0	0	FALSE	2.76
L38+L39	L38	5.64	2.24	L39	4.89	1.54	215.2	0.003	Circle	6	0.013	0	0.12	1.26	0.24	0.12	0.32	37.5	48.8	FALSE	2.487
L39+L40	L39	4.89	1.54	L40	4.16	0.81	345.7	0.002	Circle	6	0.013	0	0.12	1.06	0.28	0.12	0.2578	46.5	55.9	FALSE	1.821
L40+L42	L40	4.16	0.61	L42	3.25	0.2	345.8	0.001	Circle	8	0.013	0.0017	0.1249	0.88	0.29	0.125	0.4161	30	42.8	FALSE	0.899
L41+L40	L41	6.09	0.95	L40	4.16	0.81	70.6	0.002	Circle	6	0.013	0.0017	0.0049	0.64	0.02	0.0049	0.2499	2	4.7	FALSE	0.977
L42+L43	L42	3.25	0.2	L43	2.56	-0.34	330.1	0.002	Circle	8	0.013	0.0017	0.125	0.98	0.26	0.125	0.4887	25.6	39.3	FALSE	0.464
L43+L44	L43	2.56	-0.34	L44	3.5	-0.85	334.4	0.002	Circle	8	0.013	0.0017	0.125	0.95	0.27	0.125	0.4719	26.5	40.1	FALSE	-0.071
L44+L45	L44	3.5	-0.85	L45	2.57	-1.33	238.4	0.002	Circle	8	0.013	0.0017	0.125	0.55	0.42	0.125	0.5422	23	62.3	FALSE	-0.6

Attachment 2
Peak Wet Weather Flow Model Results

Label	Start Node	Rim (Start) (ft)	Invert (Start) (ft)	Stop Node	Rim (Stop) (ft)	Invert (Stop) (ft)	Length (ft)	Slope (Calculated) (ft/ft)	Section Type	Diameter (in)	Manning's n	Flow (Middle) (cfs)	Velocity (ft/s)	Depth (Middle) (ft)	Flow (Maximum) (cfs)	Capacity (Full Flow) (cfs)	Flow / Capacity (Design) (%)	Depth/Rise (%)	Depth (Maximum) / Rise (%)	Is Ever Surcharged?	Hydraulic Grade (Maximum) (ft)
L45+L25	L45	2.57	-1.38	L25	3.54	-1.76	201.8	0.002	Circle	8	0.013	0.0057	0.1377	0.39	0.67	0.1377	0.5244	26.3	100	TRUE	-0.675
L46+L45	L46	2.92	-0.93	L45	2.57	-1.23	136	0.002	Circle	6	0.013	0.004	0.0128	0.07	0.41	0.0128	0.2635	4.8	81	TRUE	-0.675
L47+L4	L47	3.21	-2.04	L4	3.39	-2.3	88	0.003	Circle	8	0.013	0.0714	0.272	1.62	0.32	0.272	0.6568	41.4	48.5	FALSE	-1.711
L48+L47	L48	3.22	-1.35	L47	3.21	-2.04	228.9	0.003	Circle	8	0.013	0.0504	0.204	1.49	0.28	0.204	0.6634	30.7	41.4	FALSE	-1.072
L49+L48	L49	4.08	-1.2	L48	3.22	-1.35	233.3	0.001	Circle	8	0.013	0.0504	0.204	0.99	0.38	0.204	0.3064	66.6	56.9	FALSE	-0.788
L50+L49	L50	4.26	-0.68	L49	4.08	-1.2	223.6	0.002	Circle	8	0.013	0.0504	0.204	1.35	0.3	0.204	0.5827	35	44.6	FALSE	-0.378
L51+L50	L51	3.85	-0.28	L50	4.26	-0.68	79.7	0.005	Circle	6	0.013	0.0013	0.0077	0.27	0.1	0.0077	0.3975	1.9	20.3	FALSE	-0.245
L52+L50	L52	4.54	-0.36	L50	4.26	-0.68	223.9	0.001	Circle	6	0.013	0.0491	0.1963	1.17	0.4	0.1963	0.2121	92.5	79.9	FALSE	0.071
L53+L52	L53	5.4	0.6	L52	4.54	-0.36	218.4	0.004	Circle	6	0.013	0.0491	0.1963	1.69	0.29	0.1963	0.372	52.8	57.2	FALSE	0.892
L54+L53	L54	6.47	2.07	L53	5.4	0.6	369.4	0.004	Circle	6	0.013	0.037	0.0935	1.21	0.21	0.0935	0.3539	26.4	41.6	FALSE	2.281
L55+L54	L55	6.53	2.37	L54	6.47	2.07	148.7	0.002	Circle	6	0.013	0.0177	0.0425	0.62	0.19	0.0425	0.252	16.9	38	FALSE	2.56
L56+L54	L56	7.59	3.34	L54	6.47	2.17	326.7	0.004	Circle	6	0.013	0.0193	0.051	0.84	0.17	0.0511	0.3358	15.2	34.8	FALSE	3.512
L57+L53	L57	5.49	1.29	L53	5.4	0.65	202.8	0.003	Circle	6	0.013	0.0121	0.1028	1.16	0.23	0.1028	0.3152	32.6	46	FALSE	1.523
L58+L57	L58	6.75	2.35	L57	5.49	1.29	295.3	0.004	Circle	6	0.013	0.0121	0.1028	1.21	0.22	0.1028	0.3362	30.6	44.8	FALSE	2.574
L59+L58	L59	7.91	3.31	L58	6.75	2.35	250	0.004	Circle	6	0.013	0.0121	0.1028	1.24	0.22	0.103	0.3477	29.6	43.9	FALSE	3.531
L60+L59	L60	8.08	3.53	L59	7.91	3.31	108.8	0.002	Circle	6	0.013	0.0121	0.1028	1.02	0.26	0.1028	0.2523	40.7	51.1	FALSE	3.792
L61+L5	L61	4.57	-0.73	L5	4.17	-1.13	152.5	0.003	Circle	6	0.013	0.006	0.034	0.71	0.15	0.034	0.2874	11.8	29.3	FALSE	-0.581
L62+L34	L62	4.95	0.45	L34	4.66	-0.19	146.7	0.004	Circle	6	0.013	0.009	0.014	0.66	0.08	0.014	0.3706	3.8	16.4	FALSE	0.515
M2+I43	M2	5.62	0.3	I43	5.62	0.22	42.2	0.002	Circle	10	0.013	0.0025	0.897	1.64	0.83	0.897	0.9539	94	100	TRUE	1.611
M2+N1	M2	5.62	2.62	N1	5.32	2.32	82	0.004	Circle	12	0.013	0	0	0	0.03	0	2.1549	0	2.5	FALSE	2.66
M3+M2	M3	6.98	1.33	M2	5.62	0.3	379.8	0.003	Circle	8	0.013	0.0015	0.8973	2.57	0.67	0.8973	0.6293	142.6	100	TRUE	3.687
M4+M31	M4	9.9	3	M31	7	2.52	142.5	0.003	Circle	8	0.013	0.0122	0.6174	1.77	0.67	0.6174	0.7013	88	100	TRUE	6.051
M5+M4	M5	11.95	3.9	M4	9.9	3.05	372.5	0.002	Circle	8	0.013	0.0519	0.6174	1.77	0.67	0.6174	0.5772	107	100	TRUE	7.038
M6+M22	M6	12.3	6.22	M22	12.3	5.54	341.1	0.002	Circle	10	0.013	0.0744	0.3512	0.64	0.83	0.3513	0.9782	35.9	100	TRUE	7.047
M7+M6	M7	12.4	6.45	M6	12.3	6.22	115.5	0.002	Circle	10	0.013	0.0979	0.3513	0.71	0.71	0.3513	0.9777	35.9	85.5	FALSE	7.048
M8+M7	M8	14.41	7.71	M7	12.4	6.45	192.5	0.007	Circle	10	0.013	0.1057	0.3513	2.36	0.26	0.3521	1.7725	19.8	31.7	FALSE	7.979
M12+M40	M12	14.95	7.4	M40	13.27	5.72	338.8	0.005	Circle	8	0.013	0.041	0.2462	0.92	0.48	0.2466	0.8509	28.9	71.9	TRUE	7.665
M13+M12	M13	16.33	8.78	M12	14.95	7.4	275.6	0.005	Circle	8	0.013	0.0368	0.2463	1.92	0.26	0.2466	0.8551	28.8	39.6	FALSE	9.045
M14+M5	M14	10.14	5.82	M5	11.95	3.95	327.8	0.006	Circle	6	0.013	0.001	0.02	0.1	0.5	0.0209	0.4238	4.7	100	TRUE	7.038
M16+M8	M16	14.85	8.05	M8	14.41	7.81	19.7	0.012	Circle	6	0.013	0.0005	0.01	0.44	0.09	0.01	0.6193	1.6	17.4	FALSE	8.086
M18+M5	M18	12	4.51	M5	11.95	4.2	153.9	0.002	Circle	10	0.013	0.0696	0.3512	0.64	0.83	0.3513	0.9833	35.7	100	TRUE	7.039
M19+M18	M19	12.1	4.7	M18	12	4.51	94.8	0.002	Circle	10	0.013	0.063	0.3512	0.64	0.83	0.3513	0.9808	35.8	100	TRUE	7.04
M20+M19	M20	12.2	4.86	M19	12.1	4.7	78	0.002	Circle	10	0.013	0.0706	0.3512	0.64	0.83	0.3513	0.9923	35.4	100	TRUE	7.042
M21+M20	M21	12.3	5.45	M20	12.2	4.86	296.6	0.002	Circle	10	0.013	0.074	0.3512	0.64	0.83	0.3513	0.9771	35.9	100	TRUE	7.044
M22+M21	M22	12.3	5.54	M21	12.3	5.45	43.3	0.002	Circle	10	0.013	0.0885	0.3512	0.64	0.83	0.3513	0.9988	35.2	100	TRUE	7.045
M23+M24	M23	7.5	4.92	M24	7.4	4.53	195	0.002	Circle	8	0.013	0.0387	0.28	0.8	0.67	0.28	0.5404	51.8	100	TRUE	5.999
M24+M25	M24	7.4	4.56	M25	7.3	4.04	260	0.002	Circle	8	0.013	0.0327	0.28	0.8	0.67	0.28	0.5404	51.8	100	TRUE	5.969
M25+M26	M25	7.3	4.04	M26	7.3	3.5	270	0.002	Circle	8	0.013	0.0371	0.28	0.8	0.67	0.28	0.5404	51.8	100	TRUE	5.909
M26+M27	M26	7.3	3.5	M27	7.2	3.25	124.9	0.002	Circle	8	0.013	0.022	0.28	0.8	0.67	0.28	0.5406	51.8	100	TRUE	5.907
M27+M29	M27	7.2	3.25	M29	7.1	3.18	35.2	0.002	Circle	8	0.013	0.0237	0.28	0.8	0.67	0.28	0.5389	52	100	TRUE	5.906
M28+N11	M28	7.3	0.37	N11	7.2	-0.1	236.4	0.002	Circle	8	0.013	0.0031	0.0109	0.78	0.04	0.0109	0.5388	2	6.7	FALSE	0.425
M29+M31	M29	7.1	3.18	M31	7	2.52	328.8	0.002	Circle	8	0.013	0.0373	0.28	0.8	0.67	0.28	0.5414	51.7	100	TRUE	5.905
M30+N29	M30	7.3	0.64	N29	7.2	0.13	255.2	0.002	Circle	8	0.013	0.006	0.0109	0.74	0.06	0.0109	0.5402	2	8.7	FALSE	0.696
M31+M3	M31	7	2.52	M3	6.98	1.33	357.1	0.003	Circle	8	0.013	0.0033	0.8973	2.57	0.67	0.8973	0.6975	128.6	100	TRUE	5.733
M32+M33	M32	7.3	2.88	M33	7.3	2.49	195	0.002	Circle	8	0.013	0.0062	0.0123	0.84	0.05	0.0123	0.5404	2.3	8.2	FALSE	2.942
M33+M34	M33	7.3	2.49	M34	7.2	1.91	287.6	0.002	Circle	8	0.013	0.0062	0.0123	0.7	0.06	0.0123	0.5426	2.3	9.7	FALSE	2.552
M34+N22	M34	7.2	1.91	N22	7.1	1.4	253.5	0.002	Circle	8	0.013	0.011	0.0246	0.64	0.11	0.0246	0.542	4.5	16.6	FALSE	2.022
M35+M34	M35	7.2	2.16	M34	7.2	1.91	123.6	0.002	Circle	8	0.013	0.0048	0.0123	0.76	0.06	0.0123	0.5434	2.3	9.2	FALSE	2.221
M36+M37	M36	7.3	3.24	M37	7.4	2.73	256.6	0.002	Circle	8	0.013	0.0108	0.0287	0.62	0.13	0.0288	0.5387	5.3	19	FALSE	3.366
M37+N24	M37	7.4	2.73	N24	7.3	2.21	259.3	0.002	Circle	8	0.013	0.0108	0.0287	0.62	0.13	0.0289	0.5411	5.3	19	FALSE	2.859
M38+M39	M38	19.58	12.03	M39	18.79	11.24	153	0.005	Circle	8	0.013	0.0532	0.2464	1.95	0.26	0.2472	0.8683	28.4	39	FALSE	12.291
M39+M43	M39	18.79	11.24	M43	17.59	10.04	240	0.005	Circle	8	0.013	0.0367	0.2465	1.94	0.26	0.2466	0.8544	28.8	39.2	FALSE	11.505
M40+M5	M40	13.27	5.72	M5	11.95	4.4	265.2	0.005	Circle	8	0.013	0.0284	0.2465	0.71	0.67	0.2465	0.8525	28.9	100	TRUE	7.039
M41+M13	M41	16.89	9.34	M13	16.33	8.78	109.7	0.005	Circle	8	0.013	0.0449	0.2463	1.94	0.26	0.2464	0.8633	28.5	39.3	FALSE	9.604
M42+M41	M42	17.07	9.82	M41	16.89	9.34	37	0.013	Circle	8	0.013	0.0401	0.2463	2.71	0.2	0.2464	1.3763	17.9	30.7	FALSE	10.029
M43+M42	M43	17.59	10.04	M42	17.07	9.82	103	0.002	Circle	8	0.013	0.0458	0.2463	1.49	0.32	0.2465	0.5585	44.1	48	FALSE	10.373
METERING STATION+T2	METERING STATION	0	-14.66	T2	3.04	-14.76	444.9	0	Circle	24	0.013	1.7982	8.9574	3.04	1.77	8.9574	3.3914	264.1	88.7	TRUE	-12.603
N1+K6	N1	5.32	-2.08	K6	4.44	-2.86	253.3	0.003	Circle	12	0.013	0.153	0.3379	1.75	0.29	0.338	1.977	17.1	29.4	FALSE	-1.781
N2+N1	N2	5.71	-1.39	N1	5.32	-2.08	295.7	0.002	Circle	10	0.013	0.153	0.3725	1.66	0.36	0.3725	1.0583	35.2	43	FALSE	-1.03
N3+N21	N3	6	-0.64	N21	6	-0.82	88.8	0.002	Circle	10	0.013	0.1316	0.3152	1.6	0.32	0.3152	0.9864	32	38.9	FALSE	-0.301
N4+N3	N4	6.14	0.24	N3	6	-0.64	334.7	0.003	Circle	10	0.013	0.1316	0.3152	1.64	0.32	0.3152	1.1234	28.1	38.3	FALSE	0.564
N5+N4	N5	7.28	1.13	N4	6.14	0.29	332.5	0.003	Circle	10	0.013	0.1098	0.2619	1.51	0.3	0.2619	1.1012	23.8	35.5	FALSE	1.427
N6+N5	N6	8.64	1.99	N5	7.28	1.13	332.5	0.003	Circle	10	0.013	0.1098	0.2619	1.52	0.29	0.2619	1.1142	23.5	35.2	FALSE	2.285
N7+N6	N7	9.69	2.84	N6	8.64	1.99	332.7	0.003	Circle	10	0.013	0.1098	0.2619	1.52	0.29	0.2619	1.1074	23.7	35.4	FALSE	3.136
N8+N9	N8	13.8	4.05	N9	11.48	3.68	118.7	0.003	Circle	10	0.013	0.1098	0.2619	1.64	0.28	0.262	1.2232	21.4	33.4	FALSE	4.331
N9+N7	N9	11.48	3.68	N7	9.69	2.84	284	0.003	Circle	10	0.013	0.1098	0.2619	1.6	0.28	0.2619	1.1915	22	34	FALSE	3.965
N10+N13	N10	7.1	-0.52	N13	7	-0.88	176	0.002	Circle	8	0.013	0.006	0.0109	0.78	0.06	0.0109	0.5465	2	8.4	FALSE	-0.464
N11+N12	N11	7.2	-0.1	N12	7.1	-0.56	227.2	0.002	Circle	8	0.013	0.0062	0.0218	0.77	0.09	0.0218	0.5437	4	13.6	FALSE	0.001
N12+N13	N12	7.1	-0.56	N13	7	-0.88	157.9	0.002	Circle	8	0.013	0.0062	0.0218	0.69	0.1	0.0218	0.544	4	14.6	FALSE	-0.46

Attachment 2
Peak Wet Weather Flow Model Results

Label	Start Node	Rim (Start) (ft)	Invert (Start) (ft)	Stop Node	Rim (Stop) (ft)	Invert (Stop) (ft)	Length (ft)	Slope (Calculated) (ft/ft)	Section Type	Diameter (in)	Manning's n	Flow (Middle) (cfs)	Velocity (ft/s)	Depth (Middle) (ft)	Flow (Maximum) (cfs)	Capacity (Full Flow) (cfs)	Flow / Capacity (Design) (%)	Depth/Rise (%)	Depth (Maximum) / Rise (%)	Is Ever Surcharged?	Hydraulic Grade (Maximum) (ft)
N13+N14	N13	7	-0.88	N14	6	-1.21	167	0.002	Circle	8	0.013	0.0122	0.0327	0.35	0.21	0.0327	0.5371	6.1	31.1	FALSE	-0.737
N14+N2	N14	6	-1.21	N2	5.71	-1.39	88.4	0.002	Circle	10	0.013	0.153	0.3725	1.72	0.35	0.3725	0.9886	37.7	41.8	FALSE	-0.838
N15+N16	N15	7.3	0.75	N16	7.2	0.25	251.8	0.002	Circle	8	0.013	0.0046	0.0123	0.72	0.06	0.0123	0.5385	2.3	9.5	FALSE	0.812
N16+N17	N16	7.2	0.25	N17	7.1	-0.21	228.2	0.002	Circle	8	0.013	0.0046	0.0123	0.81	0.05	0.0123	0.5425	2.3	7.6	FALSE	0.311
N17+N20	N17	7.1	-0.27	N20	7	-0.67	197	0.002	Circle	8	0.013	0.0046	0.0123	0.74	0.06	0.0123	0.5445	2.3	9.4	FALSE	-0.208
N18+N19	N18	7.2	0.29	N19	7.1	-0.22	255.9	0.002	Circle	8	0.013	0.0046	0.0123	0.72	0.06	0.0123	0.5394	2.3	9.5	FALSE	0.352
N19+N20	N19	7.1	-0.22	N20	7	-0.67	224.1	0.002	Circle	8	0.013	0.0046	0.0123	0.82	0.05	0.0123	0.5415	2.3	7.7	FALSE	-0.159
N20+N21	N20	7	-0.67	N21	6	-0.82	72	0.002	Circle	8	0.013	0.0092	0.0246	0.17	0.29	0.0246	0.5515	4.5	43.2	FALSE	-0.457
N21+N14	N21	6	-0.82	N14	6	-1.21	195.8	0.002	Circle	10	0.013	0.1408	0.3398	1.54	0.35	0.3398	0.9778	34.8	42.5	FALSE	-0.457
N22+N23	N22	7.1	1.4	N23	7.1	0.98	212	0.002	Circle	8	0.013	0.011	0.0246	0.7	0.1	0.0246	0.5378	4.6	15.7	FALSE	1.511
N23+N28	N23	7.1	0.98	N28	7	0.59	193.2	0.002	Circle	8	0.013	0.011	0.0246	0.69	0.11	0.0246	0.5429	4.5	15.8	FALSE	1.09
N24+N25	N24	7.3	2.21	N25	7.3	1.98	116.3	0.002	Circle	8	0.013	0.0108	0.0287	0.63	0.13	0.0288	0.5374	5.3	18.9	FALSE	2.337
N25+N26	N25	7.3	1.98	N26	7.2	1.46	262.5	0.002	Circle	8	0.013	0.0108	0.0287	0.62	0.13	0.0288	0.5378	5.3	19	FALSE	2.107
N26+N27	N26	7.2	1.46	N27	7.1	0.96	247.5	0.002	Circle	8	0.013	0.0108	0.0287	0.71	0.11	0.0287	0.5431	5.3	17.2	FALSE	1.585
N27+N28	N27	7.1	0.96	N28	7	0.59	183	0.002	Circle	8	0.013	0.0108	0.0287	0.64	0.12	0.0287	0.5433	5.3	18.7	FALSE	1.086
N28+N4	N28	7	0.59	N4	6.14	0.29	150.3	0.002	Circle	8	0.013	0.0218	0.0533	0.67	0.19	0.0533	0.5398	9.9	27.9	FALSE	0.774
N29+N10	N29	7.2	0.13	N10	7.1	-0.52	325.6	0.002	Circle	8	0.013	0.006	0.0109	0.72	0.06	0.0109	0.5399	2	8.8	FALSE	0.186
N30+N11	N30	7.3	0.17	N11	7.2	-0.1	134	0.002	Circle	8	0.013	0.0031	0.0109	0.79	0.06	0.0109	0.5424	2	8.3	FALSE	0.226
O3+N8	O3	17.6	8.2	N8	13.8	4.1	205.1	0.02	Circle	8	0.013	0.1098	0.2615	2.75	0.19	0.2623	1.7084	15.3	28.2	FALSE	8.392
O4+O3	O4	15.39	9.13	O3	17.6	8.3	277.4	0.003	Circle	8	0.013	0.0912	0.2128	1.51	0.28	0.2128	0.661	32.2	42.4	FALSE	9.415
O5+O4	O5	14.73	10.25	O4	15.39	9.13	398.6	0.003	Circle	8	0.013	0.0912	0.2125	1.47	0.29	0.2126	0.6405	33.2	43.1	FALSE	10.54
O6+O5	O6	13.82	11.05	O5	14.73	10.25	399.4	0.002	Circle	8	0.013	0.0912	0.2126	1.3	0.32	0.2126	0.5408	39.3	47.5	FALSE	11.369
O7+O6	O7	15.16	11.56	O6	13.82	11.05	426.9	0.001	Circle	8	0.013	0.0912	0.2126	1.09	0.36	0.2126	0.4177	50.9	54.7	FALSE	11.933
O8+O59	O8	16.28	12.23	O59	16.36	11.92	102.7	0.003	Circle	8	0.013	0.0788	0.1798	1.43	0.26	0.1798	0.6639	27.1	38.9	FALSE	12.496
O9+O8	O9	17.01	12.76	O8	16.28	12.23	139.7	0.004	Circle	6	0.013	0.0711	0.1588	1.48	0.27	0.1588	0.3456	46	53.5	FALSE	13.03
O10+O9	O10	17.95	13.1	O9	17.01	12.76	156.6	0.002	Circle	8	0.013	0.0711	0.1588	1.21	0.27	0.1588	0.563	28.2	40.3	FALSE	13.373
O11+O10	O11	19.41	14.01	O10	17.95	13.15	259.2	0.003	Circle	8	0.013	0.0543	0.1445	1.34	0.23	0.1445	0.696	20.8	34.7	FALSE	14.242
O12+O11	O12	19.9	14.5	O11	19.41	14.01	394.2	0.001	Circle	8	0.013	0.0543	0.1445	0.94	0.3	0.1445	0.426	33.9	45.2	FALSE	14.803
O13+O12	O13	22.22	16.47	O12	19.9	14.5	414.6	0.005	Circle	8	0.013	0.0543	0.1445	1.53	0.21	0.1445	0.8329	17.3	31.5	FALSE	16.683
O14+O13	O14	21.75	17.35	O13	22.22	16.87	129.7	0.004	Circle	8	0.013	0.0105	0.0279	0.88	0.1	0.0282	0.7351	3.8	14.6	FALSE	17.455
O15+O14	O15	24.85	19.05	O14	21.75	17.35	307.9	0.006	Circle	8	0.013	0.0105	0.0279	0.87	0.1	0.03	0.8979	3.1	14.8	FALSE	19.143
O16+O15	O16	28.01	22.56	O15	24.85	19.2	234.7	0.014	Circle	6	0.013	0.0105	0.0279	1.04	0.08	0.0309	0.6713	4.2	15.9	FALSE	22.645
O17+O3	O17	10.93	8.62	O3	17.6	8.3	161.2	0.002	Circle	8	0.013	0.0186	0.0493	0.66	0.18	0.0493	0.5384	9.2	26.7	FALSE	8.8
O18+O17	O18	15.83	11.93	O17	10.93	8.62	264	0.013	Circle	8	0.013	0.0051	0.0136	0.74	0.04	0.0136	1.353	1	5.3	FALSE	11.966
O19+O17	O19	17.6	10.75	O17	10.93	8.62	85.9	0.025	Circle	6	0.013	0.0135	0.0357	1.09	0.08	0.0362	0.8835	4	16.6	FALSE	10.84
O20+O19	O20	17	10.98	O19	17.6	10.75	115.6	0.002	Circle	6	0.013	0.0042	0.0057	0.68	0.03	0.0057	0.2503	2.3	6.2	FALSE	11.011
O21+O19	O21	20.09	12.64	O19	17.6	10.75	393.6	0.005	Circle	6	0.013	0.0093	0.0302	0.97	0.11	0.0302	0.3888	7.8	21.5	FALSE	12.761
O22+O21	O22	20	13.27	O21	20.09	12.64	318.2	0.002	Circle	6	0.013	0.0093	0.03	0.64	0.14	0.0302	0.2497	12	28.9	FALSE	13.418
O23+O22	O23	21.65	15.65	O22	20	13.27	469.8	0.005	Circle	6	0.013	0.0093	0.0301	0.89	0.11	0.0301	0.3993	7.5	22.8	FALSE	15.768
O24+O23	O24	21.18	15.84	O23	21.65	15.65	96.7	0.002	Circle	6	0.013	0.0093	0.03	0.67	0.14	0.03	0.2487	12.1	27.9	FALSE	15.983
O25+O7	O25	16.12	12.07	O7	15.16	11.61	177.4	0.003	Circle	6	0.013	0.0124	0.0328	0.76	0.14	0.0335	0.2857	11.5	27.2	FALSE	12.222
O26+O25	O26	18.86	13.26	O25	16.12	12.12	332.8	0.003	Circle	6	0.013	0.0031	0.0131	0.8	0.07	0.0141	0.3284	4	13.8	FALSE	13.324
O27+O26	O27	19.94	13.44	O26	18.86	13.31	65.4	0.002	Circle	6	0.013	0.0031	0.0066	0.68	0.03	0.0066	0.2502	2.6	6	FALSE	13.475
O28+O26	O28	19	14.28	O26	18.86	13.41	434.3	0.002	Circle	6	0.013	0	0.0065	0.7	0.03	0.0079	0.2511	2.6	6.8	FALSE	14.333
O29+O28	O29	23	19.53	O28	19	14.28	174	0.03	Circle	6	0.013	0	0	0	0	0	0.9746	0	0	FALSE	19.544
O29+O30	O29	23	19.53	O30	22.78	19.08	226	0.002	Circle	6	0.013	0	0	0	0.04	0	0.2504	0	7.4	FALSE	19.599
O30+O35	O30	22.78	17.63	O35	21.74	16.44	175.9	0.007	Circle	6	0.013	0.0168	0.0492	0.99	0.05	0.0492	0.4615	10.7	9.8	FALSE	17.699
O31+O30	O31	23	18.76	O30	22.78	18.58	89.5	0.002	Circle	6	0.013	0.009	0.0164	0.8	0.08	0.0164	0.2516	6.5	16.1	FALSE	18.845
O32+O31	O32	24	19.18	O31	23	18.76	210.5	0.002	Circle	6	0.013	0.009	0.0164	0.83	0.08	0.0164	0.2506	6.5	15.6	FALSE	19.264
O33+O32	O33	25	19.71	O32	24	19.18	262.5	0.002	Circle	6	0.013	0.009	0.0164	0.76	0.08	0.0165	0.2521	6.5	16.7	FALSE	19.793
O34+O10	O34	23.33	14.69	O10	17.95	13.35	267.7	0.005	Circle	6	0.013	0.0168	0.0492	1.09	0.07	0.0492	0.397	12.4	13.9	FALSE	14.769
O35+O34	O35	21.74	16.44	O34	23.33	14.69	316.4	0.006	Circle	6	0.013	0.0168	0.0492	1.08	0.07	0.0492	0.4173	11.8	13.5	FALSE	16.519
O36+O30	O36	24.12	18.01	O30	22.78	17.68	164.4	0.002	Circle	6	0.013	0.0077	0.0164	0.78	0.08	0.0164	0.2514	6.5	16.3	FALSE	18.093
O37+O25	O37	16.63	12.23	O25	16.12	12.07	80.9	0.002	Circle	6	0.013	0.0093	0.0197	0.71	0.1	0.0197	0.2495	7.9	19.8	FALSE	12.334
O38+O37	O38	17.23	12.46	O37	16.63	12.23	117.5	0.002	Circle	6	0.013	0.0031	0.0066	0.71	0.04	0.0066	0.2482	2.6	7	FALSE	12.495
O39+O37	O39	16.48	12.31	O37	16.63	12.23	40.8	0.002	Circle	6	0.013	0.0062	0.0131	0.88	0.06	0.0131	0.2484	5.3	12.8	FALSE	12.377
O40+O39	O40	16.65	12.38	O39	16.48	12.31	37.3	0.002	Circle	6	0.013	0.0031	0.0066	0.28	0.09	0.0066	0.2431	2.7	17.7	FALSE	12.434
O41+O40	O41	16.5	12.47	O40	16.65	12.38	44.5	0.002	Circle	6	0.013	0.0031	0.0066	0.64	0.02	0.0066	0.2523	2.6	4.2	FALSE	12.502
O42+O39	O42	16.78	12.41	O39	16.48	12.31	47.6	0.002	Circle	6	0.013	0.0031	0.0066	0.65	0.02	0.0066	0.2572	2.6	4.8	FALSE	12.445
O43+O42	O43	17.92	13.6	O42	16.78	12.41	181.9	0.007	Circle	6	0.013	0.0031	0.0066	0.65	0.02	0.0066	0.4538	1.4	4.5	FALSE	13.628
O44+O43	O44	18.13	13.78	O43	17.92	13.64	69.2	0.002	Circle	6	0.013	0.0031	0.0066	0.69	0.03	0.0066	0.2524	2.6	6.2	FALSE	13.815
O45+O8	O45	17.06	12.55	O8	16.28	12.23	65.8	0.005	Circle	6	0.013	0.0078	0.021	0.69	0.11	0.021	0.3913	5.4	21.2	FALSE	12.64
O46+O45	O46	18	13.61	O45	17.06	12.55	212.5	0.005	Circle	6	0.013	0.0016	0.007	0.75	0.04	0.007	0.3963	1.8	8.5	FALSE	13.647
O47+O45	O47	16.84	12.91	O45	17.06	12.55	71.5	0.005	Circle	6	0.013	0.0062	0.014	0.85	0.06	0.014	0.3981	3.5	11.3	FALSE	12.973
O48+O47	O48	17.43	13.52	O47	16.84	12.91	122	0.005	Circle	6	0.013	0.0016	0.007	0.69	0.03	0.007	0.3967	1.8	6.3	FALSE	13.552
O49+O47	O49	17.41	13.27	O47	16.84	12.91	72.6	0.005	Circle	6	0.013	0.0047	0.007	0.68	0.03	0.007	0.3951	1.8	5.9	FALSE	13.304
O50+O49	O50	17.95	14.13	O49	17.41	13.27	172.1	0.005	Circle	6	0.013	0.0047	0.007	0.63	0.02	0.007	0.3966	1.8	3.9	FALSE	14.159
O51+O13	O51	24.5	18.4	O13	22.22	16.57	467.6	0.004	Circle	6	0.013	0.0438	0.1166	1.32	0.23	0.1166	0.351	33.2	45.9	FALSE	18.633
O52+O51	O52	26.81	19.11	O51	24.5	18.4	213.3	0.003	Circle	6	0.013	0.029	0.0772	1.04	0.2	0.0772	0.3237	23.8	40.3	FALSE	19.315

Attachment 2
Peak Wet Weather Flow Model Results

Label	Start Node	Rim (Start) (ft)	Invert (Start) (ft)	Stop Node	Rim (Stop) (ft)	Invert (Stop) (ft)	Length (ft)	Slope (Calculated) (ft/ft)	Section Type	Diameter (in)	Manning's n	Flow (Middle) (cfs)	Velocity (ft/s)	Depth (Middle) (ft)	Flow (Maximum) (cfs)	Capacity (Full Flow) (cfs)	Flow / Capacity (Design) (%)	Depth/Rise (%)	Depth (Maximum) / Rise (%)	Is Ever Surcharged?	Hydraulic Grade (Maximum) (ft)
O53+O52	O53	27	19.48	O52	26.81	19.11	188.5	0.002	Circle	6	0.013	0.0145	0.01	0.81	0.05	0.01	0.2486	4	10.5	FALSE	19.533
O54+O52	O54	31.19	20.39	O52	26.81	19.11	380.1	0.003	Circle	6	0.013	0.0145	0.0672	0.97	0.19	0.0672	0.3256	20.6	38.4	FALSE	20.584
O55+O54	O55	28.75	20.95	O54	31.19	20.44	399.4	0.001	Circle	6	0.013	0.0145	0.0672	0.68	0.25	0.0672	0.2005	33.5	50.4	FALSE	21.204
O56+O55	O56	27.04	22.24	O55	28.75	20.95	376.5	0.003	Circle	6	0.013	0.0145	0.0672	0.97	0.19	0.0674	0.3284	20.5	38.2	FALSE	22.431
O57+O51	O57	25.61	19.76	O51	24.5	18.4	365.2	0.004	Circle	6	0.013	0.0148	0.0394	0.78	0.15	0.0394	0.3424	11.5	30.3	FALSE	19.916
O58+O57	O58	26.81	20.57	O57	25.61	19.76	403.4	0.002	Circle	6	0.013	0.0148	0.0394	0.61	0.18	0.0394	0.2514	15.7	36.4	FALSE	20.752
O59+O7	O59	16.36	11.92	O7	15.16	11.56	182.3	0.002	Circle	8	0.013	0.0788	0.1798	1.22	0.29	0.1798	0.537	33.5	43.8	FALSE	12.214
O60+O61	O60	15.68	9.18	O61	14.55	7.85	199	0.007	Circle	14	0.013	0.1346	0.3413	2.29	0.23	0.3413	4.3933	7.8	19.7	FALSE	9.411
O61+M8	O61	14.55	7.85	M8	14.41	7.81	11.8	0.003	Circle	14	0.013	0.1272	0.3413	2	0.25	0.3413	3.1288	10.9	21.7	FALSE	8.112
O62+O18	O62	17.08	13.18	O18	15.83	11.93	249	0.005	Circle	6	0.013	0.0051	0.0136	0.89	0.07	0.0136	0.3975	3.4	13.1	FALSE	13.241
O63+O62	O63	17.27	13.37	O62	17.08	13.18	38	0.005	Circle	6	0.013	0.0051	0.0136	0.85	0.06	0.0136	0.3967	3.4	11.4	FALSE	13.427
T1+T0	T1	4.57	-15.43	T0	#N/A	-17.68	329.2	0.007	Circle	24	0.013	1.7982	8.9574	5.86	0.98	8.9573	18.7015	47.9	48.9	FALSE	-14.443
T2+T1	T2	3.04	-14.76	T1	4.57	-15.43	505.8	0.001	Circle	24	0.013	1.7982	8.9574	3.62	1.47	8.9574	8.2331	108.8	73.4	FALSE	-13.154
T3+METERING STATION	T3	2.52	-14.63	METERING STATION	0	-14.66	55	0.001	Circle	24	0.013	1.7982	8.9574	2.85	2	8.9574	5.2832	169.5	100	TRUE	-12.567
T4+T3	T4	1.41	-12.09	T3	2.52	-14.63	474.9	0.005	Circle	24	0.013	1.7982	8.9575	5.17	1.08	8.9574	16.5436	54.1	54.1	TRUE	-11.029
T5+T4	T5	0.16	-11.76	T4	1.41	-11.99	352.3	0.001	Circle	24	0.013	1.7982	8.9575	3.5	1.52	8.9574	5.7799	155	75.9	FALSE	-10.07
T6+T5	T6	0.17	-11.38	T5	0.16	-11.66	382.1	0.001	Circle	24	0.013	1.7982	8.9575	3.21	1.66	8.9575	6.1236	146.3	83.1	FALSE	-9.585
T7+T6	T7	-0.07	-10.42	T6	0.17	-11.28	480.8	0.002	Circle	24	0.013	1.7982	8.9575	3.48	1.52	8.9575	9.5671	93.6	76.2	FALSE	-8.882
T8+T7	T8	0.14	-10.08	T7	-0.07	-10.32	501.9	0	Circle	24	0.013	1.7982	8.9576	3.19	1.67	8.9575	4.9467	181.1	83.7	FALSE	-8.151
T9+T8	T9	0.14	-9.67	T8	0.14	-9.98	497.7	0.001	Circle	24	0.013	1.7982	8.9576	2.94	1.86	8.9575	5.6456	158.7	93	TRUE	-7.593
T10+T9	T10	0.07	-9.12	T9	0.14	-9.57	446.9	0.001	Circle	24	0.013	1.7982	8.9576	2.93	1.88	8.9576	7.1782	124.8	93.8	FALSE	-7.153
T11+T10	T11	-0.24	-8.44	T10	0.07	-9.02	325.8	0.002	Circle	24	0.013	1.7982	8.9577	3.25	1.64	8.9576	9.5445	93.9	81.8	FALSE	-6.828
T12+T11	T12	0.55	-8.25	T11	-0.24	-8.49	482.2	0	Circle	24	0.013	1.7982	8.9578	3.01	1.8	8.9577	5.0467	177.5	89.8	TRUE	-6.246
T13+T12	T13	2.14	-7.3	T12	0.55	-8.25	504	0.002	Circle	24	0.013	1.7982	8.9578	3.16	1.69	8.9578	9.8211	91.2	84.6	TRUE	-5.69
T14+T13	T14	7.1	-7.1	T13	2.14	-7.3	478.1	0	Circle	24	0.013	1.7982	8.9579	3.03	1.78	8.9578	4.6267	193.6	89.2	TRUE	-5.092
T15+T14	T15	2.75	-12.9	T14	7.1	-7.9	93	-0.054	Circle	24	0.013	1.7982	8.9579	2.85	2	8.9578	52.4516	17.1	100	TRUE	-5.092
T16+T15	T16	1.34	-6.26	T15	2.75	-6.38	34.4	0.003	Circle	21	0.013	1.4197	7.4519	4.08	1.24	7.4519	9.358	79.6	71	FALSE	-5.062
T17+T16	T17	0.96	-5.84	T16	1.34	-6.26	481.7	0.001	Circle	21	0.013	1.4197	7.452	3.29	1.56	7.4519	4.6785	159.3	89.2	TRUE	-4.01
T18+T17	T18	1.12	-5.23	T17	0.96	-5.79	540.4	0.001	Circle	21	0.013	1.4197	7.452	3.1	1.75	7.4519	5.1004	146.1	100	TRUE	-3.002
T19+T18	T19	2.23	-4.72	T18	1.12	-5.23	500	0.001	Circle	21	0.013	1.4197	7.452	3.1	1.75	7.4519	5.0602	147.3	100	TRUE	-2.02
T20+T19	T20	2.72	-3.98	T19	2.23	-4.62	331.9	0.002	Circle	18	0.013	0.6762	2.2221	1.26	1.5	2.2221	4.6124	48.2	100	TRUE	-1.983
T21+T20	T21	3.07	-3.43	T20	2.72	-3.98	338.4	0.002	Circle	18	0.013	0.6617	2.1931	1.24	1.5	2.1931	4.2346	51.8	100	TRUE	-1.948
T22+T21	T22	2.81	-3.39	T21	3.07	-3.43	197.4	0	Circle	18	0.013	0.62	2.1159	1.2	1.47	2.1159	1.4952	141.5	97.8	FALSE	-1.939
T23+T22	T23	6.87	-3.03	T22	2.81	-3.29	446	0.001	Circle	18	0.013	0.62	2.116	1.36	1.23	2.116	2.5361	83.4	82	FALSE	-1.897
T24+T23	T24	3.66	-2.69	T23	6.87	-2.93	316.7	0.001	Circle	18	0.013	0.529	1.9796	1.74	0.92	1.9796	2.8915	68.5	61.3	FALSE	-1.77
T25+T24	T25	3.95	-2.59	T24	3.66	-2.62	282.2	0	Circle	18	0.013	0.529	1.9796	1.76	0.91	1.9796	1.083	182.8	60.7	FALSE	-1.599
T26+T25	T26	7.03	-2.32	T25	3.95	-2.52	305.6	0.001	Circle	18	0.013	0.465	1.792	1.75	0.84	1.792	2.6871	66.7	56.1	FALSE	-1.454
T27+T26	T27	7.85	-2.05	T26	7.03	-2.22	355.8	0	Circle	18	0.013	0.465	1.792	1.81	0.82	1.792	2.296	78.1	54.7	FALSE	-1.173
T28+T27	T28	8.67	-1.93	T27	7.85	-1.95	162.1	0	Circle	18	0.013	0.465	1.792	1.95	0.77	1.792	1.1667	153.6	51.6	FALSE	-1.082
T29+T28	T29	4.98	-1.62	T28	8.67	-1.93	233.8	0.001	Circle	18	0.013	0.465	1.792	2.1	0.73	1.792	3.8248	46.9	48.7	FALSE	-0.888

Abbreviations
PWWF: Peak Wet Weather Flow
CFS: Cubic Feet per Second
ft: Feet
s: Seconds
in: Inches

APPENDIX C

FLOW DEMAND CALCULATIONS

Scenario 1: 2025 Flow Demand Calculations

Scenario 2: 2035 Flow Demand Calculations

Scenario 3: 2035 Enhanced Flow Demand Calculations

Appendix C: Table 1
Land Use Changes - 2014 Zoning versus Proposed 2035 Zoning

APN	Address	2014 Zoning (2)	2035 Zoning (3)
063-121-400	2091 BAY RD, EAST PALO ALTO	Parks/Recreation/Conservation	Office
063-122-030	BAY RD, EAST PALO ALTO	Parks/Recreation/Conservation	Office
063-132-140	1905 BAY RD, EAST PALO ALTO	Parks/Recreation/Conservation	Mixed Use Corridor
063-111-250	1675 BAY RD, EAST PALO ALTO	Low Density Residential Office	Mixed Use High Mixed Use High
063-111-230		Parks/Recreation/Conservation	Mixed Use High
063-103-310	1585 BAY RD, EAST PALO ALTO	Office	Mixed Use High
113-530-999		Low Density Residential	High Density Residential
113-530-040	2426 GLORIA WAY, EAST PALO ALTO	Low Density Residential	High Density Residential
113-530-050	2428 GLORIA WAY, EAST PALO ALTO	Low Density Residential	High Density Residential
113-530-020	2422 GLORIA WAY, EAST PALO ALTO	Low Density Residential	High Density Residential
113-530-030	2424 GLORIA WAY, EAST PALO ALTO	Low Density Residential	High Density Residential
113-530-060	2430 GLORIA WAY, EAST PALO ALTO	Low Density Residential	High Density Residential
113-530-010	2420 GLORIA WAY, EAST PALO ALTO	Low Density Residential	High Density Residential
113-710-060	2450 GLORIA WAY, EAST PALO ALTO	Low Density Residential	High Density Residential
113-710-040	2446 GLORIA WAY, EAST PALO ALTO	Low Density Residential	High Density Residential
113-710-020	2442 GLORIA WAY, EAST PALO ALTO	Low Density Residential	High Density Residential
113-710-030	2444 GLORIA WAY, EAST PALO ALTO	Low Density Residential	High Density Residential
113-710-010	2440 GLORIA WAY, EAST PALO ALTO	Low Density Residential	High Density Residential
113-710-050	2448 GLORIA WAY, EAST PALO ALTO	Low Density Residential	High Density Residential
113-710-999		Low Density Residential	High Density Residential
113-720-999		Low Density Residential	High Density Residential
113-720-030	2464 GLORIA WAY, EAST PALO ALTO	Low Density Residential	High Density Residential
113-720-010	2460 GLORIA WAY, EAST PALO ALTO	Low Density Residential	High Density Residential
113-720-040	2466 GLORIA WAY, EAST PALO ALTO	Low Density Residential	High Density Residential
113-720-020	2462 GLORIA WAY, EAST PALO ALTO	Low Density Residential	High Density Residential
113-740-050	2478 GLORIA WAY, EAST PALO ALTO	Low Density Residential	High Density Residential
113-740-020	2472 GLORIA WAY, EAST PALO ALTO	Low Density Residential	High Density Residential
113-740-999		Low Density Residential	High Density Residential
113-740-070	2482 GLORIA WAY, EAST PALO ALTO	Low Density Residential	High Density Residential
113-740-080	2484 GLORIA WAY, EAST PALO ALTO	Low Density Residential	High Density Residential
113-740-030	2474 GLORIA WAY, EAST PALO ALTO	Low Density Residential	High Density Residential
113-740-010	2470 GLORIA WAY, EAST PALO ALTO	Low Density Residential	High Density Residential
113-740-040	2476 GLORIA WAY, EAST PALO ALTO	Low Density Residential	High Density Residential
113-740-060	2480 GLORIA WAY, EAST PALO ALTO	Low Density Residential	High Density Residential
063-103-440	2400 GLORIA WAY, EAST PALO ALTO	Low Density Residential	High Density Residential
063-090-020	1423-1425A BAY RD, EAST PALO ALTO	Medium Density Residential	Parks/Recreation/Conservation
063-090-060		Low Density Residential	Public/Institutional
063-090-080		Low Density Residential	Public/Institutional
063-231-220	1800 BAY RD, EAST PALO ALTO	Office	Mixed Use Corridor
063-231-240	1804 BAY RD, EAST PALO ALTO	Office	Mixed Use Corridor
063-231-250	1798 BAY RD, EAST PALO ALTO	Office	Mixed Use Corridor
063-232-350	901 WEEKS ST, EAST PALO ALTO	Office	Mixed Use High
063-232-210	WEEKS ST, EAST PALO ALTO	Office	High Density Residential
063-232-220	WEEKS ST, EAST PALO ALTO	Office	High Density Residential
063-232-230	WEEKS ST, EAST PALO ALTO	Office	High Density Residential
063-232-260	1001 WEEKS ST, EAST PALO ALTO	Office	High Density Residential
063-232-090	1003 WEEKS ST, EAST PALO ALTO	Office	High Density Residential
063-232-240	1045 WEEKS ST, EAST PALO ALTO	Office	High Density Residential
063-232-150	2421 PULGAS AVE, EAST PALO ALTO	Office	High Density Residential
063-232-300	1095 WEEKS ST, EAST PALO ALTO	Office	High Density Residential
063-232-250	1085 WEEKS ST, EAST PALO ALTO	Office	High Density Residential
063-232-160	2447 PULGAS AVE, EAST PALO ALTO	Office	High Density Residential
063-221-180	2371 CLARKE AVE, EAST PALO ALTO	Low Density Residential	High Density Residential
063-221-190	2369 CLARKE AVE, EAST PALO ALTO	Low Density Residential	High Density Residential
063-221-200	891 WEEKS ST, EAST PALO ALTO	Low Density Residential	High Density Residential
063-221-220	867 WEEKS ST, EAST PALO ALTO	Low Density Residential	High Density Residential
063-221-210	871 WEEKS ST, EAST PALO ALTO	Low Density Residential	High Density Residential
063-221-230	865 WEEKS ST, EAST PALO ALTO	Low Density Residential	High Density Residential
063-221-500	863 WEEKS ST, EAST PALO ALTO	Low Density Residential	High Density Residential

Appendix C: Table 1
Land Use Changes - 2014 Zoning versus Proposed 2035 Zoning

APN	Address	2014 Zoning (2)	2035 Zoning (3)
063-221-240		Low Density Residential	High Density Residential
063-221-250	831 WEEKS ST, EAST PALO ALTO	Low Density Residential	High Density Residential
063-221-260	819 JAMIE LN, EAST PALO ALTO	Low Density Residential	High Density Residential
063-221-270	823 JAMIE LN, EAST PALO ALTO	Low Density Residential	High Density Residential
063-221-280	827 JAMIE LN, EAST PALO ALTO	Low Density Residential	High Density Residential
063-221-320	817 PAUL ROBESON CT, EAST PALO ALTO	Low Density Residential	High Density Residential
063-221-310	815 PAUL ROBESON CT, EAST PALO ALTO	Low Density Residential	High Density Residential
063-221-300	813 PAUL ROBESON CT, EAST PALO ALTO	Low Density Residential	High Density Residential
063-221-290	811 PAUL ROBESON CT, EAST PALO ALTO	Low Density Residential	High Density Residential
063-221-380	809 PAUL ROBESON CT, EAST PALO ALTO	Low Density Residential	High Density Residential
063-221-370	807 PAUL ROBESON CT, EAST PALO ALTO	Low Density Residential	High Density Residential
063-221-360	805 PAUL ROBESON CT, EAST PALO ALTO	Low Density Residential	High Density Residential
063-221-350	803 PAUL ROBESON CT, EAST PALO ALTO	Low Density Residential	High Density Residential
063-221-340	801 WEEKS ST, EAST PALO ALTO	Low Density Residential	High Density Residential
063-221-390	791 WEEKS ST, EAST PALO ALTO	Low Density Residential	High Density Residential
063-221-550	785 CAROLE CT, EAST PALO ALTO	Low Density Residential	High Density Residential
063-221-540	779 CAROLE CT, EAST PALO ALTO	Low Density Residential	High Density Residential
063-221-530	773 CAROLE CT, EAST PALO ALTO	Low Density Residential	High Density Residential
063-221-520	767 CAROLE CT, EAST PALO ALTO	Low Density Residential	High Density Residential
063-221-510	761 WEEKS ST, EAST PALO ALTO	Low Density Residential	High Density Residential
063-221-410	731 WEEKS ST, EAST PALO ALTO	Low Density Residential	High Density Residential
063-221-420	717 WEEKS ST, EAST PALO ALTO	Low Density Residential	High Density Residential
063-221-430	2360 COOLEY AVE, EAST PALO ALTO	Low Density Residential	High Density Residential
063-221-440	2362-2362 COOLEY AVE, EAST PALO ALTO	Low Density Residential	High Density Residential
063-221-450	2364 COOLEY AVE, EAST PALO ALTO	Low Density Residential	High Density Residential
063-203-210	585 WEEKS ST, EAST PALO ALTO	Commercial	Mixed Use High
063-203-220	579 WEEKS ST, EAST PALO ALTO	Commercial	Low Density Residential
063-203-230	563 WEEKS ST, EAST PALO ALTO	Commercial	Low Density Residential
063-203-240	549 WEEKS ST, EAST PALO ALTO	Commercial	Low Density Residential
063-203-250	541 WEEKS ST, EAST PALO ALTO	Commercial	Low Density Residential
063-203-260	533 WEEKS ST, EAST PALO ALTO	Commercial	Low Density Residential
063-203-270		Commercial	Low Density Residential
063-203-390	1518 BAY RD, EAST PALO ALTO	Commercial	Medium Density Residential
063-203-370	1508 BAY RD, EAST PALO ALTO	Commercial	Medium Density Residential
063-203-350	1574 BAY RD, EAST PALO ALTO	Commercial	Medium Density Residential
063-203-410	1568 BAY RD, EAST PALO ALTO	Commercial	Medium Density Residential
063-203-400	1560 BAY RD, EAST PALO ALTO	Commercial	Medium Density Residential
063-203-440	1554 BAY RD, EAST PALO ALTO	Commercial	Medium Density Residential
063-203-360	1546 BAY RD, EAST PALO ALTO	Commercial	Medium Density Residential
063-203-450	1538 BAY RD, EAST PALO ALTO	Commercial	Medium Density Residential
063-203-430	1530 BAY RD, EAST PALO ALTO	Commercial	Medium Density Residential
063-203-380		Commercial	Medium Density Residential
063-202-280	2361-2369 UNIVERSITY AVE 101-308, EAST PALO ALTO	High Density Residential	Mixed Use Corridor
063-202-160	561 SACRAMENTO ST, EAST PALO ALTO	High Density Residential	Mixed Use Corridor
063-202-100	566 WEEKS ST, EAST PALO ALTO	High Density Residential	Low Density Residential
063-202-090	564 WEEKS ST, EAST PALO ALTO	High Density Residential	Low Density Residential
063-202-080	556 WEEKS ST, EAST PALO ALTO	High Density Residential	Low Density Residential
063-201-270	578 SACRAMENTO ST, EAST PALO ALTO	High Density Residential	Mixed Use Corridor
063-201-240	2343 UNIVERSITY AVE, EAST PALO ALTO	High Density Residential	Mixed Use Corridor
063-201-220	2337 UNIVERSITY AVE, EAST PALO ALTO	High Density Residential	Mixed Use Corridor
063-201-090	576 SACRAMENTO ST, EAST PALO ALTO	High Density Residential	Mixed Use Corridor
063-201-080	566 SACRAMENTO ST, EAST PALO ALTO	High Density Residential	Low Density Residential
063-201-290	2331 UNIVERSITY AVE, EAST PALO ALTO	High Density Residential	Mixed Use Corridor
063-201-250	RUNNYMEDE ST, EAST PALO ALTO	High Density Residential	Mixed Use Corridor
063-201-260	RUNNYMEDE ST, EAST PALO ALTO	High Density Residential	Mixed Use Corridor
063-210-630	2358 UNIVERSITY AVE, EAST PALO ALTO	Commercial	Mixed Use Corridor
063-210-450	2377 COOLEY AVE, EAST PALO ALTO	Commercial	Mixed Use Corridor
063-210-410	2371 COOLEY AVE, EAST PALO ALTO	Commercial	Mixed Use Corridor
063-210-340	2369 COOLEY AVE, EAST PALO ALTO	Commercial	High Density Residential

Appendix C: Table 1
Land Use Changes - 2014 Zoning versus Proposed 2035 Zoning

APN	Address	2014 Zoning (2)	2035 Zoning (3)
063-210-350	2365 COOLEY AVE, EAST PALO ALTO	Commercial	High Density Residential
063-210-480	2361 COOLEY AVE, EAST PALO ALTO	Commercial	High Density Residential
063-210-490	2355 COOLEY AVE, EAST PALO ALTO	Commercial	High Density Residential
063-210-310	2346 UNIVERSITY AVE, EAST PALO ALTO	High Density Residential	Mixed Use Corridor
063-210-380	2354 UNIVERSITY AVE, EAST PALO ALTO	High Density Residential	Mixed Use Corridor
063-210-520	2338 UNIVERSITY AVE, EAST PALO ALTO	High Density Residential	Mixed Use Corridor
114-240-070	2330 UNIVERSITY AVE # 160, EAST PALO ALTO	High Density Residential	Mixed Use Corridor
114-240-200	2330 UNIVERSITY AVE # 290, EAST PALO ALTO	High Density Residential	Mixed Use Corridor
114-240-020	2330 UNIVERSITY AVE # 110, EAST PALO ALTO	High Density Residential	Mixed Use Corridor
114-240-010	2330 UNIVERSITY AVE # 100, EAST PALO ALTO	High Density Residential	Mixed Use Corridor
114-240-260	2330 UNIVERSITY AVE # 350, EAST PALO ALTO	High Density Residential	Mixed Use Corridor
114-240-170	2330 UNIVERSITY AVE # 260, EAST PALO ALTO	High Density Residential	Mixed Use Corridor
114-240-050	2330 UNIVERSITY AVE # 140, EAST PALO ALTO	High Density Residential	Mixed Use Corridor
114-240-280	2330 UNIVERSITY AVE # 370, EAST PALO ALTO	High Density Residential	Mixed Use Corridor
114-240-060	2330 UNIVERSITY AVE # 150, EAST PALO ALTO	High Density Residential	Mixed Use Corridor
114-240-300	2330 UNIVERSITY AVE # 390, EAST PALO ALTO	High Density Residential	Mixed Use Corridor
114-240-270	2330 UNIVERSITY AVE # 360, EAST PALO ALTO	High Density Residential	Mixed Use Corridor
114-240-110	2330 UNIVERSITY AVE # 200, EAST PALO ALTO	High Density Residential	Mixed Use Corridor
114-240-090	2330 UNIVERSITY AVE # 180, EAST PALO ALTO	High Density Residential	Mixed Use Corridor
114-240-080	2330 UNIVERSITY AVE # 170, EAST PALO ALTO	High Density Residential	Mixed Use Corridor
114-240-100	2330 UNIVERSITY AVE # 190, EAST PALO ALTO	High Density Residential	Mixed Use Corridor
114-240-290	2330 UNIVERSITY AVE # 380, EAST PALO ALTO	High Density Residential	Mixed Use Corridor
114-240-160	2330 UNIVERSITY AVE # 250, EAST PALO ALTO	High Density Residential	Mixed Use Corridor
114-240-230	2330 UNIVERSITY AVE # 320, EAST PALO ALTO	High Density Residential	Mixed Use Corridor
114-240-190	2330 UNIVERSITY AVE # 280, EAST PALO ALTO	High Density Residential	Mixed Use Corridor
114-240-150	2330 UNIVERSITY AVE # 240, EAST PALO ALTO	High Density Residential	Mixed Use Corridor
114-240-040	2330 UNIVERSITY AVE # 130, EAST PALO ALTO	High Density Residential	Mixed Use Corridor
114-240-180	2330 UNIVERSITY AVE # 270, EAST PALO ALTO	High Density Residential	Mixed Use Corridor
114-240-220	2330 UNIVERSITY AVE # 310, EAST PALO ALTO	High Density Residential	Mixed Use Corridor
114-240-240	2330 UNIVERSITY AVE # 330, EAST PALO ALTO	High Density Residential	Mixed Use Corridor
114-240-250	2330 UNIVERSITY AVE # 340, EAST PALO ALTO	High Density Residential	Mixed Use Corridor
114-240-120	2330 UNIVERSITY AVE # 210, EAST PALO ALTO	High Density Residential	Mixed Use Corridor
114-240-210	2330 UNIVERSITY AVE # 300, EAST PALO ALTO	High Density Residential	Mixed Use Corridor
114-240-030	2330 UNIVERSITY AVE # 120, EAST PALO ALTO	High Density Residential	Mixed Use Corridor
114-240-140	2330 UNIVERSITY AVE # 230, EAST PALO ALTO	High Density Residential	Mixed Use Corridor
114-240-130	2330 UNIVERSITY AVE # 220, EAST PALO ALTO	High Density Residential	Mixed Use Corridor
063-210-610	661 RUNNYMEDE ST, EAST PALO ALTO	High Density Residential	Mixed Use Corridor
063-210-470	633 RUNNYMEDE ST, EAST PALO ALTO	High Density Residential	Mixed Use Corridor
063-210-360	2300 UNIVERSITY AVE, EAST PALO ALTO	High Density Residential	Mixed Use Corridor
063-302-340	584 RUNNYMEDE ST, EAST PALO ALTO	Office	Mixed Use Corridor
063-302-170	2283 UNIVERSITY AVE, EAST PALO ALTO	Office	Mixed Use Corridor
063-302-180	2281 UNIVERSITY AVE, EAST PALO ALTO	Office	Mixed Use Corridor
063-302-470	2279 UNIVERSITY AVE, EAST PALO ALTO	Office	Mixed Use Corridor
063-302-460	2277 UNIVERSITY AVE, EAST PALO ALTO	Office	Mixed Use Corridor
063-302-210	2263 UNIVERSITY AVE, EAST PALO ALTO	Office	Mixed Use Corridor
063-302-220	2253 UNIVERSITY AVE, EAST PALO ALTO	Office	Mixed Use Corridor
063-302-230	2247 UNIVERSITY AVE, EAST PALO ALTO	Office	Mixed Use Corridor
063-302-330	2201 UNIVERSITY AVE, EAST PALO ALTO	Office	Mixed Use Corridor
063-302-280	575A BELL ST, EAST PALO ALTO	Office	Mixed Use Corridor
063-302-290	565 BELL ST, EAST PALO ALTO	Office	Mixed Use Corridor
063-331-420	RUNNYMEDE ST, EAST PALO ALTO	Commercial	Public/Institutional
063-331-150	2284 UNIVERSITY AVE, EAST PALO ALTO	Commercial	Mixed Use Corridor
063-331-140	2280 UNIVERSITY AVE, EAST PALO ALTO	Commercial	Mixed Use Corridor
063-331-130	2276 UNIVERSITY AVE, EAST PALO ALTO	Commercial	Mixed Use Corridor
063-331-120	2274 UNIVERSITY AVE, EAST PALO ALTO	Commercial	Mixed Use Corridor
063-331-110	2272 UNIVERSITY AVE, EAST PALO ALTO	Commercial	Mixed Use Corridor
063-331-100	2268 UNIVERSITY AVE, EAST PALO ALTO	Commercial	Mixed Use Corridor
063-331-090	2264 UNIVERSITY AVE, EAST PALO ALTO	Commercial	Mixed Use Corridor
063-331-080	2252 UNIVERSITY AVE, EAST PALO ALTO	Commercial	Mixed Use Corridor
063-331-070	2248 UNIVERSITY AVE, EAST PALO ALTO	Commercial	Mixed Use Corridor

Appendix C: Table 1
Land Use Changes - 2014 Zoning versus Proposed 2035 Zoning

APN	Address	2014 Zoning (2)	2035 Zoning (3)
063-331-060	2242 UNIVERSITY AVE, EAST PALO ALTO	Commercial	Mixed Use Corridor
063-331-380	2240 UNIVERSITY AVE, EAST PALO ALTO	Commercial	Mixed Use Corridor
063-331-410	2220 UNIVERSITY AVE, EAST PALO ALTO	Commercial	Mixed Use Corridor
063-331-030	2212 UNIVERSITY AVE, EAST PALO ALTO	Commercial	Mixed Use Corridor
063-331-370	2200 UNIVERSITY AVE, EAST PALO ALTO	Commercial	Mixed Use Corridor
063-331-190	2291 CAPITOL AVE, EAST PALO ALTO	Commercial	Mixed Use Corridor
063-331-200	2287 CAPITOL AVE, EAST PALO ALTO	Commercial	Mixed Use Corridor
063-331-210	2285 CAPITOL AVE, EAST PALO ALTO	Commercial	Mixed Use Corridor
063-331-220	2277 CAPITOL AVE, EAST PALO ALTO	Commercial	Mixed Use Corridor
063-331-230	2267 CAPITOL AVE, EAST PALO ALTO	Commercial	Mixed Use Corridor
063-331-240	2263 CAPITOL AVE, EAST PALO ALTO	Commercial	Mixed Use Corridor
063-331-250	2255 CAPITOL AVE, EAST PALO ALTO	Commercial	Mixed Use Corridor
063-331-260	2251 CAPITOL AVE, EAST PALO ALTO	Commercial	Mixed Use Corridor
063-331-270	2249 CAPITOL AVE, EAST PALO ALTO	Commercial	Mixed Use Corridor
063-331-280	2245 CAPITOL AVE, EAST PALO ALTO	Commercial	Mixed Use Corridor
063-331-290	2239 CAPITOL AVE, EAST PALO ALTO	Commercial	Mixed Use Corridor
063-331-300	2233 CAPITOL AVE, EAST PALO ALTO	Commercial	Mixed Use Corridor
063-331-310	2227 CAPITOL AVE, EAST PALO ALTO	Commercial	Mixed Use Corridor
063-331-320	2219 CAPITOL AVE, EAST PALO ALTO	Commercial	Mixed Use Corridor
063-331-330	2217 CAPITOL AVE, EAST PALO ALTO	Commercial	Mixed Use Corridor
063-331-340	2205 CAPITOL AVE, EAST PALO ALTO	Commercial	Mixed Use Corridor
063-331-350	643 BELL ST, EAST PALO ALTO	Commercial	Mixed Use Corridor
063-321-180	612 BELL ST, EAST PALO ALTO	Commercial	Mixed Use Corridor
063-321-190	616 BELL ST, EAST PALO ALTO	Commercial	Mixed Use Corridor
063-321-200	644 BELL ST, EAST PALO ALTO	Commercial	Mixed Use Corridor
063-321-210	2189 CAPITOL AVE, EAST PALO ALTO	Commercial	Mixed Use Corridor
063-321-220	2187 CAPITOL AVE, EAST PALO ALTO	Commercial	Mixed Use Corridor
063-321-230	2181 CAPITOL AVE, EAST PALO ALTO	Commercial	Mixed Use Corridor
063-321-240	2171 CAPITOL AVE, EAST PALO ALTO	Commercial	Mixed Use Corridor
063-321-250	2165 CAPITOL AVE, EAST PALO ALTO	Commercial	Mixed Use Corridor
063-321-260	2161 CAPITOL AVE, EAST PALO ALTO	Commercial	Mixed Use Corridor
063-321-270	2157 CAPITOL AVE, EAST PALO ALTO	Commercial	Mixed Use Corridor
063-321-280	2153 CAPITOL AVE, EAST PALO ALTO	Commercial	Mixed Use Corridor
063-321-290	2149 CAPITOL AVE, EAST PALO ALTO	Commercial	Mixed Use Corridor
063-321-300	2145 CAPITOL AVE, EAST PALO ALTO	Commercial	Mixed Use Corridor
063-321-310	2141 CAPITOL AVE, EAST PALO ALTO	Commercial	Mixed Use Corridor
063-321-320	2133 CAPITOL AVE, EAST PALO ALTO	Commercial	Mixed Use Corridor
063-321-330	2129 CAPITOL AVE, EAST PALO ALTO	Commercial	Mixed Use Corridor
063-321-400	2194 UNIVERSITY AVE, EAST PALO ALTO	Commercial	Mixed Use Corridor
063-321-140	2178 UNIVERSITY AVE, EAST PALO ALTO	Commercial	Mixed Use Corridor
063-321-130	2172 UNIVERSITY AVE, EAST PALO ALTO	Commercial	Mixed Use Corridor
063-321-120	2166 UNIVERSITY AVE, EAST PALO ALTO	Commercial	Mixed Use Corridor
063-321-110	2164 UNIVERSITY AVE, EAST PALO ALTO	Commercial	Mixed Use Corridor
063-321-100	2160 UNIVERSITY AVE, EAST PALO ALTO	Commercial	Mixed Use Corridor
063-321-410	2148 UNIVERSITY AVE, EAST PALO ALTO	Commercial	Mixed Use Corridor
063-321-080	2142 UNIVERSITY AVE, EAST PALO ALTO	Commercial	Mixed Use Corridor
063-321-070		Commercial	Mixed Use Corridor
063-321-060	2126 UNIVERSITY AVE, EAST PALO ALTO	Commercial	Mixed Use Corridor
063-321-050	2124 UNIVERSITY AVE, EAST PALO ALTO	Commercial	Mixed Use Corridor
063-321-420		Commercial	Office
063-322-150	2198 CAPITOL AVE, EAST PALO ALTO	Commercial	Medium Density Residential
063-322-160	660 BELL ST, EAST PALO ALTO	Commercial	Medium Density Residential
063-322-140	2194 CAPITOL AVE, EAST PALO ALTO	Commercial	Medium Density Residential
063-322-130	2184 CAPITOL AVE, EAST PALO ALTO	Commercial	Medium Density Residential
063-322-340	2169 COOLEY AVE, EAST PALO ALTO	Commercial	Medium Density Residential
063-322-110	2162 CAPITOL AVE, EAST PALO ALTO	Commercial	Medium Density Residential
063-322-500	2159 COOLEY AVE, EAST PALO ALTO	Commercial	Medium Density Residential
063-322-100	2154 CAPITOL AVE, EAST PALO ALTO	Commercial	Medium Density Residential
063-322-090	2144 CAPITOL AVE, EAST PALO ALTO	Commercial	Medium Density Residential
063-322-080	2142 CAPITOL AVE, EAST PALO ALTO	Commercial	Medium Density Residential

Appendix C: Table 1
Land Use Changes - 2014 Zoning versus Proposed 2035 Zoning

APN	Address	2014 Zoning (2)	2035 Zoning (3)
063-322-070	2138 CAPITOL AVE, EAST PALO ALTO	Commercial	Medium Density Residential
063-322-060	2134 CAPITOL AVE, EAST PALO ALTO	Commercial	Medium Density Residential
063-322-050	2132 CAPITOL AVE, EAST PALO ALTO	Commercial	Medium Density Residential
063-322-040	2124 CAPITOL AVE, EAST PALO ALTO	Commercial	Medium Density Residential
063-322-580	2118 CAPITOL AVE, EAST PALO ALTO	Commercial	Medium Density Residential
063-322-560	DONOHOE ST, EAST PALO ALTO	High Density Residential	Office
063-322-410		High Density Residential	Office
063-292-380	2160 EUCLID AVE, EAST PALO ALTO	Low Density Residential	Mixed Use High
063-292-370	2117 UNIVERSITY AVE, EAST PALO ALTO	Office, High Density Residential	Mixed Use High
063-292-180	2101 UNIVERSITY AVE, EAST PALO ALTO	Commercial	Mixed Use High
063-291-010	1489 E BAYSHORE RD, EAST PALO ALTO	Commercial	Mixed Use Low
063-184-010	1475 E BAYSHORE RD, EAST PALO ALTO	Commercial	Mixed Use Low
063-184-020	2056 GLEN WAY, EAST PALO ALTO	Low Density Residential	Mixed Use Low
063-184-030	2070 GLEN WAY, EAST PALO ALTO	Low Density Residential	Mixed Use Low
063-184-040	2080 GLEN WAY, EAST PALO ALTO	Low Density Residential	Mixed Use Low
063-183-080	1435 E BAYSHORE RD, EAST PALO ALTO	Commercial	Mixed Use Low
063-183-070	2045 GLEN WAY, EAST PALO ALTO	Commercial	Mixed Use Low
063-183-090		Commercial	Mixed Use Low
063-183-110	1401 E BAYSHORE RD 2, EAST PALO ALTO	Commercial	Mixed Use Low
063-183-010	2088 LINCOLN ST, EAST PALO ALTO	Commercial	Mixed Use Low
063-181-240	1385 E BAYSHORE RD, EAST PALO ALTO	Commercial	Mixed Use Low
063-181-010	2110 DUMBARTON AVE, EAST PALO ALTO	Commercial	Mixed Use Low
063-181-230	2097 LINCOLN ST, EAST PALO ALTO	Low Density Residential	Mixed Use Low
063-181-220	2111 LINCOLN ST, EAST PALO ALTO	Low Density Residential	Mixed Use Low
063-155-190	2109 DUMBARTON AVE, EAST PALO ALTO	Commercial	Mixed Use Low
063-155-180	2123 DUMBARTON AVE, EAST PALO ALTO	Commercial	Mixed Use Low
063-155-010	2106 OAKWOOD DR, EAST PALO ALTO	Commercial	Mixed Use Low
063-154-260	2119 OAKWOOD DR, EAST PALO ALTO	Commercial	Mixed Use Low
063-154-200	2110 ADDISON AVE, EAST PALO ALTO	Commercial	Mixed Use Low
063-153-250	2119 ADDISON AVE, EAST PALO ALTO	Commercial	Mixed Use Low
063-153-010	1205 E BAYSHORE RD, EAST PALO ALTO	Commercial	Mixed Use Low
063-152-230	1199 E BAYSHORE RD, EAST PALO ALTO	Commercial	Mixed Use Low
063-151-170	2159 POPLAR AVE, EAST PALO ALTO	Commercial	Mixed Use Low
063-151-200	1001 E BAYSHORE RD, EAST PALO ALTO	Commercial	Mixed Use Low
063-154-240		Parks/Recreation/Conservation	Public/Institutional
063-271-480		Parks/Recreation/Conservation	Industrial Buffer
063-271-370	1171 RUNNYMEDE ST, EAST PALO ALTO	Low Density Residential	High Density Residential
063-272-080	1286 RUNNYMEDE ST, EAST PALO ALTO	Low Density Residential	Public/Institutional
063-381-190		Low Density Residential	Public/Institutional
063-341-130	1063 GARDEN ST, EAST PALO ALTO	Low Density Residential	Public/Institutional
063-341-150	1039 GARDEN ST, EAST PALO ALTO	Low Density Residential	Public/Institutional
063-600-060	1266 BEECH ST, EAST PALO ALTO	Low Density Residential	Parks/Recreation/Conservation
063-352-170	980 MYRTLE ST, EAST PALO ALTO	Low Density Residential	Public/Institutional
063-352-480	1050 MYRTLE ST, EAST PALO ALTO	Low Density Residential	Public/Institutional
063-491-040	2033A PULGAS AVE, EAST PALO ALTO	Low Density Residential	Public/Institutional
063-491-030	951 OCONNOR ST, EAST PALO ALTO	Low Density Residential	Public/Institutional
063-511-240	896 DONOHOE ST, EAST PALO ALTO	Commercial	Mixed Use Corridor
063-511-260	890 DONOHOE ST, EAST PALO ALTO	Commercial	Mixed Use Corridor
063-511-020	2039 CLARKE AVE, EAST PALO ALTO	Commercial	Mixed Use Corridor
063-511-030	2035 CLARKE AVE, EAST PALO ALTO	Commercial	Mixed Use Corridor
063-511-040	2029 CLARKE AVE, EAST PALO ALTO	Commercial	Mixed Use Corridor
063-511-050	2027 CLARKE AVE, EAST PALO ALTO	Commercial	Mixed Use Corridor
063-511-060	2023 CLARKE AVE, EAST PALO ALTO	Commercial	Mixed Use Corridor
063-511-070	2017 CLARKE AVE, EAST PALO ALTO	Commercial	Mixed Use Corridor
063-511-080	2013 CLARKE AVE, EAST PALO ALTO	Commercial	Mixed Use Corridor
063-511-090	2009 CLARKE AVE, EAST PALO ALTO	Commercial	Mixed Use Corridor
063-511-660	899 OCONNOR ST, EAST PALO ALTO	Commercial	Mixed Use Corridor
063-511-220	862 DONOHOE ST, EAST PALO ALTO	Commercial	Mixed Use Corridor
063-511-250	860 DONOHOE ST, EAST PALO ALTO	Commercial	Mixed Use Corridor
063-511-210	864 DONOHOE ST, EAST PALO ALTO	Commercial	Mixed Use Corridor

Appendix C: Table 1
Land Use Changes - 2014 Zoning versus Proposed 2035 Zoning

APN	Address	2014 Zoning (2)	2035 Zoning (3)
063-511-200	866 DONOHOE ST, EAST PALO ALTO	Commercial	Mixed Use Corridor
063-511-190	872 DONOHOE ST, EAST PALO ALTO	Commercial	Mixed Use Corridor
114-460-020	1765 EAST BAYSHORE RD, EAST PALO ALTO	Commercial	Mixed Use Corridor
114-460-090	1765 EAST BAYSHORE RD, EAST PALO ALTO	Commercial	Mixed Use Corridor
114-460-030	1765 EAST BAYSHORE RD, EAST PALO ALTO	Commercial	Mixed Use Corridor
114-460-170	1765 EAST BAYSHORE RD, EAST PALO ALTO	Commercial	Mixed Use Corridor
114-460-060	1765 EAST BAYSHORE RD 206, EAST PALO ALTO	Commercial	Mixed Use Corridor
114-460-100	1765 EAST BAYSHORE RD, EAST PALO ALTO	Commercial	Mixed Use Corridor
114-460-270	1765 EAST BAYSHORE RD, EAST PALO ALTO	Commercial	Mixed Use Corridor
114-460-260	1765 EAST BAYSHORE RD, EAST PALO ALTO	Commercial	Mixed Use Corridor
114-460-140	1765 EAST BAYSHORE RD, EAST PALO ALTO	Commercial	Mixed Use Corridor
114-450-060	1765 EAST BAYSHORE RD A1&A2, EAST PALO ALTO	Commercial	Mixed Use Corridor
114-460-210	1765 EAST BAYSHORE RD 221, EAST PALO ALTO	Commercial	Mixed Use Corridor
114-450-020	1765 EAST BAYSHORE RD, EAST PALO ALTO	Commercial	Mixed Use Corridor
114-460-040	1765 EAST BAYSHORE RD, EAST PALO ALTO	Commercial	Mixed Use Corridor
114-450-040	1765 EAST BAYSHORE RD, EAST PALO ALTO	Commercial	Mixed Use Corridor
114-460-200	1765 EAST BAYSHORE RD, EAST PALO ALTO	Commercial	Mixed Use Corridor
114-450-010	1765 EAST BAYSHORE RD, EAST PALO ALTO	Commercial	Mixed Use Corridor
114-460-050	1765 EAST BAYSHORE RD, EAST PALO ALTO	Commercial	Mixed Use Corridor
114-460-180	1765 EAST BAYSHORE RD 218, EAST PALO ALTO	Commercial	Mixed Use Corridor
114-460-250	1765 EAST BAYSHORE RD, EAST PALO ALTO	Commercial	Mixed Use Corridor
114-460-110	1765 EAST BAYSHORE RD, EAST PALO ALTO	Commercial	Mixed Use Corridor
114-460-150	1765 EAST BAYSHORE RD, EAST PALO ALTO	Commercial	Mixed Use Corridor
114-450-050	1765 EAST BAYSHORE RD, EAST PALO ALTO	Commercial	Mixed Use Corridor
114-460-160	1765 EAST BAYSHORE RD, EAST PALO ALTO	Commercial	Mixed Use Corridor
114-460-280	1765 EAST BAYSHORE RD, EAST PALO ALTO	Commercial	Mixed Use Corridor
114-460-120	1765 EAST BAYSHORE RD, EAST PALO ALTO	Commercial	Mixed Use Corridor
114-450-030	1765 EAST BAYSHORE RD, EAST PALO ALTO	Commercial	Mixed Use Corridor
114-460-010	1765 EAST BAYSHORE RD, EAST PALO ALTO	Commercial	Mixed Use Corridor
114-460-220	1765 EAST BAYSHORE RD, EAST PALO ALTO	Commercial	Mixed Use Corridor
114-460-240	1765 EAST BAYSHORE RD, EAST PALO ALTO	Commercial	Mixed Use Corridor
114-460-290	1765 EAST BAYSHORE RD, EAST PALO ALTO	Commercial	Mixed Use Corridor
114-460-070	1765 EAST BAYSHORE RD, EAST PALO ALTO	Commercial	Mixed Use Corridor
114-460-130	1765 EAST BAYSHORE RD, EAST PALO ALTO	Commercial	Mixed Use Corridor
114-460-300	1765 EAST BAYSHORE RD, EAST PALO ALTO	Commercial	Mixed Use Corridor
114-460-190	1765 EAST BAYSHORE RD, EAST PALO ALTO	Commercial	Mixed Use Corridor
114-460-230	1765 EAST BAYSHORE RD, EAST PALO ALTO	Commercial	Mixed Use Corridor
114-460-080	1765 EAST BAYSHORE RD, EAST PALO ALTO	Commercial	Mixed Use Corridor
063-511-520	1761 E BAYSHORE RD, EAST PALO ALTO	Commercial	Mixed Use High
063-511-680	1751 EAST BAYSHORE RD, EAST PALO ALTO	Commercial	Mixed Use High
063-511-690	1745 E BAYSHORE BLVD, EAST PALO ALTO	Commercial	Mixed Use High
063-511-490	1731 E BAYSHORE RD, EAST PALO ALTO	Commercial	Mixed Use High
063-511-630	1721 E BAYSHORE RD, EAST PALO ALTO	Commercial	Mixed Use High
063-511-720	1775 E BAYSHORE RD, EAST PALO ALTO	Commercial	Mixed Use High
063-312-400		Commercial	Office
063-665-020	1960-1962 TATE ST, EAST PALO ALTO	Medium Density Residential	Parks/Recreation/Conservation
063-676-020	1960-1962 TATE ST, EAST PALO ALTO	Medium Density Residential	Parks/Recreation/Conservation
134-241-370		High Density Residential	Low Density Residential
134-241-090	1885 E BAYSHORE RD SPC 9, EAST PALO ALTO	High Density Residential	Low Density Residential
134-241-100	1885 E BAYSHORE RD SPC 10, EAST PALO ALTO	High Density Residential	Low Density Residential
134-241-360		High Density Residential	Low Density Residential
134-241-120		High Density Residential	Low Density Residential
134-241-891	1885 E BAYSHORE RD, EAST PALO ALTO	High Density Residential	Low Density Residential
134-241-400	1885 E BAYSHORE RD SPC 40, EAST PALO ALTO	High Density Residential	Low Density Residential
134-241-750	1885 E BAYSHORE RD SPC 75, EAST PALO ALTO	High Density Residential	Low Density Residential
134-241-680		High Density Residential	Low Density Residential
134-241-080		High Density Residential	Low Density Residential
134-241-650		High Density Residential	Low Density Residential
134-241-791	1885 E BAYSHORE RD SPC 79, EAST PALO ALTO	High Density Residential	Low Density Residential

Appendix C: Table 1
Land Use Changes - 2014 Zoning versus Proposed 2035 Zoning

APN	Address	2014 Zoning (2)	2035 Zoning (3)
134-241-630	1885 E BAYSHORE RD, EAST PALO ALTO	High Density Residential	Low Density Residential
134-241-140	1885 E BAYSHORE RD #14, EAST PALO ALTO	High Density Residential	Low Density Residential
134-241-520		High Density Residential	Low Density Residential
134-241-720	1885 E BAYSHORE RD SPC 72, EAST PALO ALTO	High Density Residential	Low Density Residential
134-241-240	1885 E BAYSHORE RD SPC 24, EAST PALO ALTO	High Density Residential	Low Density Residential
134-241-340		High Density Residential	Low Density Residential
134-241-380		High Density Residential	Low Density Residential
134-241-810		High Density Residential	Low Density Residential
134-241-261	1885 E BAYSHORE RD SPC 26, EAST PALO ALTO	High Density Residential	Low Density Residential
134-242-180		High Density Residential	Low Density Residential
134-241-980	1885 E BAYSHORE RD SPC 98, EAST PALO ALTO	High Density Residential	Low Density Residential
134-241-221	1885 E BAYSHORE RD SPC 22, EAST PALO ALTO	High Density Residential	Low Density Residential
134-241-960	1885 E BAYSHORE RD #96, EAST PALO ALTO	High Density Residential	Low Density Residential
134-241-580	1885 E BAYSHORE RD SPC 58, EAST PALO ALTO	High Density Residential	Low Density Residential
134-241-870		High Density Residential	Low Density Residential
134-241-350	1885 E BAYSHORE RD, EAST PALO ALTO	High Density Residential	Low Density Residential
134-241-991		High Density Residential	Low Density Residential
134-241-780	1885 E BAYSHORE RD SPC 78, EAST PALO ALTO	High Density Residential	Low Density Residential
134-241-550	1885 E BAYSHORE BLVD #55, EAST PALO ALTO	High Density Residential	Low Density Residential
134-241-200	1885 E BAYSHORE RD SPC 20, EAST PALO ALTO	High Density Residential	Low Density Residential
134-241-770	1885 E BAYSHORE RD SPC 77, EAST PALO ALTO	High Density Residential	Low Density Residential
134-242-070		High Density Residential	Low Density Residential
134-241-660	1885 E BAYSHORE RD SPC 66, EAST PALO ALTO	High Density Residential	Low Density Residential
134-241-150		High Density Residential	Low Density Residential
134-242-131	1885 E BAYSHORE RD SPC 112, EAST PALO ALTO	High Density Residential	Low Density Residential
134-242-110		High Density Residential	Low Density Residential
134-241-530	1885 E BAYSHORE RD SPC 53, EAST PALO ALTO	High Density Residential	Low Density Residential
134-241-070		High Density Residential	Low Density Residential
134-241-640	1885 E BAYSHORE RD SPC 64, EAST PALO ALTO	High Density Residential	Low Density Residential
134-241-590	1885 E BAYSHORE RD #59, EAST PALO ALTO	High Density Residential	Low Density Residential
134-241-160	1885 E BAYSHORE RD #16, EAST PALO ALTO	High Density Residential	Low Density Residential
134-241-790		High Density Residential	Low Density Residential
134-241-560	1885 E BAYSHORE RD SPC 56, EAST PALO ALTO	High Density Residential	Low Density Residential
134-241-060		High Density Residential	Low Density Residential
134-241-921	1885 E BAYSHORE RD SPC 92, EAST PALO ALTO	High Density Residential	Low Density Residential
134-241-390		High Density Residential	Low Density Residential
134-241-010	1885 E BAYSHORE RD SPC 1, EAST PALO ALTO	High Density Residential	Low Density Residential
134-242-140		High Density Residential	Low Density Residential
134-241-330	1885 E BAYSHORE RD SPC 33, EAST PALO ALTO	High Density Residential	Low Density Residential
134-241-300		High Density Residential	Low Density Residential
134-241-850		High Density Residential	Low Density Residential
134-241-670	1885 E BAYSHORE RD SPC 67, EAST PALO ALTO	High Density Residential	Low Density Residential
134-242-050		High Density Residential	Low Density Residential
134-241-800		High Density Residential	Low Density Residential
134-241-510	1885 E BAYSHORE RD SPC 51, EAST PALO ALTO	High Density Residential	Low Density Residential
134-241-311	1855 E BAYSHORE RD #31, EAST PALO ALTO	High Density Residential	Low Density Residential
134-241-050	1885 E BAYSHORE RD SPC 5, EAST PALO ALTO	High Density Residential	Low Density Residential
134-241-831	1885 E BAYSHORE RD SPC 83, EAST PALO ALTO	High Density Residential	Low Density Residential
134-241-110	1885 E BAYSHORE RD SPC 11, EAST PALO ALTO	High Density Residential	Low Density Residential
134-241-950	1885 E BAYSHORE RD SPC 95, EAST PALO ALTO	High Density Residential	Low Density Residential
134-241-860		High Density Residential	Low Density Residential
134-241-700	1885 E BAYSHORE RD #70, EAST PALO ALTO	High Density Residential	Low Density Residential
134-241-930	1885 E BAYSHORE RD SPC 93, EAST PALO ALTO	High Density Residential	Low Density Residential
134-241-821	1885 E BAYSHORE RD SPC 82, EAST PALO ALTO	High Density Residential	Low Density Residential
134-242-040	1885 E BAYSHORE RD #103, EAST PALO ALTO	High Density Residential	Low Density Residential
134-241-681		High Density Residential	Low Density Residential
134-241-290	1885 E BAYSHORE RD SPC 29, EAST PALO ALTO	High Density Residential	Low Density Residential
134-241-470	1885 E BAYSHORE RD SPC 47, EAST PALO ALTO	High Density Residential	Low Density Residential
134-241-690	1885 E BAYSHORE RD SPC 69, EAST PALO ALTO	High Density Residential	Low Density Residential
134-241-410		High Density Residential	Low Density Residential

Appendix C: Table 1
Land Use Changes - 2014 Zoning versus Proposed 2035 Zoning

APN	Address	2014 Zoning (2)	2035 Zoning (3)
134-241-900	1885 E BAYSHORE RD SPC 90, EAST PALO ALTO	High Density Residential	Low Density Residential
134-241-420	1885 E BAYSHORE RD SPC 42, EAST PALO ALTO	High Density Residential	Low Density Residential
134-241-910	1885 E BAYSHORE RD SPC 91, EAST PALO ALTO	High Density Residential	Low Density Residential
134-241-190	1885 E BAYSHORE RD SPC 19, EAST PALO ALTO	High Density Residential	Low Density Residential
134-241-230		High Density Residential	Low Density Residential
134-241-270	1885 E BAYSHORE RD SPC 27, EAST PALO ALTO	High Density Residential	Low Density Residential
134-241-210		High Density Residential	Low Density Residential
134-242-150		High Density Residential	Low Density Residential
134-241-490	1885 E BAYSHORE RD SPC 49, EAST PALO ALTO	High Density Residential	Low Density Residential
134-241-801	1885 E BAYSHORE RD #80, EAST PALO ALTO	High Density Residential	Low Density Residential
134-241-280	1885 E BAYSHORE RD SPC 28, EAST PALO ALTO	High Density Residential	Low Density Residential
134-242-060	1885 E BAYSHORE RD SPC 105, EAST PALO ALTO	High Density Residential	Low Density Residential
134-241-880		High Density Residential	Low Density Residential
134-241-180		High Density Residential	Low Density Residential
134-242-100		High Density Residential	Low Density Residential
134-241-761		High Density Residential	Low Density Residential
063-492-270	1885 E BAYSHORE RD, EAST PALO ALTO	High Density Residential	Low Density Residential
134-241-310		High Density Residential	Low Density Residential
134-241-570	1885 E BAYSHORE RD SPC 57, EAST PALO ALTO	High Density Residential	Low Density Residential
134-241-020	1885 E BAYSHORE RD SPC 2, EAST PALO ALTO	High Density Residential	Low Density Residential
063-492-280	1933 PULGAS AVE, EAST PALO ALTO	Commercial	Medium Density Residential
063-492-070	1927 E BAYSHORE RD, EAST PALO ALTO	Commercial	Mixed Use Corridor
063-492-480	1895 E BAYSHORE RD, EAST PALO ALTO	Commercial	Mixed Use Corridor
063-571-090	1905 E BAYSHORE RD, EAST PALO ALTO	Commercial	Mixed Use Corridor
063-571-080	1961 E BAYSHORE RD, EAST PALO ALTO	Commercial	Mixed Use Corridor
063-571-060	1985 E BAYSHORE RD, EAST PALO ALTO	Commercial	Mixed Use Corridor
063-571-070	1981 E BAYSHORE RD, EAST PALO ALTO	Commercial	Mixed Use Corridor
063-501-020	1874 W BAYSHORE RD, EAST PALO ALTO	Commercial	Mixed Use Low
063-501-030	1870 W BAYSHORE RD, EAST PALO ALTO	Commercial	Mixed Use Low
063-501-040	1879 WOODLAND AVE, EAST PALO ALTO	Commercial	Mixed Use Low
063-501-050	1875 WOODLAND AVE, EAST PALO ALTO	Commercial	Mixed Use Low
063-515-060	1821 CLARKE AVE, EAST PALO ALTO	High Density Residential	Low Density Residential
063-515-070	1805 CLARKE AVE, EAST PALO ALTO	High Density Residential	Low Density Residential
063-515-080	1787 WOODLAND AVE, EAST PALO ALTO	High Density Residential	Low Density Residential
063-515-230	1785 WOODLAND AVE, EAST PALO ALTO	High Density Residential	Low Density Residential
063-484-130	1957 COOLEY AVE, EAST PALO ALTO	Commercial	High Density Residential
063-484-090	1949 COOLEY AVE, EAST PALO ALTO	Commercial	High Density Residential
063-484-100	1941 COOLEY AVE, EAST PALO ALTO	Commercial	High Density Residential
063-484-110	685 SCOFIELD AVE, EAST PALO ALTO	Commercial	High Density Residential
063-484-060	1934 CAPITOL AVE, EAST PALO ALTO	Commercial	High Density Residential
063-484-050	1920 CAPITOL AVE, EAST PALO ALTO	Commercial	High Density Residential
063-484-040	1916 CAPITOL AVE, EAST PALO ALTO	Commercial	High Density Residential
063-484-030	1908 CAPITOL AVE, EAST PALO ALTO	Commercial	High Density Residential
063-484-020	1902 CAPITOL AVE, EAST PALO ALTO	Commercial	High Density Residential
063-484-010	655 SCOFIELD AVE, EAST PALO ALTO	Commercial	High Density Residential
063-483-040	1943 CAPITOL AVE, EAST PALO ALTO	Commercial	High Density Residential
063-483-050	1609 WOODLAND AVE, EAST PALO ALTO	Commercial	High Density Residential
063-483-030	1909 CAPITOL AVE, EAST PALO ALTO	Commercial	Medium Density Residential
063-482-030	611 CIRCLE DR, EAST PALO ALTO	Commercial	Medium Density Residential
063-482-020	621 CIRCLE DR, EAST PALO ALTO	Commercial	Medium Density Residential
063-482-010	641 CIRCLE DR, EAST PALO ALTO	Commercial	Medium Density Residential
063-481-120	660 SCOFIELD AVE, EAST PALO ALTO	Commercial	Medium Density Residential
063-481-130	610 CIRCLE DR, EAST PALO ALTO	Commercial	Medium Density Residential
063-481-140	620 CIRCLE DR, EAST PALO ALTO	Commercial	Medium Density Residential
063-481-150	630 CIRCLE DR, EAST PALO ALTO	Commercial	Medium Density Residential
063-481-160	640 CIRCLE DR, EAST PALO ALTO	Commercial	Medium Density Residential
063-481-170	650 CIRCLE DR, EAST PALO ALTO	Commercial	Medium Density Residential
063-481-110	652 SCOFIELD AVE, EAST PALO ALTO	Commercial	Medium Density Residential
063-481-100	644 SCOFIELD AVE, EAST PALO ALTO	Commercial	Medium Density Residential
063-481-090	1621 WOODLAND AVE, EAST PALO ALTO	Commercial	Medium Density Residential

Appendix C: Table 1
Land Use Changes - 2014 Zoning versus Proposed 2035 Zoning

APN	Address	2014 Zoning (2)	2035 Zoning (3)
063-481-080	1629 WOODLAND AVE, EAST PALO ALTO	Commercial	Medium Density Residential
063-481-070	1637 WOODLAND AVE, EAST PALO ALTO	Commercial	Medium Density Residential
063-481-060	1643 WOODLAND AVE, EAST PALO ALTO	Commercial	Medium Density Residential
063-481-050	1651 WOODLAND AVE, EAST PALO ALTO	Commercial	Medium Density Residential
063-481-040	1669 WOODLAND AVE, EAST PALO ALTO	Commercial	Medium Density Residential
063-481-030	1671 WOODLAND AVE, EAST PALO ALTO	Commercial	Medium Density Residential
063-481-020	1681 WOODLAND AVE, EAST PALO ALTO	Commercial	Medium Density Residential
063-481-010	1699 WOODLAND AVE, EAST PALO ALTO	Commercial	Medium Density Residential
063-481-210	1901 COOLEY AVE, EAST PALO ALTO	Commercial	Medium Density Residential
063-481-220	1905 COOLEY AVE, EAST PALO ALTO	Commercial	Medium Density Residential
063-481-190	1909 COOLEY AVE, EAST PALO ALTO	Commercial	Medium Density Residential
063-481-180	1917 COOLEY AVE, EAST PALO ALTO	Commercial	Medium Density Residential
063-680-050		Commercial	Office
063-680-150	2050 UNIVERSITY AVE, EAST PALO ALTO	Commercial	Office
063-680-130	2000 UNIVERSITY AVE, EAST PALO ALTO	Commercial	Office
063-680-020	1900 UNIVERSITY AVE, EAST PALO ALTO	Commercial	Office
063-680-100		Commercial	Office
063-680-110		Commercial	Office
063-680-190	2000 UNIVERSITY AVE, EAST PALO ALTO	Commercial	Office
063-680-090		Commercial	Office
063-680-180		Commercial	Office
063-680-060		Commercial	Office
063-282-080	2033 MANHATTAN AVE, EAST PALO ALTO	Commercial	High Density Residential
063-282-090	2001 MANHATTAN AVE, EAST PALO ALTO	Commercial	High Density Residential
063-473-150	1995 MANHATTAN AVE, EAST PALO ALTO	Commercial	High Density Residential
063-473-160	1991 MANHATTAN AVE, EAST PALO ALTO	Commercial	High Density Residential
063-473-170	1965 MANHATTAN AVE, EAST PALO ALTO	Commercial	High Density Residential
063-473-180	1955 MANHATTAN AVE, EAST PALO ALTO	Commercial	High Density Residential
063-473-190	1919 MANHATTAN AVE, EAST PALO ALTO	Commercial	High Density Residential
063-473-200	1901 MANHATTAN AVE, EAST PALO ALTO	Commercial	High Density Residential
063-442-360	330 DONOHOE ST, EAST PALO ALTO	Low Density Residential	High Density Residential

Notes
(1) Assessor Parcel Number (APNs) for all parcels is provided and street addresses are included when the parcel has an assigned address.
If no address is available, the cell is left blank.
(2) 2014 zoning is the zoning for the parcel at the time of the preparation of the 2015 Master Plan for the East Palo Alto Sanitary District.
(3) 2035 Zoning per the City of East Palo Alto's General Plan.

Appendix C: Table 2
2014 Zoning Sanitary Sewer Flows

APN (1)		Address (1)	Land Use from EDS (2)	Equivalent Dwelling Units (3)	Average Daily Flow for Residential , GPD (4)
063-103-310		1585 BAY RD, EAST PALO ALTO	Restaurant	30	7,240
063-103-360	(5)	, EAST PALO ALTO	Public	0	0
063-103-370	(5)	, EAST PALO ALTO	Public	1	240
063-103-380	(5)	, EAST PALO ALTO	Public	0	0
063-103-390	(5)	, EAST PALO ALTO	Public	0	0
063-103-440		2400 GLORIA WAY, EAST PALO ALTO	Res-Multpl	40	9,600
063-111-230		BETWEEN 1585 AND 1675 BAY RD, EAST PALO ALTO	Public	0	0
063-111-250		1675 BAY RD, EAST PALO ALTO	Commercial	1	240
063-121-030	(5)	, EAST PALO ALTO	No hookup	0	0
063-121-040	(5)	, EAST PALO ALTO	No hookup	0	0
063-121-050	(5)	TARA RD, EAST PALO ALTO	No hookup	0	0
063-121-060	(5)	264 TARA RD, EAST PALO ALTO	Commercial	0	0
063-121-070	(5)	2081 BAY RD, EAST PALO ALTO	Industrial	0	0
063-121-110	(5)	2077 BAY RD, EAST PALO ALTO	Industrial	0	0
063-121-120	(5)	2005 BAY RD, EAST PALO ALTO	Industrial	0	0
063-121-150	(5)	, EAST PALO ALTO	No hookup	0	0
063-121-160	(5)	180 TARA ROAD, EAST PALO ALTO	No hookup	0	0
063-121-170	(5)	240 TARA ROAD, EAST PALO ALTO	No hookup	0	0
063-121-190	(5)	2560 PULGAS AVE, EAST PALO ALTO	Industrial	1	240
063-121-200	(5)	2555 PULGAS AVE, EAST PALO ALTO	No hookup	0	0
063-121-210	(5)	2555 PULGAS AVE, EAST PALO ALTO	Commercial	1	240
063-121-290	(5)	218 DEMETER ST, EAST PALO ALTO	Commercial	3	744
063-121-320	(5)	350 DEMETER ST, EAST PALO ALTO	Commercial	1	240
063-121-330	(5)	, EAST PALO ALTO	No hookup	0	0
063-121-350	(5)	, EAST PALO ALTO	No hookup	0	0
063-121-360	(5)	, EAST PALO ALTO	No hookup	0	0
063-121-370	(5)	2535 PULGAS AVE, EAST PALO ALTO	Industrial	1	240
063-121-390	(5)	, EAST PALO ALTO	Commercial	0	0
063-121-400		2091 BAY RD, EAST PALO ALTO	Commercial	1	240
063-121-410	(5)	2091 BAY RD, EAST PALO ALTO	Industrial	0	0
063-121-490	(5)	, EAST PALO ALTO	Industrial	0	0
063-121-500	(5)	, EAST PALO ALTO	Industrial	1	240
063-121-510	(5)	, EAST PALO ALTO	Industrial	1	240
063-122-040	(5)	1990 BAY RD, EAST PALO ALTO	Res-Single	1	240
063-131-220	(5)	2519 PULGAS AVE, EAST PALO ALTO	Civic Facilities	1	240
063-131-230	(5)	, EAST PALO ALTO	No hookup	0	0
063-131-240	(5)	1885 BAY RD, EAST PALO ALTO	Civic Facilities	1	240
063-131-250	(5)	1861 BAY RD, EAST PALO ALTO	Commercial	0	0
063-131-260	(5)	1879 BAY RD, EAST PALO ALTO	Commercial	1	240
063-131-270	(5)	1873 BAY RD, EAST PALO ALTO	No hookup	0	0
063-131-290	(5)	140 DEMETER ST, EAST PALO ALTO	Commercial	1	240
063-131-300	(5)	, EAST PALO ALTO	Commercial	1	240
063-131-310	(5)	1891 BAY RD, EAST PALO ALTO	Civic Facilities	1	240
063-131-320	(5)	1847 BAY RD, EAST PALO ALTO	Commercial	1	240
063-131-330	(5)	1851 BAY RD, EAST PALO ALTO	Commercial	0	0
063-131-340	(5)	2509 PULGAS AVE, EAST PALO ALTO	Commercial	1	240
063-132-020	(5)	151 TARA RD, EAST PALO ALTO	Commercial	1	240
063-132-060	(5)	150 TARA RD, EAST PALO ALTO	Commercial	1	240
063-132-090	(5)	, EAST PALO ALTO	No hookup	0	0
063-132-110	(5)	1923 BAY RD, EAST PALO ALTO	Commercial	0	0
063-132-120	(5)	1907 BAY RD, EAST PALO ALTO	Commercial	1	240
063-132-130	(5)	1911 BAY RD, EAST PALO ALTO	Commercial	1	240
063-132-140		1905 BAY RD, EAST PALO ALTO	Industrial	1	240
063-132-150	(5)	2520 PULGAS AVE, EAST PALO ALTO	Industrial	1	240
063-132-170	(5)	, EAST PALO ALTO	Industrial	1	240
063-132-190	(5)	2532 PULGAS AVE, EAST PALO ALTO	Industrial	2	480

Appendix C: Table 2
2014 Zoning Sanitary Sewer Flows

APN (1)		Address (1)	Land Use from EDS (2)	Equivalent Dwelling Units (3)	Average Daily Flow for Residential , GPD (4)
063-132-210	(5)	2524 PULGAS AVE, EAST PALO ALTO	Industrial	1	240
063-132-220	(5)	1987 BAY RD, EAST PALO ALTO	No hookup	0	0
063-133-110	(5)	, EAST PALO ALTO	Industrial	1	240
063-133-130	(5)	1805 BAY RD, EAST PALO ALTO	Commercial	7	1,620
063-151-170		2159 POPLAR AVE, EAST PALO ALTO	Res-Multpl	2	480
063-151-200		1001 E BAYSHORE RD, EAST PALO ALTO	Res-Single	1	240
063-152-230		1199 E BAYSHORE RD, EAST PALO ALTO	Church	1	240
063-153-010		1205 E BAYSHORE RD, EAST PALO ALTO	No hookup	0	0
063-153-250		2119 ADDISON AVE, EAST PALO ALTO	Manual	0	0
063-154-200		2110 ADDISON AVE, EAST PALO ALTO	Commercial	1	240
063-154-260		2119 OAKWOOD DR, EAST PALO ALTO	Res-Multpl	1	240
063-155-010		2106 OAKWOOD DR, EAST PALO ALTO	Commercial	1	240
063-155-180		2123 DUMBARTON AVE, EAST PALO ALTO	Res-Single	1	240
063-155-190		2109 DUMBARTON AVE, EAST PALO ALTO	Res-Multpl	1	240
063-181-010		2110 DUMBARTON AVE, EAST PALO ALTO	Res-Multpl	1	240
063-181-220		2111 LINCOLN ST, EAST PALO ALTO	Res-Single	1	240
063-181-230		2097 LINCOLN ST, EAST PALO ALTO	Res-Single	1	240
063-181-240		1385 E BAYSHORE RD, EAST PALO ALTO	No hookup	0	0
063-183-010		2088 LINCOLN ST, EAST PALO ALTO	Res-Multpl	1	240
063-183-070		2045 GLEN WAY, EAST PALO ALTO	Res-Multpl	1	240
063-183-080		1441 E BAYSHORE RD, EAST PALO ALTO	Commercial	1	240
063-183-090		, EAST PALO ALTO	No hookup	0	0
063-183-110		1401 E BAYSHORE RD 2, EAST PALO ALTO	Res-Multpl	0	0
063-184-010		1475 E BAYSHORE RD, EAST PALO ALTO	Commercial	0	0
063-184-020		2056 GLEN WAY, EAST PALO ALTO	Res-Multpl	0	0
063-184-030		2070 GLEN WAY, EAST PALO ALTO	Res-Multpl	0	0
063-184-040		2080 GLEN WAY, EAST PALO ALTO	Manual	0	0
063-201-080		566 SACRAMENTO ST, EAST PALO ALTO	Res-Multpl	1	240
063-201-090		576 SACRAMENTO ST, EAST PALO ALTO	Res-Single	1	240
063-201-220		2337 UNIVERSITY AVE, EAST PALO ALTO	Res-Single	1	240
063-201-240		2343 UNIVERSITY AVE, EAST PALO ALTO	Res-Multpl	1	240
063-201-250		RUNNYMEDE ST, EAST PALO ALTO	Res-Multpl	1	240
063-201-260		RUNNYMEDE ST, EAST PALO ALTO	Res-Single	1	240
063-201-270		578 SACRAMENTO ST, EAST PALO ALTO	Res-Multpl	1	240
063-201-290		2331 UNIVERSITY AVE, EAST PALO ALTO	Res-Single	1	240
063-202-080		556 WEEKS ST, EAST PALO ALTO	Res-Single	1	240
063-202-090		564 WEEKS ST, EAST PALO ALTO	Res-Single	1	240
063-202-100		566 WEEKS ST, EAST PALO ALTO	Res-Single	1	240
063-202-160		561 SACRAMENTO ST, EAST PALO ALTO	Res-Multpl	1	240
063-202-280		2361-2369 UNIVERSITY AVE 101-308, EAST PALO ALTO	Res-Multpl	1	240
063-203-160	(5)	2387 UNIVERSITY AVE, EAST PALO ALTO	Commercial	2	461
063-203-170	(5)	2381 UNIVERSITY AVE, EAST PALO ALTO	Commercial	2	408
063-203-180	(5)	2373 UNIVERSITY AVE, EAST PALO ALTO	Commercial	1	240
063-203-200	(5)	593 WEEKS ST, EAST PALO ALTO	Res-Single	1	240
063-203-210		585 WEEKS ST, EAST PALO ALTO	Res-Single	1	240
063-203-220		579 WEEKS ST, EAST PALO ALTO	Res-Single	1	240
063-203-230		563 WEEKS ST, EAST PALO ALTO	Res-Multpl	1	240
063-203-240		549 WEEKS ST, EAST PALO ALTO	Res-Single	1	240
063-203-250		541 WEEKS ST, EAST PALO ALTO	Res-Multpl	1	240
063-203-260		533 WEEKS ST, EAST PALO ALTO	Res-Single	1	240
063-203-270		, EAST PALO ALTO	No hookup	0	0
063-203-300	(5)	2395 UNIVERSITY AVE, EAST PALO ALTO	Restaurant	4	922
063-203-310	(5)	2371 UNIVERSITY AVE, EAST PALO ALTO	Commercial	1	240
063-203-320	(5)	1586 BAY RD, EAST PALO ALTO	Res-Single	1	240
063-203-330	(5)	1590 BAY RD, EAST PALO ALTO	No hookup	0	0
063-203-340	(5)	2387 UNIVERSITY AVE, EAST PALO ALTO	Commercial	1	240

Appendix C: Table 2
2014 Zoning Sanitary Sewer Flows

APN (1)		Address (1)	Land Use from EDS (2)	Equivalent Dwelling Units (3)	Average Daily Flow for Residential , GPD (4)
063-203-350		1574 BAY RD, EAST PALO ALTO	Res-Single	1	240
063-203-360		1546 BAY RD, EAST PALO ALTO	Res-Single	1	240
063-203-370		1508 BAY RD, EAST PALO ALTO	Res-Single	1	240
063-203-380		, NO DATA	No hookup	0	0
063-203-390		1518 BAY RD, EAST PALO ALTO	Res-Single	1	240
063-203-400		1560 BAY RD, EAST PALO ALTO	Res-Single	1	240
063-203-410		1568 BAY RD, EAST PALO ALTO	Res-Single	1	240
063-203-430		1530 BAY RD, EAST PALO ALTO	Res-Single	1	240
063-203-440		1554 BAY RD, EAST PALO ALTO	Res-Single	1	240
063-203-450		1538 BAY RD, EAST PALO ALTO	Res-Single	1	240
063-210-310		2346 UNIVERSITY AVE, EAST PALO ALTO	Res-Multpl	1	240
063-210-340		2369 COOLEY AVE, EAST PALO ALTO	Res-Single	1	240
063-210-350		2365 COOLEY AVE, EAST PALO ALTO	Res-Single	1	240
063-210-360		2300 UNIVERSITY AVE, EAST PALO ALTO	Res-Single	1	240
063-210-380		2354 UNIVERSITY AVE, EAST PALO ALTO	Res-Single	1	240
063-210-410		2371 COOLEY AVE, EAST PALO ALTO	Res-Single	1	240
063-210-450		2377 COOLEY AVE, EAST PALO ALTO	Res-Single	1	240
063-210-460	(5)	2396 UNIVERSITY AVE, EAST PALO ALTO	Commercial	1	240
063-210-470		633 RUNNYMEDE ST, EAST PALO ALTO	Res-Single	1	240
063-210-480		2361 COOLEY AVE, EAST PALO ALTO	Res-Single	1	240
063-210-490		2355 COOLEY AVE, EAST PALO ALTO	Res-Multpl	1	240
063-210-520		2338 UNIVERSITY AVE, EAST PALO ALTO	Res-Multpl	1	240
063-210-610		661 RUNNYMEDE ST, EAST PALO ALTO	Res-Single	1	240
063-210-630		2358 UNIVERSITY AVE, EAST PALO ALTO	Res-Multpl	1	240
063-221-010	(5)	, EAST PALO ALTO	Manual	0	0
063-221-020	(5)	1620 BAY RD, EAST PALO ALTO	Res-Single	1	240
063-221-030	(5)	, EAST PALO ALTO	Res-Single	1	240
063-221-040	(5)	1640 BAY RD, EAST PALO ALTO	Res-Multpl	12	2,880
063-221-050	(5)	1650 BAY RD, EAST PALO ALTO	Res-Multpl	5	1,200
063-221-060	(5)	1660 BAY RD, EAST PALO ALTO	Res-Multpl	21	5,040
063-221-070	(5)	1670 BAY RD, EAST PALO ALTO	Res-Multpl	17	4,080
063-221-100	(5)	1760 BAY RD, EAST PALO ALTO	Res-Multpl	48	11,520
063-221-110	(5)	1796 BAY RD, EAST PALO ALTO	Commercial	1	240
063-221-140	(5)	2397 CLARKE AVE, EAST PALO ALTO	Res-Multpl	5	1,200
063-221-150	(5)	2387 CLARKE AVE, EAST PALO ALTO	Res-Multpl	5	1,200
063-221-160	(5)	2377 CLARKE AVE, EAST PALO ALTO	Res-Multpl	5	1,200
063-221-170	(5)	2373 CLARKE AVE, EAST PALO ALTO	Res-Multpl	2	480
063-221-180		2371 CLARKE AVE, EAST PALO ALTO	Res-Single	1	240
063-221-190		2369 CLARKE AVE, EAST PALO ALTO	Res-Single	1	240
063-221-200		891 WEEKS ST, EAST PALO ALTO	Church	1	240
063-221-210		871 WEEKS ST, EAST PALO ALTO	Res-Single	1	240
063-221-220		867 WEEKS ST, EAST PALO ALTO	Res-Single	1	240
063-221-230		865 WEEKS ST, EAST PALO ALTO	Res-Single	1	240
063-221-240		, NO DATA	No hookup	0	0
063-221-250		831 WEEKS ST, EAST PALO ALTO	Res-Single	1	240
063-221-260		819 JAMIE LN, EAST PALO ALTO	No hookup	0	0
063-221-270		823 JAMIE LN, EAST PALO ALTO	No hookup	0	0
063-221-280		827 JAMIE LN, EAST PALO ALTO	No hookup	0	0
063-221-290		811 PAUL ROBESON CT, EAST PALO ALTO	Res-Single	1	240
063-221-300		813 PAUL ROBESON CT, EAST PALO ALTO	Res-Single	1	240
063-221-310		815 PAUL ROBESON CT, EAST PALO ALTO	Res-Single	1	240
063-221-320		817 PAUL ROBESON CT, EAST PALO ALTO	Res-Single	1	240
063-221-340		801 WEEKS ST, EAST PALO ALTO	Res-Single	1	240
063-221-350		803 PAUL ROBESON CT, EAST PALO ALTO	Res-Single	1	240
063-221-360		805 PAUL ROBESON CT, EAST PALO ALTO	Res-Single	1	240
063-221-370		807 PAUL ROBESON CT, EAST PALO ALTO	Res-Single	1	240
063-221-380		809 PAUL ROBESON CT, EAST PALO ALTO	Res-Single	1	240

Appendix C: Table 2
2014 Zoning Sanitary Sewer Flows

APN (1)		Address (1)	Land Use from EDS (2)	Equivalent Dwelling Units (3)	Average Daily Flow for Residential , GPD (4)
063-221-390		791 WEEKS ST, EAST PALO ALTO	Res-Single	1	240
063-221-410		731 WEEKS ST, EAST PALO ALTO	Res-Single	1	240
063-221-420		717 WEEKS ST, EAST PALO ALTO	Res-Single	1	240
063-221-430		2360 COOLEY AVE, EAST PALO ALTO	Res-Single	1	240
063-221-440		2362-2362 COOLEY AVE, EAST PALO ALTO	Res-Multpl	1	240
063-221-450		2364 COOLEY AVE, EAST PALO ALTO	Res-Single	1	240
063-221-460	(5)	2370 COOLEY AVE, EAST PALO ALTO	Res-Multpl	42	10,080
063-221-480	(5)	2380 COOLEY AVE, EAST PALO ALTO	Commercial	16	3,758
063-221-490	(5)	, EAST PALO ALTO	No hookup	0	0
063-221-500		863 WEEKS ST, EAST PALO ALTO	Res-Single	1	240
063-221-510		761 WEEKS ST, EAST PALO ALTO	Res-Single	1	240
063-221-520		767 CAROLE CT, EAST PALO ALTO	Res-Single	1	240
063-221-530		773 CAROLE CT, EAST PALO ALTO	Res-Single	1	240
063-221-540		779 CAROLE CT, EAST PALO ALTO	Res-Single	1	240
063-221-550		785 CAROLE CT, EAST PALO ALTO	Res-Single	1	240
063-221-560	(5)	1794 BAY RD, EAST PALO ALTO	Church	1	240
063-221-570	(5)	, EAST PALO ALTO	No hookup	0	0
063-221-580	(5)	, EAST PALO ALTO	No hookup	0	0
063-221-590	(5)	1730 BAY RD, EAST PALO ALTO	Res-Multpl	77	18,480
063-231-210	(5)	2495 PULGAS AVE, EAST PALO ALTO	Commercial	3	629
063-231-220		1800 BAY RD, EAST PALO ALTO	Commercial	1	240
063-231-230	(5)	1890 BAY RD, EAST PALO ALTO	Res-Multpl	2	480
063-231-240		1804 BAY RD, EAST PALO ALTO	Commercial	1	240
063-231-250		1798 BAY RD, EAST PALO ALTO	Medical	1	240
063-231-260	(5)	1836 BAY RD, EAST PALO ALTO	Commercial	1	240
063-231-270	(5)	1894 BAY RD, EAST PALO ALTO	Res-Single	1	240
063-231-280	(5)	1896 BAY RD, EAST PALO ALTO	Res-Single	1	240
063-231-300	(5)	, EAST PALO ALTO	No hookup	0	0
063-232-090		1003 WEEKS ST, EAST PALO ALTO	Commercial	11	2,743
063-232-150		2421 PULGAS AVE, EAST PALO ALTO	Restaurant	6	1,545
063-232-160		2447 PULGAS AVE, EAST PALO ALTO	Commercial	1	302
063-232-200	(5)	2373 CLARKE AVE, EAST PALO ALTO	Res-Single	1	240
063-232-210		WEEKS ST, EAST PALO ALTO	No hookup	0	0
063-232-220		WEEKS ST, EAST PALO ALTO	Commercial	0	0
063-232-230		WEEKS ST, EAST PALO ALTO	No hookup	0	0
063-232-240		1045 WEEKS ST, EAST PALO ALTO	Commercial	1	240
063-232-250		1085 WEEKS ST, EAST PALO ALTO	Manual	0	0
063-232-260		1001 WEEKS ST, EAST PALO ALTO	Church	1	240
063-232-300		1095 WEEKS ST, EAST PALO ALTO	Commercial	1	336
063-232-310	(5)	2368 CLARKE AVE, EAST PALO ALTO	Commercial	1	240
063-232-340	(5)	2386 CLARKE AVE, EAST PALO ALTO	Commercial	1	240
063-232-350		901 WEEKS ST, EAST PALO ALTO	Public	0	0
063-240-210	(5)	NO DATA, EAST PALO ALTO	No hookup	0	0
063-240-220	(5)	NO DATA, EAST PALO ALTO	No hookup	0	0
063-240-270	(5)	NO DATA, EAST PALO ALTO	No hookup	0	0
063-240-310	(5)	NO DATA, EAST PALO ALTO	Industrial	1	240
063-240-350	(5)	NO DATA, EAST PALO ALTO	No hookup	0	0
063-240-360	(5)	NO DATA, EAST PALO ALTO	No hookup	0	0
063-240-370	(5)	NO DATA, EAST PALO ALTO	Res-Single	1	240
063-240-380	(5)	NO DATA, EAST PALO ALTO	Res-Single	1	240
063-240-390	(5)	NO DATA, EAST PALO ALTO	Industrial	1	240
063-240-420	(5)	NO DATA, EAST PALO ALTO	Industrial	1	240
063-240-440	(5)	NO DATA, EAST PALO ALTO	No hookup	0	0
063-240-460	(5)	NO DATA, EAST PALO ALTO	Industrial	1	240
063-253-320	(5)	,NO DATA	No hookup	0	0
063-271-070	(5)	1275 RUNNYMEDE ST, EAST PALO ALTO	Res-Multpl	3	720
063-271-090	(5)	1201 RUNNYMEDE ST, EAST PALO ALTO	Res-Multpl	2	480

Appendix C: Table 2
2014 Zoning Sanitary Sewer Flows

APN (1)		Address (1)	Land Use from EDS (2)	Equivalent Dwelling Units (3)	Average Daily Flow for Residential , GPD (4)
063-271-370		1171 RUNNYMEDE ST, EAST PALO ALTO	Church	1	240
063-271-410	(5)	NO DATA, EAST PALO ALTO	Res-Single	1	240
063-271-420	(5)	NO DATA, EAST PALO ALTO	Res-Single	1	240
063-271-440	(5)	1191 RUNNYMEDE ST, EAST PALO ALTO	Res-Single	1	240
063-271-450	(5)	1200 WEEKS ST, EAST PALO ALTO	No hookup	0	0
063-271-470	(5)	1249 RUNNYMEDE ST, EAST PALO ALTO	Res-Single	1	240
063-271-480		, EAST PALO ALTO	No hookup	0	0
063-271-490	(5)	NO DATA, EAST PALO ALTO	No hookup	0	0
063-271-500	(5)	1269 RUNNYMEDE ST, EAST PALO ALTO	Res-Single	1	240
063-271-510	(5)	1265 RUNNYMEDE ST, EAST PALO ALTO	Res-Single	1	240
063-271-520	(5)	1261 RUNNYMEDE ST, EAST PALO ALTO	Res-Single	1	240
063-271-530	(5)	1257 RUNNYMEDE ST, EAST PALO ALTO	Res-Single	1	240
063-271-540	(5)	NO DATA, EAST PALO ALTO	Res-Single	1	240
063-271-550	(5)	NO DATA, EAST PALO ALTO	Res-Single	1	240
063-271-560	(5)	NO DATA, EAST PALO ALTO	Res-Single	1	240
063-271-570	(5)	NO DATA, EAST PALO ALTO	Res-Single	1	240
063-281-020	(5)	2021 EUCLID AVE	Res-Multpl	1	240
063-281-030	(5)	2025 EUCLID AVE	Res-Multpl	1	240
063-281-040	(5)	2031 EUCLID AVE	Res-Multpl	1	240
063-281-100	(5)	2043 EUCLID AVE	Commercial	1	240
063-281-110	(5)	2041 EUCLID AVE	Commercial	1	240
063-282-010	(5)	501 O'CONNOR STREET	Res-Multpl	1	240
063-282-020	(5)	2012 EUCLID AVE	Res-Multpl	1	240
063-282-030	(5)	2032 EUCLID AVE	Res-Multpl	1	240
063-282-040	(5)	2036 EUCLID AVE	Res-Multpl	1	240
063-282-050	(5)	2040/2042 EUCLID AVE	Res-Multpl	1	240
063-282-060	(5)	2044 EUCLID AVE	Res-Multpl	1	240
063-282-070	(5)	2054 EUCLID AVE	Res-Multpl	1	240
063-282-080		2033 MANHATTAN AVE, EAST PALO ALTO	Res-Multpl	1	240
063-282-090		2001 MANHATTAN AVE, EAST PALO ALTO	Res-Multpl	1	240
063-291-010		1489 E BAYSHORE RD, EAST PALO ALTO	Commercial	1	240
063-292-180		2101 UNIVERSITY AVE, EAST PALO ALTO	Industrial	2	474
063-292-370		2117 UNIVERSITY AVE, EAST PALO ALTO	#N/A	5	1,209
063-292-380		2160 EUCLID AVE, EAST PALO ALTO	#N/A	5	1,209
063-302-170		2283 UNIVERSITY AVE, EAST PALO ALTO	Res-Single	1	240
063-302-180		2281 UNIVERSITY AVE, EAST PALO ALTO	Res-Single	1	240
063-302-210		2263 UNIVERSITY AVE, EAST PALO ALTO	Res-Multpl	1	240
063-302-220		2253 UNIVERSITY AVE, EAST PALO ALTO	Res-Single	1	240
063-302-230		2247 UNIVERSITY AVE, EAST PALO ALTO	Res-Multpl	1	240
063-302-280		575A BELL ST, EAST PALO ALTO	Res-Single	1	240
063-302-290		565 BELL ST, EAST PALO ALTO	Res-Single	1	240
063-302-330		2201 UNIVERSITY AVE, EAST PALO ALTO	Church	1	240
063-302-340		584 RUNNYMEDE ST, EAST PALO ALTO	Res-Single	1	240
063-302-460		2277 UNIVERSITY AVE, EAST PALO ALTO	Res-Single	1	240
063-302-470		2279 UNIVERSITY AVE, EAST PALO ALTO	Res-Single	1	240
063-312-400		, NO DATA	#N/A	1	240
063-321-050		2124 UNIVERSITY AVE, EAST PALO ALTO	Res-Single	1	240
063-321-060		2126 UNIVERSITY AVE, EAST PALO ALTO	Manual	0	0
063-321-070		, EAST PALO ALTO	No hookup	0	0
063-321-080		2142 UNIVERSITY AVE, EAST PALO ALTO	Commercial	1	240
063-321-100		2160 UNIVERSITY AVE, EAST PALO ALTO	Commercial	2	388
063-321-110		2164 UNIVERSITY AVE, EAST PALO ALTO	Res-Single	1	240
063-321-120		2166 UNIVERSITY AVE, EAST PALO ALTO	Res-Single	1	240
063-321-130		2172 UNIVERSITY AVE, EAST PALO ALTO	Res-Single	1	240
063-321-140		2178 UNIVERSITY AVE, EAST PALO ALTO	Res-Single	1	240
063-321-180		612 BELL ST, EAST PALO ALTO	Res-Single	1	240
063-321-190		616 BELL ST, EAST PALO ALTO	Res-Single	1	240

Appendix C: Table 2
2014 Zoning Sanitary Sewer Flows

APN (1)		Address (1)	Land Use from EDS (2)	Equivalent Dwelling Units (3)	Average Daily Flow for Residential , GPD (4)
063-321-200		644 BELL ST, EAST PALO ALTO	Res-Multpl	1	240
063-321-210		2189 CAPITOL AVE, EAST PALO ALTO	Res-Single	1	240
063-321-220		2187 CAPITOL AVE, EAST PALO ALTO	Res-Single	1	240
063-321-230		2181 CAPITOL AVE, EAST PALO ALTO	Res-Single	1	240
063-321-240		2171 CAPITOL AVE, EAST PALO ALTO	Res-Single	1	240
063-321-250		2165 CAPITOL AVE, EAST PALO ALTO	Res-Single	1	240
063-321-260		2161 CAPITOL AVE, EAST PALO ALTO	Res-Single	1	240
063-321-270		2157 CAPITOL AVE, EAST PALO ALTO	Res-Single	1	240
063-321-280		2153 CAPITOL AVE, EAST PALO ALTO	Res-Single	1	240
063-321-290		2149 CAPITOL AVE, EAST PALO ALTO	Res-Single	1	240
063-321-300		2145 CAPITOL AVE, EAST PALO ALTO	Res-Single	1	240
063-321-310		2141 CAPITOL AVE, EAST PALO ALTO	Res-Single	1	240
063-321-320		2133 CAPITOL AVE, EAST PALO ALTO	Res-Single	1	240
063-321-330		2129 CAPITOL AVE, EAST PALO ALTO	Res-Single	1	240
063-321-400		2194 UNIVERSITY AVE, EAST PALO ALTO	Commercial	1	240
063-321-410		2148 UNIVERSITY AVE, EAST PALO ALTO	Restaurant	1	240
063-321-420		, NO DATA	#N/A	1	240
063-322-040		2124 CAPITOL AVE, EAST PALO ALTO	Res-Single	1	240
063-322-050		2132 CAPITOL AVE, EAST PALO ALTO	Res-Single	1	240
063-322-060		2134 CAPITOL AVE, EAST PALO ALTO	Res-Single	1	240
063-322-070		2138 CAPITOL AVE, EAST PALO ALTO	Res-Single	1	240
063-322-080		2142 CAPITOL AVE, EAST PALO ALTO	Res-Single	1	240
063-322-090		2144 CAPITOL AVE, EAST PALO ALTO	Res-Multpl	1	240
063-322-100		2154 CAPITOL AVE, EAST PALO ALTO	Res-Single	1	240
063-322-110		2162 CAPITOL AVE, EAST PALO ALTO	Church	1	240
063-322-130		2184 CAPITOL AVE, EAST PALO ALTO	Church	1	240
063-322-140		2194 CAPITOL AVE, EAST PALO ALTO	Res-Single	1	240
063-322-150		2198 CAPITOL AVE, EAST PALO ALTO	Res-Single	1	240
063-322-160		660 BELL ST, EAST PALO ALTO	Res-Single	1	240
063-322-340		2169 COOLEY AVE, EAST PALO ALTO	Church	1	344
063-322-410		, NO DATA	0	0	0
063-322-500		2159 COOLEY AVE, EAST PALO ALTO	Res-Single	1	240
063-322-560		DONOHOE ST, EAST PALO ALTO	Res-Single	1	240
063-322-580		2118 CAPITOL AVE, EAST PALO ALTO	#N/A	0	0
063-331-030		2212 UNIVERSITY AVE, EAST PALO ALTO	Res-Single	1	240
063-331-060		2242 UNIVERSITY AVE, EAST PALO ALTO	Res-Single	1	240
063-331-070		2248 UNIVERSITY AVE, EAST PALO ALTO	Res-Multpl	1	240
063-331-080		2252 UNIVERSITY AVE, EAST PALO ALTO	Res-Single	1	240
063-331-090		2264 UNIVERSITY AVE, EAST PALO ALTO	Res-Single	1	240
063-331-100		2268 UNIVERSITY AVE, EAST PALO ALTO	Res-Single	1	240
063-331-110		2272 UNIVERSITY AVE, EAST PALO ALTO	Res-Single	1	240
063-331-120		2274 UNIVERSITY AVE, EAST PALO ALTO	Res-Single	1	240
063-331-130		2276 UNIVERSITY AVE, EAST PALO ALTO	Res-Single	1	240
063-331-140		2280 UNIVERSITY AVE, EAST PALO ALTO	Res-Single	1	240
063-331-150		2284 UNIVERSITY AVE, EAST PALO ALTO	Res-Single	1	240
063-331-190		2291 CAPITOL AVE, EAST PALO ALTO	Res-Single	1	240
063-331-200		2287 CAPITOL AVE, EAST PALO ALTO	Res-Single	1	240
063-331-210		2285 CAPITOL AVE, EAST PALO ALTO	Res-Single	1	240
063-331-220		2277 CAPITOL AVE, EAST PALO ALTO	Res-Single	1	240
063-331-230		2267 CAPITOL AVE, EAST PALO ALTO	Res-Single	1	240
063-331-240		2263 CAPITOL AVE, EAST PALO ALTO	Res-Single	1	240
063-331-250		2255 CAPITOL AVE, EAST PALO ALTO	Res-Single	1	240
063-331-260		2251 CAPITOL AVE, EAST PALO ALTO	Res-Single	1	240
063-331-270		2249 CAPITOL AVE, EAST PALO ALTO	Res-Single	1	240
063-331-280		2245 CAPITOL AVE, EAST PALO ALTO	Res-Single	1	240
063-331-290		2239 CAPITOL AVE, EAST PALO ALTO	Res-Single	1	240
063-331-300		2233 CAPITOL AVE, EAST PALO ALTO	Res-Single	1	240

Appendix C: Table 2
2014 Zoning Sanitary Sewer Flows

APN (1)		Address (1)	Land Use from EDS (2)	Equivalent Dwelling Units (3)	Average Daily Flow for Residential , GPD (4)
063-331-310		2227 CAPITOL AVE, EAST PALO ALTO	Res-Single	1	240
063-331-320		2219 CAPITOL AVE, EAST PALO ALTO	Res-Single	1	240
063-331-330		2217 CAPITOL AVE, EAST PALO ALTO	Res-Single	1	240
063-331-340		2205 CAPITOL AVE, EAST PALO ALTO	Res-Single	1	240
063-331-350		643 BELL ST, EAST PALO ALTO	Res-Single	1	240
063-331-370		2200 UNIVERSITY AVE, EAST PALO ALTO	Office	1	358
063-331-380		2240 UNIVERSITY AVE, EAST PALO ALTO	Commercial	1	240
063-331-410		2220 UNIVERSITY AVE, EAST PALO ALTO	Restaurant	7	1,695
063-442-360		330 DONOHOE ST, EAST PALO ALTO	Church	1	240
063-473-150		1995 MANHATTAN AVE, EAST PALO ALTO	Res-Multpl	14	3,418
063-473-160		1991 MANHATTAN AVE, EAST PALO ALTO	Res-Multpl	14	3,418
063-473-170		1965 MANHATTAN AVE, EAST PALO ALTO	Res-Multpl	14	3,418
063-473-180		1955 MANHATTAN AVE, EAST PALO ALTO	Res-Multpl	14	3,418
063-473-190		1919 MANHATTAN AVE, EAST PALO ALTO	Res-Multpl	14	3,418
063-473-200		1901 MANHATTAN AVE, EAST PALO ALTO	Res-Multpl	14	3,418
063-481-010		1699 WOODLAND AVE, EAST PALO ALTO	Res-Single	1	240
063-481-020		1681 WOODLAND AVE, EAST PALO ALTO	Res-Multpl	1	240
063-481-030		1671 WOODLAND AVE, EAST PALO ALTO	Res-Multpl	1	240
063-481-040		1669 WOODLAND AVE, EAST PALO ALTO	Res-Single	1	240
063-481-050		1651 WOODLAND AVE, EAST PALO ALTO	Res-Multpl	1	240
063-481-060		1643 WOODLAND AVE, EAST PALO ALTO	Res-Multpl	1	240
063-481-070		1637 WOODLAND AVE, EAST PALO ALTO	Res-Multpl	1	240
063-481-080		1629 WOODLAND AVE, EAST PALO ALTO	Res-Single	1	240
063-481-090		1621 WOODLAND AVE, EAST PALO ALTO	Res-Multpl	1	240
063-481-100		644 SCOFIELD AVE, EAST PALO ALTO	Res-Multpl	1	240
063-481-110		652 SCOFIELD AVE, EAST PALO ALTO	Res-Multpl	1	240
063-481-120		660 SCOFIELD AVE, EAST PALO ALTO	Res-Multpl	1	240
063-481-130		610 CIRCLE DR, EAST PALO ALTO	Res-Multpl	1	240
063-481-140		620 CIRCLE DR, EAST PALO ALTO	Res-Multpl	1	240
063-481-150		630 CIRCLE DR, EAST PALO ALTO	Res-Single	1	240
063-481-160		640 CIRCLE DR, EAST PALO ALTO	Res-Single	1	240
063-481-170		650 CIRCLE DR, EAST PALO ALTO	Res-Single	1	240
063-481-180		1917 COOLEY AVE, EAST PALO ALTO	Res-Multpl	1	240
063-481-190		1909 COOLEY AVE, EAST PALO ALTO	Res-Multpl	1	240
063-481-210		1901 COOLEY AVE, EAST PALO ALTO	Res-Multpl	1	240
063-481-220		1905 COOLEY AVE, EAST PALO ALTO	Res-Multpl	1	240
063-482-010		641 CIRCLE DR, EAST PALO ALTO	Res-Single	1	240
063-482-020		621 CIRCLE DR, EAST PALO ALTO	Res-Multpl	1	240
063-482-030		611 CIRCLE DR, EAST PALO ALTO	Res-Multpl	1	240
063-483-030		1909 CAPITOL AVE, EAST PALO ALTO	Res-Multpl	1	240
063-483-040		1943 CAPITOL AVE, EAST PALO ALTO	Res-Multpl	1	240
063-483-050		1609 WOODLAND AVE, EAST PALO ALTO	Res-Multpl	1	240
063-484-010		655 SCOFIELD AVE, EAST PALO ALTO	Res-Multpl	1	240
063-484-020		1902 CAPITOL AVE, EAST PALO ALTO	Res-Single	1	240
063-484-030		1908 CAPITOL AVE, EAST PALO ALTO	Res-Single	1	240
063-484-040		1916 CAPITOL AVE, EAST PALO ALTO	Res-Multpl	1	240
063-484-050		1920 CAPITOL AVE, EAST PALO ALTO	Res-Multpl	1	240
063-484-060		1934 CAPITOL AVE, EAST PALO ALTO	Res-Multpl	1	240
063-484-090		1949 COOLEY AVE, EAST PALO ALTO	Res-Multpl	1	240
063-484-100		1941 COOLEY AVE, EAST PALO ALTO	Res-Multpl	1	240
063-484-110		685 SCOFIELD AVE, EAST PALO ALTO	Res-Multpl	1	240
063-484-130		1957 COOLEY AVE, EAST PALO ALTO	Res-Multpl	1	240
063-492-070		1927 E BAYSHORE RD, EAST PALO ALTO	Res-Single	1	240
063-492-280		1933 PULGAS AVE, EAST PALO ALTO	Commercial	1	240
063-492-480		1895 E BAYSHORE RD, EAST PALO ALTO	Res-Single	1	240
063-501-020		1874 W BAYSHORE RD, EAST PALO ALTO	Commercial	1	240
063-501-030		1870 W BAYSHORE RD, EAST PALO ALTO	Commercial	1	240

Appendix C: Table 2
2014 Zoning Sanitary Sewer Flows

APN (1)		Address (1)	Land Use from EDS (2)	Equivalent Dwelling Units (3)	Average Daily Flow for Residential , GPD (4)
063-501-040		1879 WOODLAND AVE, EAST PALO ALTO	Res-Multpl	1	240
063-501-050		1875 WOODLAND AVE, EAST PALO ALTO	Res-Single	1	240
063-511-020		2039 CLARKE AVE, EAST PALO ALTO	Res-Single	1	240
063-511-030		2035 CLARKE AVE, EAST PALO ALTO	Res-Single	1	240
063-511-040		2029 CLARKE AVE, EAST PALO ALTO	Res-Single	1	240
063-511-050		2027 CLARKE AVE, EAST PALO ALTO	Res-Single	1	240
063-511-060		2023 CLARKE AVE, EAST PALO ALTO	Res-Single	1	240
063-511-070		2017 CLARKE AVE, EAST PALO ALTO	Res-Single	1	240
063-511-080		2013 CLARKE AVE, EAST PALO ALTO	Res-Single	1	240
063-511-090		2009 CLARKE AVE, EAST PALO ALTO	Res-Single	1	240
063-511-190		872 DONOHOE ST, EAST PALO ALTO	Res-Single	1	240
063-511-200		866 DONOHOE ST, EAST PALO ALTO	Res-Single	1	240
063-511-210		864 DONOHOE ST, EAST PALO ALTO	Res-Single	1	240
063-511-220		862 DONOHOE ST, EAST PALO ALTO	Res-Single	1	240
063-511-240		896 DONOHOE ST, EAST PALO ALTO	Res-Single	1	240
063-511-250		860 DONOHOE ST, EAST PALO ALTO	Res-Single	1	240
063-511-260		890 DONOHOE ST, EAST PALO ALTO	Res-Single	1	240
063-511-490		1731 E BAYSHORE RD, EAST PALO ALTO	Restaurant	23	5,615
063-511-520		1761 E BAYSHORE RD, EAST PALO ALTO	Commercial	1	240
063-511-630		1721 E BAYSHORE RD, EAST PALO ALTO	Restaurant	21	4,925
063-511-660		899 OCONNOR ST, EAST PALO ALTO	Commercial	1	240
063-511-680		1751 EAST BAYSHORE RD, EAST PALO ALTO	Commercial	1	240
063-511-690		1745 E BAYSHORE BLVD, EAST PALO ALTO	Commercial	6	1,467
063-511-720		1775 E BAYSHORE RD, EAST PALO ALTO	Commercial	6	1,499
063-515-060		1821 CLARKE AVE, EAST PALO ALTO	Res-Single	1	240
063-515-070		1805 CLARKE AVE, EAST PALO ALTO	Res-Single	1	240
063-515-080		1787 WOODLAND AVE, EAST PALO ALTO	Res-Single	1	240
063-515-230		1785 WOODLAND AVE, EAST PALO ALTO	Res-Single	1	240
063-571-060		1985 E BAYSHORE RD, EAST PALO ALTO	Commercial	1	240
063-571-070		1981 E BAYSHORE RD, EAST PALO ALTO	No hookup	0	0
063-571-080		1961 E BAYSHORE RD, EAST PALO ALTO	Commercial	1	240
063-571-090		1905 E BAYSHORE RD, EAST PALO ALTO	Industrial	1	240
114-590-050	(5)	NO DATA, EAST PALO ALTO	#N/A	0	0
063-680-020		1900 UNIVERSITY AVE, EAST PALO ALTO	Office	15	3,500
063-680-050		, NO DATA	#N/A	15	3,500
063-680-060		, NO DATA	#N/A	15	3,500
063-680-090		, EAST PALO ALTO	No hookup	0	0
063-680-100		, EAST PALO ALTO	Commercial	1	240
063-680-110		, EAST PALO ALTO	Commercial	1	240
063-680-130		2000 UNIVERSITY AVE, EAST PALO ALTO	Office	19	4,567
063-680-150		2050 UNIVERSITY AVE, EAST PALO ALTO	Motel	19	4,567
063-680-180		, EAST PALO ALTO	No hookup	0	0
063-680-190		2000 UNIVERSITY AVE, EAST PALO ALTO	Office	1	240
063-730-010		2477 PULGAS AVE, EAST PALO ALTO	No hookup	0	0
063-730-020		2477 PULGAS AVE, EAST PALO ALTO	No hookup	0	0
063-730-030		2477 PULGAS AVE, EAST PALO ALTO	No hookup	0	0
063-730-040		2477 PULGAS AVE, EAST PALO ALTO	No hookup	0	0
063-730-050		2477 PULGAS AVE, EAST PALO ALTO	No hookup	0	0
063-730-060		2477 PULGAS AVE, EAST PALO ALTO	No hookup	0	0
063-730-070		2477 PULGAS AVE, EAST PALO ALTO	No hookup	0	0
063-730-080		2477 PULGAS AVE, EAST PALO ALTO	No hookup	0	0
063-730-090		2477 PULGAS AVE, EAST PALO ALTO	No hookup	0	0
063-730-100		2477 PULGAS AVE, EAST PALO ALTO	No hookup	0	0
063-730-110		2477 PULGAS AVE, EAST PALO ALTO	No hookup	0	0
063-730-120		2477 PULGAS AVE, EAST PALO ALTO	No hookup	0	0
063-730-130		2477 PULGAS AVE, EAST PALO ALTO	No hookup	0	0
063-730-140		2477 PULGAS AVE, EAST PALO ALTO	No hookup	0	0

Appendix C: Table 2
2014 Zoning Sanitary Sewer Flows

APN (1)		Address (1)	Land Use from EDS (2)	Equivalent Dwelling Units (3)	Average Daily Flow for Residential , GPD (4)
063-730-150		2477 PULGAS AVE, EAST PALO ALTO	No hookup	0	0
063-730-160		2477 PULGAS AVE, EAST PALO ALTO	No hookup	0	0
063-730-170		2477 PULGAS AVE, EAST PALO ALTO	No hookup	0	0
063-730-180		2477 PULGAS AVE, EAST PALO ALTO	No hookup	0	0
063-730-190		2477 PULGAS AVE, EAST PALO ALTO	No hookup	0	0
063-730-200		2477 PULGAS AVE, EAST PALO ALTO	No hookup	0	0
063-730-210		2477 PULGAS AVE, EAST PALO ALTO	No hookup	0	0
063-730-220		2477 PULGAS AVE, EAST PALO ALTO	No hookup	0	0
063-730-230		2477 PULGAS AVE, EAST PALO ALTO	No hookup	0	0
063-730-240		2477 PULGAS AVE, EAST PALO ALTO	No hookup	0	0
063-730-250		2477 PULGAS AVE, EAST PALO ALTO	No hookup	0	0
063-730-260		2477 PULGAS AVE, EAST PALO ALTO	No hookup	0	0
063-730-270		2477 PULGAS AVE, EAST PALO ALTO	No hookup	0	0
063-730-280		2477 PULGAS AVE, EAST PALO ALTO	No hookup	0	0
063-730-290		2477 PULGAS AVE, EAST PALO ALTO	No hookup	0	0
063-730-300		2477 PULGAS AVE, EAST PALO ALTO	No hookup	0	0
063-730-310		2477 PULGAS AVE, EAST PALO ALTO	No hookup	0	0
063-730-320		2477 PULGAS AVE, EAST PALO ALTO	No hookup	0	0
063-730-330		2477 PULGAS AVE, EAST PALO ALTO	No hookup	0	0
063-730-340		2477 PULGAS AVE, EAST PALO ALTO	No hookup	0	0
063-730-350		2477 PULGAS AVE, EAST PALO ALTO	No hookup	0	0
063-730-360		2477 PULGAS AVE, EAST PALO ALTO	No hookup	0	0
063-730-370		2477 PULGAS AVE, EAST PALO ALTO	No hookup	0	0
063-730-380		2477 PULGAS AVE, EAST PALO ALTO	No hookup	0	0
063-730-390		2477 PULGAS AVE, EAST PALO ALTO	No hookup	0	0
063-730-400		2477 PULGAS AVE, EAST PALO ALTO	No hookup	0	0
063-730-410		2477 PULGAS AVE, EAST PALO ALTO	No hookup	0	0
063-730-420		2477 PULGAS AVE, EAST PALO ALTO	No hookup	0	0
063-730-430		2477 PULGAS AVE, EAST PALO ALTO	No hookup	0	0
063-730-440		2477 PULGAS AVE, EAST PALO ALTO	No hookup	0	0
063-730-450		2477 PULGAS AVE, EAST PALO ALTO	No hookup	0	0
063-730-460		2477 PULGAS AVE, EAST PALO ALTO	No hookup	0	0
063-730-470		2477 PULGAS AVE, EAST PALO ALTO	No hookup	0	0
063-730-480		2477 PULGAS AVE, EAST PALO ALTO	No hookup	0	0
063-730-490		2477 PULGAS AVE, EAST PALO ALTO	No hookup	0	0
063-730-500		2477 PULGAS AVE, EAST PALO ALTO	No hookup	0	0
063-730-510		2477 PULGAS AVE, EAST PALO ALTO	No hookup	0	0
113-530-010 to 113-530-999		2420 GLORIA WAY, EAST PALO ALTO	Res-Multpl	7	1,680
113-710-010 to 113-710-999		2440 GLORIA WAY, EAST PALO ALTO	Res-Multpl	7	1,680
113-720-010 to 113-720-999		2460 GLORIA WAY, EAST PALO ALTO	Res-Multpl	5	1,200

Appendix C: Table 2
2014 Zoning Sanitary Sewer Flows

APN (1)		Address (1)	Land Use from EDS (2)	Equivalent Dwelling Units (3)	Average Daily Flow for Residential , GPD (4)
113-740-010 to 113-740-999		2470 GLORIA WAY, EAST PALO ALTO	Res-Multpl	9	2,160
114-240-010 to 114-240-300		2330 UNIVERSITY AVE, EAST PALO ALTO	Res-Multpl	30	7,200
114-450-010 to 114-460-300		1765 EAST BAYSHORE RD, EAST PALO ALTO	Res-Multpl	36	8,640
			Total	**1,034**	**248,273**

Notes:

(1) Properties with Zoning change per Figure 4-12: General Plan Land Use and Figure 4-16: Ravenswood / 4 Corners TOP Specific Plan Land Use City of East Palo Alto General Plan "Existing Conditions Report, February 2014" and Figure 4-2: General Plan Land Use Designations City of East Palo Alto General Plan "Vista 2035, Final Version: March 2017"

(2) Land use from EDS (Engineering Data Services) Service Fee Calculation sheet.

(3) Equivalent Dwelling Units. Unit= (Past Billing amount from EDS)/$575

(4) ADWF Equivalent Dwellings, calculated by multiplying 240 gallons per dwelling unit per day by the total number of units. Based on Section B1.03.2.b of the East Palo Alto Sanitary District Standard Specifications for Design and Construction of Sanitary Collection and Conveyance Facilities date June 6, 2002. Units converted from GPD (Gallons Per Day) to CFS. Based Based off 24 hours in a day, 60 minutes in a hour, and 60 seconds in a minute.

(5) Additional parcles added to 2014 conditions per 2025 EPASD Master Plan Appendix D.

Abbreviations

ADWF: Average Dry Weather Flow
APN: Assessors Parcel Number
CFS: Cubic Feet per Second
MGD: Million Gallons Per Day
PDWF: Peak Dry Weather Flow

Appendix C: Table 3
2035 Zoning Sanitary Sewer Flows

APN (1)	Address (1)	2035 Zoning	Maximum Density and FAR Extents (2)	Acres per Parcel (3)	FAR	Maximum du per acre	Average du per Parcel or Project (4)	Average Non-Residential Development, SF (5)	Average Daily Flow Residential, GPD (6)	Average Daily Flow Non-Residential, GPD (7)
063-103-310	1585 BAY RD, EAST PALO ALTO	Mixed Use High	22-86 du/a; 2.5 FAR (kept FAR)	0.81	2.50	86	35	43,891	6,932	4,389
063-103-360	, EAST PALO ALTO	Public/Institutional	22-86 du/a; 2.5 FAR (kept FAR)	1.29	2.50	86	55	69,968	11,051	6,997
063-103-370	, EAST PALO ALTO	Public/Institutional	22-86 du/a; 2.5 FAR (kept FAR)	0.76	2.50	86	33	41,600	6,570	4,160
063-103-380	, EAST PALO ALTO	Public/Institutional	22-86 du/a; 2.5 FAR (kept FAR)	0.15	2.50	86	7	8,276	1,307	828
063-103-390	, EAST PALO ALTO	Public/Institutional	22-86 du/a; 2.5 FAR (kept FAR)	0.23	2.50	86	10	12,251	1,935	1,225
063-103-440	2400 GLORIA WAY, EAST PALO ALTO	High Density Residential	22-43 du/a	2.00	0.00	43	43	0	8,618	0
063-111-230	BETWEEN 1585 AND 1675 BAY RD, EAST PALO ALTO	Mixed Use High	22-86 du/a; 2.5 FAR (kept FAR)	0.23	2.50	86	10	12,513	1,976	1,251
063-111-250	1675 BAY RD, EAST PALO ALTO	Mixed Use High	22-86 du/a; 2.5 FAR (kept FAR)	6.03	2.50	86	259	328,120	51,824	32,812
063-121-040	, EAST PALO ALTO	General Industrial	3.0 FAR	1.88	3.00	0	0	122,905	0	12,290
063-121-050	TARA RD, EAST PALO ALTO	Industrial Buffer	3.0 FAR	0.18	3.00	0	0	11,500	0	1,150
063-121-030	, EAST PALO ALTO	Industrial Buffer	1.0 FAR	0.78	1.00	0	0	16,945	0	1,694
063-121-060	264 TARA RD, EAST PALO ALTO	Industrial Buffer	3.0 FAR	1.20	3.00	0	0	78,081	0	7,808
063-121-070	2081 BAY RD, EAST PALO ALTO	Office	3.0 FAR	5.21	3.00	0	0	340,421	0	34,042
063-121-110	2077 BAY RD, EAST PALO ALTO	Office	3.0 FAR	1.29	3.00	0	0	84,289	0	8,429
063-121-120	2005 BAY RD, EAST PALO ALTO	Office	3.0 FAR	2.57	3.00	0	0	167,924	0	16,792
063-121-150	, EAST PALO ALTO	Industrial Buffer	3.0 FAR	0.30	3.00	0	0	19,733	0	1,973
063-121-160	180 TARA ROAD, EAST PALO ALTO	Industrial Buffer	3.0 FAR	1.17	3.00	0	0	76,513	0	7,651
063-121-170	240 TARA ROAD, EAST PALO ALTO	Industrial Buffer	3.0 FAR	1.30	3.00	0	0	84,615	0	8,462
063-121-190	2560 PULGAS AVE, EAST PALO ALTO	General Industrial	1.0 FAR	0.91	1.00	0	0	19,907	0	1,991
063-121-200	2555 PULGAS AVE, EAST PALO ALTO	General Industrial	3.0 FAR	0.91	3.00	0	0	59,721	0	5,972
063-121-210	2555 PULGAS AVE, EAST PALO ALTO	General Industrial	3.0 FAR	0.92	3.00	0	0	59,786	0	5,979
063-121-240	, EAST PALO ALTO	General Industrial	3.0 FAR	1.90	3.00	0	0	123,950	0	12,395
063-121-290	218 DEMETER ST, EAST PALO ALTO	General Industrial	1.0 FAR	1.45	1.00	0	0	31,668	0	3,167
063-121-320	350 DEMETER ST, EAST PALO ALTO	General Industrial	3.0 FAR	2.00	3.00	0	0	130,484	0	13,048
063-121-330	, EAST PALO ALTO	General Industrial	3.0 FAR	1.99	3.00	0	0	130,027	0	13,003
063-121-350	, EAST PALO ALTO	General Industrial	1.0 FAR	1.97	1.00	0	0	42,928	0	4,293
063-121-360	, EAST PALO ALTO	Industrial Buffer	3.0 FAR	0.04	3.00	0	0	2,875	0	287
063-121-370	2535 PULGAS AVE, EAST PALO ALTO	General Industrial	1.0 FAR	3.91	1.00	0	0	85,051	0	8,505
063-121-390	, EAST PALO ALTO	Office	3.0 FAR	0.63	3.00	0	0	41,164	0	4,116
063-121-400	2091 BAY RD, EAST PALO ALTO	Office	3.0 FAR	0.83	3.00	0	0	54,548	0	5,455
063-121-410	2091 BAY RD, EAST PALO ALTO	Office	3.0 FAR	1.00	3.00	0	0	65,340	0	6,534
063-121-490	, EAST PALO ALTO	Office	3.0 FAR	1.97	3.00	0	0	128,720	0	12,872
063-121-500	, EAST PALO ALTO	Office	3.0 FAR	2.53	3.00	0	0	165,310	0	16,531
063-121-510	, EAST PALO ALTO	Office	3.0 FAR	0.72	3.00	0	0	47,045	0	4,704
063-122-040	1990 BAY RD, EAST PALO ALTO	Office	3.0 FAR	4.71	3.00	0	0	307,727	0	30,773
063-123-010	351 DEMETER ST, EAST PALO ALTO	Industrial Buffer	1.0 FAR	1.25	1.00	0	0	27,225	0	2,723
063-123-030	225 DEMETER ST, EAST PALO ALTO	Industrial Buffer	1.0 FAR	0.80	1.00	0	0	17,337	0	1,734
063-123-060	325 DEMETER ST, EAST PALO ALTO	Industrial Buffer	1.0 FAR	1.02	1.00	0	0	22,216	0	2,222
063-123-070	245 DEMETER ST, EAST PALO ALTO	Industrial Buffer	1.0 FAR	0.92	1.00	0	0	20,016	0	2,002
063-123-080	, EAST PALO ALTO	Industrial Buffer	1.0 FAR	0.10	1.00	0	0	2,091	0	209
063-131-220	2519 PULGAS AVE, EAST PALO ALTO	General Industrial	1.0 FAR	5.01	1.00	0	0	109,031	0	10,903
063-131-230	, EAST PALO ALTO	Mixed Use Corridor	22-65 du/a	0.24	0.00	65	8	0	1,541	0
063-131-240	1885 BAY RD, EAST PALO ALTO	Mixed Use Corridor	22-65 du/a	0.23	0.00	65	7	0	1,495	0
063-131-250	1861 BAY RD, EAST PALO ALTO	Mixed Use Corridor	22-65 du/a	0.31	0.00	65	10	0	2,002	0
063-131-260	1879 BAY RD, EAST PALO ALTO	Mixed Use Corridor	22-65 du/a	0.57	0.00	65	19	0	3,718	0
063-131-270	1873 BAY RD, EAST PALO ALTO	Mixed Use Corridor	22-65 du/a	0.11	0.00	65	4	0	702	0
063-131-290	140 DEMETER ST, EAST PALO ALTO	General Industrial	1.0 FAR	2.67	1.00	0	0	58,153	0	5,815
063-131-300	, EAST PALO ALTO	Mixed Use Corridor	22-65 du/a	0.10	0.00	65	3	0	663	0
063-131-310	1891 BAY RD, EAST PALO ALTO	Mixed Use Corridor	22-65 du/a	0.15	0.00	65	5	0	975	0
063-131-320	1847 BAY RD, EAST PALO ALTO	Mixed Use Corridor	22-65 du/a	0.22	0.00	65	7	0	1,450	0
063-131-330	1851 BAY RD, EAST PALO ALTO	Mixed Use Corridor	22-65 du/a	0.12	0.00	65	4	0	787	0
063-131-340	2509 PULGAS AVE, EAST PALO ALTO	Mixed Use Corridor	22-65 du/a	0.22	0.00	65	7	0	1,411	0
063-132-020	151 TARA RD, EAST PALO ALTO	General Industrial	1.0 FAR	0.17	1.00	0	0	3,659	0	366
063-132-060	150 TARA RD, EAST PALO ALTO	Industrial Buffer	3.0 FAR	0.34	3.00	0	0	21,889	0	2,189
063-132-090	, EAST PALO ALTO	Industrial Buffer	3.0 FAR	0.03	3.00	0	0	2,026	0	203
063-132-110	1923 BAY RD, EAST PALO ALTO	Mixed Use Corridor	22-65 du/a	0.99	0.00	65	32	0	6,455	0
063-132-120	1907 BAY RD, EAST PALO ALTO	Mixed Use Corridor	22-65 du/a	0.16	0.00	65	5	0	1,040	0
063-132-130	1911 BAY RD, EAST PALO ALTO	Mixed Use Corridor	22-65 du/a	0.14	0.00	65	4	0	878	0
063-132-140	1905 BAY RD, EAST PALO ALTO	Mixed Use Corridor	22-65 du/a	0.43	0.00	65	14	0	2,763	0
063-132-150	2520 PULGAS AVE, EAST PALO ALTO	Mixed Use Corridor	22-65 du/a	0.95	0.00	65	31	0	6,195	0
063-132-170	, EAST PALO ALTO	General Industrial	22-65 du/a	0.17	0.00	65	5	0	1,092	0
063-132-190	2532 PULGAS AVE, EAST PALO ALTO	General Industrial	1.0 FAR	0.94	1.00	0	0	20,560	0	2,056
063-132-210	2524 PULGAS AVE, EAST PALO ALTO	General Industrial	1.0 FAR	0.91	1.00	0	0	19,754	0	1,975
063-132-220	1987 BAY RD, EAST PALO ALTO	Industrial Buffer	3.0 FAR	1.23	3.00	0	0	80,434	0	8,043
063-133-070	195 DEMETER ST, EAST PALO ALTO	Industrial Buffer	1.0 FAR	0.31	1.00	0	0	6,817	0	682
063-133-080	175 DEMETER ST, EAST PALO ALTO	Industrial Buffer	1.0 FAR	0.32	1.00	0	0	6,926	0	693
063-133-090	75 DEMETER ST, EAST PALO ALTO	Industrial Buffer	1.0 FAR	0.28	1.00	0	0	6,055	0	605
063-133-100	215 DEMETER ST, EAST PALO ALTO	Industrial Buffer	1.0 FAR	0.84	1.00	0	0	18,361	0	1,836
063-133-110	, EAST PALO ALTO	Mixed Use Corridor	22-65 du/a	0.89	0.00	65	29	0	5,753	0
063-133-130	1805 BAY RD, EAST PALO ALTO	Mixed Use Corridor	22-65 du/a	1.07	0.00	65	35	0	6,981	0
063-151-170	2159 POPLAR AVE, EAST PALO ALTO	Mixed Use Low	22 du/a; 1.0 FAR	0.13	1.00	22	1	2,929	296	293
063-151-200	1001 E BAYSHORE RD, EAST PALO ALTO	Mixed Use Low	22 du/a; 1.0 FAR	0.08	1.00	22	1	1,773	179	177
063-152-230	1199 E BAYSHORE RD, EAST PALO ALTO	Mixed Use Low	22 du/a; 1.0 FAR	0.26	1.00	22	3	5,605	566	561
063-153-010	1205 E BAYSHORE RD, EAST PALO ALTO	Mixed Use Low	22 du/a; 1.0 FAR	0.12	1.00	22	1	2,648	267	265
063-153-250	2119 ADDISON AVE, EAST PALO ALTO	Mixed Use Low	22 du/a; 1.0 FAR	0.12	1.00	22	1	2,572	260	257
063-154-200	2110 ADDISON AVE, EAST PALO ALTO	Mixed Use Low	22 du/a; 1.0 FAR	0.15	1.00	22	2	3,331	336	333
063-154-260	2119 OAKWOOD DR, EAST PALO ALTO	Mixed Use Low	22 du/a; 1.0 FAR	0.27	1.00	22	3	5,878	594	588
063-155-010	2106 OAKWOOD DR, EAST PALO ALTO	Mixed Use Low	22 du/a; 1.0 FAR	0.17	1.00	22	2	3,747	378	375
063-155-180	2123 DUMBARTON AVE, EAST PALO ALTO	Mixed Use Low	22 du/a; 1.0 FAR	0.11	1.00	22	1	2,454	248	245
063-155-190	2109 DUMBARTON AVE, EAST PALO ALTO	Mixed Use Low	22 du/a; 1.0 FAR	0.17	1.00	22	2	3,742	378	374
063-181-010	2110 DUMBARTON AVE, EAST PALO ALTO	Mixed Use Low	22 du/a; 1.0 FAR	0.22	1.00	22	2	4,705	475	470
063-181-220	2111 LINCOLN ST, EAST PALO ALTO	Mixed Use Low	22 du/a; 1.0 FAR	0.12	1.00	22	1	2,660	269	266
063-181-230	2097 LINCOLN ST, EAST PALO ALTO	Mixed Use Low	22 du/a; 1.0 FAR	0.11	1.00	22	1	2,488	251	249
063-181-240	1385 E BAYSHORE RD, EAST PALO ALTO	Mixed Use Low	22 du/a; 1.0 FAR	0.10	1.00	22	1	2,232	225	223
063-183-010	2088 LINCOLN ST, EAST PALO ALTO	Mixed Use Low	22 du/a; 1.0 FAR	0.11	1.00	22	1	2,476	250	248
063-183-070	2045 GLEN WAY, EAST PALO ALTO	Mixed Use Low	22 du/a; 1.0 FAR	0.18	1.00	22	2	3,894	393	389
063-183-080	1441 E BAYSHORE RD, EAST PALO ALTO	Mixed Use Low	22 du/a; 1.0 FAR	0.24	1.00	22	3	5,172	522	517
063-183-090	, EAST PALO ALTO	Mixed Use Low	22 du/a; 1.0 FAR	0.09	1.00	22	1	1,898	192	190
063-183-110	1401 E BAYSHORE RD 2, EAST PALO ALTO	Mixed Use Low	22 du/a; 1.0 FAR	0.21	1.00	22	2	4,512	456	451
063-184-010	1475 E BAYSHORE RD, EAST PALO ALTO	Mixed Use Low	22 du/a; 1.0 FAR	0.23	1.00	22	3	5,053	510	505
063-184-020	2056 GLEN WAY, EAST PALO ALTO	Mixed Use Low	22 du/a; 1.0 FAR	0.21	1.00	22	2	4,526	457	453
063-184-030	2070 GLEN WAY, EAST PALO ALTO	Mixed Use Low	22 du/a; 1.0 FAR	0.18	1.00	22	2	3,872	391	387
063-184-040	2080 GLEN WAY, EAST PALO ALTO	Mixed Use Low	22 du/a; 1.0 FAR	0.19	1.00	22	2	4,205	425	420
063-201-080	566 SACRAMENTO ST, EAST PALO ALTO	Low Density Residential	0-12 du/a	0.19	0.00	12	1	0	227	0
063-201-090	576 SACRAMENTO ST, EAST PALO ALTO	Mixed Use Corridor	65 du/a; 1.75 FAR	0.22	1.75	65	7	8,209	1,400	821
063-201-220	2337 UNIVERSITY AVE, EAST PALO ALTO	Mixed Use Corridor	65 du/a; 1.75 FAR	0.13	1.75	65	4	4,964	847	496
063-201-240	2343 UNIVERSITY AVE, EAST PALO ALTO	Mixed Use Corridor	65 du/a; 1.75 FAR	0.14	1.75	65	5	5,292	902	529
063-201-250	RUNNYMEDE ST, EAST PALO ALTO	Mixed Use Corridor	65 du/a; 1.75 FAR	0.35	1.75	65	11	13,216	2,254	1,322
063-201-260	RUNNYMEDE ST, EAST PALO ALTO	Mixed Use Corridor	65 du/a; 1.75 FAR	0.11	1.75	65	4	4,295	733	430
063-201-270	578 SACRAMENTO ST, EAST PALO ALTO	Mixed Use Corridor	65 du/a; 1.75 FAR	0.15	1.75	65	5	5,553	947	555
063-201-290	2331 UNIVERSITY AVE, EAST PALO ALTO	Mixed Use Corridor	65 du/a; 1.75 FAR	0.45	1.75	65	15	17,157	2,926	1,716
063-202-080	556 WEEKS ST, EAST PALO ALTO	Low Density Residential	0-12 du/a	0.18	0.00	12	1	0	210	0
063-202-090	564 WEEKS ST, EAST PALO ALTO	Low Density Residential	0-12 du/a	0.17	0.00	12	1	0	208	0
063-202-100	566 WEEKS ST, EAST PALO ALTO	Low Density Residential	0-12 du/a	0.17	0.00	12	1	0	203	0
063-202-160	561 SACRAMENTO ST, EAST PALO ALTO	Mixed Use Corridor	65 du/a; 1.75 FAR	0.52	1.75	65	17	19,723	3,363	1,972
063-202-280	2361-2369 UNIVERSITY AVE 101-308, EAST PALO ALTO	Mixed Use Corridor	65 du/a; 1.75 FAR	1.01	1.75	65	33	38,579	6,579	3,858
063-203-160	2387 UNIVERSITY AVE, EAST PALO ALTO	Mixed Use High	22-86 du/a; 2.5 FAR (kept FAR)	0.11	2.50	86	5	5,968	943	597
063-203-170	2381 UNIVERSITY AVE, EAST PALO ALTO	Mixed Use High	22-86 du/a; 2.5 FAR (kept FAR)	0.15	2.50	86	6	7,950	1,256	795
063-203-180	2373 UNIVERSITY AVE, EAST PALO ALTO	Mixed Use High	22-86 du/a; 2.5 FAR (kept FAR)	0.18	2.50	86	8	9,747	1,539	975
063-203-200	593 WEEKS ST, EAST PALO ALTO	Mixed Use High	22-86 du/a; 2.5 FAR (kept FAR)	0.21	2.50	86	9	11,543	1,823	1,154
063-203-210	585 WEEKS ST, EAST PALO ALTO	Mixed Use High	86 du/a; 2.5 FAR	0.15	2.50	86	6	7,995	1,263	800
063-203-220	579 WEEKS ST, EAST PALO ALTO	Low Density Residential	0-12 du/a	0.15	0.00	12	1	0	177	0
063-203-230	563 WEEKS ST, EAST PALO ALTO	Low Density Residential	0-12 du/a	0.44	0.00	12	3	0	530	0
063-203-240	549 WEEKS ST, EAST PALO ALTO	Low Density Residential	0-12 du/a	0.15	0.00	12	1	0	178	0
063-203-250	541 WEEKS ST, EAST PALO ALTO	Low Density Residential	0-12 du/a	0.14	0.00	12	1	0	174	0
063-203-260	533 WEEKS ST, EAST PALO ALTO	Low Density Residential	0-12 du/a	0.14	0.00	12	1	0	170	0

Appendix C: Table 3
2035 Zoning Sanitary Sewer Flows

APN (1)	Address (1)	2035 Zoning	Maximum Density and FAR Extents (2)	Acres per Parcel (3)	FAR	Maximum du per acre	Average du per Parcel or Project (4)	Average Non-Residential Development, SF (5)	Average Daily Flow Residential, GPD (6)	Average Daily Flow Non-Residential, GPD (7)
063-203-270	, EAST PALO ALTO	Low Density Residential	0-12 du/a	0.13	0.00	12	1	0	161	0
063-203-300	2395 UNIVERSITY AVE, EAST PALO ALTO	Mixed Use High	22-86 du/a; 2.5 FAR (kept FAR)	0.18	2.50	86	8	9,638	1,522	964
063-203-310	2371 UNIVERSITY AVE, EAST PALO ALTO	Mixed Use High	22-86 du/a; 2.5 FAR (kept FAR)	0.07	2.50	86	3	3,648	576	365
063-203-320	1586 BAY RD, EAST PALO ALTO	Mixed Use High	22-86 du/a; 2.5 FAR (kept FAR)	0.18	2.50	86	8	9,638	1,522	964
063-203-330	1590 BAY RD, EAST PALO ALTO	Mixed Use High	22-86 du/a; 2.5 FAR (kept FAR)	0.28	2.50	86	12	15,083	2,382	1,508
063-203-340	2387 UNIVERSITY AVE, EAST PALO ALTO	Mixed Use High	22-86 du/a; 2.5 FAR (kept FAR)	0.20	2.50	86	9	10,836	1,711	1,084
063-203-350	1574 BAY RD, EAST PALO ALTO	Medium Density Residential	12-22 du/a	0.17	0.00	22	2	0	368	0
063-203-360	1546 BAY RD, EAST PALO ALTO	Medium Density Residential	12-22 du/a	0.15	0.00	22	2	0	337	0
063-203-370	1508 BAY RD, EAST PALO ALTO	Medium Density Residential	12-22 du/a	0.25	0.00	22	3	0	555	0
063-203-380	, NO DATA	Medium Density Residential	12-22 du/a	0.12	0.00	22	1	0	260	0
063-203-390	1518 BAY RD, EAST PALO ALTO	Medium Density Residential	12-22 du/a	0.33	0.00	22	4	0	724	0
063-203-400	1560 BAY RD, EAST PALO ALTO	Medium Density Residential	12-22 du/a	0.15	0.00	22	2	0	322	0
063-203-410	1568 BAY RD, EAST PALO ALTO	Medium Density Residential	12-22 du/a	0.15	0.00	22	2	0	340	0
063-203-430	1530 BAY RD, EAST PALO ALTO	Medium Density Residential	12-22 du/a	0.16	0.00	22	2	0	343	0
063-203-440	1554 BAY RD, EAST PALO ALTO	Medium Density Residential	12-22 du/a	0.13	0.00	22	1	0	297	0
063-203-450	1538 BAY RD, EAST PALO ALTO	Medium Density Residential	12-22 du/a	0.14	0.00	22	2	0	307	0
063-210-310	2346 UNIVERSITY AVE, EAST PALO ALTO	Mixed Use Corridor	65 du/a; 1.75 FAR	0.21	1.75	65	7	7,835	1,336	783
063-210-340	2369 COOLEY AVE, EAST PALO ALTO	High Density Residential	22-43 du/a	0.12	0.00	43	3	0	512	0
063-210-350	2365 COOLEY AVE, EAST PALO ALTO	High Density Residential	22-43 du/a	0.12	0.00	43	3	0	531	0
063-210-360	2300 UNIVERSITY AVE, EAST PALO ALTO	Mixed Use Corridor	65 du/a; 1.75 FAR	0.20	1.75	65	7	7,627	1,301	763
063-210-380	2354 UNIVERSITY AVE, EAST PALO ALTO	Mixed Use Corridor	65 du/a; 1.75 FAR	0.17	1.75	65	6	6,548	1,117	655
063-210-410	2371 COOLEY AVE, EAST PALO ALTO	Mixed Use Corridor	65 du/a; 1.75 FAR	0.11	1.75	65	4	4,228	721	423
063-210-450	2377 COOLEY AVE, EAST PALO ALTO	Mixed Use Corridor	65 du/a; 1.75 FAR	0.09	1.75	65	3	3,257	555	326
063-210-460	2396 UNIVERSITY AVE, EAST PALO ALTO	Mixed Use High	22-86 du/a; 2.5 FAR (kept FAR)	0.24	2.50	86	10	12,905	2,038	1,290
063-210-470	633 RUNNYMEDE ST, EAST PALO ALTO	Mixed Use Corridor	65 du/a; 1.75 FAR	0.11	1.75	65	4	4,256	726	426
063-210-480	2361 COOLEY AVE, EAST PALO ALTO	High Density Residential	22-43 du/a	0.16	0.00	43	3	0	681	0
063-210-490	2355 COOLEY AVE, EAST PALO ALTO	High Density Residential	22-43 du/a	0.17	0.00	43	4	0	714	0
063-210-520	2338 UNIVERSITY AVE, EAST PALO ALTO	Mixed Use Corridor	65 du/a; 1.75 FAR	0.22	1.75	65	7	8,249	1,407	825
063-210-610	661 RUNNYMEDE ST, EAST PALO ALTO	Mixed Use Corridor	65 du/a; 1.75 FAR	0.23	1.75	65	8	8,831	1,506	883
063-210-630	2358 UNIVERSITY AVE, EAST PALO ALTO	Mixed Use Corridor	65 du/a; 1.75 FAR	0.17	1.75	65	6	6,659	1,136	666
063-221-010	, EAST PALO ALTO	Mixed Use High	22-86 du/a; 2.5 FAR (kept FAR)	0.25	2.50	86	11	13,667	2,159	1,367
063-221-020	1620 BAY RD, EAST PALO ALTO	Mixed Use High	22-86 du/a; 2.5 FAR (kept FAR)	0.42	2.50	86	18	22,760	3,595	2,276
063-221-030	, EAST PALO ALTO	Mixed Use High	22-86 du/a; 2.5 FAR (kept FAR)	0.13	2.50	86	5	6,806	1,075	681
063-221-040	1640 BAY RD, EAST PALO ALTO	Mixed Use High	22-86 du/a; 2.5 FAR (kept FAR)	0.66	2.50	86	28	35,719	5,642	3,572
063-221-050	1650 BAY RD, EAST PALO ALTO	Mixed Use High	22-86 du/a; 2.5 FAR (kept FAR)	0.18	2.50	86	8	9,964	1,574	996
063-221-060	1660 BAY RD, EAST PALO ALTO	Mixed Use High	22-86 du/a; 2.5 FAR (kept FAR)	0.42	2.50	86	18	22,869	3,612	2,287
063-221-070	1670 BAY RD, EAST PALO ALTO	Mixed Use High	22-86 du/a; 2.5 FAR (kept FAR)	0.39	2.50	86	17	21,236	3,354	2,124
063-221-100	1760 BAY RD, EAST PALO ALTO	Mixed Use High	22-86 du/a; 2.5 FAR (kept FAR)	1.05	2.50	86	45	57,173	9,030	5,717
063-221-110	1796 BAY RD, EAST PALO ALTO	Mixed Use High	22-86 du/a; 2.5 FAR (kept FAR)	1.03	2.50	86	44	56,084	8,858	5,608
063-221-140	2397 CLARKE AVE, EAST PALO ALTO	Mixed Use High	22-86 du/a; 2.5 FAR (kept FAR)	0.12	2.50	86	5	6,697	1,058	670
063-221-150	2387 CLARKE AVE, EAST PALO ALTO	Mixed Use High	22-86 du/a; 2.5 FAR (kept FAR)	0.13	2.50	86	6	7,296	1,152	730
063-221-160	2377 CLARKE AVE, EAST PALO ALTO	Mixed Use High	22-86 du/a; 2.5 FAR (kept FAR)	0.15	2.50	86	6	8,004	1,264	800
063-221-170	2373 CLARKE AVE, EAST PALO ALTO	Mixed Use High	22-86 du/a; 2.5 FAR (kept FAR)	0.13	2.50	86	6	7,242	1,144	724
063-221-180	2371 CLARKE AVE, EAST PALO ALTO	High Density Residential	22-43 du/a	0.13	0.00	43	3	0	577	0
063-221-190	2369 CLARKE AVE, EAST PALO ALTO	High Density Residential	22-43 du/a	0.15	0.00	43	3	0	634	0
063-221-200	891 WEEKS ST, EAST PALO ALTO	High Density Residential	22-43 du/a	0.29	0.00	43	6	0	1,235	0
063-221-210	871 WEEKS ST, EAST PALO ALTO	High Density Residential	22-43 du/a	0.13	0.00	43	3	0	562	0
063-221-220	867 WEEKS ST, EAST PALO ALTO	High Density Residential	22-43 du/a	0.19	0.00	43	4	0	800	0
063-221-230	865 WEEKS ST, EAST PALO ALTO	High Density Residential	22-43 du/a	0.19	0.00	43	4	0	827	0
063-221-240	, NO DATA	High Density Residential	22-43 du/a	0.65	0.00	43	14	0	2,813	0
063-221-250	831 WEEKS ST, EAST PALO ALTO	High Density Residential	22-43 du/a	0.19	0.00	43	4	0	819	0
063-221-260	819 JAMIE LN, EAST PALO ALTO	High Density Residential	22-43 du/a	0.11	0.00	43	2	0	492	0
063-221-270	823 JAMIE LN, EAST PALO ALTO	High Density Residential	22-43 du/a	0.15	0.00	43	3	0	648	0
063-221-280	827 JAMIE LN, EAST PALO ALTO	High Density Residential	22-43 du/a	0.19	0.00	43	4	0	835	0
063-221-290	811 PAUL ROBESON CT, EAST PALO ALTO	High Density Residential	22-43 du/a	0.12	0.00	43	3	0	507	0
063-221-300	813 PAUL ROBESON CT, EAST PALO ALTO	High Density Residential	22-43 du/a	0.10	0.00	43	2	0	429	0
063-221-310	815 PAUL ROBESON CT, EAST PALO ALTO	High Density Residential	22-43 du/a	0.11	0.00	43	2	0	463	0
063-221-320	817 PAUL ROBESON CT, EAST PALO ALTO	High Density Residential	22-43 du/a	0.11	0.00	43	2	0	469	0
063-221-340	801 WEEKS ST, EAST PALO ALTO	High Density Residential	22-43 du/a	0.11	0.00	43	2	0	471	0
063-221-350	803 PAUL ROBESON CT, EAST PALO ALTO	High Density Residential	22-43 du/a	0.11	0.00	43	2	0	475	0
063-221-360	805 PAUL ROBESON CT, EAST PALO ALTO	High Density Residential	22-43 du/a	0.09	0.00	43	2	0	398	0
063-221-370	807 PAUL ROBESON CT, EAST PALO ALTO	High Density Residential	22-43 du/a	0.11	0.00	43	2	0	492	0
063-221-380	809 PAUL ROBESON CT, EAST PALO ALTO	High Density Residential	22-43 du/a	0.11	0.00	43	2	0	459	0
063-221-390	791 WEEKS ST, EAST PALO ALTO	High Density Residential	22-43 du/a	0.89	0.00	43	19	0	3,814	0
063-221-410	731 WEEKS ST, EAST PALO ALTO	High Density Residential	22-43 du/a	0.30	0.00	43	7	0	1,303	0
063-221-420	717 WEEKS ST, EAST PALO ALTO	High Density Residential	22-43 du/a	0.22	0.00	43	5	0	958	0
063-221-430	2360 COOLEY AVE, EAST PALO ALTO	High Density Residential	22-43 du/a	0.14	0.00	43	3	0	620	0
063-221-440	2362-2362 COOLEY AVE, EAST PALO ALTO	High Density Residential	22-43 du/a	0.14	0.00	43	3	0	584	0
063-221-450	2364 COOLEY AVE, EAST PALO ALTO	High Density Residential	22-43 du/a	0.16	0.00	43	3	0	682	0
063-221-460	2370 COOLEY AVE, EAST PALO ALTO	Mixed Use High	22-86 du/a; 2.5 FAR (kept FAR)	0.67	2.50	86	29	36,482	5,762	3,648
063-221-480	2380 COOLEY AVE, EAST PALO ALTO	Mixed Use High	22-86 du/a; 2.5 FAR (kept FAR)	0.42	2.50	86	18	22,978	3,629	2,298
063-221-490	, EAST PALO ALTO	Mixed Use High	22-86 du/a; 2.5 FAR (kept FAR)	0.30	2.50	86	13	16,498	2,606	1,650
063-221-500	863 WEEKS ST, EAST PALO ALTO	High Density Residential	22-43 du/a	0.13	0.00	43	3	0	562	0
063-221-510	761 WEEKS ST, EAST PALO ALTO	High Density Residential	22-43 du/a	0.17	0.00	43	4	0	743	0
063-221-520	767 CAROLE CT, EAST PALO ALTO	High Density Residential	22-43 du/a	0.14	0.00	43	3	0	622	0
063-221-530	773 CAROLE CT, EAST PALO ALTO	High Density Residential	22-43 du/a	0.13	0.00	43	3	0	564	0
063-221-540	779 CAROLE CT, EAST PALO ALTO	High Density Residential	22-43 du/a	0.13	0.00	43	3	0	552	0
063-221-550	785 CAROLE CT, EAST PALO ALTO	High Density Residential	22-43 du/a	0.13	0.00	43	3	0	566	0
063-221-560	1794 BAY RD, EAST PALO ALTO	Mixed Use High	22-86 du/a; 2.5 FAR (kept FAR)	0.21	2.50	86	9	11,435	1,806	1,143
063-221-570	, EAST PALO ALTO	Mixed Use High	22-86 du/a; 2.5 FAR (kept FAR)	0.06	2.50	86	3	3,267	516	327
063-221-580	, EAST PALO ALTO	Mixed Use High	22-86 du/a; 2.5 FAR (kept FAR)	0.03	2.50	86	1	1,416	224	142
063-221-590	1730 BAY RD, EAST PALO ALTO	Mixed Use High	22-86 du/a; 2.5 FAR (kept FAR)	1.59	2.50	86	68	86,684	13,691	8,668
063-231-210	2495 PULGAS AVE, EAST PALO ALTO	Mixed Use Corridor	50 du/a	0.42	0.00	50	11	0	2,105	0
063-231-220	1800 BAY RD, EAST PALO ALTO	Mixed Use Corridor	50 du/a	0.23	0.00	50	6	0	1,130	0
063-231-230	1890 BAY RD, EAST PALO ALTO	Mixed Use Corridor	50 du/a	0.14	0.00	50	4	0	720	0
063-231-240	1804 BAY RD, EAST PALO ALTO	Mixed Use Corridor	50 du/a	0.90	0.00	50	23	0	4,510	0
063-231-250	1798 BAY RD, EAST PALO ALTO	Mixed Use Corridor	50 du/a	1.38	0.00	50	34	0	6,883	0
063-231-260	1836 BAY RD, EAST PALO ALTO	Mixed Use Corridor	50 du/a	1.43	0.00	50	36	0	7,150	0
063-231-270	1894 BAY RD, EAST PALO ALTO	Mixed Use Corridor	50 du/a	0.10	0.00	50	2	0	485	0
063-231-280	1896 BAY RD, EAST PALO ALTO	Mixed Use Corridor	50 du/a	0.10	0.00	50	2	0	485	0
063-231-300	, EAST PALO ALTO	Mixed Use Corridor	50 du/a	0.25	0.00	50	6	0	1,240	0
063-232-090	1003 WEEKS ST, EAST PALO ALTO	High Density Residential	22-43 du/a	0.58	0.00	43	12	0	2,499	0
063-232-150	2421 PULGAS AVE, EAST PALO ALTO	High Density Residential	22-43 du/a	0.77	0.00	43	17	0	3,305	0
063-232-160	2447 PULGAS AVE, EAST PALO ALTO	High Density Residential	22-43 du/a	0.32	0.00	43	7	0	1,388	0
063-232-200	2373 CLARKE AVE, EAST PALO ALTO	Mixed Use Corridor	22-86 du/a; 2.5 FAR (kept FAR)	0.25	2.50	86	11	13,340	2,107	1,334
063-232-210 (8)	WEEKS ST, EAST PALO ALTO	High Density Residential	102 du/a	1.13	0.00	102	58	0	11,564	0
063-232-220 (8)	WEEKS ST, EAST PALO ALTO	High Density Residential	102 du/a	0.64	0.00	102	33	0	6,560	0
063-232-230 (8)	WEEKS ST, EAST PALO ALTO	High Density Residential	101 du/a	0.90	0.00	101	45	0	9,065	0
063-232-240	1045 WEEKS ST, EAST PALO ALTO	High Density Residential	22-43 du/a	0.98	0.00	43	21	0	4,218	0
063-232-250	1085 WEEKS ST, EAST PALO ALTO	High Density Residential	22-43 du/a	0.11	0.00	43	2	0	461	0
063-232-260	1001 WEEKS ST, EAST PALO ALTO	High Density Residential	22-43 du/a	0.35	0.00	43	8	0	1,505	0

Appendix C: Table 3
2035 Zoning Sanitary Sewer Flows

APN (1)		Address (1)	2035 Zoning	Maximum Density and FAR Extents (2)	Acres per Parcel (3)	FAR	Maximum du per acre	Average du per Parcel or Project (4)	Average Non-Residential Development, SF (5)	Average Daily Flow Residential, GPD (6)	Average Daily Flow Non-Residential, GPD (7)
063-232-300		1095 WEEKS ST, EAST PALO ALTO	High Density Residential	22-43 du/a	0.21	0.00	43	4	0	891	0
063-232-310		2368 CLARKE AVE, EAST PALO ALTO	Mixed Use High	22-86 du/a; 2.5 FAR (kept FAR)	0.16	2.50	86	7	8,712	1,376	871
063-232-340		2386 CLARKE AVE, EAST PALO ALTO	Mixed Use High	22-86 du/a; 2.5 FAR (kept FAR)	0.18	2.50	86	8	9,747	1,539	975
063-232-350		901 WEEKS ST, EAST PALO ALTO	Mixed Use High	22-86 du/a; 2.5 FAR (kept FAR)	0.46	2.50	86	20	24,865	3,927	2,487
063-240-210		NO DATA, EAST PALO ALTO	General Industrial	1.0 FAR	0.49	1.00	0	0	10,716	0	1,072
063-240-220		NO DATA, EAST PALO ALTO	General Industrial	1.0 FAR	0.47	1.00	0	0	10,237	0	1,024
063-240-270		NO DATA, EAST PALO ALTO	General Industrial	50 du/a	0.15	0.00	50	4	0	746	0
063-240-310		NO DATA, EAST PALO ALTO	General Industrial	50 du/a	2.36	0.00	50	59	0	11,780	0
063-240-320		1950 BAY RD, EAST PALO ALTO	Mixed Use Corridor	22-65 du/a	1.51	0.00	65	49	0	9,815	0
063-240-330		BAY RD, EAST PALO ALTO	Mixed Use Corridor	22-65 du/a	0.44	0.00	65	14	0	2,860	0
063-240-350		NO DATA, EAST PALO ALTO	General Industrial	1.0 FAR	0.07	1.00	0	0	1,416	0	142
063-240-360		NO DATA, EAST PALO ALTO	General Industrial	50 du/a	0.14	0.00	50	3	0	676	0
063-240-370		NO DATA, EAST PALO ALTO	General Industrial	50 du/a	0.15	0.00	50	4	0	767	0
063-240-380		NO DATA, EAST PALO ALTO	General Industrial	50 du/a	1.17	0.00	50	29	0	5,854	0
063-240-390		NO DATA, EAST PALO ALTO	General Industrial	50 du/a	0.80	0.00	50	20	0	3,987	0
063-240-420		NO DATA, EAST PALO ALTO	General Industrial	1.0 FAR	8.42	1.00	0	0	183,316	0	18,332
063-240-440		NO DATA, EAST PALO ALTO	General Industrial	1.0 FAR	0.07	1.00	0	0	1,590	0	159
063-240-460		NO DATA, EAST PALO ALTO	General Industrial	50 du/a	1.54	0.00	50	38	0	7,695	0
063-253-320	(8)	NO DATA, EAST PALO ALTO	Medium Density Residential	10 du Planned	0.47	0.00	22	10	0	2,068	0
063-271-070		1275 RUNNYMEDE ST, EAST PALO ALTO	High Density Residential	22-43 du/a	1.25	0.00	43	27	0	5,371	0
063-271-090		1201 RUNNYMEDE ST, EAST PALO ALTO	High Density Residential	22-43 du/a	0.93	0.00	43	20	0	4,008	0
063-271-370		1171 RUNNYMEDE ST, EAST PALO ALTO	High Density Residential	22-43 du/a	0.90	0.00	43	19	0	3,851	0
063-271-410		NO DATA, EAST PALO ALTO	Medium Density Residential	1.0 FAR	0.11	1.00	0	0	2,439	0	244
063-271-420		NO DATA, EAST PALO ALTO	Medium Density Residential	1.0 FAR	0.16	1.00	0	0	3,463	0	346
063-271-440		1191 RUNNYMEDE ST, EAST PALO ALTO	Medium Density Residential	22-43 du/a	0.15	0.00	43	3	0	636	0
063-271-450		1200 WEEKS ST, EAST PALO ALTO	Medium Density Residential	22-43 du/a	0.75	0.00	43	16	0	3,212	0
063-271-470		1249 RUNNYMEDE ST, EAST PALO ALTO	Medium Density Residential	22-43 du/a	0.22	0.00	43	5	0	942	0
063-271-480		, EAST PALO ALTO	Industrial Buffer	0.75 to 3.0 FAR	0.83	2.55	0	0	45,961	0	4,596
063-271-490		NO DATA, EAST PALO ALTO	Industrial Buffer	15 du/a	2.72	1.00	0	0	59,285	0	5,929
063-271-500		1269 RUNNYMEDE ST, EAST PALO ALTO	High Density Residential	22-43 du/a	0.23	0.00	43	5	0	1,002	0
063-271-510		1265 RUNNYMEDE ST, EAST PALO ALTO	High Density Residential	22-43 du/a	0.15	0.00	43	3	0	645	0
063-271-520		1261 RUNNYMEDE ST, EAST PALO ALTO	High Density Residential	22-43 du/a	0.15	0.00	43	3	0	654	0
063-271-530		1257 RUNNYMEDE ST, EAST PALO ALTO	High Density Residential	22-43 du/a	0.15	0.00	43	3	0	654	0
063-271-540		NO DATA, EAST PALO ALTO	Medium Density Residential	1.0 FAR	0.28	1.00	0	0	6,055	0	605
063-271-550		NO DATA, EAST PALO ALTO	Medium Density Residential	1.0 FAR	0.11	1.00	0	0	2,483	0	248
063-271-560		NO DATA, EAST PALO ALTO	Medium Density Residential	1.0 FAR	0.11	1.00	0	0	2,483	0	248
063-271-570		NO DATA, EAST PALO ALTO	Medium Density Residential	1.0 FAR	0.12	1.00	0	0	2,505	0	250
063-281-020	(8)	2021 EUCLID AVE	High Density Residential	175 du/a	0.15	0.00	175	26	0	5,285	0
063-281-030	(8)	2025 EUCLID AVE	High Density Residential	175 du/a	0.12	0.00	175	22	0	4,305	0
063-281-040	(8)	2031 EUCLID AVE	High Density Residential	175 du/a	0.21	0.00	175	36	0	7,210	0
063-281-100	(8)	2043 EUCLID AVE	High Density Residential	175 du/a	0.12	0.00	175	22	0	4,305	0
063-281-110	(8)	2041 EUCLID AVE	High Density Residential	175 du/a	0.12	0.00	175	21	0	4,165	0
063-282-010	(8)	501 O'CONNOR STREET	High Density Residential	175 du/a	0.32	0.00	175	57	0	11,340	0
063-282-020	(8)	2012 EUCLID AVE	High Density Residential	175 du/a	0.34	0.00	175	59	0	11,865	0
063-282-030	(8)	2032 EUCLID AVE	High Density Residential	175 du/a	0.16	0.00	175	28	0	5,670	0
063-282-040	(8)	2036 EUCLID AVE	High Density Residential	175 du/a	0.15	0.00	175	27	0	5,390	0
063-282-050	(8)	2040/2042 EUCLID AVE	High Density Residential	175 du/a	0.14	0.00	175	25	0	4,900	0
063-282-060	(8)	2044 EUCLID AVE	High Density Residential	175 du/a	0.18	0.00	175	31	0	6,195	0
063-282-070	(8)	2054 EUCLID AVE	High Density Residential	175 du/a	0.24	0.00	175	42	0	8,435	0
063-282-080	(8)	2033 MANHATTAN AVE, EAST PALO ALTO	High Density Residential	175 du/a	0.51	0.00	175	89	0	17,843	0
063-282-090	(8)	2001 MANHATTAN AVE, EAST PALO ALTO	High Density Residential	175 du/a	0.69	0.00	175	121	0	24,199	0
063-291-010		1489 E BAYSHORE RD, EAST PALO ALTO	Mixed Use Low	22 du/a; 1.0 FAR	0.45	1.00	22	5	9,783	988	978
063-292-180		2101 UNIVERSITY AVE, EAST PALO ALTO	Mixed Use High	86 du/a; 2.5 FAR	0.33	2.50	86	14	17,860	2,821	1,786
063-292-370		2117 UNIVERSITY AVE, EAST PALO ALTO	Mixed Use High	86 du/a; 2.5 FAR	0.77	2.50	86	33	41,778	6,598	4,178
063-292-380	(8)	2160 EUCLID AVE, EAST PALO ALTO	Mixed Use High	430 du planned	3.99	2.50	216	430	217,239	85,978	21,724
063-302-170		2283 UNIVERSITY AVE, EAST PALO ALTO	Mixed Use Corridor	65 du/a; 1.75 FAR	0.24	1.75	65	8	9,103	1,552	910
063-302-180		2281 UNIVERSITY AVE, EAST PALO ALTO	Mixed Use Corridor	65 du/a; 1.75 FAR	0.21	1.75	65	7	7,997	1,364	800
063-302-210		2263 UNIVERSITY AVE, EAST PALO ALTO	Mixed Use Corridor	65 du/a; 1.75 FAR	0.46	1.75	65	15	17,653	3,011	1,765
063-302-220		2253 UNIVERSITY AVE, EAST PALO ALTO	Mixed Use Corridor	65 du/a; 1.75 FAR	0.21	1.75	65	7	7,983	1,361	798
063-302-230		2247 UNIVERSITY AVE, EAST PALO ALTO	Mixed Use Corridor	65 du/a; 1.75 FAR	0.30	1.75	65	10	11,258	1,920	1,126
063-302-280		575A BELL ST, EAST PALO ALTO	Mixed Use Corridor	65 du/a; 1.75 FAR	0.20	1.75	65	6	7,476	1,275	748
063-302-290		565 BELL ST, EAST PALO ALTO	Mixed Use Corridor	65 du/a; 1.75 FAR	0.19	1.75	65	6	7,242	1,235	724
063-302-330		2201 UNIVERSITY AVE, EAST PALO ALTO	Mixed Use Corridor	65 du/a; 1.75 FAR	1.41	1.75	65	46	53,812	9,177	5,381
063-302-340		584 RUNNYMEDE ST, EAST PALO ALTO	Mixed Use Corridor	65 du/a; 1.75 FAR	0.39	1.75	65	13	14,888	2,539	1,489
063-302-460		2277 UNIVERSITY AVE, EAST PALO ALTO	Mixed Use Corridor	65 du/a; 1.75 FAR	0.36	1.75	65	12	13,569	2,314	1,357
063-302-470		2279 UNIVERSITY AVE, EAST PALO ALTO	Mixed Use Corridor	65 du/a; 1.75 FAR	0.23	1.75	65	7	8,788	1,499	879
063-312-400		, NO DATA	Office	3.0 FAR	0.35	3.00	0	0	22,556	0	2,256
063-321-050		2124 UNIVERSITY AVE, EAST PALO ALTO	Mixed Use Corridor	65 du/a; 1.75 FAR	0.28	1.75	65	9	10,643	1,815	1,064
063-321-060		2126 UNIVERSITY AVE, EAST PALO ALTO	Mixed Use Corridor	65 du/a; 1.75 FAR	0.23	1.75	65	7	8,711	1,485	871
063-321-070		, EAST PALO ALTO	Mixed Use Corridor	65 du/a; 1.75 FAR	0.05	1.75	65	2	1,984	338	198
063-321-080		2142 UNIVERSITY AVE, EAST PALO ALTO	Mixed Use Corridor	65 du/a; 1.75 FAR	0.19	1.75	65	6	7,128	1,216	713
063-321-100		2160 UNIVERSITY AVE, EAST PALO ALTO	Mixed Use Corridor	65 du/a; 1.75 FAR	0.37	1.75	65	12	13,973	2,383	1,397
063-321-110		2164 UNIVERSITY AVE, EAST PALO ALTO	Mixed Use Corridor	65 du/a; 1.75 FAR	0.18	1.75	65	6	6,772	1,155	677
063-321-120		2166 UNIVERSITY AVE, EAST PALO ALTO	Mixed Use Corridor	65 du/a; 1.75 FAR	0.17	1.75	65	6	6,661	1,136	666
063-321-130		2172 UNIVERSITY AVE, EAST PALO ALTO	Mixed Use Corridor	65 du/a; 1.75 FAR	0.17	1.75	65	6	6,660	1,136	666
063-321-140		2178 UNIVERSITY AVE, EAST PALO ALTO	Mixed Use Corridor	65 du/a; 1.75 FAR	0.17	1.75	65	5	6,371	1,086	637
063-321-180		612 BELL ST, EAST PALO ALTO	Mixed Use Corridor	65 du/a; 1.75 FAR	0.11	1.75	65	4	4,282	730	428
063-321-190		616 BELL ST, EAST PALO ALTO	Mixed Use Corridor	65 du/a; 1.75 FAR	0.12	1.75	65	4	4,548	776	455
063-321-200		644 BELL ST, EAST PALO ALTO	Mixed Use Corridor	65 du/a; 1.75 FAR	0.15	1.75	65	5	5,729	977	573
063-321-210		2189 CAPITOL AVE, EAST PALO ALTO	Mixed Use Corridor	65 du/a; 1.75 FAR	0.14	1.75	65	5	5,402	921	540
063-321-220		2187 CAPITOL AVE, EAST PALO ALTO	Mixed Use Corridor	65 du/a; 1.75 FAR	0.12	1.75	65	4	4,432	756	443
063-321-230		2181 CAPITOL AVE, EAST PALO ALTO	Mixed Use Corridor	65 du/a; 1.75 FAR	0.17	1.75	65	6	6,626	1,130	663
063-321-240		2171 CAPITOL AVE, EAST PALO ALTO	Mixed Use Corridor	65 du/a; 1.75 FAR	0.15	1.75	65	5	5,776	985	578
063-321-250		2165 CAPITOL AVE, EAST PALO ALTO	Mixed Use Corridor	65 du/a; 1.75 FAR	0.15	1.75	65	5	5,590	953	559
063-321-260		2161 CAPITOL AVE, EAST PALO ALTO	Mixed Use Corridor	65 du/a; 1.75 FAR	0.15	1.75	65	5	5,779	986	578
063-321-270		2157 CAPITOL AVE, EAST PALO ALTO	Mixed Use Corridor	65 du/a; 1.75 FAR	0.15	1.75	65	5	5,850	998	585
063-321-280		2153 CAPITOL AVE, EAST PALO ALTO	Mixed Use Corridor	65 du/a; 1.75 FAR	0.15	1.75	65	5	5,682	969	568
063-321-290		2149 CAPITOL AVE, EAST PALO ALTO	Mixed Use Corridor	65 du/a; 1.75 FAR	0.16	1.75	65	5	5,921	1,010	592
063-321-300		2145 CAPITOL AVE, EAST PALO ALTO	Mixed Use Corridor	65 du/a; 1.75 FAR	0.16	1.75	65	5	5,988	1,021	599
063-321-310		2141 CAPITOL AVE, EAST PALO ALTO	Mixed Use Corridor	65 du/a; 1.75 FAR	0.15	1.75	65	5	5,901	1,006	590
063-321-320		2133 CAPITOL AVE, EAST PALO ALTO	Mixed Use Corridor	65 du/a; 1.75 FAR	0.15	1.75	65	5	5,669	967	567
063-321-330		2129 CAPITOL AVE, EAST PALO ALTO	Mixed Use Corridor	65 du/a; 1.75 FAR	0.11	1.75	65	3	4,007	683	401
063-321-400		2194 UNIVERSITY AVE, EAST PALO ALTO	Mixed Use Corridor	65 du/a; 1.75 FAR	0.43	1.75	65	14	16,237	2,769	1,624
063-321-410		2148 UNIVERSITY AVE, EAST PALO ALTO	Mixed Use Corridor	65 du/a; 1.75 FAR	0.25	1.75	65	8	9,620	1,641	962
063-321-420		, NO DATA	Office	3.0 FAR	1.64	3.00	0	0	107,405	0	10,740
063-322-040		2124 CAPITOL AVE, EAST PALO ALTO	Medium Density Residential	12-22 du/a	0.16	0.00	22	2	0	349	0
063-322-050		2132 CAPITOL AVE, EAST PALO ALTO	Medium Density Residential	12-22 du/a	0.17	0.00	22	2	0	379	0
063-322-060		2134 CAPITOL AVE, EAST PALO ALTO	Medium Density Residential	12-22 du/a	0.16	0.00	22	2	0	350	0
063-322-070		2138 CAPITOL AVE, EAST PALO ALTO	Medium Density Residential	12-22 du/a	0.16	0.00	22	2	0	349	0
063-322-080		2142 CAPITOL AVE, EAST PALO ALTO	Medium Density Residential	12-22 du/a	0.16	0.00	22	2	0	345	0
063-322-090		2144 CAPITOL AVE, EAST PALO ALTO	Medium Density Residential	12-22 du/a	0.16	0.00	22	2	0	363	0
063-322-100		2154 CAPITOL AVE, EAST PALO ALTO	Medium Density Residential	12-22 du/a	0.20	0.00	22	2	0	434	0
063-322-110		2162 CAPITOL AVE, EAST PALO ALTO	Medium Density Residential	12-22 du/a	0.22	0.00	22	2	0	477	0
063-322-130		2184 CAPITOL AVE, EAST PALO ALTO	Medium Density Residential	12-22 du/a	0.19	0.00	22	2	0	425	0
063-322-140		2194 CAPITOL AVE, EAST PALO ALTO	Medium Density Residential	12-22 du/a	0.24	0.00	22	3	0	538	0
063-322-150		2198 CAPITOL AVE, EAST PALO ALTO	Medium Density Residential	12-22 du/a	0.13	0.00	22	1	0	297	0
063-322-160		660 BELL ST, EAST PALO ALTO	Medium Density Residential	12-22 du/a	0.13	0.00	22	1	0	286	0
063-322-340		2169 COOLEY AVE, EAST PALO ALTO	Medium Density Residential	12-22 du/a	0.69	0.00	22	8	0	1,508	0
063-322-410		, NO DATA	Office	3.0 FAR	0.17	3.00	0	0	11,099	0	1,110
063-322-500		2159 COOLEY AVE, EAST PALO ALTO	Medium Density Residential	12-22 du/a	0.22	0.00	22	2	0	494	0
063-322-560		DONOHOE ST, EAST PALO ALTO	Office	3.0 FAR	0.72	3.00	0	0	46,920	0	4,692
063-322-580		2118 CAPITOL AVE, EAST PALO ALTO	Medium Density Residential	12-22 du/a	0.16	0.00	22	2	0	359	0
063-331-030		2212 UNIVERSITY AVE, EAST PALO ALTO	Mixed Use Corridor	65 du/a; 1.75 FAR	0.20	1.75	65	7	7,656	1,306	766
063-331-060		2242 UNIVERSITY AVE, EAST PALO ALTO	Mixed Use Corridor	65 du/a; 1.75 FAR	0.16	1.75	65	5	6,118	1,043	612
063-331-070		2248 UNIVERSITY AVE, EAST PALO ALTO	Mixed Use Corridor	65 du/a; 1.75 FAR	0.16	1.75	65	5	6,105	1,041	610
063-331-080		2252 UNIVERSITY AVE, EAST PALO ALTO	Mixed Use Corridor	65 du/a; 1.75 FAR	0.16	1.75	65	5	6,092	1,039	609
063-331-090		2264 UNIVERSITY AVE, EAST PALO ALTO	Mixed Use Corridor	65 du/a; 1.75 FAR	0.16	1.75	65	5	6,078	1,036	608
063-331-100		2268 UNIVERSITY AVE, EAST PALO ALTO	Mixed Use Corridor	65 du/a; 1.75 FAR	0.16	1.75	65	5	6,065	1,034	606
063-331-110		2272 UNIVERSITY AVE, EAST PALO ALTO	Mixed Use Corridor	65 du/a; 1.75 FAR	0.16	1.75	65	5	6,052	1,032	605
063-331-120		2274 UNIVERSITY AVE, EAST PALO ALTO	Mixed Use Corridor	65 du/a; 1.75 FAR	0.21	1.75	65	7	8,187	1,396	819
063-331-130		2276 UNIVERSITY AVE, EAST PALO ALTO	Mixed Use Corridor	65 du/a; 1.75 FAR	0.14	1.75	65	5	5,449	929	545
063-331-140		2280 UNIVERSITY AVE, EAST PALO ALTO	Mixed Use Corridor	65 du/a; 1.75 FAR	0.14	1.75	65	5	5,443	928	544
063-331-150		2284 UNIVERSITY AVE, EAST PALO ALTO	Mixed Use Corridor	65 du/a; 1.75 FAR	0.14	1.75	65	5	5,436	927	544
063-331-190		2291 CAPITOL AVE, EAST PALO ALTO	Mixed Use Corridor	65 du/a; 1.75 FAR	0.15	1.75	65	5	5,555	947	556
063-331-200		2287 CAPITOL AVE, EAST PALO ALTO	Mixed Use Corridor	65 du/a; 1.75 FAR	0.15	1.75	65	5	5,592	954	559

Appendix C: Table 3
2035 Zoning Sanitary Sewer Flows

APN (1)		Address (1)	2035 Zoning	Maximum Density and FAR Extents (2)	Acres per Parcel (3)	FAR	Maximum du per acre	Average du per Parcel or Project (4)	Average Non-Residential Development, SF (5)	Average Daily Flow Residential, GPD (6)	Average Daily Flow Non-Residential, GPD (7)
063-331-210		2285 CAPITOL AVE, EAST PALO ALTO	Mixed Use Corridor	65 du/a; 1.75 FAR	0.15	1.75	65	5	5,629	960	563
063-331-220		2277 CAPITOL AVE, EAST PALO ALTO	Mixed Use Corridor	65 du/a; 1.75 FAR	0.14	1.75	65	5	5,333	909	533
063-331-230		2267 CAPITOL AVE, EAST PALO ALTO	Mixed Use Corridor	65 du/a; 1.75 FAR	0.13	1.75	65	4	5,120	873	512
063-331-240		2263 CAPITOL AVE, EAST PALO ALTO	Mixed Use Corridor	65 du/a; 1.75 FAR	0.14	1.75	65	4	5,149	878	515
063-331-250		2255 CAPITOL AVE, EAST PALO ALTO	Mixed Use Corridor	65 du/a; 1.75 FAR	0.14	1.75	65	4	5,179	883	518
063-331-260		2251 CAPITOL AVE, EAST PALO ALTO	Mixed Use Corridor	65 du/a; 1.75 FAR	0.14	1.75	65	4	5,208	888	521
063-331-270		2249 CAPITOL AVE, EAST PALO ALTO	Mixed Use Corridor	65 du/a; 1.75 FAR	0.14	1.75	65	4	5,238	893	524
063-331-280		2245 CAPITOL AVE, EAST PALO ALTO	Mixed Use Corridor	65 du/a; 1.75 FAR	0.14	1.75	65	4	5,267	898	527
063-331-290		2239 CAPITOL AVE, EAST PALO ALTO	Mixed Use Corridor	65 du/a; 1.75 FAR	0.18	1.75	65	6	6,726	1,147	673
063-331-300		2233 CAPITOL AVE, EAST PALO ALTO	Mixed Use Corridor	65 du/a; 1.75 FAR	0.18	1.75	65	6	6,808	1,161	681
063-331-310		2227 CAPITOL AVE, EAST PALO ALTO	Mixed Use Corridor	65 du/a; 1.75 FAR	0.15	1.75	65	5	5,530	943	553
063-331-320		2219 CAPITOL AVE, EAST PALO ALTO	Mixed Use Corridor	65 du/a; 1.75 FAR	0.14	1.75	65	5	5,465	932	547
063-331-330		2217 CAPITOL AVE, EAST PALO ALTO	Mixed Use Corridor	65 du/a; 1.75 FAR	0.12	1.75	65	4	4,464	761	446
063-331-340		2205 CAPITOL AVE, EAST PALO ALTO	Mixed Use Corridor	65 du/a; 1.75 FAR	0.16	1.75	65	5	6,151	1,049	615
063-331-350		643 BELL ST, EAST PALO ALTO	Mixed Use Corridor	65 du/a; 1.75 FAR	0.16	1.75	65	5	5,924	1,010	592
063-331-370		2200 UNIVERSITY AVE, EAST PALO ALTO	Mixed Use Corridor	65 du/a; 1.75 FAR	0.40	1.75	65	13	15,313	2,611	1,531
063-331-380		2240 UNIVERSITY AVE, EAST PALO ALTO	Mixed Use Corridor	65 du/a; 1.75 FAR	0.24	1.75	65	8	9,056	1,544	906
063-331-410		2220 UNIVERSITY AVE, EAST PALO ALTO	Mixed Use Corridor	65 du/a; 1.75 FAR	0.44	1.75	65	14	16,713	2,850	1,671
063-442-360		330 DONOHOE ST, EAST PALO ALTO	High Density Residential	22-43 du/a	0.98	0.00	43	21	0	4,213	0
063-473-150		1995 MANHATTAN AVE, EAST PALO ALTO	High Density Residential	22-43 du/a	0.17	0.00	43	4	0	725	0
063-473-160		1991 MANHATTAN AVE, EAST PALO ALTO	High Density Residential	22-43 du/a	0.38	0.00	43	8	0	1,631	0
063-473-170		1965 MANHATTAN AVE, EAST PALO ALTO	High Density Residential	22-43 du/a	0.28	0.00	43	6	0	1,207	0
063-473-180		1955 MANHATTAN AVE, EAST PALO ALTO	High Density Residential	22-43 du/a	0.34	0.00	43	7	0	1,448	0
063-473-190		1919 MANHATTAN AVE, EAST PALO ALTO	High Density Residential	22-43 du/a	0.46	0.00	43	10	0	1,962	0
063-473-200		1901 MANHATTAN AVE, EAST PALO ALTO	High Density Residential	22-43 du/a	0.58	0.00	43	13	0	2,503	0
063-481-010		1699 WOODLAND AVE, EAST PALO ALTO	Medium Density Residential	12-22 du/a	0.17	0.00	22	2	0	367	0
063-481-020		1681 WOODLAND AVE, EAST PALO ALTO	Medium Density Residential	12-22 du/a	0.16	0.00	22	2	0	345	0
063-481-030		1671 WOODLAND AVE, EAST PALO ALTO	Medium Density Residential	12-22 du/a	0.16	0.00	22	2	0	360	0
063-481-040		1669 WOODLAND AVE, EAST PALO ALTO	Medium Density Residential	12-22 du/a	0.18	0.00	22	2	0	396	0
063-481-050		1651 WOODLAND AVE, EAST PALO ALTO	Medium Density Residential	12-22 du/a	0.24	0.00	22	3	0	531	0
063-481-060		1643 WOODLAND AVE, EAST PALO ALTO	Medium Density Residential	12-22 du/a	0.18	0.00	22	2	0	403	0
063-481-070		1637 WOODLAND AVE, EAST PALO ALTO	Medium Density Residential	12-22 du/a	0.19	0.00	22	2	0	423	0
063-481-080		1629 WOODLAND AVE, EAST PALO ALTO	Medium Density Residential	12-22 du/a	0.17	0.00	22	2	0	384	0
063-481-090		1621 WOODLAND AVE, EAST PALO ALTO	Medium Density Residential	12-22 du/a	0.17	0.00	22	2	0	363	0
063-481-100		644 SCOFIELD AVE, EAST PALO ALTO	Medium Density Residential	12-22 du/a	0.21	0.00	22	2	0	463	0
063-481-110		652 SCOFIELD AVE, EAST PALO ALTO	Medium Density Residential	12-22 du/a	0.15	0.00	22	2	0	322	0
063-481-120		660 SCOFIELD AVE, EAST PALO ALTO	Medium Density Residential	12-22 du/a	0.18	0.00	22	2	0	396	0
063-481-130		610 CIRCLE DR, EAST PALO ALTO	Medium Density Residential	12-22 du/a	0.18	0.00	22	2	0	396	0
063-481-140		620 CIRCLE DR, EAST PALO ALTO	Medium Density Residential	12-22 du/a	0.19	0.00	22	2	0	415	0
063-481-150		630 CIRCLE DR, EAST PALO ALTO	Medium Density Residential	12-22 du/a	0.18	0.00	22	2	0	387	0
063-481-160		640 CIRCLE DR, EAST PALO ALTO	Medium Density Residential	12-22 du/a	0.18	0.00	22	2	0	399	0
063-481-170		650 CIRCLE DR, EAST PALO ALTO	Medium Density Residential	12-22 du/a	0.21	0.00	22	2	0	461	0
063-481-180		1917 COOLEY AVE, EAST PALO ALTO	Medium Density Residential	12-22 du/a	0.21	0.00	22	2	0	470	0
063-481-190		1909 COOLEY AVE, EAST PALO ALTO	Medium Density Residential	12-22 du/a	0.21	0.00	22	2	0	457	0
063-481-210		1901 COOLEY AVE, EAST PALO ALTO	Medium Density Residential	12-22 du/a	0.20	0.00	22	2	0	441	0
063-481-220		1905 COOLEY AVE, EAST PALO ALTO	Medium Density Residential	12-22 du/a	0.18	0.00	22	2	0	407	0
063-482-010		641 CIRCLE DR, EAST PALO ALTO	Medium Density Residential	12-22 du/a	0.15	0.00	22	2	0	322	0
063-482-020		621 CIRCLE DR, EAST PALO ALTO	Medium Density Residential	12-22 du/a	0.16	0.00	22	2	0	359	0
063-482-030		611 CIRCLE DR, EAST PALO ALTO	Medium Density Residential	12-22 du/a	0.19	0.00	22	2	0	414	0
063-483-030		1909 CAPITOL AVE, EAST PALO ALTO	Medium Density Residential	12-22 du/a	0.23	0.00	22	2	0	496	0
063-483-040		1943 CAPITOL AVE, EAST PALO ALTO	High Density Residential	22-43 du/a	0.25	0.00	43	5	0	1,068	0
063-483-050		1609 WOODLAND AVE, EAST PALO ALTO	High Density Residential	22-43 du/a	0.50	0.00	43	11	0	2,169	0
063-484-010		655 SCOFIELD AVE, EAST PALO ALTO	High Density Residential	22-43 du/a	0.09	0.00	43	2	0	407	0
063-484-020		1902 CAPITOL AVE, EAST PALO ALTO	High Density Residential	22-43 du/a	0.12	0.00	43	2	0	497	0
063-484-030		1908 CAPITOL AVE, EAST PALO ALTO	High Density Residential	22-43 du/a	0.21	0.00	43	5	0	907	0
063-484-040		1916 CAPITOL AVE, EAST PALO ALTO	High Density Residential	22-43 du/a	0.33	0.00	43	7	0	1,407	0
063-484-050		1920 CAPITOL AVE, EAST PALO ALTO	High Density Residential	22-43 du/a	0.20	0.00	43	4	0	865	0
063-484-060		1934 CAPITOL AVE, EAST PALO ALTO	High Density Residential	22-43 du/a	0.54	0.00	43	12	0	2,327	0
063-484-090		1949 COOLEY AVE, EAST PALO ALTO	High Density Residential	22-43 du/a	0.31	0.00	43	7	0	1,319	0
063-484-100		1941 COOLEY AVE, EAST PALO ALTO	High Density Residential	22-43 du/a	0.34	0.00	43	7	0	1,464	0
063-484-110		685 SCOFIELD AVE, EAST PALO ALTO	High Density Residential	22-43 du/a	0.41	0.00	43	9	0	1,743	0
063-484-130		1957 COOLEY AVE, EAST PALO ALTO	High Density Residential	22-43 du/a	0.74	0.00	43	16	0	3,197	0
063-492-070		1927 E BAYSHORE RD, EAST PALO ALTO	Mixed Use Corridor	65 du/a; 1.75 FAR	0.19	1.75	65	6	7,139	1,217	714
063-492-280		1933 PULGAS AVE, EAST PALO ALTO	Medium Density Residential	12-22 du/a	2.14	0.00	22	24	0	4,705	0
063-492-350	(8)	1805 E BAYSHORE RD #1-94, EAST PALO ALTO	High Density Residential	94 proposed	3.32		94	156	0	31,208	0
063-492-480		1895 E BAYSHORE RD, EAST PALO ALTO	Mixed Use Corridor	65 du/a; 1.75 FAR	0.25	1.75	65	8	9,521	1,624	952
063-501-020		1874 W BAYSHORE RD, EAST PALO ALTO	Mixed Use Low	22 du/a; 1.0 FAR	0.50	1.00	22	5	10,818	1,093	1,082
063-501-030		1870 W BAYSHORE RD, EAST PALO ALTO	Mixed Use Low	22 du/a; 1.0 FAR	0.23	1.00	22	3	5,052	510	505
063-501-040		1879 WOODLAND AVE, EAST PALO ALTO	Mixed Use Low	22 du/a; 1.0 FAR	0.24	1.00	22	3	5,119	517	512
063-501-050		1875 WOODLAND AVE, EAST PALO ALTO	Mixed Use Low	22 du/a; 1.0 FAR	0.20	1.00	22	2	4,456	450	446
063-511-020		2039 CLARKE AVE, EAST PALO ALTO	Mixed Use Corridor	65 du/a; 1.75 FAR	0.12	1.75	65	4	4,698	801	470
063-511-030		2035 CLARKE AVE, EAST PALO ALTO	Mixed Use Corridor	65 du/a; 1.75 FAR	0.13	1.75	65	4	5,094	869	509
063-511-040		2029 CLARKE AVE, EAST PALO ALTO	Mixed Use Corridor	65 du/a; 1.75 FAR	0.26	1.75	65	8	9,897	1,688	990
063-511-050		2027 CLARKE AVE, EAST PALO ALTO	Mixed Use Corridor	65 du/a; 1.75 FAR	0.12	1.75	65	4	4,482	764	448
063-511-060		2023 CLARKE AVE, EAST PALO ALTO	Mixed Use Corridor	65 du/a; 1.75 FAR	0.14	1.75	65	4	5,275	899	527
063-511-070		2017 CLARKE AVE, EAST PALO ALTO	Mixed Use Corridor	65 du/a; 1.75 FAR	0.13	1.75	65	4	4,908	837	491
063-511-080		2013 CLARKE AVE, EAST PALO ALTO	Mixed Use Corridor	65 du/a; 1.75 FAR	0.13	1.75	65	4	4,857	828	486
063-511-090		2009 CLARKE AVE, EAST PALO ALTO	Mixed Use Corridor	65 du/a; 1.75 FAR	0.13	1.75	65	4	4,834	824	483
063-511-190		872 DONOHOE ST, EAST PALO ALTO	Mixed Use Corridor	65 du/a; 1.75 FAR	0.21	1.75	65	7	8,007	1,366	801
063-511-200		866 DONOHOE ST, EAST PALO ALTO	Mixed Use Corridor	65 du/a; 1.75 FAR	0.18	1.75	65	6	6,898	1,176	690
063-511-210		864 DONOHOE ST, EAST PALO ALTO	Mixed Use Corridor	65 du/a; 1.75 FAR	0.15	1.75	65	5	5,844	997	584
063-511-220		862 DONOHOE ST, EAST PALO ALTO	Mixed Use Corridor	65 du/a; 1.75 FAR	0.11	1.75	65	3	4,040	689	404
063-511-240		896 DONOHOE ST, EAST PALO ALTO	Mixed Use Corridor	65 du/a; 1.75 FAR	0.11	1.75	65	4	4,244	724	424
063-511-250		860 DONOHOE ST, EAST PALO ALTO	Mixed Use Corridor	65 du/a; 1.75 FAR	0.16	1.75	65	5	6,145	1,048	615
063-511-260		890 DONOHOE ST, EAST PALO ALTO	Mixed Use Corridor	65 du/a; 1.75 FAR	0.12	1.75	65	4	4,566	779	457
063-511-490		1731 E BAYSHORE RD, EAST PALO ALTO	Mixed Use High	86 du/a; 2.5 FAR	2.51	2.50	86	108	136,888	21,620	13,689
063-511-520		1761 E BAYSHORE RD, EAST PALO ALTO	Mixed Use High	86 du/a; 2.5 FAR	2.64	2.50	86	114	143,790	22,711	14,379
063-511-630		1721 E BAYSHORE RD, EAST PALO ALTO	Mixed Use High	86 du/a; 2.5 FAR	0.67	2.50	86	29	36,236	5,723	3,624
063-511-660		899 OCONNOR ST, EAST PALO ALTO	Mixed Use Corridor	65 du/a; 1.75 FAR	0.08	1.75	65	2	2,872	490	287
063-511-680		1751 EAST BAYSHORE RD, EAST PALO ALTO	Mixed Use High	86 du/a; 2.5 FAR	4.24	2.50	86	182	231,026	36,489	23,103
063-511-690		1745 E BAYSHORE BLVD, EAST PALO ALTO	Mixed Use High	86 du/a; 2.5 FAR	0.67	2.50	86	29	36,743	5,803	3,674
063-511-720		1775 E BAYSHORE RD, EAST PALO ALTO	Mixed Use High	86 du/a; 2.5 FAR	6.12	2.50	86	263	333,269	52,637	33,327
063-515-060		1821 CLARKE AVE, EAST PALO ALTO	Low Density Residential	0-12 du/a	0.19	0.00	12	1	0	226	0
063-515-070		1805 CLARKE AVE, EAST PALO ALTO	Low Density Residential	0-12 du/a	0.35	0.00	12	2	0	424	0
063-515-080		1787 WOODLAND AVE, EAST PALO ALTO	Low Density Residential	0-12 du/a	0.18	0.00	12	1	0	218	0
063-515-230		1785 WOODLAND AVE, EAST PALO ALTO	Low Density Residential	0-12 du/a	0.35	0.00	12	2	0	423	0
063-571-060		1985 E BAYSHORE RD, EAST PALO ALTO	Mixed Use Corridor	65 du/a; 1.75 FAR	1.38	1.75	65	45	52,597	8,970	5,260
063-571-070		1981 E BAYSHORE RD, EAST PALO ALTO	Mixed Use Corridor	65 du/a; 1.75 FAR	0.66	1.75	65	21	25,211	4,299	2,521
063-571-080		1961 E BAYSHORE RD, EAST PALO ALTO	Mixed Use Corridor	65 du/a; 1.75 FAR	1.44	1.75	65	47	54,786	9,343	5,479
063-571-090		1905 E BAYSHORE RD, EAST PALO ALTO	Mixed Use Corridor	65 du/a; 1.75 FAR	0.25	1.75	65	8	9,439	1,610	944
063-680-020		1900 UNIVERSITY AVE, EAST PALO ALTO	Office	3.0 FAR	2.31	3.00	0	0	150,737	0	15,074
063-680-050		, NO DATA	Office	3.0 FAR	0.02	3.00	0	0	1,566	0	157
063-680-060		, NO DATA	Office	3.0 FAR	0.02	3.00	0	0	1,566	0	157
063-680-090		, EAST PALO ALTO	Office	3.0 FAR	0.13	3.00	0	0	8,177	0	818
063-680-100		, EAST PALO ALTO	Office	3.0 FAR	0.13	3.00	0	0	8,273	0	827
063-680-110		, EAST PALO ALTO	Office	3.0 FAR	0.35	3.00	0	0	22,595	0	2,259
063-680-130		2000 UNIVERSITY AVE, EAST PALO ALTO	Office	3.0 FAR	2.14	3.00	0	0	139,586	0	13,959
063-680-150		2050 UNIVERSITY AVE, EAST PALO ALTO	Office	3.0 FAR	3.35	3.00	0	0	218,937	0	21,894
063-680-180		, EAST PALO ALTO	Office	3.0 FAR	0.01	3.00	0	0	533	0	53
063-680-190		2000 UNIVERSITY AVE, EAST PALO ALTO	Office	3.0 FAR	3.92	3.00	0	0	256,076	0	25,608
063-730-010	(8)	2477 PULGAS AVE, EAST PALO ALTO	Medium Density Residential	12-22 du/a	0.06	0.00	22	1	0	200	0
063-730-020	(8)	2477 PULGAS AVE, EAST PALO ALTO	Medium Density Residential	12-22 du/a	0.06	0.00	22	1	0	200	0
063-730-030	(8)	2477 PULGAS AVE, EAST PALO ALTO	Medium Density Residential	12-22 du/a	0.06	0.00	22	1	0	200	0
063-730-040	(8)	2477 PULGAS AVE, EAST PALO ALTO	Medium Density Residential	12-22 du/a	0.06	0.00	22	1	0	200	0
063-730-050	(8)	2477 PULGAS AVE, EAST PALO ALTO	Medium Density Residential	12-22 du/a	0.06	0.00	22	1	0	200	0
063-730-060	(8)	2477 PULGAS AVE, EAST PALO ALTO	Medium Density Residential	12-22 du/a	0.06	0.00	22	1	0	200	0
063-730-070	(8)	2477 PULGAS AVE, EAST PALO ALTO	Medium Density Residential	12-22 du/a	0.06	0.00	22	1	0	200	0
063-730-080	(8)	2477 PULGAS AVE, EAST PALO ALTO	Medium Density Residential	12-22 du/a	0.05	0.00	22	1	0	200	0
063-730-090	(8)	2477 PULGAS AVE, EAST PALO ALTO	Medium Density Residential	12-22 du/a	0.05	0.00	22	1	0	200	0
063-730-100	(8)	2477 PULGAS AVE, EAST PALO ALTO	Medium Density Residential	12-22 du/a	0.05	0.00	22	1	0	200	0
063-730-110	(8)	2477 PULGAS AVE, EAST PALO ALTO	Medium Density Residential	12-22 du/a	0.05	0.00	22	1	0	200	0
063-730-120	(8)	2477 PULGAS AVE, EAST PALO ALTO	Medium Density Residential	12-22 du/a	0.05	0.00	22	1	0	200	0
063-730-130	(8)	2477 PULGAS AVE, EAST PALO ALTO	Medium Density Residential	12-22 du/a	0.05	0.00	22	1	0	200	0
063-730-140	(8)	2477 PULGAS AVE, EAST PALO ALTO	Medium Density Residential	12-22 du/a	0.06	0.00	22	1	0	200	0
063-730-150	(8)	2477 PULGAS AVE, EAST PALO ALTO	Medium Density Residential	12-22 du/a	0.05	0.00	22	1	0	200	0
063-730-160	(8)	2477 PULGAS AVE, EAST PALO ALTO	Medium Density Residential	12-22 du/a	0.05	0.00	22	1	0	200	0
063-730-170	(8)	2477 PULGAS AVE, EAST PALO ALTO	Medium Density Residential	12-22 du/a	0.05	0.00	22	1	0	200	0
063-730-180	(8)	2477 PULGAS AVE, EAST PALO ALTO	Medium Density Residential	12-22 du/a	0.05	0.00	22	1	0	200	0

Appendix C: Table 3
2035 Zoning Sanitary Sewer Flows

APN (1)	Address (1)	2035 Zoning	Maximum Density and FAR Extents (2)	Acres per Parcel (3)	FAR	Maximum du per acre	Average du per Parcel or Project (4)	Average Non-Residential Development, SF (5)	Average Daily Flow Residential, GPD (6)	Average Daily Flow Non-Residential, GPD (7)
063-730-190 (8)	2477 PULGAS AVE, EAST PALO ALTO	Medium Density Residential	12-22 du/a	0.05	0.00	22	1	0	200	0
063-730-200 (8)	2477 PULGAS AVE, EAST PALO ALTO	Medium Density Residential	12-22 du/a	0.05	0.00	22	1	0	200	0
063-730-210 (8)	2477 PULGAS AVE, EAST PALO ALTO	Medium Density Residential	12-22 du/a	0.06	0.00	22	1	0	200	0
063-730-220 (8)	2477 PULGAS AVE, EAST PALO ALTO	Medium Density Residential	12-22 du/a	0.09	0.00	22	1	0	200	0
063-730-230 (8)	2477 PULGAS AVE, EAST PALO ALTO	Medium Density Residential	12-22 du/a	0.06	0.00	22	1	0	200	0
063-730-240 (8)	2477 PULGAS AVE, EAST PALO ALTO	Medium Density Residential	12-22 du/a	0.05	0.00	22	1	0	200	0
063-730-250 (8)	2477 PULGAS AVE, EAST PALO ALTO	Medium Density Residential	12-22 du/a	0.05	0.00	22	1	0	200	0
063-730-260 (8)	2477 PULGAS AVE, EAST PALO ALTO	Medium Density Residential	12-22 du/a	0.05	0.00	22	1	0	200	0
063-730-270 (8)	2477 PULGAS AVE, EAST PALO ALTO	Medium Density Residential	12-22 du/a	0.05	0.00	22	1	0	200	0
063-730-280 (8)	2477 PULGAS AVE, EAST PALO ALTO	Medium Density Residential	12-22 du/a	0.05	0.00	22	1	0	200	0
063-730-290 (8)	2477 PULGAS AVE, EAST PALO ALTO	Medium Density Residential	12-22 du/a	0.05	0.00	22	1	0	200	0
063-730-300 (8)	2477 PULGAS AVE, EAST PALO ALTO	Medium Density Residential	12-22 du/a	0.05	0.00	22	1	0	200	0
063-730-310 (8)	2477 PULGAS AVE, EAST PALO ALTO	Medium Density Residential	12-22 du/a	0.08	0.00	22	1	0	200	0
063-730-320 (8)	2477 PULGAS AVE, EAST PALO ALTO	Medium Density Residential	12-22 du/a	0.06	0.00	22	1	0	200	0
063-730-330 (8)	2477 PULGAS AVE, EAST PALO ALTO	Medium Density Residential	12-22 du/a	0.06	0.00	22	1	0	200	0
063-730-340 (8)	2477 PULGAS AVE, EAST PALO ALTO	Medium Density Residential	12-22 du/a	0.05	0.00	22	1	0	200	0
063-730-350 (8)	2477 PULGAS AVE, EAST PALO ALTO	Medium Density Residential	12-22 du/a	0.05	0.00	22	1	0	200	0
063-730-360 (8)	2477 PULGAS AVE, EAST PALO ALTO	Medium Density Residential	12-22 du/a	0.06	0.00	22	1	0	200	0
063-730-370 (8)	2477 PULGAS AVE, EAST PALO ALTO	Medium Density Residential	12-22 du/a	0.06	0.00	22	1	0	200	0
063-730-380 (8)	2477 PULGAS AVE, EAST PALO ALTO	Medium Density Residential	12-22 du/a	0.07	0.00	22	1	0	200	0
063-730-390 (8)	2477 PULGAS AVE, EAST PALO ALTO	Medium Density Residential	12-22 du/a	0.06	0.00	22	1	0	200	0
063-730-400 (8)	2477 PULGAS AVE, EAST PALO ALTO	Medium Density Residential	12-22 du/a	0.05	0.00	22	1	0	200	0
063-730-410 (8)	2477 PULGAS AVE, EAST PALO ALTO	Medium Density Residential	12-22 du/a	0.05	0.00	22	1	0	200	0
063-730-420 (8)	2477 PULGAS AVE, EAST PALO ALTO	Medium Density Residential	12-22 du/a	0.05	0.00	22	1	0	200	0
063-730-430 (8)	2477 PULGAS AVE, EAST PALO ALTO	Medium Density Residential	12-22 du/a	0.05	0.00	22	1	0	200	0
063-730-440 (8)	2477 PULGAS AVE, EAST PALO ALTO	Medium Density Residential	12-22 du/a	0.05	0.00	22	1	0	200	0
063-730-450 (8)	2477 PULGAS AVE, EAST PALO ALTO	Medium Density Residential	12-22 du/a	0.06	0.00	22	1	0	200	0
063-730-460 (8)	2477 PULGAS AVE, EAST PALO ALTO	Medium Density Residential	12-22 du/a	0.06	0.00	22	1	0	200	0
063-730-470 (8)	2477 PULGAS AVE, EAST PALO ALTO	Medium Density Residential	12-22 du/a	0.07	0.00	22	1	0	200	0
063-730-480 (8)	2477 PULGAS AVE, EAST PALO ALTO	Medium Density Residential	12-22 du/a	0.06	0.00	22	1	0	200	0
063-730-490 (8)	2477 PULGAS AVE, EAST PALO ALTO	Medium Density Residential	12-22 du/a	0.05	0.00	22	1	0	200	0
063-730-500 (8)	2477 PULGAS AVE, EAST PALO ALTO	Medium Density Residential	12-22 du/a	0.05	0.00	22	1	0	200	0
063-730-510 (8)	2477 PULGAS AVE, EAST PALO ALTO	Medium Density Residential	12-22 du/a	0.05	0.00	22	1	0	200	0
113-530-010 to 113-530-999	2420 GLORIA WAY, EAST PALO ALTO	High Density Residential	22-43 du/a	0.47	0.00	43	10	0	2,036	0
113-710-010 to 113-710-999	2440 GLORIA WAY, EAST PALO ALTO	High Density Residential	22-43 du/a	0.25	0.00	43	5	0	1,064	0
113-720-010 to 113-720-999	2460 GLORIA WAY, EAST PALO ALTO	High Density Residential	22-43 du/a	0.21	0.00	43	4	0	895	0
113-740-010 to 113-740-999	2470 GLORIA WAY, EAST PALO ALTO	High Density Residential	22-43 du/a	0.33	0.00	43	7	0	1,402	0
114-240-010 to 114-240-300	2330 UNIVERSITY AVE, EAST PALO ALTO	Mixed Use Corridor	65 du/a; 1.75 FAR	0.46	1.75	65	15	17,593	3,000	1,759
114-450-010 to 114-460-300	1765 EAST BAYSHORE RD, EAST PALO ALTO	Mixed Use Corridor	65 du/a; 1.75 FAR	1.04	1.75	65	34	39,597	6,753	3,960
114-590-050	NO DATA, EAST PALO ALTO	Office	3.0 FAR	3.61	3	0	0	235,877	0	23,588

Notes:
(1) Properties with Zoning change per Figure 4-12: General Plan Land Use and Figure 4-16: Ravenswood / 4 Corners TOP Specific Plan Land Use City of East Palo Alto General Plan "Existing Conditions Report, February 2014" and Figure 4-2: General Plan Land Use Designations City of East Palo Alto General Plan "Vista 2035, Final Version: March 2017"
(2) du/a and FAR based on Section 4 Table 4-2 of City of East Palo Alto General Plan "Vista 2035, Final Version: March 2017"
(3) Square footage of parcel divided 43,560 feet (1 Acre Equivalent).
(4) Average Dwelling units per number of acres in parcel is calculated to be 50% of the maximum number of units allowed in the General Plan.
(5) Calculated by multiplying 50% of the maximum FAR for the land use allowed by the General Plan and square feet of parcel.
(6) 2025 Master Plan update ADWF Residential Dwellings, calculated by multiplying 200 gallons per dwelling unit per day by the total number of untis.
(7) ADWF Non-Residential , calculated by multiplying 0.1 gallons per day per square foot. Based on Section B1.03.3 for Office and Retail of the East Palo Alto Sanitary District Standard Specifications for Design and Construction of Sanitray Collection and Conveyance Facilities dated June 6, 2002. Units converted from GPD (Gallons Per Day) to CFS assuming flows are discharged over 24 hours in a day.
(8) Number of units planned are approved development projects by the City. Average Daily Flow, Residential is calculated using the known unit count.

Abbreviations
ADWF: Average Dry Weather Flow
APN: Assessors Parcel Number
CFS: Cubic Feet per Second

Appendix C: Table 4
Scenario 2: 2025 Additional Sanitary Sewer Flows

APN (1)	Address (1)	Sanitary Sewer Sub-Basins	Peaking Factor (2)	Delta Residential Average Daily Flow, GPD (3)	Delta Non-Residential Average Daily Flow, GPD (4)	Residential ADWF, CFS (5)	Non-Residential ADWF, CFS (6)	Residential PDWF, CFS (7)	Non-Residential PDWF, CFS (8)	Total ADWF, CFS	Total PDWF, CFS
063-232-210 (9)	WEEKS ST, EAST PALO ALTO	T20	1.5	11,564	0	0.0178	0.0000	0.0267	0.0000	0.0178	0.0267
063-232-220 (9)	WEEKS ST, EAST PALO ALTO	T20	1.5	6,560	0	0.0101	0.0000	0.0152	0.0000	0.0101	0.0152
063-232-230 (9)	WEEKS ST, EAST PALO ALTO	T20	1.5	9,065	0	0.0140	0.0000	0.0209	0.0000	0.0140	0.0209
063-240-320 (9)	1950 BAY RD, EAST PALO ALTO	T20	1.5	9,799	5,746	0.0151	0.0088	0.0226	0.0133	0.0239	0.0359
063-240-330 (9)	1950 BAY RD, EAST PALO ALTO	T20	1.5	2,895	1,698	0.0045	0.0026	0.0067	0.0039	0.0071	0.0106
063-730-190 (9)	2477 PULGAS AVE	T20	1.5	114	0	0.0002	0.0000	0.0003	0.0000	0.0002	0.0003
063-730-200 (9)	2477 PULGAS AVE	T20	1.5	200	0	0.0003	0.0000	0.0005	0.0000	0.0003	0.0005
063-730-220 (9)	2477 PULGAS AVE	T20	1.5	200	341	0.0003	0.0005	0.0005	0.0008	0.0008	0.0012
063-730-230 (9)	2477 PULGAS AVE	T20	1.5	200	0	0.0003	0.0000	0.0005	0.0000	0.0003	0.0005
063-730-130 (9)	2477 PULGAS AVE	T20	1.5	200	0	0.0003	0.0000	0.0005	0.0000	0.0003	0.0005
063-730-090 (9)	2477 PULGAS AVE	T20	1.5	200	0	0.0003	0.0000	0.0005	0.0000	0.0003	0.0005
063-730-140 (9)	2477 PULGAS AVE	T20	1.5	200	0	0.0003	0.0000	0.0005	0.0000	0.0003	0.0005
063-730-180 (9)	2477 PULGAS AVE	T20	1.5	200	0	0.0003	0.0000	0.0005	0.0000	0.0003	0.0005
063-730-100 (9)	2477 PULGAS AVE	T20	1.5	200	0	0.0003	0.0000	0.0005	0.0000	0.0003	0.0005
063-730-110 (9)	2477 PULGAS AVE	T20	1.5	200	0	0.0003	0.0000	0.0005	0.0000	0.0003	0.0005
063-730-010 (9)	2477 PULGAS AVE	T20	1.5	200	0	0.0003	0.0000	0.0005	0.0000	0.0003	0.0005
063-730-020 (9)	2477 PULGAS AVE	T20	1.5	200	0	0.0003	0.0000	0.0005	0.0000	0.0003	0.0005
063-730-040 (9)	2477 PULGAS AVE	T20	1.5	200	0	0.0003	0.0000	0.0005	0.0000	0.0003	0.0005
063-730-050 (9)	2477 PULGAS AVE	T20	1.5	200	0	0.0003	0.0000	0.0005	0.0000	0.0003	0.0005
063-730-060 (9)	2477 PULGAS AVE	T20	1.5	200	0	0.0003	0.0000	0.0005	0.0000	0.0003	0.0005
063-730-240 (9)	2477 PULGAS AVE	T20	1.5	200	0	0.0003	0.0000	0.0005	0.0000	0.0003	0.0005
063-730-250 (9)	2477 PULGAS AVE	T20	1.5	200	0	0.0003	0.0000	0.0005	0.0000	0.0003	0.0005
063-730-290 (9)	2477 PULGAS AVE	T20	1.5	200	0	0.0003	0.0000	0.0005	0.0000	0.0003	0.0005
063-730-300 (9)	2477 PULGAS AVE	T20	1.5	200	0	0.0003	0.0000	0.0005	0.0000	0.0003	0.0005
063-730-320 (9)	2477 PULGAS AVE	T20	1.5	200	0	0.0003	0.0000	0.0005	0.0000	0.0003	0.0005
063-730-330 (9)	2477 PULGAS AVE	T20	1.5	200	0	0.0003	0.0000	0.0005	0.0000	0.0003	0.0005
063-730-340 (9)	2477 PULGAS AVE	T20	1.5	200	0	0.0003	0.0000	0.0005	0.0000	0.0003	0.0005
063-730-350 (9)	2477 PULGAS AVE	T20	1.5	200	0	0.0003	0.0000	0.0005	0.0000	0.0003	0.0005
063-730-360 (9)	2477 PULGAS AVE	T20	1.5	200	0	0.0003	0.0000	0.0005	0.0000	0.0003	0.0005
063-730-370 (9)	2477 PULGAS AVE	T20	1.5	200	0	0.0003	0.0000	0.0005	0.0000	0.0003	0.0005
063-730-420 (9)	2477 PULGAS AVE	T20	1.5	200	0	0.0003	0.0000	0.0005	0.0000	0.0003	0.0005
063-730-430 (9)	2477 PULGAS AVE	T20	1.5	200	0	0.0003	0.0000	0.0005	0.0000	0.0003	0.0005
063-730-440 (9)	2477 PULGAS AVE	T20	1.5	200	0	0.0003	0.0000	0.0005	0.0000	0.0003	0.0005
063-730-450 (9)	2477 PULGAS AVE	T20	1.5	200	0	0.0003	0.0000	0.0005	0.0000	0.0003	0.0005
063-730-480 (9)	2477 PULGAS AVE	T20	1.5	200	0	0.0003	0.0000	0.0005	0.0000	0.0003	0.0005
063-730-490 (9)	2477 PULGAS AVE	T20	1.5	200	0	0.0003	0.0000	0.0005	0.0000	0.0003	0.0005
063-730-500 (9)	2477 PULGAS AVE	T20	1.5	200	0	0.0003	0.0000	0.0005	0.0000	0.0003	0.0005
063-730-510 (9)	2477 PULGAS AVE	T20	1.5	200	0	0.0003	0.0000	0.0005	0.0000	0.0003	0.0005
063-730-470 (9)	2477 PULGAS AVE	T20	1.5	200	0	0.0003	0.0000	0.0005	0.0000	0.0003	0.0005
063-730-460 (9)	2477 PULGAS AVE	T20	1.5	200	0	0.0003	0.0000	0.0005	0.0000	0.0003	0.0005
063-730-380 (9)	2477 PULGAS AVE	T20	1.5	200	0	0.0003	0.0000	0.0005	0.0000	0.0003	0.0005
063-730-390 (9)	2477 PULGAS AVE	T20	1.5	200	0	0.0003	0.0000	0.0005	0.0000	0.0003	0.0005
063-730-400 (9)	2477 PULGAS AVE	T20	1.5	200	0	0.0003	0.0000	0.0005	0.0000	0.0003	0.0005
063-730-410 (9)	2477 PULGAS AVE	T20	1.5	200	0	0.0003	0.0000	0.0005	0.0000	0.0003	0.0005
063-730-260 (9)	2477 PULGAS AVE	T20	1.5	200	0	0.0003	0.0000	0.0005	0.0000	0.0003	0.0005
063-730-270 (9)	2477 PULGAS AVE	T20	1.5	200	0	0.0003	0.0000	0.0005	0.0000	0.0003	0.0005
063-730-280 (9)	2477 PULGAS AVE	T20	1.5	200	0	0.0003	0.0000	0.0005	0.0000	0.0003	0.0005
063-730-210 (9)	2477 PULGAS AVE	T20	1.5	200	0	0.0003	0.0000	0.0005	0.0000	0.0003	0.0005
063-730-080 (9)	2477 PULGAS AVE	T20	1.5	200	0	0.0003	0.0000	0.0005	0.0000	0.0003	0.0005
063-730-070 (9)	2477 PULGAS AVE	T20	1.5	200	0	0.0003	0.0000	0.0005	0.0000	0.0003	0.0005
063-730-030 (9)	2477 PULGAS AVE	T20	1.5	200	0	0.0003	0.0000	0.0005	0.0000	0.0003	0.0005
063-730-120 (9)	2477 PULGAS AVE	T20	1.5	200	0	0.0003	0.0000	0.0005	0.0000	0.0003	0.0005
063-730-170 (9)	2477 PULGAS AVE	T20	1.5	200	0	0.0003	0.0000	0.0005	0.0000	0.0003	0.0005
063-730-160 (9)	2477 PULGAS AVE	T20	1.5	200	0	0.0003	0.0000	0.0005	0.0000	0.0003	0.0005
063-730-150 (9)	2477 PULGAS AVE	T20	1.5	200	0	0.0003	0.0000	0.0005	0.0000	0.0003	0.0005
063-730-310 (9)	2477 PULGAS AVE	T20	1.5	200	0	0.0003	0.0000	0.0005	0.0000	0.0003	0.0005
063-492-350 (9)	1805 E BAYSHORE RD #1-94, EAST PALO ALTO	K4	1.59	18,200	0	0.0280	0.0000	0.0446	0.0000	0.0280	0.0446
063-321-420 (9)	, NO DATA	E2	1.46	0	10,740	0.0000	0.0165	0.0000	0.0241	0.0165	0.0241
063-322-410 (9)	, NO DATA	E2	1.47	0	1,159	0.0000	0.0018	0.0000	0.0026	0.0018	0.0026
063-322-560 (9)	DONOHOE ST, EAST PALO ALTO	E2	1.47	0	4,692	0.0000	0.0072	0.0000	0.0106	0.0072	0.0106

Notes are on Page 2 of 2.

Appendix C: Table 4
Scenario 2: 2025 Additional Sanitary Sewer Flows

Notes:

(1) Properties with Zoning change per Figure 4-12: General Plan Land Use and Figure 4-16: Ravenswood / 4 Corners TOP Specific Plan Land Use City of East Palo Alto General Plan "Existing Conditions Report, February 2014" and Figure 4-2: General Plan Land Use Designations City of East Palo Alto General Plan "Vista 2035, Final Version: March 2017"

(2) Per Section 5.3.2 of the "East Palo Alto Sanitary District Master Plan Update, March 2015". For modeling scenarios, peak sanitary flows based on the collected data. Collected data for Peaking Factors for each sub-basin are shown in Table 3.2.

(3) Delta Residential Flows is calculated by taking the Average Daily Flow for Residential areas from Table 3 minus the Average Daily Flow for Residential area from Table 2. If calculation resulted in a decrease of flow, the flow change is shown as "0" because it is not anticipated that the land use changes will result in flow reductions.

(4) Delta Non-Residential Flows is calculated by taking the Average Faily Flow for Non-Residential areas from Table 3 minus the Average Daily Flow for Non-Residential areas from Table 2.

(5) ADWF Residential Dwellings, calculated by multiplying 200 gallons per dwelling unit per day by the total number of units. Based on internal F&L meeting, 2/13/2025. Units converted from GPD (Gallons Per Day) to CFS based off 24 hours in a day, 60 minutes in a hour, and 60 seconds in a minute.

(6) ADWF Non-Residential , calculated by multiplying 0.1 gallons per day per square foot. Based on Section B1.03.3 for Office and Retail of the East Palo Alto Sanitary District Standard Specifications forDesign and Construction of Sanitray Collection and Conveyance Facilities dated June 6, 2002. Units converted from GPD (Gallons Per Day) to CFS. Based off 24 hours in a day, 60 minutes in an hour, and 60 seconds in a minute.

(7) PDWF Residential Dwellings, calculated by multiplying Average Dry Weather Flows (5) by the Peaking Factor (2). Units converted from GPD to CFS. Based off 24 hours a day, 60 minutes in a hour, and 60 seconds in a minute.

(8) PDWF Non-Residential, calculated by multiplying Average Dry Weather Flows (6) by the Peaking Factor (2). Units converted from GPD to CFS. Based off 24 hours a day, 60 minutes in a hour, and 60seconds in a minute.

(9) Number of units planned are approved development projects by the City. Average Daily Flow, Residential is calculated using the known unit count.

Abbreviations

ADWF: Average Dry Weather Flow
APN: Assessors Parcel Number
CFS: Cubic Feet per Second
MGD: Million Gallons Per Day
PDWF: Peak Dry Weather Flow

Appendix C: Table 5
Scenario 2: 2035 Proposed Additional Sanitary Sewer Flows

APN (1)		Address (1)	Sanitary Sewer Sub-Basins	Peaking Factor (2)	Delta Residential Average Daily Flow, GPD (3)	Delta Non-Residential Average Daily Flow, GPD (4)	Residential ADWF, CFS (5)	Non-Residential ADWF, CFS (6)	Residential PDWF, CFS (7)	Non-Residential PDWF, CFS (8)	Total ADWF, CFS	Total PDWF, CFS
063-103-310		1585 BAY RD, EAST PALO ALTO	A15	0.00	43,861	6,902	0.0675	0.0106	0.0000	0.0000	0.0782	0.0000
063-103-360		, EAST PALO ALTO	A15	0.00	69,968	11,051	0.1078	0.0170	0.0000	0.0000	0.1248	0.0000
063-103-370		, EAST PALO ALTO	A15	0.00	41,599	6,569	0.0641	0.0101	0.0000	0.0000	0.0742	0.0000
063-103-380		, EAST PALO ALTO	A15	0.00	8,276	1,307	0.0127	0.0020	0.0000	0.0000	0.0148	0.0000
063-103-390		, EAST PALO ALTO	A15	0.00	12,251	1,935	0.0189	0.0030	0.0000	0.0000	0.0218	0.0000
063-103-440		2400 GLORIA WAY, EAST PALO ALTO	A15	0.00	0	8,578	0.0000	0.0132	0.0000	0.0000	0.0132	0.0000
063-111-230		BETWEEN 1585 AND 1675 BAY RD, EAST PALO A	A15	0.00	12,513	1,976	0.0193	0.0030	0.0000	0.0000	0.0223	0.0000
063-111-250		1675 BAY RD, EAST PALO ALTO	A15	0.00	328,119	51,823	0.5053	0.0798	0.0000	0.0000	0.5851	0.0000
063-121-030		, EAST PALO ALTO	T20	0.00	16,945	0	0.0261	0.0000	0.0000	0.0000	0.0261	0.0000
063-121-040		, EAST PALO ALTO	T20	0.00	122,905	0	0.1893	0.0000	0.0000	0.0000	0.1893	0.0000
063-121-050		TARA RD, EAST PALO ALTO	T20	0.00	11,500	0	0.0177	0.0000	0.0000	0.0000	0.0177	0.0000
063-121-060		264 TARA RD, EAST PALO ALTO	T20	0.00	78,081	0	0.1202	0.0000	0.0000	0.0000	0.1202	0.0000
063-121-070		2081 BAY RD, EAST PALO ALTO	T20	0.00	340,421	0	0.5242	0.0000	0.0000	0.0000	0.5242	0.0000
063-121-110		2077 BAY RD, EAST PALO ALTO	T20	0.00	84,289	0	0.1298	0.0000	0.0000	0.0000	0.1298	0.0000
063-121-120		2005 BAY RD, EAST PALO ALTO	T20	0.00	167,924	0	0.2586	0.0000	0.0000	0.0000	0.2586	0.0000
063-121-150		, EAST PALO ALTO	T20	0.00	19,733	0	0.0304	0.0000	0.0000	0.0000	0.0304	0.0000
063-121-160		180 TARA ROAD, EAST PALO ALTO	T20	0.00	76,513	0	0.1178	0.0000	0.0000	0.0000	0.1178	0.0000
063-121-170		240 TARA ROAD, EAST PALO ALTO	T20	0.00	84,615	0	0.1303	0.0000	0.0000	0.0000	0.1303	0.0000
063-121-190		2560 PULGAS AVE, EAST PALO ALTO	T20	0.00	19,906	0	0.0307	0.0000	0.0000	0.0000	0.0307	0.0000
063-121-200		2555 PULGAS AVE, EAST PALO ALTO	T20	0.00	59,721	0	0.0920	0.0000	0.0000	0.0000	0.0920	0.0000
063-121-210		2555 PULGAS AVE, EAST PALO ALTO	T20	0.00	59,785	0	0.0921	0.0000	0.0000	0.0000	0.0921	0.0000
063-121-240		, EAST PALO ALTO	A15	0.00	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
063-121-290		218 DEMETER ST, EAST PALO ALTO	A15	0.00	31,665	0	0.0488	0.0000	0.0000	0.0000	0.0488	0.0000
063-121-320		350 DEMETER ST, EAST PALO ALTO	A15	0.00	130,483	0	0.2009	0.0000	0.0000	0.0000	0.2009	0.0000
063-121-330		, EAST PALO ALTO	A15	0.00	130,027	0	0.2002	0.0000	0.0000	0.0000	0.2002	0.0000
063-121-350		, EAST PALO ALTO	T20	0.00	42,928	0	0.0661	0.0000	0.0000	0.0000	0.0661	0.0000
063-121-360		, EAST PALO ALTO	T20	0.00	2,875	0	0.0044	0.0000	0.0000	0.0000	0.0044	0.0000
063-121-370		2535 PULGAS AVE, EAST PALO ALTO	T20	0.00	85,050	0	0.1310	0.0000	0.0000	0.0000	0.1310	0.0000
063-121-390		, EAST PALO ALTO	T20	0.00	41,164	0	0.0634	0.0000	0.0000	0.0000	0.0634	0.0000
063-121-400		2091 BAY RD, EAST PALO ALTO	T20	0.00	54,547	0	0.0840	0.0000	0.0000	0.0000	0.0840	0.0000
063-121-410		2091 BAY RD, EAST PALO ALTO	T20	0.00	65,340	0	0.1006	0.0000	0.0000	0.0000	0.1006	0.0000
063-121-490		, EAST PALO ALTO	T20	0.00	128,720	0	0.1982	0.0000	0.0000	0.0000	0.1982	0.0000
063-121-500		, EAST PALO ALTO	T20	0.00	165,309	0	0.2546	0.0000	0.0000	0.0000	0.2546	0.0000
063-121-510		, EAST PALO ALTO	T20	0.00	47,044	0	0.0724	0.0000	0.0000	0.0000	0.0724	0.0000
063-122-040		1990 BAY RD, EAST PALO ALTO	T20	0.00	307,726	0	0.4739	0.0000	0.0000	0.0000	0.4739	0.0000
063-123-010		351 DEMETER ST, EAST PALO ALTO	T20	0.00	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
063-123-030		225 DEMETER ST, EAST PALO ALTO	T20	0.00	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
063-123-060		325 DEMETER ST, EAST PALO ALTO	T20	0.00	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
063-123-070		245 DEMETER ST, EAST PALO ALTO	T20	0.00	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
063-123-080		, EAST PALO ALTO	T20	0.00	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
063-131-220	(9)	2519 PULGAS AVE, EAST PALO ALTO	T20	0.00	109,030	0	0.1679	0.0000	0.0000	0.0000	0.1679	0.0000
063-131-230		, EAST PALO ALTO	T20	0.00	0	1,541	0.0000	0.0024	0.0000	0.0000	0.0024	0.0000
063-131-240		1885 BAY RD, EAST PALO ALTO	T20	0.00	0	1,494	0.0000	0.0023	0.0000	0.0000	0.0023	0.0000
063-131-250		1861 BAY RD, EAST PALO ALTO	T20	0.00	0	2,002	0.0000	0.0031	0.0000	0.0000	0.0031	0.0000
063-131-260		1879 BAY RD, EAST PALO ALTO	T20	0.00	0	3,717	0.0000	0.0057	0.0000	0.0000	0.0057	0.0000
063-131-270		1873 BAY RD, EAST PALO ALTO	T20	0.00	0	702	0.0000	0.0011	0.0000	0.0000	0.0011	0.0000
063-131-290		140 DEMETER ST, EAST PALO ALTO	A15	0.00	58,152	0	0.0896	0.0000	0.0000	0.0000	0.0896	0.0000
063-131-300		, EAST PALO ALTO	T20	0.00	0	662	0.0000	0.0010	0.0000	0.0000	0.0010	0.0000
063-131-310		1891 BAY RD, EAST PALO ALTO	T20	0.00	0	974	0.0000	0.0015	0.0000	0.0000	0.0015	0.0000
063-131-320		1847 BAY RD, EAST PALO ALTO	T20	0.00	0	1,449	0.0000	0.0022	0.0000	0.0000	0.0022	0.0000
063-131-330		1851 BAY RD, EAST PALO ALTO	T20	0.00	0	787	0.0000	0.0012	0.0000	0.0000	0.0012	0.0000
063-131-340		2509 PULGAS AVE, EAST PALO ALTO	T20	0.00	0	1,410	0.0000	0.0022	0.0000	0.0000	0.0022	0.0000
063-132-020		151 TARA RD, EAST PALO ALTO	T20	0.00	3,658	0	0.0056	0.0000	0.0000	0.0000	0.0056	0.0000
063-132-060		150 TARA RD, EAST PALO ALTO	T20	0.00	21,888	0	0.0337	0.0000	0.0000	0.0000	0.0337	0.0000
063-132-090		, EAST PALO ALTO	T20	0.00	2,026	0	0.0031	0.0000	0.0000	0.0000	0.0031	0.0000
063-132-110		1923 BAY RD, EAST PALO ALTO	T20	0.00	0	6,455	0.0000	0.0099	0.0000	0.0000	0.0099	0.0000
063-132-120		1907 BAY RD, EAST PALO ALTO	T20	0.00	0	1,039	0.0000	0.0016	0.0000	0.0000	0.0016	0.0000
063-132-130		1911 BAY RD, EAST PALO ALTO	T20	0.00	0	877	0.0000	0.0013	0.0000	0.0000	0.0013	0.0000
063-132-140		1905 BAY RD, EAST PALO ALTO	T20	0.00	0	2,762	0.0000	0.0043	0.0000	0.0000	0.0043	0.0000
063-132-150		2520 PULGAS AVE, EAST PALO ALTO	T20	0.00	0	6,194	0.0000	0.0095	0.0000	0.0000	0.0095	0.0000
063-132-170		, EAST PALO ALTO	T20	0.00	0	1,091	0.0000	0.0017	0.0000	0.0000	0.0017	0.0000
063-132-190		2532 PULGAS AVE, EAST PALO ALTO	T20	0.00	20,558	0	0.0317	0.0000	0.0000	0.0000	0.0317	0.0000
063-132-210		2524 PULGAS AVE, EAST PALO ALTO	T20	0.00	19,753	0	0.0304	0.0000	0.0000	0.0000	0.0304	0.0000
063-132-220		1987 BAY RD, EAST PALO ALTO	T20	0.00	80,434	0	0.1239	0.0000	0.0000	0.0000	0.1239	0.0000
063-133-070		195 DEMETER ST, EAST PALO ALTO	A15	0.00	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
063-133-080		175 DEMETER ST, EAST PALO ALTO	A15	0.00	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
063-133-090		75 DEMETER ST, EAST PALO ALTO	A15	0.00	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
063-133-100		215 DEMETER ST, EAST PALO ALTO	A15	0.00	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
063-133-110		, EAST PALO ALTO	A15	0.00	0	5,752	0.0000	0.0089	0.0000	0.0000	0.0089	0.0000
063-133-130		1805 BAY RD, EAST PALO ALTO	A15	0.00	0	6,974	0.0000	0.0107	0.0000	0.0000	0.0107	0.0000
063-151-170		2159 POPLAR AVE, EAST PALO ALTO	B13	0.00	2,927	294	0.0045	0.0005	0.0000	0.0000	0.0050	0.0000
063-151-200		1001 E BAYSHORE RD, EAST PALO ALTO	B13	0.00	1,772	178	0.0027	0.0003	0.0000	0.0000	0.0030	0.0000
063-152-230		1199 E BAYSHORE RD, EAST PALO ALTO	B13	0.00	5,604	565	0.0086	0.0009	0.0000	0.0000	0.0095	0.0000
063-153-010		1205 E BAYSHORE RD, EAST PALO ALTO	B13	0.00	2,648	267	0.0041	0.0004	0.0000	0.0000	0.0045	0.0000
063-153-250		2119 ADDISON AVE, EAST PALO ALTO	B13	0.00	2,572	260	0.0040	0.0004	0.0000	0.0000	0.0044	0.0000
063-154-200		2110 ADDISON AVE, EAST PALO ALTO	B13	0.00	3,330	335	0.0051	0.0005	0.0000	0.0000	0.0056	0.0000
063-154-260		2119 OAKWOOD DR, EAST PALO ALTO	B13	0.00	5,877	593	0.0091	0.0009	0.0000	0.0000	0.0100	0.0000
063-155-010		2106 OAKWOOD DR, EAST PALO ALTO	E1	0.00	3,746	377	0.0058	0.0006	0.0000	0.0000	0.0063	0.0000
063-155-180		2123 DUMBARTON AVE, EAST PALO ALTO	E1	0.00	2,453	247	0.0038	0.0004	0.0000	0.0000	0.0042	0.0000
063-155-190		2109 DUMBARTON AVE, EAST PALO ALTO	E1	0.00	3,741	377	0.0058	0.0006	0.0000	0.0000	0.0063	0.0000
063-181-010		2110 DUMBARTON AVE, EAST PALO ALTO	E1	0.00	4,704	474	0.0072	0.0007	0.0000	0.0000	0.0080	0.0000
063-181-220		2111 LINCOLN ST, EAST PALO ALTO	E1	0.00	2,659	268	0.0041	0.0004	0.0000	0.0000	0.0045	0.0000

Appendix C: Table 5
Scenario 2: 2035 Proposed Additional Sanitary Sewer Flows

APN (1)		Address (1)	Sanitary Sewer Sub-Basins	Peaking Factor (2)	Delta Residential Average Daily Flow, GPD (3)	Delta Non-Residential Average Daily Flow, GPD (4)	Residential ADWF, CFS (5)	Non-Residential ADWF, CFS (6)	Residential PDWF, CFS (7)	Non-Residential PDWF, CFS (8)	Total ADWF, CFS	Total PDWF, CFS
063-181-230		2097 LINCOLN ST, EAST PALO ALTO	E1	0.00	2,487	250	0.0038	0.0004	0.0000	0.0000	0.0042	0.0000
063-181-240		1385 E BAYSHORE RD, EAST PALO ALTO	E1	0.00	2,232	225	0.0034	0.0003	0.0000	0.0000	0.0038	0.0000
063-183-010		2088 LINCOLN ST, EAST PALO ALTO	E2	0.00	2,475	249	0.0038	0.0004	0.0000	0.0000	0.0042	0.0000
063-183-070		2045 GLEN WAY, EAST PALO ALTO	E2	0.00	3,893	392	0.0060	0.0006	0.0000	0.0000	0.0066	0.0000
063-183-080		1441 E BAYSHORE RD, EAST PALO ALTO	E2	0.00	5,171	521	0.0080	0.0008	0.0000	0.0000	0.0088	0.0000
063-183-090		, EAST PALO ALTO	E2	0.00	1,898	192	0.0029	0.0003	0.0000	0.0000	0.0032	0.0000
063-183-110		1401 E BAYSHORE RD 2, EAST PALO ALTO	E2	0.00	4,512	456	0.0069	0.0007	0.0000	0.0000	0.0076	0.0000
063-184-010		1475 E BAYSHORE RD, EAST PALO ALTO	E2	0.00	5,053	510	0.0078	0.0008	0.0000	0.0000	0.0086	0.0000
063-184-020		2056 GLEN WAY, EAST PALO ALTO	E2	0.00	4,526	457	0.0070	0.0007	0.0000	0.0000	0.0077	0.0000
063-184-030		2070 GLEN WAY, EAST PALO ALTO	E2	0.00	3,872	391	0.0060	0.0006	0.0000	0.0000	0.0066	0.0000
063-184-040		2080 GLEN WAY, EAST PALO ALTO	E2	0.00	4,205	425	0.0065	0.0007	0.0000	0.0000	0.0071	0.0000
063-201-080		566 SACRAMENTO ST, EAST PALO ALTO	H3	0.00	0	226	0.0000	0.0003	0.0000	0.0000	0.0003	0.0000
063-201-090		576 SACRAMENTO ST, EAST PALO ALTO	H3	0.00	8,208	1,399	0.0126	0.0022	0.0000	0.0000	0.0148	0.0000
063-201-220		2337 UNIVERSITY AVE, EAST PALO ALTO	H3	0.00	4,963	846	0.0076	0.0013	0.0000	0.0000	0.0089	0.0000
063-201-240		2343 UNIVERSITY AVE, EAST PALO ALTO	H3	0.00	5,291	901	0.0081	0.0014	0.0000	0.0000	0.0095	0.0000
063-201-250		RUNNYMEDE ST, EAST PALO ALTO	H3	0.00	13,215	2,253	0.0204	0.0035	0.0000	0.0000	0.0238	0.0000
063-201-260		RUNNYMEDE ST, EAST PALO ALTO	H3	0.00	4,294	732	0.0066	0.0011	0.0000	0.0000	0.0077	0.0000
063-201-270		578 SACRAMENTO ST, EAST PALO ALTO	H3	0.00	5,552	946	0.0085	0.0015	0.0000	0.0000	0.0100	0.0000
063-201-290	(9)	2331 UNIVERSITY AVE, EAST PALO ALTO	H3	0.00	17,156	2,925	0.0264	0.0045	0.0000	0.0000	0.0309	0.0000
063-202-080		556 WEEKS ST, EAST PALO ALTO	H3	0.00	0	209	0.0000	0.0003	0.0000	0.0000	0.0003	0.0000
063-202-090		564 WEEKS ST, EAST PALO ALTO	H3	0.00	0	207	0.0000	0.0003	0.0000	0.0000	0.0003	0.0000
063-202-100		566 WEEKS ST, EAST PALO ALTO	H3	0.00	0	202	0.0000	0.0003	0.0000	0.0000	0.0003	0.0000
063-202-160		561 SACRAMENTO ST, EAST PALO ALTO	H3	0.00	19,722	3,362	0.0304	0.0052	0.0000	0.0000	0.0355	0.0000
063-202-280		2361-2369 UNIVERSITY AVE 101-308, EAST PALO	H3	0.00	38,578	6,578	0.0594	0.0101	0.0000	0.0000	0.0695	0.0000
063-203-160		2387 UNIVERSITY AVE, EAST PALO ALTO	H3	0.00	5,966	941	0.0092	0.0014	0.0000	0.0000	0.0106	0.0000
063-203-170		2381 UNIVERSITY AVE, EAST PALO ALTO	H3	0.00	7,948	1,254	0.0122	0.0019	0.0000	0.0000	0.0142	0.0000
063-203-180		2373 UNIVERSITY AVE, EAST PALO ALTO	H3	0.00	9,746	1,538	0.0150	0.0024	0.0000	0.0000	0.0174	0.0000
063-203-200		593 WEEKS ST, EAST PALO ALTO	H3	0.00	11,542	1,822	0.0178	0.0028	0.0000	0.0000	0.0206	0.0000
063-203-210		585 WEEKS ST, EAST PALO ALTO	H3	0.00	7,994	1,262	0.0123	0.0019	0.0000	0.0000	0.0143	0.0000
063-203-220		579 WEEKS ST, EAST PALO ALTO	H3	0.00	0	176	0.0000	0.0003	0.0000	0.0000	0.0003	0.0000
063-203-230		563 WEEKS ST, EAST PALO ALTO	H3	0.00	0	529	0.0000	0.0008	0.0000	0.0000	0.0008	0.0000
063-203-240		549 WEEKS ST, EAST PALO ALTO	H3	0.00	0	177	0.0000	0.0003	0.0000	0.0000	0.0003	0.0000
063-203-250		541 WEEKS ST, EAST PALO ALTO	H3	0.00	0	173	0.0000	0.0003	0.0000	0.0000	0.0003	0.0000
063-203-260		533 WEEKS ST, EAST PALO ALTO	H3	0.00	0	169	0.0000	0.0003	0.0000	0.0000	0.0003	0.0000
063-203-270		, EAST PALO ALTO	H3	0.00	0	161	0.0000	0.0002	0.0000	0.0000	0.0002	0.0000
063-203-300		2395 UNIVERSITY AVE, EAST PALO ALTO	H3	0.00	9,634	1,518	0.0148	0.0023	0.0000	0.0000	0.0172	0.0000
063-203-310		2371 UNIVERSITY AVE, EAST PALO ALTO	H3	0.00	3,647	575	0.0056	0.0009	0.0000	0.0000	0.0065	0.0000
063-203-320		1586 BAY RD, EAST PALO ALTO	A15	0.00	9,637	1,521	0.0148	0.0023	0.0000	0.0000	0.0172	0.0000
063-203-330		1590 BAY RD, EAST PALO ALTO	A15	0.00	15,083	2,382	0.0232	0.0037	0.0000	0.0000	0.0269	0.0000
063-203-340		2387 UNIVERSITY AVE, EAST PALO ALTO	H3	0.00	10,835	1,710	0.0167	0.0026	0.0000	0.0000	0.0193	0.0000
063-203-350		1574 BAY RD, EAST PALO ALTO	A15	0.00	0	367	0.0000	0.0006	0.0000	0.0000	0.0006	0.0000
063-203-360		1546 BAY RD, EAST PALO ALTO	A15	0.00	0	336	0.0000	0.0005	0.0000	0.0000	0.0005	0.0000
063-203-370		1508 BAY RD, EAST PALO ALTO	H3	0.00	0	554	0.0000	0.0009	0.0000	0.0000	0.0009	0.0000
063-203-380		, NO DATA	A15	0.00	0	260	0.0000	0.0004	0.0000	0.0000	0.0004	0.0000
063-203-390		1518 BAY RD, EAST PALO ALTO	H3	0.00	0	723	0.0000	0.0011	0.0000	0.0000	0.0011	0.0000
063-203-400		1560 BAY RD, EAST PALO ALTO	A15	0.00	0	321	0.0000	0.0005	0.0000	0.0000	0.0005	0.0000
063-203-410		1568 BAY RD, EAST PALO ALTO	A15	0.00	0	339	0.0000	0.0005	0.0000	0.0000	0.0005	0.0000
063-203-430		1530 BAY RD, EAST PALO ALTO	A15	0.00	0	342	0.0000	0.0005	0.0000	0.0000	0.0005	0.0000
063-203-440		1554 BAY RD, EAST PALO ALTO	A15	0.00	0	296	0.0000	0.0005	0.0000	0.0000	0.0005	0.0000
063-203-450		1538 BAY RD, EAST PALO ALTO	A15	0.00	0	306	0.0000	0.0005	0.0000	0.0000	0.0005	0.0000
063-210-310		2346 UNIVERSITY AVE, EAST PALO ALTO	H3	0.00	7,834	1,335	0.0121	0.0021	0.0000	0.0000	0.0141	0.0000
063-210-340		2369 COOLEY AVE, EAST PALO ALTO	H3	0.00	0	511	0.0000	0.0008	0.0000	0.0000	0.0008	0.0000
063-210-350		2365 COOLEY AVE, EAST PALO ALTO	H3	0.00	0	530	0.0000	0.0008	0.0000	0.0000	0.0008	0.0000
063-210-360		2300 UNIVERSITY AVE, EAST PALO ALTO	H3	0.00	7,626	1,300	0.0117	0.0020	0.0000	0.0000	0.0137	0.0000
063-210-380		2354 UNIVERSITY AVE, EAST PALO ALTO	H3	0.00	6,547	1,116	0.0101	0.0017	0.0000	0.0000	0.0118	0.0000
063-210-410		2371 COOLEY AVE, EAST PALO ALTO	H3	0.00	4,227	720	0.0065	0.0011	0.0000	0.0000	0.0076	0.0000
063-210-450		2377 COOLEY AVE, EAST PALO ALTO	H3	0.00	3,256	554	0.0050	0.0009	0.0000	0.0000	0.0059	0.0000
063-210-460		2396 UNIVERSITY AVE, EAST PALO ALTO	H3	0.00	12,904	2,037	0.0199	0.0031	0.0000	0.0000	0.0230	0.0000
063-210-470		633 RUNNYMEDE ST, EAST PALO ALTO	H3	0.00	4,255	725	0.0066	0.0011	0.0000	0.0000	0.0077	0.0000
063-210-480		2361 COOLEY AVE, EAST PALO ALTO	H3	0.00	0	680	0.0000	0.0010	0.0000	0.0000	0.0010	0.0000
063-210-490		2355 COOLEY AVE, EAST PALO ALTO	H3	0.00	0	713	0.0000	0.0011	0.0000	0.0000	0.0011	0.0000
063-210-520		2338 UNIVERSITY AVE, EAST PALO ALTO	H3	0.00	8,248	1,406	0.0127	0.0022	0.0000	0.0000	0.0149	0.0000
063-210-610		661 RUNNYMEDE ST, EAST PALO ALTO	H3	0.00	8,830	1,505	0.0136	0.0023	0.0000	0.0000	0.0159	0.0000
063-210-630		2358 UNIVERSITY AVE, EAST PALO ALTO	H3	0.00	6,658	1,135	0.0103	0.0017	0.0000	0.0000	0.0120	0.0000
063-221-010		, EAST PALO ALTO	A15	0.00	13,667	2,159	0.0210	0.0033	0.0000	0.0000	0.0244	0.0000
063-221-020		1620 BAY RD, EAST PALO ALTO	A15	0.00	22,759	3,594	0.0350	0.0055	0.0000	0.0000	0.0406	0.0000
063-221-030		, EAST PALO ALTO	A15	0.00	6,805	1,074	0.0105	0.0017	0.0000	0.0000	0.0121	0.0000
063-221-040		1640 BAY RD, EAST PALO ALTO	A15	0.00	35,707	5,630	0.0550	0.0087	0.0000	0.0000	0.0637	0.0000
063-221-050		1650 BAY RD, EAST PALO ALTO	A15	0.00	9,959	1,569	0.0153	0.0024	0.0000	0.0000	0.0178	0.0000
063-221-060		1660 BAY RD, EAST PALO ALTO	A15	0.00	22,848	3,591	0.0352	0.0055	0.0000	0.0000	0.0407	0.0000
063-221-070		1670 BAY RD, EAST PALO ALTO	A15	0.00	21,219	3,337	0.0327	0.0051	0.0000	0.0000	0.0378	0.0000
063-221-100		1760 BAY RD, EAST PALO ALTO	A15	0.00	57,125	8,982	0.0880	0.0138	0.0000	0.0000	0.1018	0.0000
063-221-110		1796 BAY RD, EAST PALO ALTO	A15	0.00	56,083	8,857	0.0864	0.0136	0.0000	0.0000	0.1000	0.0000
063-221-140		2397 CLARKE AVE, EAST PALO ALTO	T20	0.00	6,692	1,053	0.0103	0.0016	0.0000	0.0000	0.0119	0.0000
063-221-150		2387 CLARKE AVE, EAST PALO ALTO	T20	0.00	7,291	1,147	0.0112	0.0018	0.0000	0.0000	0.0130	0.0000
063-221-160		2377 CLARKE AVE, EAST PALO ALTO	T20	0.00	7,999	1,259	0.0123	0.0019	0.0000	0.0000	0.0143	0.0000
063-221-170		2373 CLARKE AVE, EAST PALO ALTO	T20	0.00	7,240	1,142	0.0111	0.0018	0.0000	0.0000	0.0129	0.0000
063-221-180		2371 CLARKE AVE, EAST PALO ALTO	T20	0.00	0	576	0.0000	0.0009	0.0000	0.0000	0.0009	0.0000
063-221-190		2369 CLARKE AVE, EAST PALO ALTO	T20	0.00	0	633	0.0000	0.0010	0.0000	0.0000	0.0010	0.0000
063-221-200		891 WEEKS ST, EAST PALO ALTO	T20	0.00	0	1,234	0.0000	0.0019	0.0000	0.0000	0.0019	0.0000
063-221-210		871 WEEKS ST, EAST PALO ALTO	T20	0.00	0	561	0.0000	0.0009	0.0000	0.0000	0.0009	0.0000

Appendix C: Table 5
Scenario 2: 2035 Proposed Additional Sanitary Sewer Flows

APN (1)		Address (1)	Sanitary Sewer Sub-Basins	Peaking Factor (2)	Delta Residential Average Daily Flow, GPD (3)	Delta Non-Residential Average Daily Flow, GPD (4)	Residential ADWF, CFS (5)	Non-Residential ADWF, CFS (6)	Residential PDWF, CFS (7)	Non-Residential PDWF, CFS (8)	Total ADWF, CFS	Total PDWF, CFS
063-221-220		867 WEEKS ST, EAST PALO ALTO	T20	0.00	0	799	0.0000	0.0012	0.0000	0.0000	0.0012	0.0000
063-221-230		865 WEEKS ST, EAST PALO ALTO	T20	0.00	0	826	0.0000	0.0013	0.0000	0.0000	0.0013	0.0000
063-221-240		, NO DATA	T20	0.00	0	2,813	0.0000	0.0043	0.0000	0.0000	0.0043	0.0000
063-221-250		831 WEEKS ST, EAST PALO ALTO	T20	0.00	0	818	0.0000	0.0013	0.0000	0.0000	0.0013	0.0000
063-221-260		819 JAMIE LN, EAST PALO ALTO	T20	0.00	0	492	0.0000	0.0008	0.0000	0.0000	0.0008	0.0000
063-221-270		823 JAMIE LN, EAST PALO ALTO	T20	0.00	0	648	0.0000	0.0010	0.0000	0.0000	0.0010	0.0000
063-221-280		827 JAMIE LN, EAST PALO ALTO	T20	0.00	0	835	0.0000	0.0013	0.0000	0.0000	0.0013	0.0000
063-221-290		811 PAUL ROBESON CT, EAST PALO ALTO	T20	0.00	0	506	0.0000	0.0008	0.0000	0.0000	0.0008	0.0000
063-221-300		813 PAUL ROBESON CT, EAST PALO ALTO	T20	0.00	0	428	0.0000	0.0007	0.0000	0.0000	0.0007	0.0000
063-221-310		815 PAUL ROBESON CT, EAST PALO ALTO	T20	0.00	0	462	0.0000	0.0007	0.0000	0.0000	0.0007	0.0000
063-221-320		817 PAUL ROBESON CT, EAST PALO ALTO	T20	0.00	0	468	0.0000	0.0007	0.0000	0.0000	0.0007	0.0000
063-221-340		801 WEEKS ST, EAST PALO ALTO	T20	0.00	0	470	0.0000	0.0007	0.0000	0.0000	0.0007	0.0000
063-221-350		803 PAUL ROBESON CT, EAST PALO ALTO	T20	0.00	0	474	0.0000	0.0007	0.0000	0.0000	0.0007	0.0000
063-221-360		805 PAUL ROBESON CT, EAST PALO ALTO	T20	0.00	0	397	0.0000	0.0006	0.0000	0.0000	0.0006	0.0000
063-221-370		807 PAUL ROBESON CT, EAST PALO ALTO	T20	0.00	0	491	0.0000	0.0008	0.0000	0.0000	0.0008	0.0000
063-221-380		809 PAUL ROBESON CT, EAST PALO ALTO	T20	0.00	0	458	0.0000	0.0007	0.0000	0.0000	0.0007	0.0000
063-221-390		791 WEEKS ST, EAST PALO ALTO	T20	0.00	0	3,813	0.0000	0.0059	0.0000	0.0000	0.0059	0.0000
063-221-410		731 WEEKS ST, EAST PALO ALTO	T20	0.00	0	1,302	0.0000	0.0020	0.0000	0.0000	0.0020	0.0000
063-221-420		717 WEEKS ST, EAST PALO ALTO	T20	0.00	0	957	0.0000	0.0015	0.0000	0.0000	0.0015	0.0000
063-221-430		2360 COOLEY AVE, EAST PALO ALTO	H3	0.00	0	619	0.0000	0.0010	0.0000	0.0000	0.0010	0.0000
063-221-440		2362-2362 COOLEY AVE, EAST PALO ALTO	H3	0.00	0	583	0.0000	0.0009	0.0000	0.0000	0.0009	0.0000
063-221-450		2364 COOLEY AVE, EAST PALO ALTO	H3	0.00	0	681	0.0000	0.0010	0.0000	0.0000	0.0010	0.0000
063-221-460		2370 COOLEY AVE, EAST PALO ALTO	H3	0.00	36,440	5,720	0.0561	0.0088	0.0000	0.0000	0.0649	0.0000
063-221-480		2380 COOLEY AVE, EAST PALO ALTO	H3	0.00	22,962	3,614	0.0354	0.0056	0.0000	0.0000	0.0409	0.0000
063-221-490		, EAST PALO ALTO	A15	0.00	16,498	2,606	0.0254	0.0040	0.0000	0.0000	0.0294	0.0000
063-221-500		863 WEEKS ST, EAST PALO ALTO	T20	0.00	0	561	0.0000	0.0009	0.0000	0.0000	0.0009	0.0000
063-221-510		761 WEEKS ST, EAST PALO ALTO	T20	0.00	0	742	0.0000	0.0011	0.0000	0.0000	0.0011	0.0000
063-221-520		767 CAROLE CT, EAST PALO ALTO	T20	0.00	0	621	0.0000	0.0010	0.0000	0.0000	0.0010	0.0000
063-221-530		773 CAROLE CT, EAST PALO ALTO	T20	0.00	0	563	0.0000	0.0009	0.0000	0.0000	0.0009	0.0000
063-221-540		779 CAROLE CT, EAST PALO ALTO	T20	0.00	0	551	0.0000	0.0008	0.0000	0.0000	0.0008	0.0000
063-221-550		785 CAROLE CT, EAST PALO ALTO	T20	0.00	0	565	0.0000	0.0009	0.0000	0.0000	0.0009	0.0000
063-221-560		1794 BAY RD, EAST PALO ALTO	A15	0.00	11,434	1,805	0.0176	0.0028	0.0000	0.0000	0.0204	0.0000
063-221-570		, EAST PALO ALTO	H3	0.00	3,267	516	0.0050	0.0008	0.0000	0.0000	0.0058	0.0000
063-221-580		, EAST PALO ALTO	H3	0.00	1,416	224	0.0022	0.0003	0.0000	0.0000	0.0025	0.0000
063-221-590		1730 BAY RD, EAST PALO ALTO	A15	0.00	86,607	13,614	0.1334	0.0210	0.0000	0.0000	0.1543	0.0000
063-231-210		2495 PULGAS AVE, EAST PALO ALTO	T20	0.00	0	2,102	0.0000	0.0032	0.0000	0.0000	0.0032	0.0000
063-231-220		1800 BAY RD, EAST PALO ALTO	A15	0.00	0	1,129	0.0000	0.0017	0.0000	0.0000	0.0017	0.0000
063-231-230		1890 BAY RD, EAST PALO ALTO	T20	0.00	0	718	0.0000	0.0011	0.0000	0.0000	0.0011	0.0000
063-231-240		1804 BAY RD, EAST PALO ALTO	A15	0.00	0	4,509	0.0000	0.0069	0.0000	0.0000	0.0069	0.0000
063-231-250		1798 BAY RD, EAST PALO ALTO	A15	0.00	0	6,882	0.0000	0.0106	0.0000	0.0000	0.0106	0.0000
063-231-260		1836 BAY RD, EAST PALO ALTO	T20	0.00	0	7,149	0.0000	0.0110	0.0000	0.0000	0.0110	0.0000
063-231-270		1894 BAY RD, EAST PALO ALTO	T20	0.00	0	484	0.0000	0.0007	0.0000	0.0000	0.0007	0.0000
063-231-280		1896 BAY RD, EAST PALO ALTO	T20	0.00	0	484	0.0000	0.0007	0.0000	0.0000	0.0007	0.0000
063-231-300		, EAST PALO ALTO	T20	0.00	0	1,240	0.0000	0.0019	0.0000	0.0000	0.0019	0.0000
063-232-090		1003 WEEKS ST, EAST PALO ALTO	T20	0.00	0	2,488	0.0000	0.0038	0.0000	0.0000	0.0038	0.0000
063-232-150		2421 PULGAS AVE, EAST PALO ALTO	T20	0.00	0	3,299	0.0000	0.0051	0.0000	0.0000	0.0051	0.0000
063-232-160		2447 PULGAS AVE, EAST PALO ALTO	T20	0.00	0	1,387	0.0000	0.0021	0.0000	0.0000	0.0021	0.0000
063-232-200		2373 CLARKE AVE, EAST PALO ALTO	T20	0.00	13,339	2,106	0.0205	0.0032	0.0000	0.0000	0.0238	0.0000
063-232-210	(9)	WEEKS ST, EAST PALO ALTO	T20	0.00	0	11,564	0.0000	0.0178	0.0000	0.0000	0.0178	0.0000
063-232-220	(9)	WEEKS ST, EAST PALO ALTO	T20	0.00	0	6,560	0.0000	0.0101	0.0000	0.0000	0.0101	0.0000
063-232-230	(9)	WEEKS ST, EAST PALO ALTO	T20	0.00	0	9,065	0.0000	0.0140	0.0000	0.0000	0.0140	0.0000
063-232-240		1045 WEEKS ST, EAST PALO ALTO	T20	0.00	0	4,217	0.0000	0.0065	0.0000	0.0000	0.0065	0.0000
063-232-250		1085 WEEKS ST, EAST PALO ALTO	T20	0.00	0	461	0.0000	0.0007	0.0000	0.0000	0.0007	0.0000
063-232-260		1001 WEEKS ST, EAST PALO ALTO	T20	0.00	0	1,504	0.0000	0.0023	0.0000	0.0000	0.0023	0.0000
063-232-300		1095 WEEKS ST, EAST PALO ALTO	T20	0.00	0	890	0.0000	0.0014	0.0000	0.0000	0.0014	0.0000
063-232-310		2368 CLARKE AVE, EAST PALO ALTO	T20	0.00	8,711	1,375	0.0134	0.0021	0.0000	0.0000	0.0155	0.0000
063-232-340		2386 CLARKE AVE, EAST PALO ALTO	T20	0.00	9,746	1,538	0.0150	0.0024	0.0000	0.0000	0.0174	0.0000
063-232-350		901 WEEKS ST, EAST PALO ALTO	T20	0.00	24,865	3,927	0.0383	0.0060	0.0000	0.0000	0.0443	0.0000
063-240-210		NO DATA, EAST PALO ALTO	T20	0.00	10,716	0	0.0165	0.0000	0.0000	0.0000	0.0165	0.0000
063-240-220		NO DATA, EAST PALO ALTO	T20	0.00	10,237	0	0.0158	0.0000	0.0000	0.0000	0.0158	0.0000
063-240-270		NO DATA, EAST PALO ALTO	T20	0.00	0	746	0.0000	0.0011	0.0000	0.0000	0.0011	0.0000
063-240-310		NO DATA, EAST PALO ALTO	T20	0.00	0	11,779	0.0000	0.0181	0.0000	0.0000	0.0181	0.0000
063-240-320		1950 BAY RD, EAST PALO ALTO	T20	0.00	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
063-240-330		BAY RD, EAST PALO ALTO	T20	0.00	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
063-240-350		NO DATA, EAST PALO ALTO	T20	0.00	1,416	0	0.0022	0.0000	0.0000	0.0000	0.0022	0.0000
063-240-360		NO DATA, EAST PALO ALTO	T20	0.00	0	676	0.0000	0.0010	0.0000	0.0000	0.0010	0.0000
063-240-370		NO DATA, EAST PALO ALTO	T20	0.00	0	766	0.0000	0.0012	0.0000	0.0000	0.0012	0.0000
063-240-380		NO DATA, EAST PALO ALTO	T20	0.00	0	5,853	0.0000	0.0090	0.0000	0.0000	0.0090	0.0000
063-240-390		NO DATA, EAST PALO ALTO	T20	0.00	0	3,986	0.0000	0.0061	0.0000	0.0000	0.0061	0.0000
063-240-420		NO DATA, EAST PALO ALTO	T20	0.00	183,315	0	0.2823	0.0000	0.0000	0.0000	0.2823	0.0000
063-240-440		NO DATA, EAST PALO ALTO	T20	0.00	1,590	0	0.0024	0.0000	0.0000	0.0000	0.0024	0.0000
063-240-460		NO DATA, EAST PALO ALTO	T20	0.00	0	7,694	0.0000	0.0118	0.0000	0.0000	0.0118	0.0000
063-253-320	(9)	NO DATA, EAST PALO ALTO	T20	0.00	0	2,068	0.0000	0.0032	0.0000	0.0000	0.0032	0.0000
063-271-070		1275 RUNNYMEDE ST, EAST PALO ALTO	T20	0.00	0	5,368	0.0000	0.0083	0.0000	0.0000	0.0083	0.0000
063-271-090	(9)	1201 RUNNYMEDE ST, EAST PALO ALTO	T20	0.00	0	4,006	0.0000	0.0062	0.0000	0.0000	0.0062	0.0000
063-271-370		1171 RUNNYMEDE ST, EAST PALO ALTO	T20	0.00	0	3,850	0.0000	0.0059	0.0000	0.0000	0.0059	0.0000
063-271-410		NO DATA, EAST PALO ALTO	T20	0.00	2,438	0	0.0038	0.0000	0.0000	0.0000	0.0038	0.0000
063-271-420		NO DATA, EAST PALO ALTO	T20	0.00	3,462	0	0.0053	0.0000	0.0000	0.0000	0.0053	0.0000
063-271-440		1191 RUNNYMEDE ST, EAST PALO ALTO	T20	0.00	0	635	0.0000	0.0010	0.0000	0.0000	0.0010	0.0000
063-271-450		1200 WEEKS ST, EAST PALO ALTO	T20	0.00	0	3,212	0.0000	0.0049	0.0000	0.0000	0.0049	0.0000
063-271-470		1249 RUNNYMEDE ST, EAST PALO ALTO	T20	0.00	0	941	0.0000	0.0014	0.0000	0.0000	0.0014	0.0000
063-271-480		, EAST PALO ALTO	T20	0.00	45,961	0	0.0708	0.0000	0.0000	0.0000	0.0708	0.0000

Appendix C: Table 5
Scenario 2: 2035 Proposed Additional Sanitary Sewer Flows

APN (1)		Address (1)	Sanitary Sewer Sub-Basins	Peaking Factor (2)	Delta Residential Average Daily Flow, GPD (3)	Delta Non-Residential Average Daily Flow, GPD (4)	Residential ADWF, CFS (5)	Non-Residential ADWF, CFS (6)	Residential PDWF, CFS (7)	Non-Residential PDWF, CFS (8)	Total ADWF, CFS	Total PDWF, CFS
063-271-490		NO DATA, EAST PALO ALTO	T20	0.00	59,285	0	0.0913	0.0000	0.0000	0.0000	0.0913	0.0000
063-271-500		1269 RUNNYMEDE ST, EAST PALO ALTO	T20	0.00	0	1,001	0.0000	0.0015	0.0000	0.0000	0.0015	0.0000
063-271-510		1265 RUNNYMEDE ST, EAST PALO ALTO	T20	0.00	0	644	0.0000	0.0010	0.0000	0.0000	0.0010	0.0000
063-271-520		1261 RUNNYMEDE ST, EAST PALO ALTO	T20	0.00	0	653	0.0000	0.0010	0.0000	0.0000	0.0010	0.0000
063-271-530		1257 RUNNYMEDE ST, EAST PALO ALTO	T20	0.00	0	653	0.0000	0.0010	0.0000	0.0000	0.0010	0.0000
063-271-540		NO DATA, EAST PALO ALTO	T20	0.00	6,054	0	0.0093	0.0000	0.0000	0.0000	0.0093	0.0000
063-271-550		NO DATA, EAST PALO ALTO	T20	0.00	2,482	0	0.0038	0.0000	0.0000	0.0000	0.0038	0.0000
063-271-560		NO DATA, EAST PALO ALTO	T20	0.00	2,482	0	0.0038	0.0000	0.0000	0.0000	0.0038	0.0000
063-271-570		NO DATA, EAST PALO ALTO	T29	0.00	2,504	0	0.0039	0.0000	0.0000	0.0000	0.0039	0.0000
063-281-020	(9)	2021 EUCLID AVE	E2	0.00	0	5,284	0.0000	0.0081	0.0000	0.0000	0.0081	0.0000
063-281-030	(9)	2025 EUCLID AVE	E2	0.00	0	4,304	0.0000	0.0066	0.0000	0.0000	0.0066	0.0000
063-281-040	(9)	2031 EUCLID AVE	E2	0.00	0	7,209	0.0000	0.0111	0.0000	0.0000	0.0111	0.0000
063-281-100	(9)	2043 EUCLID AVE	E2	0.00	0	4,304	0.0000	0.0066	0.0000	0.0000	0.0066	0.0000
063-281-110	(9)	2041 EUCLID AVE	E2	0.00	0	4,164	0.0000	0.0064	0.0000	0.0000	0.0064	0.0000
063-282-010	(9)	501 O'CONNOR STREET	E2	0.00	0	11,339	0.0000	0.0175	0.0000	0.0000	0.0175	0.0000
063-282-020	(9)	2012 EUCLID AVE	E2	0.00	0	11,864	0.0000	0.0183	0.0000	0.0000	0.0183	0.0000
063-282-030	(9)	2032 EUCLID AVE	E2	0.00	0	5,669	0.0000	0.0087	0.0000	0.0000	0.0087	0.0000
063-282-040	(9)	2036 EUCLID AVE	E2	0.00	0	5,389	0.0000	0.0083	0.0000	0.0000	0.0083	0.0000
063-282-050	(9)	2040/2042 EUCLID AVE	E2	0.00	0	4,899	0.0000	0.0075	0.0000	0.0000	0.0075	0.0000
063-282-060	(9)	2044 EUCLID AVE	E2	0.00	0	6,194	0.0000	0.0095	0.0000	0.0000	0.0095	0.0000
063-282-070	(9)	2054 EUCLID AVE	E2	0.00	0	8,434	0.0000	0.0130	0.0000	0.0000	0.0130	0.0000
063-282-080	(9)	2033 MANHATTAN AVE, EAST PALO ALTO	E2	0.00	0	17,842	0.0000	0.0275	0.0000	0.0000	0.0275	0.0000
063-282-090	(9)	2001 MANHATTAN AVE, EAST PALO ALTO	E2	0.00	0	24,198	0.0000	0.0373	0.0000	0.0000	0.0373	0.0000
063-291-010		1489 E BAYSHORE RD, EAST PALO ALTO	E2	0.00	9,782	987	0.0151	0.0015	0.0000	0.0000	0.0166	0.0000
063-292-180		2101 UNIVERSITY AVE, EAST PALO ALTO	E2	0.00	17,858	2,819	0.0275	0.0043	0.0000	0.0000	0.0318	0.0000
063-292-370	(9)	2117 UNIVERSITY AVE, EAST PALO ALTO	E2	0.00	41,772	6,593	0.0643	0.0102	0.0000	0.0000	0.0745	0.0000
063-292-380		2160 EUCLID AVE, EAST PALO ALTO	E1	0.00	217,234	85,973	0.3345	0.1324	0.0000	0.0000	0.4669	0.0000
063-302-170		2283 UNIVERSITY AVE, EAST PALO ALTO	E1	0.00	9,102	1,551	0.0140	0.0024	0.0000	0.0000	0.0164	0.0000
063-302-180		2281 UNIVERSITY AVE, EAST PALO ALTO	E1	0.00	7,996	1,363	0.0123	0.0021	0.0000	0.0000	0.0144	0.0000
063-302-210		2263 UNIVERSITY AVE, EAST PALO ALTO	E1	0.00	17,652	3,010	0.0272	0.0046	0.0000	0.0000	0.0318	0.0000
063-302-220		2253 UNIVERSITY AVE, EAST PALO ALTO	E1	0.00	7,982	1,360	0.0123	0.0021	0.0000	0.0000	0.0144	0.0000
063-302-230		2247 UNIVERSITY AVE, EAST PALO ALTO	E1	0.00	11,257	1,919	0.0173	0.0030	0.0000	0.0000	0.0203	0.0000
063-302-280		575A BELL ST, EAST PALO ALTO	E1	0.00	7,475	1,274	0.0115	0.0020	0.0000	0.0000	0.0135	0.0000
063-302-290		565 BELL ST, EAST PALO ALTO	E1	0.00	7,241	1,234	0.0112	0.0019	0.0000	0.0000	0.0131	0.0000
063-302-330		2201 UNIVERSITY AVE, EAST PALO ALTO	E1	0.00	53,811	9,176	0.0829	0.0141	0.0000	0.0000	0.0970	0.0000
063-302-340		584 RUNNYMEDE ST, EAST PALO ALTO	E1	0.00	14,887	2,538	0.0229	0.0039	0.0000	0.0000	0.0268	0.0000
063-302-460		2277 UNIVERSITY AVE, EAST PALO ALTO	E1	0.00	13,568	2,313	0.0209	0.0036	0.0000	0.0000	0.0245	0.0000
063-302-470		2279 UNIVERSITY AVE, EAST PALO ALTO	E1	0.00	8,787	1,498	0.0135	0.0023	0.0000	0.0000	0.0158	0.0000
063-312-400	(9)	, NO DATA	E1	0.00	22,555	0	0.0347	0.0000	0.0000	0.0000	0.0347	0.0000
063-321-050		2124 UNIVERSITY AVE, EAST PALO ALTO	E1	0.00	10,642	1,814	0.0164	0.0028	0.0000	0.0000	0.0192	0.0000
063-321-060		2126 UNIVERSITY AVE, EAST PALO ALTO	E1	0.00	8,711	1,485	0.0134	0.0023	0.0000	0.0000	0.0157	0.0000
063-321-070		, EAST PALO ALTO	E1	0.00	1,984	338	0.0031	0.0005	0.0000	0.0000	0.0036	0.0000
063-321-080		2142 UNIVERSITY AVE, EAST PALO ALTO	E1	0.00	7,127	1,215	0.0110	0.0019	0.0000	0.0000	0.0128	0.0000
063-321-100		2160 UNIVERSITY AVE, EAST PALO ALTO	E1	0.00	13,971	2,381	0.0215	0.0037	0.0000	0.0000	0.0252	0.0000
063-321-110		2164 UNIVERSITY AVE, EAST PALO ALTO	E1	0.00	6,771	1,154	0.0104	0.0018	0.0000	0.0000	0.0122	0.0000
063-321-120		2166 UNIVERSITY AVE, EAST PALO ALTO	E1	0.00	6,660	1,135	0.0103	0.0017	0.0000	0.0000	0.0120	0.0000
063-321-130		2172 UNIVERSITY AVE, EAST PALO ALTO	E1	0.00	6,659	1,135	0.0103	0.0017	0.0000	0.0000	0.0120	0.0000
063-321-140		2178 UNIVERSITY AVE, EAST PALO ALTO	E1	0.00	6,370	1,085	0.0098	0.0017	0.0000	0.0000	0.0115	0.0000
063-321-180		612 BELL ST, EAST PALO ALTO	E1	0.00	4,281	729	0.0066	0.0011	0.0000	0.0000	0.0077	0.0000
063-321-190		616 BELL ST, EAST PALO ALTO	E1	0.00	4,547	775	0.0070	0.0012	0.0000	0.0000	0.0082	0.0000
063-321-200		644 BELL ST, EAST PALO ALTO	E1	0.00	5,728	976	0.0088	0.0015	0.0000	0.0000	0.0103	0.0000
063-321-210		2189 CAPITOL AVE, EAST PALO ALTO	E1	0.00	5,401	920	0.0083	0.0014	0.0000	0.0000	0.0097	0.0000
063-321-220		2187 CAPITOL AVE, EAST PALO ALTO	E1	0.00	4,431	755	0.0068	0.0012	0.0000	0.0000	0.0080	0.0000
063-321-230		2181 CAPITOL AVE, EAST PALO ALTO	E1	0.00	6,625	1,129	0.0102	0.0017	0.0000	0.0000	0.0119	0.0000
063-321-240		2171 CAPITOL AVE, EAST PALO ALTO	E1	0.00	5,775	984	0.0089	0.0015	0.0000	0.0000	0.0104	0.0000
063-321-250		2165 CAPITOL AVE, EAST PALO ALTO	E1	0.00	5,589	952	0.0086	0.0015	0.0000	0.0000	0.0101	0.0000
063-321-260		2161 CAPITOL AVE, EAST PALO ALTO	E1	0.00	5,778	985	0.0089	0.0015	0.0000	0.0000	0.0104	0.0000
063-321-270		2157 CAPITOL AVE, EAST PALO ALTO	E1	0.00	5,849	997	0.0090	0.0015	0.0000	0.0000	0.0105	0.0000
063-321-280		2153 CAPITOL AVE, EAST PALO ALTO	E1	0.00	5,681	968	0.0087	0.0015	0.0000	0.0000	0.0102	0.0000
063-321-290		2149 CAPITOL AVE, EAST PALO ALTO	E1	0.00	5,920	1,009	0.0091	0.0016	0.0000	0.0000	0.0107	0.0000
063-321-300		2145 CAPITOL AVE, EAST PALO ALTO	E1	0.00	5,987	1,020	0.0092	0.0016	0.0000	0.0000	0.0108	0.0000
063-321-310		2141 CAPITOL AVE, EAST PALO ALTO	E1	0.00	5,900	1,005	0.0091	0.0015	0.0000	0.0000	0.0106	0.0000
063-321-320		2133 CAPITOL AVE, EAST PALO ALTO	E1	0.00	5,668	966	0.0087	0.0015	0.0000	0.0000	0.0102	0.0000
063-321-330		2129 CAPITOL AVE, EAST PALO ALTO	E1	0.00	4,006	682	0.0062	0.0011	0.0000	0.0000	0.0072	0.0000
063-321-400		2194 UNIVERSITY AVE, EAST PALO ALTO	E1	0.00	16,236	2,768	0.0250	0.0043	0.0000	0.0000	0.0293	0.0000
063-321-410		2148 UNIVERSITY AVE, EAST PALO ALTO	E1	0.00	9,619	1,640	0.0148	0.0025	0.0000	0.0000	0.0173	0.0000
063-321-420	(9)	, NO DATA	E1	0.00	107,404	0	0.1654	0.0000	0.0000	0.0000	0.1654	0.0000
063-322-040		2124 CAPITOL AVE, EAST PALO ALTO	E1	0.00	0	348	0.0000	0.0005	0.0000	0.0000	0.0005	0.0000
063-322-050		2132 CAPITOL AVE, EAST PALO ALTO	E1	0.00	0	378	0.0000	0.0006	0.0000	0.0000	0.0006	0.0000
063-322-060		2134 CAPITOL AVE, EAST PALO ALTO	E1	0.00	0	349	0.0000	0.0005	0.0000	0.0000	0.0005	0.0000
063-322-070		2138 CAPITOL AVE, EAST PALO ALTO	E1	0.00	0	348	0.0000	0.0005	0.0000	0.0000	0.0005	0.0000
063-322-080		2142 CAPITOL AVE, EAST PALO ALTO	E1	0.00	0	344	0.0000	0.0005	0.0000	0.0000	0.0005	0.0000
063-322-090		2144 CAPITOL AVE, EAST PALO ALTO	E1	0.00	0	362	0.0000	0.0006	0.0000	0.0000	0.0006	0.0000
063-322-100		2154 CAPITOL AVE, EAST PALO ALTO	E1	0.00	0	433	0.0000	0.0007	0.0000	0.0000	0.0007	0.0000
063-322-110		2162 CAPITOL AVE, EAST PALO ALTO	E1	0.00	0	476	0.0000	0.0007	0.0000	0.0000	0.0007	0.0000
063-322-130		2184 CAPITOL AVE, EAST PALO ALTO	E1	0.00	0	424	0.0000	0.0007	0.0000	0.0000	0.0007	0.0000
063-322-140		2194 CAPITOL AVE, EAST PALO ALTO	E1	0.00	0	537	0.0000	0.0008	0.0000	0.0000	0.0008	0.0000
063-322-150		2198 CAPITOL AVE, EAST PALO ALTO	E1	0.00	0	296	0.0000	0.0005	0.0000	0.0000	0.0005	0.0000
063-322-160		660 BELL ST, EAST PALO ALTO	E1	0.00	0	285	0.0000	0.0004	0.0000	0.0000	0.0004	0.0000
063-322-340		2169 COOLEY AVE, EAST PALO ALTO	E1	0.00	0	1,507	0.0000	0.0023	0.0000	0.0000	0.0023	0.0000
063-322-410	(9)	, NO DATA	E1	0.00	11,099	0	0.0171	0.0000	0.0000	0.0000	0.0171	0.0000
063-322-500		2159 COOLEY AVE, EAST PALO ALTO	E1	0.00	0	493	0.0000	0.0008	0.0000	0.0000	0.0008	0.0000

Appendix C: Table 5
Scenario 2: 2035 Proposed Additional Sanitary Sewer Flows

APN (1)		Address (1)	Sanitary Sewer Sub-Basins	Peaking Factor (2)	Delta Residential Average Daily Flow, GPD (3)	Delta Non-Residential Average Daily Flow, GPD (4)	Residential ADWF, CFS (5)	Non-Residential ADWF, CFS (6)	Residential PDWF, CFS (7)	Non-Residential PDWF, CFS (8)	Total ADWF, CFS	Total PDWF, CFS
063-322-560	(9)	DONOHOE ST, EAST PALO ALTO	E1	0.00	46,919	0	0.0723	0.0000	0.0000	0.0000	0.0723	0.0000
063-322-580		2118 CAPITOL AVE, EAST PALO ALTO	E1	0.00	0	359	0.0000	0.0006	0.0000	0.0000	0.0006	0.0000
063-331-030		2212 UNIVERSITY AVE, EAST PALO ALTO	E1	0.00	7,655	1,305	0.0118	0.0020	0.0000	0.0000	0.0138	0.0000
063-331-060		2242 UNIVERSITY AVE, EAST PALO ALTO	E1	0.00	6,117	1,042	0.0094	0.0016	0.0000	0.0000	0.0110	0.0000
063-331-070		2248 UNIVERSITY AVE, EAST PALO ALTO	E1	0.00	6,104	1,040	0.0094	0.0016	0.0000	0.0000	0.0110	0.0000
063-331-080		2252 UNIVERSITY AVE, EAST PALO ALTO	E1	0.00	6,091	1,038	0.0094	0.0016	0.0000	0.0000	0.0110	0.0000
063-331-090		2264 UNIVERSITY AVE, EAST PALO ALTO	E1	0.00	6,077	1,035	0.0094	0.0016	0.0000	0.0000	0.0110	0.0000
063-331-100		2268 UNIVERSITY AVE, EAST PALO ALTO	E1	0.00	6,064	1,033	0.0093	0.0016	0.0000	0.0000	0.0109	0.0000
063-331-110		2272 UNIVERSITY AVE, EAST PALO ALTO	E1	0.00	6,051	1,031	0.0093	0.0016	0.0000	0.0000	0.0109	0.0000
063-331-120		2274 UNIVERSITY AVE, EAST PALO ALTO	E1	0.00	8,186	1,395	0.0126	0.0021	0.0000	0.0000	0.0148	0.0000
063-331-130		2276 UNIVERSITY AVE, EAST PALO ALTO	E1	0.00	5,448	928	0.0084	0.0014	0.0000	0.0000	0.0098	0.0000
063-331-140		2280 UNIVERSITY AVE, EAST PALO ALTO	E1	0.00	5,442	927	0.0084	0.0014	0.0000	0.0000	0.0098	0.0000
063-331-150		2284 UNIVERSITY AVE, EAST PALO ALTO	E1	0.00	5,435	926	0.0084	0.0014	0.0000	0.0000	0.0098	0.0000
063-331-190		2291 CAPITOL AVE, EAST PALO ALTO	E1	0.00	5,554	946	0.0086	0.0015	0.0000	0.0000	0.0100	0.0000
063-331-200		2287 CAPITOL AVE, EAST PALO ALTO	E1	0.00	5,591	953	0.0086	0.0015	0.0000	0.0000	0.0101	0.0000
063-331-210		2285 CAPITOL AVE, EAST PALO ALTO	E1	0.00	5,628	959	0.0087	0.0015	0.0000	0.0000	0.0101	0.0000
063-331-220		2277 CAPITOL AVE, EAST PALO ALTO	E1	0.00	5,332	908	0.0082	0.0014	0.0000	0.0000	0.0096	0.0000
063-331-230		2267 CAPITOL AVE, EAST PALO ALTO	E1	0.00	5,119	872	0.0079	0.0013	0.0000	0.0000	0.0092	0.0000
063-331-240		2263 CAPITOL AVE, EAST PALO ALTO	E1	0.00	5,148	877	0.0079	0.0014	0.0000	0.0000	0.0093	0.0000
063-331-250		2255 CAPITOL AVE, EAST PALO ALTO	E1	0.00	5,178	882	0.0080	0.0014	0.0000	0.0000	0.0093	0.0000
063-331-260		2251 CAPITOL AVE, EAST PALO ALTO	E1	0.00	5,207	887	0.0080	0.0014	0.0000	0.0000	0.0094	0.0000
063-331-270		2249 CAPITOL AVE, EAST PALO ALTO	E1	0.00	5,237	892	0.0081	0.0014	0.0000	0.0000	0.0094	0.0000
063-331-280		2245 CAPITOL AVE, EAST PALO ALTO	E1	0.00	5,266	897	0.0081	0.0014	0.0000	0.0000	0.0095	0.0000
063-331-290		2239 CAPITOL AVE, EAST PALO ALTO	E1	0.00	6,725	1,146	0.0104	0.0018	0.0000	0.0000	0.0121	0.0000
063-331-300		2233 CAPITOL AVE, EAST PALO ALTO	E1	0.00	6,807	1,160	0.0105	0.0018	0.0000	0.0000	0.0123	0.0000
063-331-310		2227 CAPITOL AVE, EAST PALO ALTO	E1	0.00	5,529	942	0.0085	0.0015	0.0000	0.0000	0.0100	0.0000
063-331-320		2219 CAPITOL AVE, EAST PALO ALTO	E1	0.00	5,464	931	0.0084	0.0014	0.0000	0.0000	0.0098	0.0000
063-331-330		2217 CAPITOL AVE, EAST PALO ALTO	E1	0.00	4,463	760	0.0069	0.0012	0.0000	0.0000	0.0080	0.0000
063-331-340		2205 CAPITOL AVE, EAST PALO ALTO	E1	0.00	6,150	1,048	0.0095	0.0016	0.0000	0.0000	0.0111	0.0000
063-331-350		643 BELL ST, EAST PALO ALTO	E1	0.00	5,923	1,009	0.0091	0.0016	0.0000	0.0000	0.0107	0.0000
063-331-370		2200 UNIVERSITY AVE, EAST PALO ALTO	E1	0.00	15,311	2,610	0.0236	0.0040	0.0000	0.0000	0.0276	0.0000
063-331-380		2240 UNIVERSITY AVE, EAST PALO ALTO	E1	0.00	9,055	1,543	0.0139	0.0024	0.0000	0.0000	0.0163	0.0000
063-331-410		2220 UNIVERSITY AVE, EAST PALO ALTO	E1	0.00	16,705	2,843	0.0257	0.0044	0.0000	0.0000	0.0301	0.0000
063-442-360	(9)	330 DONOHOE ST, EAST PALO ALTO	E2	0.00	0	4,212	0.0000	0.0065	0.0000	0.0000	0.0065	0.0000
063-473-150	(9)	1995 MANHATTAN AVE, EAST PALO ALTO	E2	0.00	0	711	0.0000	0.0011	0.0000	0.0000	0.0011	0.0000
063-473-160	(9)	1991 MANHATTAN AVE, EAST PALO ALTO	E2	0.00	0	1,616	0.0000	0.0025	0.0000	0.0000	0.0025	0.0000
063-473-170	(9)	1965 MANHATTAN AVE, EAST PALO ALTO	E2	0.00	0	1,193	0.0000	0.0018	0.0000	0.0000	0.0018	0.0000
063-473-180	(9)	1955 MANHATTAN AVE, EAST PALO ALTO	E2	0.00	0	1,434	0.0000	0.0022	0.0000	0.0000	0.0022	0.0000
063-473-190	(9)	1919 MANHATTAN AVE, EAST PALO ALTO	E2	0.00	0	1,948	0.0000	0.0030	0.0000	0.0000	0.0030	0.0000
063-473-200	(9)	1901 MANHATTAN AVE, EAST PALO ALTO	E2	0.00	0	2,488	0.0000	0.0038	0.0000	0.0000	0.0038	0.0000
063-481-010		1699 WOODLAND AVE, EAST PALO ALTO	E2	0.00	0	366	0.0000	0.0006	0.0000	0.0000	0.0006	0.0000
063-481-020		1681 WOODLAND AVE, EAST PALO ALTO	I12	0.00	0	344	0.0000	0.0005	0.0000	0.0000	0.0005	0.0000
063-481-030		1671 WOODLAND AVE, EAST PALO ALTO	I12	0.00	0	359	0.0000	0.0006	0.0000	0.0000	0.0006	0.0000
063-481-040		1669 WOODLAND AVE, EAST PALO ALTO	I12	0.00	0	395	0.0000	0.0006	0.0000	0.0000	0.0006	0.0000
063-481-050		1651 WOODLAND AVE, EAST PALO ALTO	I12	0.00	0	530	0.0000	0.0008	0.0000	0.0000	0.0008	0.0000
063-481-060		1643 WOODLAND AVE, EAST PALO ALTO	I12	0.00	0	402	0.0000	0.0006	0.0000	0.0000	0.0006	0.0000
063-481-070		1637 WOODLAND AVE, EAST PALO ALTO	I12	0.00	0	422	0.0000	0.0007	0.0000	0.0000	0.0007	0.0000
063-481-080		1629 WOODLAND AVE, EAST PALO ALTO	I12	0.00	0	383	0.0000	0.0006	0.0000	0.0000	0.0006	0.0000
063-481-090		1621 WOODLAND AVE, EAST PALO ALTO	I12	0.00	0	362	0.0000	0.0006	0.0000	0.0000	0.0006	0.0000
063-481-100		644 SCOFIELD AVE, EAST PALO ALTO	I12	0.00	0	462	0.0000	0.0007	0.0000	0.0000	0.0007	0.0000
063-481-110		652 SCOFIELD AVE, EAST PALO ALTO	I12	0.00	0	321	0.0000	0.0005	0.0000	0.0000	0.0005	0.0000
063-481-120		660 SCOFIELD AVE, EAST PALO ALTO	I12	0.00	0	395	0.0000	0.0006	0.0000	0.0000	0.0006	0.0000
063-481-130		610 CIRCLE DR, EAST PALO ALTO	I12	0.00	0	395	0.0000	0.0006	0.0000	0.0000	0.0006	0.0000
063-481-140		620 CIRCLE DR, EAST PALO ALTO	I12	0.00	0	414	0.0000	0.0006	0.0000	0.0000	0.0006	0.0000
063-481-150		630 CIRCLE DR, EAST PALO ALTO	I12	0.00	0	386	0.0000	0.0006	0.0000	0.0000	0.0006	0.0000
063-481-160		640 CIRCLE DR, EAST PALO ALTO	I12	0.00	0	398	0.0000	0.0006	0.0000	0.0000	0.0006	0.0000
063-481-170		650 CIRCLE DR, EAST PALO ALTO	I12	0.00	0	460	0.0000	0.0007	0.0000	0.0000	0.0007	0.0000
063-481-180		1917 COOLEY AVE, EAST PALO ALTO	I12	0.00	0	469	0.0000	0.0007	0.0000	0.0000	0.0007	0.0000
063-481-190		1909 COOLEY AVE, EAST PALO ALTO	I12	0.00	0	456	0.0000	0.0007	0.0000	0.0000	0.0007	0.0000
063-481-210		1901 COOLEY AVE, EAST PALO ALTO	I12	0.00	0	440	0.0000	0.0007	0.0000	0.0000	0.0007	0.0000
063-481-220		1905 COOLEY AVE, EAST PALO ALTO	I12	0.00	0	406	0.0000	0.0006	0.0000	0.0000	0.0006	0.0000
063-482-010		641 CIRCLE DR, EAST PALO ALTO	I12	0.00	0	321	0.0000	0.0005	0.0000	0.0000	0.0005	0.0000
063-482-020		621 CIRCLE DR, EAST PALO ALTO	I12	0.00	0	358	0.0000	0.0006	0.0000	0.0000	0.0006	0.0000
063-482-030		611 CIRCLE DR, EAST PALO ALTO	I12	0.00	0	413	0.0000	0.0006	0.0000	0.0000	0.0006	0.0000
063-483-030		1909 CAPITOL AVE, EAST PALO ALTO	I12	0.00	0	495	0.0000	0.0008	0.0000	0.0000	0.0008	0.0000
063-483-040		1943 CAPITOL AVE, EAST PALO ALTO	I12	0.00	0	1,067	0.0000	0.0016	0.0000	0.0000	0.0016	0.0000
063-483-050		1609 WOODLAND AVE, EAST PALO ALTO	I12	0.00	0	2,168	0.0000	0.0033	0.0000	0.0000	0.0033	0.0000
063-484-010		655 SCOFIELD AVE, EAST PALO ALTO	I12	0.00	0	406	0.0000	0.0006	0.0000	0.0000	0.0006	0.0000
063-484-020		1902 CAPITOL AVE, EAST PALO ALTO	I12	0.00	0	496	0.0000	0.0008	0.0000	0.0000	0.0008	0.0000
063-484-030		1908 CAPITOL AVE, EAST PALO ALTO	I12	0.00	0	906	0.0000	0.0014	0.0000	0.0000	0.0014	0.0000
063-484-040		1916 CAPITOL AVE, EAST PALO ALTO	I12	0.00	0	1,406	0.0000	0.0022	0.0000	0.0000	0.0022	0.0000
063-484-050		1920 CAPITOL AVE, EAST PALO ALTO	I12	0.00	0	864	0.0000	0.0013	0.0000	0.0000	0.0013	0.0000
063-484-060		1934 CAPITOL AVE, EAST PALO ALTO	I12	0.00	0	2,326	0.0000	0.0036	0.0000	0.0000	0.0036	0.0000
063-484-090		1949 COOLEY AVE, EAST PALO ALTO	I12	0.00	0	1,318	0.0000	0.0020	0.0000	0.0000	0.0020	0.0000
063-484-100		1941 COOLEY AVE, EAST PALO ALTO	I12	0.00	0	1,463	0.0000	0.0023	0.0000	0.0000	0.0023	0.0000
063-484-110		685 SCOFIELD AVE, EAST PALO ALTO	I12	0.00	0	1,742	0.0000	0.0027	0.0000	0.0000	0.0027	0.0000
063-484-130		1957 COOLEY AVE, EAST PALO ALTO	I12	0.00	0	3,196	0.0000	0.0049	0.0000	0.0000	0.0049	0.0000
063-492-070		1927 E BAYSHORE RD, EAST PALO ALTO	I12	0.00	7,138	1,216	0.0110	0.0019	0.0000	0.0000	0.0129	0.0000
063-492-280		1933 PULGAS AVE, EAST PALO ALTO	K4	0.00	0	4,704	0.0000	0.0072	0.0000	0.0000	0.0072	0.0000
063-492-350	(9)	1805 E BAYSHORE RD #1-94, EAST PALO ALTO	K4	0.00	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
063-492-480		1895 E BAYSHORE RD, EAST PALO ALTO	K4	0.00	9,520	1,623	0.0147	0.0025	0.0000	0.0000	0.0172	0.0000
063-501-020		1874 W BAYSHORE RD, EAST PALO ALTO	K4	0.00	10,817	1,092	0.0167	0.0017	0.0000	0.0000	0.0183	0.0000

Appendix C: Table 5
Scenario 2: 2035 Proposed Additional Sanitary Sewer Flows

APN (1)		Address (1)	Sanitary Sewer Sub-Basins	Peaking Factor (2)	Delta Residential Average Daily Flow, GPD (3)	Delta Non-Residential Average Daily Flow, GPD (4)	Residential ADWF, CFS (5)	Non-Residential ADWF, CFS (6)	Residential PDWF, CFS (7)	Non-Residential PDWF, CFS (8)	Total ADWF, CFS	Total PDWF, CFS
063-501-030		1870 W BAYSHORE RD, EAST PALO ALTO	K4	0.00	5,051	509	0.0078	0.0008	0.0000	0.0000	0.0086	0.0000
063-501-040		1879 WOODLAND AVE, EAST PALO ALTO	K4	0.00	5,118	516	0.0079	0.0008	0.0000	0.0000	0.0087	0.0000
063-501-050		1875 WOODLAND AVE, EAST PALO ALTO	K4	0.00	4,455	449	0.0069	0.0007	0.0000	0.0000	0.0076	0.0000
063-511-020		2039 CLARKE AVE, EAST PALO ALTO	K4	0.00	4,697	800	0.0072	0.0012	0.0000	0.0000	0.0085	0.0000
063-511-030		2035 CLARKE AVE, EAST PALO ALTO	I3	0.00	5,093	868	0.0078	0.0013	0.0000	0.0000	0.0092	0.0000
063-511-040		2029 CLARKE AVE, EAST PALO ALTO	I3	0.00	9,896	1,687	0.0152	0.0026	0.0000	0.0000	0.0178	0.0000
063-511-050		2027 CLARKE AVE, EAST PALO ALTO	I3	0.00	4,481	763	0.0069	0.0012	0.0000	0.0000	0.0081	0.0000
063-511-060		2023 CLARKE AVE, EAST PALO ALTO	I3	0.00	5,274	898	0.0081	0.0014	0.0000	0.0000	0.0095	0.0000
063-511-070		2017 CLARKE AVE, EAST PALO ALTO	I3	0.00	4,907	836	0.0076	0.0013	0.0000	0.0000	0.0088	0.0000
063-511-080		2013 CLARKE AVE, EAST PALO ALTO	I3	0.00	4,856	827	0.0075	0.0013	0.0000	0.0000	0.0088	0.0000
063-511-090		2009 CLARKE AVE, EAST PALO ALTO	I3	0.00	4,833	823	0.0074	0.0013	0.0000	0.0000	0.0087	0.0000
063-511-190		872 DONOHOE ST, EAST PALO ALTO	I3	0.00	8,006	1,365	0.0123	0.0021	0.0000	0.0000	0.0144	0.0000
063-511-200		866 DONOHOE ST, EAST PALO ALTO	I3	0.00	6,897	1,175	0.0106	0.0018	0.0000	0.0000	0.0124	0.0000
063-511-210		864 DONOHOE ST, EAST PALO ALTO	I3	0.00	5,843	996	0.0090	0.0015	0.0000	0.0000	0.0105	0.0000
063-511-220		862 DONOHOE ST, EAST PALO ALTO	I3	0.00	4,039	688	0.0062	0.0011	0.0000	0.0000	0.0073	0.0000
063-511-240		896 DONOHOE ST, EAST PALO ALTO	I3	0.00	4,243	723	0.0065	0.0011	0.0000	0.0000	0.0076	0.0000
063-511-250		860 DONOHOE ST, EAST PALO ALTO	I3	0.00	6,144	1,047	0.0095	0.0016	0.0000	0.0000	0.0111	0.0000
063-511-260		890 DONOHOE ST, EAST PALO ALTO	I3	0.00	4,565	778	0.0070	0.0012	0.0000	0.0000	0.0082	0.0000
063-511-490		1731 E BAYSHORE RD, EAST PALO ALTO	I3	0.00	136,864	21,597	0.2108	0.0333	0.0000	0.0000	0.2440	0.0000
063-511-520		1761 E BAYSHORE RD, EAST PALO ALTO	I12	0.00	143,789	22,710	0.2214	0.0350	0.0000	0.0000	0.2564	0.0000
063-511-630		1721 E BAYSHORE RD, EAST PALO ALTO	I12	0.00	36,216	5,703	0.0558	0.0088	0.0000	0.0000	0.0646	0.0000
063-511-660		899 OCONNOR ST, EAST PALO ALTO	I12	0.00	2,871	489	0.0044	0.0008	0.0000	0.0000	0.0052	0.0000
063-511-680		1751 EAST BAYSHORE RD, EAST PALO ALTO	I12	0.00	231,025	36,488	0.3558	0.0562	0.0000	0.0000	0.4120	0.0000
063-511-690		1745 E BAYSHORE BLVD, EAST PALO ALTO	I12	0.00	36,736	5,797	0.0566	0.0089	0.0000	0.0000	0.0655	0.0000
063-511-720		1775 E BAYSHORE RD, EAST PALO ALTO	I12	0.00	333,263	52,631	0.5132	0.0811	0.0000	0.0000	0.5943	0.0000
063-515-060		1821 CLARKE AVE, EAST PALO ALTO	I12	0.00	0	225	0.0000	0.0003	0.0000	0.0000	0.0003	0.0000
063-515-070		1805 CLARKE AVE, EAST PALO ALTO	K4	0.00	0	423	0.0000	0.0007	0.0000	0.0000	0.0007	0.0000
063-515-080		1787 WOODLAND AVE, EAST PALO ALTO	K4	0.00	0	217	0.0000	0.0003	0.0000	0.0000	0.0003	0.0000
063-515-230		1785 WOODLAND AVE, EAST PALO ALTO	K4	0.00	0	422	0.0000	0.0006	0.0000	0.0000	0.0006	0.0000
063-571-060		1985 E BAYSHORE RD, EAST PALO ALTO	K4	0.00	52,596	8,969	0.0810	0.0138	0.0000	0.0000	0.0948	0.0000
063-571-070		1981 E BAYSHORE RD, EAST PALO ALTO	K28	0.00	25,211	4,299	0.0388	0.0066	0.0000	0.0000	0.0454	0.0000
063-571-080		1961 E BAYSHORE RD, EAST PALO ALTO	K28	0.00	54,785	9,342	0.0844	0.0144	0.0000	0.0000	0.0988	0.0000
063-571-090		1905 E BAYSHORE RD, EAST PALO ALTO	K28	0.00	9,438	1,609	0.0145	0.0025	0.0000	0.0000	0.0170	0.0000
063-680-020	(9)	1900 UNIVERSITY AVE, EAST PALO ALTO	K28	0.00	150,722	0	0.2321	0.0000	0.0000	0.0000	0.2321	0.0000
063-680-050	(9)	, NO DATA	E2	0.00	1,551	0	0.0024	0.0000	0.0000	0.0000	0.0024	0.0000
063-680-060	(9)	, NO DATA	E2	0.00	1,551	0	0.0024	0.0000	0.0000	0.0000	0.0024	0.0000
063-680-090	(9)	, EAST PALO ALTO	E2	0.00	8,177	0	0.0126	0.0000	0.0000	0.0000	0.0126	0.0000
063-680-100	(9)	, EAST PALO ALTO	E2	0.00	8,272	0	0.0127	0.0000	0.0000	0.0000	0.0127	0.0000
063-680-110	(9)	, EAST PALO ALTO	E2	0.00	22,594	0	0.0348	0.0000	0.0000	0.0000	0.0348	0.0000
063-680-130	(9)	2000 UNIVERSITY AVE, EAST PALO ALTO	E2	0.00	139,566	0	0.2149	0.0000	0.0000	0.0000	0.2149	0.0000
063-680-150	(9)	2050 UNIVERSITY AVE, EAST PALO ALTO	E2	0.00	218,918	0	0.3371	0.0000	0.0000	0.0000	0.3371	0.0000
063-680-180	(9)	, EAST PALO ALTO	E2	0.00	533	0	0.0008	0.0000	0.0000	0.0000	0.0008	0.0000
063-680-190	(9)	2000 UNIVERSITY AVE, EAST PALO ALTO	E2	0.00	256,075	0	0.3944	0.0000	0.0000	0.0000	0.3944	0.0000
063-730-010	(9)	2477 PULGAS AVE, EAST PALO ALTO	E2	0.00	0	200	0.0000	0.0003	0.0000	0.0000	0.0003	0.0000
063-730-020	(9)	2477 PULGAS AVE, EAST PALO ALTO	T20	0.00	0	200	0.0000	0.0003	0.0000	0.0000	0.0003	0.0000
063-730-030	(9)	2477 PULGAS AVE, EAST PALO ALTO	T20	0.00	0	200	0.0000	0.0003	0.0000	0.0000	0.0003	0.0000
063-730-040	(9)	2477 PULGAS AVE, EAST PALO ALTO	T20	0.00	0	200	0.0000	0.0003	0.0000	0.0000	0.0003	0.0000
063-730-050	(9)	2477 PULGAS AVE, EAST PALO ALTO	T20	0.00	0	200	0.0000	0.0003	0.0000	0.0000	0.0003	0.0000
063-730-060	(9)	2477 PULGAS AVE, EAST PALO ALTO	T20	0.00	0	200	0.0000	0.0003	0.0000	0.0000	0.0003	0.0000
063-730-070	(9)	2477 PULGAS AVE, EAST PALO ALTO	T20	0.00	0	200	0.0000	0.0003	0.0000	0.0000	0.0003	0.0000
063-730-080	(9)	2477 PULGAS AVE, EAST PALO ALTO	T20	0.00	0	200	0.0000	0.0003	0.0000	0.0000	0.0003	0.0000
063-730-090	(9)	2477 PULGAS AVE, EAST PALO ALTO	T20	0.00	0	200	0.0000	0.0003	0.0000	0.0000	0.0003	0.0000
063-730-100	(9)	2477 PULGAS AVE, EAST PALO ALTO	T20	0.00	0	200	0.0000	0.0003	0.0000	0.0000	0.0003	0.0000
063-730-110	(9)	2477 PULGAS AVE, EAST PALO ALTO	T20	0.00	0	200	0.0000	0.0003	0.0000	0.0000	0.0003	0.0000
063-730-120	(9)	2477 PULGAS AVE, EAST PALO ALTO	T20	0.00	0	200	0.0000	0.0003	0.0000	0.0000	0.0003	0.0000
063-730-130	(9)	2477 PULGAS AVE, EAST PALO ALTO	T20	0.00	0	200	0.0000	0.0003	0.0000	0.0000	0.0003	0.0000
063-730-140	(9)	2477 PULGAS AVE, EAST PALO ALTO	T20	0.00	0	200	0.0000	0.0003	0.0000	0.0000	0.0003	0.0000
063-730-150	(9)	2477 PULGAS AVE, EAST PALO ALTO	T20	0.00	0	200	0.0000	0.0003	0.0000	0.0000	0.0003	0.0000
063-730-160	(9)	2477 PULGAS AVE, EAST PALO ALTO	T20	0.00	0	200	0.0000	0.0003	0.0000	0.0000	0.0003	0.0000
063-730-170	(9)	2477 PULGAS AVE, EAST PALO ALTO	T20	0.00	0	200	0.0000	0.0003	0.0000	0.0000	0.0003	0.0000
063-730-180	(9)	2477 PULGAS AVE, EAST PALO ALTO	T20	0.00	0	200	0.0000	0.0003	0.0000	0.0000	0.0003	0.0000
063-730-190	(9)	2477 PULGAS AVE, EAST PALO ALTO	T20	0.00	0	200	0.0000	0.0003	0.0000	0.0000	0.0003	0.0000
063-730-200	(9)	2477 PULGAS AVE, EAST PALO ALTO	T20	0.00	0	200	0.0000	0.0003	0.0000	0.0000	0.0003	0.0000
063-730-210	(9)	2477 PULGAS AVE, EAST PALO ALTO	T20	0.00	0	200	0.0000	0.0003	0.0000	0.0000	0.0003	0.0000
063-730-220	(9)	2477 PULGAS AVE, EAST PALO ALTO	T20	0.00	0	200	0.0000	0.0003	0.0000	0.0000	0.0003	0.0000
063-730-230	(9)	2477 PULGAS AVE, EAST PALO ALTO	T20	0.00	0	200	0.0000	0.0003	0.0000	0.0000	0.0003	0.0000
063-730-240	(9)	2477 PULGAS AVE, EAST PALO ALTO	T20	0.00	0	200	0.0000	0.0003	0.0000	0.0000	0.0003	0.0000
063-730-250	(9)	2477 PULGAS AVE, EAST PALO ALTO	T20	0.00	0	200	0.0000	0.0003	0.0000	0.0000	0.0003	0.0000
063-730-260	(9)	2477 PULGAS AVE, EAST PALO ALTO	T20	0.00	0	200	0.0000	0.0003	0.0000	0.0000	0.0003	0.0000
063-730-270	(9)	2477 PULGAS AVE, EAST PALO ALTO	T20	0.00	0	200	0.0000	0.0003	0.0000	0.0000	0.0003	0.0000
063-730-280	(9)	2477 PULGAS AVE, EAST PALO ALTO	T20	0.00	0	200	0.0000	0.0003	0.0000	0.0000	0.0003	0.0000
063-730-290	(9)	2477 PULGAS AVE, EAST PALO ALTO	T20	0.00	0	200	0.0000	0.0003	0.0000	0.0000	0.0003	0.0000
063-730-300	(9)	2477 PULGAS AVE, EAST PALO ALTO	T20	0.00	0	200	0.0000	0.0003	0.0000	0.0000	0.0003	0.0000
063-730-310	(9)	2477 PULGAS AVE, EAST PALO ALTO	T20	0.00	0	200	0.0000	0.0003	0.0000	0.0000	0.0003	0.0000
063-730-320	(9)	2477 PULGAS AVE, EAST PALO ALTO	T20	0.00	0	200	0.0000	0.0003	0.0000	0.0000	0.0003	0.0000
063-730-330	(9)	2477 PULGAS AVE, EAST PALO ALTO	T20	0.00	0	200	0.0000	0.0003	0.0000	0.0000	0.0003	0.0000
063-730-340	(9)	2477 PULGAS AVE, EAST PALO ALTO	T20	0.00	0	200	0.0000	0.0003	0.0000	0.0000	0.0003	0.0000
063-730-350	(9)	2477 PULGAS AVE, EAST PALO ALTO	T20	0.00	0	200	0.0000	0.0003	0.0000	0.0000	0.0003	0.0000
063-730-360	(9)	2477 PULGAS AVE, EAST PALO ALTO	T20	0.00	0	200	0.0000	0.0003	0.0000	0.0000	0.0003	0.0000
063-730-370	(9)	2477 PULGAS AVE, EAST PALO ALTO	T20	0.00	0	200	0.0000	0.0003	0.0000	0.0000	0.0003	0.0000
063-730-380	(9)	2477 PULGAS AVE, EAST PALO ALTO	T20	0.00	0	200	0.0000	0.0003	0.0000	0.0000	0.0003	0.0000
063-730-390	(9)	2477 PULGAS AVE, EAST PALO ALTO	T20	0.00	0	200	0.0000	0.0003	0.0000	0.0000	0.0003	0.0000

Appendix C: Table 5
Scenario 2: 2035 Proposed Additional Sanitary Sewer Flows

APN (1)		Address (1)	Sanitary Sewer Sub-Basins	Peaking Factor (2)	Delta Residential Average Daily Flow, GPD (3)	Delta Non-Residential Average Daily Flow, GPD (4)	Residential ADWF, CFS (5)	Non-Residential ADWF, CFS (6)	Residential PDWF, CFS (7)	Non-Residential PDWF, CFS (8)	Total ADWF, CFS	Total PDWF, CFS
063-730-400	(9)	2477 PULGAS AVE, EAST PALO ALTO	T20	0.00	0	200	0.0000	0.0003	0.0000	0.0000	0.0003	0.0000
063-730-410	(9)	2477 PULGAS AVE, EAST PALO ALTO	T20	0.00	0	200	0.0000	0.0003	0.0000	0.0000	0.0003	0.0000
063-730-420	(9)	2477 PULGAS AVE, EAST PALO ALTO	T20	0.00	0	200	0.0000	0.0003	0.0000	0.0000	0.0003	0.0000
063-730-430	(9)	2477 PULGAS AVE, EAST PALO ALTO	T20	0.00	0	200	0.0000	0.0003	0.0000	0.0000	0.0003	0.0000
063-730-440	(9)	2477 PULGAS AVE, EAST PALO ALTO	T20	0.00	0	200	0.0000	0.0003	0.0000	0.0000	0.0003	0.0000
063-730-450	(9)	2477 PULGAS AVE, EAST PALO ALTO	T20	0.00	0	200	0.0000	0.0003	0.0000	0.0000	0.0003	0.0000
063-730-460	(9)	2477 PULGAS AVE, EAST PALO ALTO	T20	0.00	0	200	0.0000	0.0003	0.0000	0.0000	0.0003	0.0000
063-730-470	(9)	2477 PULGAS AVE, EAST PALO ALTO	T20	0.00	0	200	0.0000	0.0003	0.0000	0.0000	0.0003	0.0000
063-730-480	(9)	2477 PULGAS AVE, EAST PALO ALTO	T20	0.00	0	200	0.0000	0.0003	0.0000	0.0000	0.0003	0.0000
063-730-490	(9)	2477 PULGAS AVE, EAST PALO ALTO	T20	0.00	0	200	0.0000	0.0003	0.0000	0.0000	0.0003	0.0000
063-730-500	(9)	2477 PULGAS AVE, EAST PALO ALTO	T20	0.00	0	200	0.0000	0.0003	0.0000	0.0000	0.0003	0.0000
063-730-510	(9)	2477 PULGAS AVE, EAST PALO ALTO	T20	0.00	0	200	0.0000	0.0003	0.0000	0.0000	0.0003	0.0000
113-530-010 to 113-530-999		2420 GLORIA WAY, EAST PALO ALTO	NEW	0	0	2,029	0.0000	0.0031	0.0000	0.0000	0.0031	0.0000
113-710-010 to 113-710-999		2440 GLORIA WAY, EAST PALO ALTO	NEW	0	0	1,057	0.0000	0.0016	0.0000	0.0000	0.0016	0.0000
113-720-010 to 113-720-999		2460 GLORIA WAY, EAST PALO ALTO	NEW	0	0	890	0.0000	0.0014	0.0000	0.0000	0.0014	0.0000
113-740-010 to 113-740-999		2470 GLORIA WAY, EAST PALO ALTO	NEW	0	0	1,393	0.0000	0.0021	0.0000	0.0000	0.0021	0.0000
114-240-010 to 114-240-300		2330 UNIVERSITY AVE, EAST PALO ALTO	NEW	0	17,563	2,970	0.0270	0.0046	0.0000	0.0000	0.0316	0.0000
114-450-010 to 114-460-300		1765 EAST BAYSHORE RD, EAST PALO ALTO	NEW	0	39,561	6,717	0.0609	0.0103	0.0000	0.0000	0.0713	0.0000
114-590-050		NO DATA, EAST PALO ALTO	T20	0.00	235,877	0	0.3633	0.0000	0.0000	0.0000	0.3633	0.0000

Notes:

(1) Properties with Zoning change per Figure 4-12: General Plan Land Use and Figure 4-16: Ravenswood / 4 Corners TOP Specific Plan Land Use City of East Palo Alto General Plan "Existing Conditions Report, February 2014" and Figure 4-2: General Plan Land Use Designations City of East Palo Alto General Plan "Vista 2035, Final Version: March 2017"

(2) Per Section 5.3.2 of the "East Palo Alto Sanitary District Master Plan Update, March 2015". For modeling scenarios, peak sanitary flows based on the collected data. Collected data for Peaking Factors for each sub-basin are shown in Table 3.2.

(3) Delta Residential Flows is calculated by taking the Average Daily Flow for Residential areas from Table 3 minus the Average Daily Flow for Residential area from Table 2. If calculation resulted in a decrease of flow, the flow change is shown as "0" because it is not anticipated that the land use changes will result in flow reductions.

(4) Delta Non-Residential Flows is calculated by taking the Average Faily Flow for Non-Residential areas from Table 3 minus the Average Daily Flow for Non-Residential areas from Table 2.

(5) ADWF Residential Dwellings, calculated by multiplying 200 gallons per dwelling unit per day by the total number of units. Based on internal F&L meeting, 2/13/2025. Units converted from GPD (Gallons Per Day) to CFS based off 24 hours in a day, 60 minutes in a hour, and 60 seconds in a minute.

(6) ADWF Non-Residential , calculated by multiplying 0.1 gallons per day per square foot. Based on Section B1.03.3 for Office and Retail of the East Palo Alto Sanitary District Standard Specifications for Design and Construction of Sanitray Collection and Conveyance Facilities dated June 6, 2002. Units converted from GPD (Gallons Per Day) to CFS. Based off 24 hours in a day, 60 minutes in a hour, and 60 seconds in a minute.

(7) PDWF Residential Dwellings, calculated by multiplying Average Dry Weather Flows (5) by the Peaking Factor (2). Units converted from GPD to CFS. Based off 24 hours a day, 60 minutes in a hour, and 60 seconds in a minute.

(8) PDWF Non-Residential, calculated by multiplying Average Dry Weather Flows (6) by the Peaking Factor (2). Units converted from GPD to CFS. Based off 24 hours a day, 60 minutes in a hour, and 60 seconds in a minute.

(9) Number of units planned are approved development projects by the City. Average Daily Flow, Residential is calculated using the known unit count.

Abbreviations

ADWF: Average Dry Weather Flow
APN: Assessors Parcel Number
CFS: Cubic Feet per Second
MGD: Million Gallons Per Day
PDWF: Peak Dry Weather Flow

Appendix C: Table 6
Scenario 3: 2035 Enhanced Proposed Additional Sanitary Sewer Flows

APN (1)		Address (1)	Sanitary Sewer Sub-Basins	Peaking Factor (2)	Delta Residential Average Daily Flow, GPD (3)	Delta Non-Residential Average Daily Flow, GPD (4)	Residential ADWF, CFS (5)	Non-Residential ADWF, CFS (6)	Residential PDWF, CFS (7)	Non-Residential PDWF, CFS (8)	Total ADWF, CFS	Total PDWF, CFS
063-103-310		1585 BAY RD, EAST PALO ALTO	A15	0.00	43,861	6,902	0.0675	0.0106	0.0000	0.0000	0.0782	0.0000
063-103-360		, EAST PALO ALTO	A15	0.00	69,968	11,051	0.1078	0.0170	0.0000	0.0000	0.1248	0.0000
063-103-370		, EAST PALO ALTO	A15	0.00	41,599	6,569	0.0641	0.0101	0.0000	0.0000	0.0742	0.0000
063-103-380		, EAST PALO ALTO	A15	0.00	8,276	1,307	0.0127	0.0020	0.0000	0.0000	0.0148	0.0000
063-103-390		, EAST PALO ALTO	A15	0.00	12,251	1,935	0.0189	0.0030	0.0000	0.0000	0.0218	0.0000
063-103-440		2400 GLORIA WAY, EAST PALO ALTO	A15	0.00	0	8,578	0.0000	0.0132	0.0000	0.0000	0.0132	0.0000
063-111-230		BETWEEN 1585 AND 1675 BAY RD, EAST PALO A	A15	0.00	12,513	1,976	0.0193	0.0030	0.0000	0.0000	0.0223	0.0000
063-111-250		1675 BAY RD, EAST PALO ALTO	A15	0.00	328,119	51,823	0.5053	0.0798	0.0000	0.0000	0.5851	0.0000
063-121-030		, EAST PALO ALTO	T20	0.00	16,945	0	0.0261	0.0000	0.0000	0.0000	0.0261	0.0000
063-121-040		, EAST PALO ALTO	T20	0.00	122,905	0	0.1893	0.0000	0.0000	0.0000	0.1893	0.0000
063-121-050		TARA RD, EAST PALO ALTO	T20	0.00	11,500	0	0.0177	0.0000	0.0000	0.0000	0.0177	0.0000
063-121-060		264 TARA RD, EAST PALO ALTO	T20	0.00	78,081	0	0.1202	0.0000	0.0000	0.0000	0.1202	0.0000
063-121-070		2081 BAY RD, EAST PALO ALTO	T20	0.00	340,421	0	0.5242	0.0000	0.0000	0.0000	0.5242	0.0000
063-121-110		2077 BAY RD, EAST PALO ALTO	T20	0.00	84,289	0	0.1298	0.0000	0.0000	0.0000	0.1298	0.0000
063-121-120		2005 BAY RD, EAST PALO ALTO	T20	0.00	167,924	0	0.2586	0.0000	0.0000	0.0000	0.2586	0.0000
063-121-150		, EAST PALO ALTO	T20	0.00	19,733	0	0.0304	0.0000	0.0000	0.0000	0.0304	0.0000
063-121-160		180 TARA ROAD, EAST PALO ALTO	T20	0.00	76,513	0	0.1178	0.0000	0.0000	0.0000	0.1178	0.0000
063-121-170		240 TARA ROAD, EAST PALO ALTO	T20	0.00	84,615	0	0.1303	0.0000	0.0000	0.0000	0.1303	0.0000
063-121-190		2560 PULGAS AVE, EAST PALO ALTO	T20	0.00	19,906	0	0.0307	0.0000	0.0000	0.0000	0.0307	0.0000
063-121-200		2555 PULGAS AVE, EAST PALO ALTO	T20	0.00	59,721	0	0.0920	0.0000	0.0000	0.0000	0.0920	0.0000
063-121-210		2555 PULGAS AVE, EAST PALO ALTO	T20	0.00	59,785	0	0.0921	0.0000	0.0000	0.0000	0.0921	0.0000
063-121-240		, EAST PALO ALTO	A15	0.00	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
063-121-290		218 DEMETER ST, EAST PALO ALTO	A15	0.00	31,665	0	0.0488	0.0000	0.0000	0.0000	0.0488	0.0000
063-121-320		350 DEMETER ST, EAST PALO ALTO	A15	0.00	130,483	0	0.2009	0.0000	0.0000	0.0000	0.2009	0.0000
063-121-330		, EAST PALO ALTO	A15	0.00	130,027	0	0.2002	0.0000	0.0000	0.0000	0.2002	0.0000
063-121-350		, EAST PALO ALTO	T20	0.00	42,928	0	0.0661	0.0000	0.0000	0.0000	0.0661	0.0000
063-121-360		, EAST PALO ALTO	T20	0.00	2,875	0	0.0044	0.0000	0.0000	0.0000	0.0044	0.0000
063-121-370		2535 PULGAS AVE, EAST PALO ALTO	T20	0.00	85,050	0	0.1310	0.0000	0.0000	0.0000	0.1310	0.0000
063-121-390		, EAST PALO ALTO	T20	0.00	41,164	0	0.0634	0.0000	0.0000	0.0000	0.0634	0.0000
063-121-400		2091 BAY RD, EAST PALO ALTO	T20	0.00	54,547	0	0.0840	0.0000	0.0000	0.0000	0.0840	0.0000
063-121-410		2091 BAY RD, EAST PALO ALTO	T20	0.00	65,340	0	0.1006	0.0000	0.0000	0.0000	0.1006	0.0000
063-121-490		, EAST PALO ALTO	T20	0.00	128,720	0	0.1982	0.0000	0.0000	0.0000	0.1982	0.0000
063-121-500		, EAST PALO ALTO	T20	0.00	165,309	0	0.2546	0.0000	0.0000	0.0000	0.2546	0.0000
063-121-510		, EAST PALO ALTO	T20	0.00	47,044	0	0.0724	0.0000	0.0000	0.0000	0.0724	0.0000
063-122-040		1990 BAY RD, EAST PALO ALTO	T20	0.00	307,726	0	0.4739	0.0000	0.0000	0.0000	0.4739	0.0000
063-123-010		351 DEMETER ST, EAST PALO ALTO	T20	0.00	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
063-123-030		225 DEMETER ST, EAST PALO ALTO	T20	0.00	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
063-123-060		325 DEMETER ST, EAST PALO ALTO	T20	0.00	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
063-123-070		245 DEMETER ST, EAST PALO ALTO	T20	0.00	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
063-123-080		, EAST PALO ALTO	T20	0.00	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
063-131-220	(9)	2519 PULGAS AVE, EAST PALO ALTO	T20	0.00	109,030	0	0.1679	0.0000	0.0000	0.0000	0.1679	0.0000
063-131-230		, EAST PALO ALTO	T20	0.00	0	1,541	0.0000	0.0024	0.0000	0.0000	0.0024	0.0000
063-131-240		1885 BAY RD, EAST PALO ALTO	T20	0.00	0	1,494	0.0000	0.0023	0.0000	0.0000	0.0023	0.0000
063-131-250		1861 BAY RD, EAST PALO ALTO	T20	0.00	0	2,002	0.0000	0.0031	0.0000	0.0000	0.0031	0.0000
063-131-260		1879 BAY RD, EAST PALO ALTO	T20	0.00	0	3,717	0.0000	0.0057	0.0000	0.0000	0.0057	0.0000
063-131-270		1873 BAY RD, EAST PALO ALTO	T20	0.00	0	702	0.0000	0.0011	0.0000	0.0000	0.0011	0.0000
063-131-290		140 DEMETER ST, EAST PALO ALTO	A15	0.00	58,152	0	0.0896	0.0000	0.0000	0.0000	0.0896	0.0000
063-131-300		, EAST PALO ALTO	T20	0.00	0	662	0.0000	0.0010	0.0000	0.0000	0.0010	0.0000
063-131-310		1891 BAY RD, EAST PALO ALTO	T20	0.00	0	974	0.0000	0.0015	0.0000	0.0000	0.0015	0.0000
063-131-320		1847 BAY RD, EAST PALO ALTO	T20	0.00	0	1,449	0.0000	0.0022	0.0000	0.0000	0.0022	0.0000
063-131-330		1851 BAY RD, EAST PALO ALTO	T20	0.00	0	787	0.0000	0.0012	0.0000	0.0000	0.0012	0.0000
063-131-340		2509 PULGAS AVE, EAST PALO ALTO	T20	0.00	0	1,410	0.0000	0.0022	0.0000	0.0000	0.0022	0.0000
063-132-020		151 TARA RD, EAST PALO ALTO	T20	0.00	3,658	0	0.0056	0.0000	0.0000	0.0000	0.0056	0.0000
063-132-060		150 TARA RD, EAST PALO ALTO	T20	0.00	21,888	0	0.0337	0.0000	0.0000	0.0000	0.0337	0.0000
063-132-090		, EAST PALO ALTO	T20	0.00	2,026	0	0.0031	0.0000	0.0000	0.0000	0.0031	0.0000
063-132-110		1923 BAY RD, EAST PALO ALTO	T20	0.00	0	6,455	0.0000	0.0099	0.0000	0.0000	0.0099	0.0000
063-132-120		1907 BAY RD, EAST PALO ALTO	T20	0.00	0	1,039	0.0000	0.0016	0.0000	0.0000	0.0016	0.0000
063-132-130		1911 BAY RD, EAST PALO ALTO	T20	0.00	0	877	0.0000	0.0013	0.0000	0.0000	0.0013	0.0000
063-132-140		1905 BAY RD, EAST PALO ALTO	T20	0.00	0	2,762	0.0000	0.0043	0.0000	0.0000	0.0043	0.0000
063-132-150		2520 PULGAS AVE, EAST PALO ALTO	T20	0.00	0	6,194	0.0000	0.0095	0.0000	0.0000	0.0095	0.0000
063-132-170		, EAST PALO ALTO	T20	0.00	0	1,091	0.0000	0.0017	0.0000	0.0000	0.0017	0.0000
063-132-190		2532 PULGAS AVE, EAST PALO ALTO	T20	0.00	20,558	0	0.0317	0.0000	0.0000	0.0000	0.0317	0.0000
063-132-210		2524 PULGAS AVE, EAST PALO ALTO	T20	0.00	19,753	0	0.0304	0.0000	0.0000	0.0000	0.0304	0.0000
063-132-220		1987 BAY RD, EAST PALO ALTO	T20	0.00	80,434	0	0.1239	0.0000	0.0000	0.0000	0.1239	0.0000
063-133-070		195 DEMETER ST, EAST PALO ALTO	A15	0.00	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
063-133-080		175 DEMETER ST, EAST PALO ALTO	A15	0.00	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
063-133-090		75 DEMETER ST, EAST PALO ALTO	A15	0.00	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
063-133-100		215 DEMETER ST, EAST PALO ALTO	A15	0.00	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
063-133-110		, EAST PALO ALTO	A15	0.00	0	5,752	0.0000	0.0089	0.0000	0.0000	0.0089	0.0000
063-133-130		1805 BAY RD, EAST PALO ALTO	A15	0.00	0	6,974	0.0000	0.0107	0.0000	0.0000	0.0107	0.0000
063-151-170		2159 POPLAR AVE, EAST PALO ALTO	B13	0.00	2,927	294	0.0045	0.0005	0.0000	0.0000	0.0050	0.0000
063-151-200		1001 E BAYSHORE RD, EAST PALO ALTO	B13	0.00	1,772	178	0.0027	0.0003	0.0000	0.0000	0.0030	0.0000
063-152-230		1199 E BAYSHORE RD, EAST PALO ALTO	B13	0.00	5,604	565	0.0086	0.0009	0.0000	0.0000	0.0095	0.0000
063-153-010		1205 E BAYSHORE RD, EAST PALO ALTO	B13	0.00	2,648	267	0.0041	0.0004	0.0000	0.0000	0.0045	0.0000
063-153-250		2119 ADDISON AVE, EAST PALO ALTO	B13	0.00	2,572	260	0.0040	0.0004	0.0000	0.0000	0.0044	0.0000
063-154-200		2110 ADDISON AVE, EAST PALO ALTO	B13	0.00	3,330	335	0.0051	0.0005	0.0000	0.0000	0.0056	0.0000
063-154-260		2119 OAKWOOD DR, EAST PALO ALTO	B13	0.00	5,877	593	0.0091	0.0009	0.0000	0.0000	0.0100	0.0000
063-155-010		2106 OAKWOOD DR, EAST PALO ALTO	E1	0.00	3,746	377	0.0058	0.0006	0.0000	0.0000	0.0063	0.0000
063-155-180		2123 DUMBARTON AVE, EAST PALO ALTO	E1	0.00	2,453	247	0.0038	0.0004	0.0000	0.0000	0.0042	0.0000
063-155-190		2109 DUMBARTON AVE, EAST PALO ALTO	E1	0.00	3,741	377	0.0058	0.0006	0.0000	0.0000	0.0063	0.0000
063-181-010		2110 DUMBARTON AVE, EAST PALO ALTO	E1	0.00	4,704	474	0.0072	0.0007	0.0000	0.0000	0.0080	0.0000
063-181-220		2111 LINCOLN ST, EAST PALO ALTO	E1	0.00	2,659	268	0.0041	0.0004	0.0000	0.0000	0.0045	0.0000

Appendix C: Table 6
Scenario 3: 2035 Enhanced Proposed Additional Sanitary Sewer Flows

APN (1)		Address (1)	Sanitary Sewer Sub-Basins	Peaking Factor (2)	Delta Residential Average Daily Flow, GPD (3)	Delta Non-Residential Average Daily Flow, GPD (4)	Residential ADWF, CFS (5)	Non-Residential ADWF, CFS (6)	Residential PDWF, CFS (7)	Non-Residential PDWF, CFS (8)	Total ADWF, CFS	Total PDWF, CFS
063-181-230		2097 LINCOLN ST, EAST PALO ALTO	E1	0.00	2,487	250	0.0038	0.0004	0.0000	0.0000	0.0042	0.0000
063-181-240		1385 E BAYSHORE RD, EAST PALO ALTO	E1	0.00	2,232	225	0.0034	0.0003	0.0000	0.0000	0.0038	0.0000
063-183-010		2088 LINCOLN ST, EAST PALO ALTO	E2	0.00	2,475	249	0.0038	0.0004	0.0000	0.0000	0.0042	0.0000
063-183-070		2045 GLEN WAY, EAST PALO ALTO	E2	0.00	3,893	392	0.0060	0.0006	0.0000	0.0000	0.0066	0.0000
063-183-080		1441 E BAYSHORE RD, EAST PALO ALTO	E2	0.00	5,171	521	0.0080	0.0008	0.0000	0.0000	0.0088	0.0000
063-183-090		, EAST PALO ALTO	E2	0.00	1,898	192	0.0029	0.0003	0.0000	0.0000	0.0032	0.0000
063-183-110		1401 E BAYSHORE RD 2, EAST PALO ALTO	E2	0.00	4,512	456	0.0069	0.0007	0.0000	0.0000	0.0076	0.0000
063-184-010		1475 E BAYSHORE RD, EAST PALO ALTO	E2	0.00	5,053	510	0.0078	0.0008	0.0000	0.0000	0.0086	0.0000
063-184-020		2056 GLEN WAY, EAST PALO ALTO	E2	0.00	4,526	457	0.0070	0.0007	0.0000	0.0000	0.0077	0.0000
063-184-030		2070 GLEN WAY, EAST PALO ALTO	E2	0.00	3,872	391	0.0060	0.0006	0.0000	0.0000	0.0066	0.0000
063-184-040		2080 GLEN WAY, EAST PALO ALTO	E2	0.00	4,205	425	0.0065	0.0007	0.0000	0.0000	0.0071	0.0000
063-201-080		566 SACRAMENTO ST, EAST PALO ALTO	H3	0.00	0	226	0.0000	0.0003	0.0000	0.0000	0.0003	0.0000
063-201-090		576 SACRAMENTO ST, EAST PALO ALTO	H3	0.00	8,208	1,399	0.0126	0.0022	0.0000	0.0000	0.0148	0.0000
063-201-220		2337 UNIVERSITY AVE, EAST PALO ALTO	H3	0.00	4,963	846	0.0076	0.0013	0.0000	0.0000	0.0089	0.0000
063-201-240		2343 UNIVERSITY AVE, EAST PALO ALTO	H3	0.00	5,291	901	0.0081	0.0014	0.0000	0.0000	0.0095	0.0000
063-201-250		RUNNYMEDE ST, EAST PALO ALTO	H3	0.00	13,215	2,253	0.0204	0.0035	0.0000	0.0000	0.0238	0.0000
063-201-260		RUNNYMEDE ST, EAST PALO ALTO	H3	0.00	4,294	732	0.0066	0.0011	0.0000	0.0000	0.0077	0.0000
063-201-270		578 SACRAMENTO ST, EAST PALO ALTO	H3	0.00	5,552	946	0.0085	0.0015	0.0000	0.0000	0.0100	0.0000
063-201-290	(9)	2331 UNIVERSITY AVE, EAST PALO ALTO	H3	0.00	17,156	2,925	0.0264	0.0045	0.0000	0.0000	0.0309	0.0000
063-202-080		556 WEEKS ST, EAST PALO ALTO	H3	0.00	0	209	0.0000	0.0003	0.0000	0.0000	0.0003	0.0000
063-202-090		564 WEEKS ST, EAST PALO ALTO	H3	0.00	0	207	0.0000	0.0003	0.0000	0.0000	0.0003	0.0000
063-202-100		566 WEEKS ST, EAST PALO ALTO	H3	0.00	0	202	0.0000	0.0003	0.0000	0.0000	0.0003	0.0000
063-202-160		561 SACRAMENTO ST, EAST PALO ALTO	H3	0.00	19,722	3,362	0.0304	0.0052	0.0000	0.0000	0.0355	0.0000
063-202-280		2361-2369 UNIVERSITY AVE 101-308, EAST PALO	H3	0.00	38,578	6,578	0.0594	0.0101	0.0000	0.0000	0.0695	0.0000
063-203-160		2387 UNIVERSITY AVE, EAST PALO ALTO	H3	0.00	5,966	941	0.0092	0.0014	0.0000	0.0000	0.0106	0.0000
063-203-170		2381 UNIVERSITY AVE, EAST PALO ALTO	H3	0.00	7,948	1,254	0.0122	0.0019	0.0000	0.0000	0.0142	0.0000
063-203-180		2373 UNIVERSITY AVE, EAST PALO ALTO	H3	0.00	9,746	1,538	0.0150	0.0024	0.0000	0.0000	0.0174	0.0000
063-203-200		593 WEEKS ST, EAST PALO ALTO	H3	0.00	11,542	1,822	0.0178	0.0028	0.0000	0.0000	0.0206	0.0000
063-203-210		585 WEEKS ST, EAST PALO ALTO	H3	0.00	7,994	1,262	0.0123	0.0019	0.0000	0.0000	0.0143	0.0000
063-203-220		579 WEEKS ST, EAST PALO ALTO	H3	0.00	0	176	0.0000	0.0003	0.0000	0.0000	0.0003	0.0000
063-203-230		563 WEEKS ST, EAST PALO ALTO	H3	0.00	0	529	0.0000	0.0008	0.0000	0.0000	0.0008	0.0000
063-203-240		549 WEEKS ST, EAST PALO ALTO	H3	0.00	0	177	0.0000	0.0003	0.0000	0.0000	0.0003	0.0000
063-203-250		541 WEEKS ST, EAST PALO ALTO	H3	0.00	0	173	0.0000	0.0003	0.0000	0.0000	0.0003	0.0000
063-203-260		533 WEEKS ST, EAST PALO ALTO	H3	0.00	0	169	0.0000	0.0003	0.0000	0.0000	0.0003	0.0000
063-203-270		, EAST PALO ALTO	H3	0.00	0	161	0.0000	0.0002	0.0000	0.0000	0.0002	0.0000
063-203-300		2395 UNIVERSITY AVE, EAST PALO ALTO	H3	0.00	9,634	1,518	0.0148	0.0023	0.0000	0.0000	0.0172	0.0000
063-203-310		2371 UNIVERSITY AVE, EAST PALO ALTO	H3	0.00	3,647	575	0.0056	0.0009	0.0000	0.0000	0.0065	0.0000
063-203-320		1586 BAY RD, EAST PALO ALTO	A15	0.00	9,637	1,521	0.0148	0.0023	0.0000	0.0000	0.0172	0.0000
063-203-330		1590 BAY RD, EAST PALO ALTO	A15	0.00	15,083	2,382	0.0232	0.0037	0.0000	0.0000	0.0269	0.0000
063-203-340		2387 UNIVERSITY AVE, EAST PALO ALTO	H3	0.00	10,835	1,710	0.0167	0.0026	0.0000	0.0000	0.0193	0.0000
063-203-350		1574 BAY RD, EAST PALO ALTO	A15	0.00	0	367	0.0000	0.0006	0.0000	0.0000	0.0006	0.0000
063-203-360		1546 BAY RD, EAST PALO ALTO	A15	0.00	0	336	0.0000	0.0005	0.0000	0.0000	0.0005	0.0000
063-203-370		1508 BAY RD, EAST PALO ALTO	H3	0.00	0	554	0.0000	0.0009	0.0000	0.0000	0.0009	0.0000
063-203-380		, NO DATA	A15	0.00	0	260	0.0000	0.0004	0.0000	0.0000	0.0004	0.0000
063-203-390		1518 BAY RD, EAST PALO ALTO	H3	0.00	0	723	0.0000	0.0011	0.0000	0.0000	0.0011	0.0000
063-203-400		1560 BAY RD, EAST PALO ALTO	A15	0.00	0	321	0.0000	0.0005	0.0000	0.0000	0.0005	0.0000
063-203-410		1568 BAY RD, EAST PALO ALTO	A15	0.00	0	339	0.0000	0.0005	0.0000	0.0000	0.0005	0.0000
063-203-430		1530 BAY RD, EAST PALO ALTO	A15	0.00	0	342	0.0000	0.0005	0.0000	0.0000	0.0005	0.0000
063-203-440		1554 BAY RD, EAST PALO ALTO	A15	0.00	0	296	0.0000	0.0005	0.0000	0.0000	0.0005	0.0000
063-203-450		1538 BAY RD, EAST PALO ALTO	A15	0.00	0	306	0.0000	0.0005	0.0000	0.0000	0.0005	0.0000
063-210-310		2346 UNIVERSITY AVE, EAST PALO ALTO	H3	0.00	7,834	1,335	0.0121	0.0021	0.0000	0.0000	0.0141	0.0000
063-210-340		2369 COOLEY AVE, EAST PALO ALTO	H3	0.00	0	511	0.0000	0.0008	0.0000	0.0000	0.0008	0.0000
063-210-350		2365 COOLEY AVE, EAST PALO ALTO	H3	0.00	0	530	0.0000	0.0008	0.0000	0.0000	0.0008	0.0000
063-210-360		2300 UNIVERSITY AVE, EAST PALO ALTO	H3	0.00	7,626	1,300	0.0117	0.0020	0.0000	0.0000	0.0137	0.0000
063-210-380		2354 UNIVERSITY AVE, EAST PALO ALTO	H3	0.00	6,547	1,116	0.0101	0.0017	0.0000	0.0000	0.0118	0.0000
063-210-410		2371 COOLEY AVE, EAST PALO ALTO	H3	0.00	4,227	720	0.0065	0.0011	0.0000	0.0000	0.0076	0.0000
063-210-450		2377 COOLEY AVE, EAST PALO ALTO	H3	0.00	3,256	554	0.0050	0.0009	0.0000	0.0000	0.0059	0.0000
063-210-460		2396 UNIVERSITY AVE, EAST PALO ALTO	H3	0.00	12,904	2,037	0.0199	0.0031	0.0000	0.0000	0.0230	0.0000
063-210-470		633 RUNNYMEDE ST, EAST PALO ALTO	H3	0.00	4,255	725	0.0066	0.0011	0.0000	0.0000	0.0077	0.0000
063-210-480		2361 COOLEY AVE, EAST PALO ALTO	H3	0.00	0	680	0.0000	0.0010	0.0000	0.0000	0.0010	0.0000
063-210-490		2355 COOLEY AVE, EAST PALO ALTO	H3	0.00	0	713	0.0000	0.0011	0.0000	0.0000	0.0011	0.0000
063-210-520		2338 UNIVERSITY AVE, EAST PALO ALTO	H3	0.00	8,248	1,406	0.0127	0.0022	0.0000	0.0000	0.0149	0.0000
063-210-610		661 RUNNYMEDE ST, EAST PALO ALTO	H3	0.00	8,830	1,505	0.0136	0.0023	0.0000	0.0000	0.0159	0.0000
063-210-630		2358 UNIVERSITY AVE, EAST PALO ALTO	H3	0.00	6,658	1,135	0.0103	0.0017	0.0000	0.0000	0.0120	0.0000
063-221-010		, EAST PALO ALTO	A15	0.00	13,667	2,159	0.0210	0.0033	0.0000	0.0000	0.0244	0.0000
063-221-020		1620 BAY RD, EAST PALO ALTO	A15	0.00	22,759	3,594	0.0350	0.0055	0.0000	0.0000	0.0406	0.0000
063-221-030		, EAST PALO ALTO	A15	0.00	6,805	1,074	0.0105	0.0017	0.0000	0.0000	0.0121	0.0000
063-221-040		1640 BAY RD, EAST PALO ALTO	A15	0.00	35,707	5,630	0.0550	0.0087	0.0000	0.0000	0.0637	0.0000
063-221-050		1650 BAY RD, EAST PALO ALTO	A15	0.00	9,959	1,569	0.0153	0.0024	0.0000	0.0000	0.0178	0.0000
063-221-060		1660 BAY RD, EAST PALO ALTO	A15	0.00	22,848	3,591	0.0352	0.0055	0.0000	0.0000	0.0407	0.0000
063-221-070		1670 BAY RD, EAST PALO ALTO	A15	0.00	21,219	3,337	0.0327	0.0051	0.0000	0.0000	0.0378	0.0000
063-221-100		1760 BAY RD, EAST PALO ALTO	A15	0.00	57,125	8,982	0.0880	0.0138	0.0000	0.0000	0.1018	0.0000
063-221-110		1796 BAY RD, EAST PALO ALTO	A15	0.00	56,083	8,857	0.0864	0.0136	0.0000	0.0000	0.1000	0.0000
063-221-140		2397 CLARKE AVE, EAST PALO ALTO	T20	0.00	6,692	1,053	0.0103	0.0016	0.0000	0.0000	0.0119	0.0000
063-221-150		2387 CLARKE AVE, EAST PALO ALTO	T20	0.00	7,291	1,147	0.0112	0.0018	0.0000	0.0000	0.0130	0.0000
063-221-160		2377 CLARKE AVE, EAST PALO ALTO	T20	0.00	7,999	1,259	0.0123	0.0019	0.0000	0.0000	0.0143	0.0000
063-221-170		2373 CLARKE AVE, EAST PALO ALTO	T20	0.00	7,240	1,142	0.0111	0.0018	0.0000	0.0000	0.0129	0.0000
063-221-180		2371 CLARKE AVE, EAST PALO ALTO	T20	0.00	0	576	0.0000	0.0009	0.0000	0.0000	0.0009	0.0000
063-221-190		2369 CLARKE AVE, EAST PALO ALTO	T20	0.00	0	633	0.0000	0.0010	0.0000	0.0000	0.0010	0.0000
063-221-200		891 WEEKS ST, EAST PALO ALTO	T20	0.00	0	1,234	0.0000	0.0019	0.0000	0.0000	0.0019	0.0000
063-221-210		871 WEEKS ST, EAST PALO ALTO	T20	0.00	0	561	0.0000	0.0009	0.0000	0.0000	0.0009	0.0000

Appendix C: Table 6
Scenario 3: 2035 Enhanced Proposed Additional Sanitary Sewer Flows

APN (1)		Address (1)	Sanitary Sewer Sub-Basins	Peaking Factor (2)	Delta Residential Average Daily Flow, GPD (3)	Delta Non-Residential Average Daily Flow, GPD (4)	Residential ADWF, CFS (5)	Non-Residential ADWF, CFS (6)	Residential PDWF, CFS (7)	Non-Residential PDWF, CFS (8)	Total ADWF, CFS	Total PDWF, CFS
063-221-220		867 WEEKS ST, EAST PALO ALTO	T20	0.00	0	799	0.0000	0.0012	0.0000	0.0000	0.0012	0.0000
063-221-230		865 WEEKS ST, EAST PALO ALTO	T20	0.00	0	826	0.0000	0.0013	0.0000	0.0000	0.0013	0.0000
063-221-240		, NO DATA	T20	0.00	0	2,813	0.0000	0.0043	0.0000	0.0000	0.0043	0.0000
063-221-250		831 WEEKS ST, EAST PALO ALTO	T20	0.00	0	818	0.0000	0.0013	0.0000	0.0000	0.0013	0.0000
063-221-260		819 JAMIE LN, EAST PALO ALTO	T20	0.00	0	492	0.0000	0.0008	0.0000	0.0000	0.0008	0.0000
063-221-270		823 JAMIE LN, EAST PALO ALTO	T20	0.00	0	648	0.0000	0.0010	0.0000	0.0000	0.0010	0.0000
063-221-280		827 JAMIE LN, EAST PALO ALTO	T20	0.00	0	835	0.0000	0.0013	0.0000	0.0000	0.0013	0.0000
063-221-290		811 PAUL ROBESON CT, EAST PALO ALTO	T20	0.00	0	506	0.0000	0.0008	0.0000	0.0000	0.0008	0.0000
063-221-300		813 PAUL ROBESON CT, EAST PALO ALTO	T20	0.00	0	428	0.0000	0.0007	0.0000	0.0000	0.0007	0.0000
063-221-310		815 PAUL ROBESON CT, EAST PALO ALTO	T20	0.00	0	462	0.0000	0.0007	0.0000	0.0000	0.0007	0.0000
063-221-320		817 PAUL ROBESON CT, EAST PALO ALTO	T20	0.00	0	468	0.0000	0.0007	0.0000	0.0000	0.0007	0.0000
063-221-340		801 WEEKS ST, EAST PALO ALTO	T20	0.00	0	470	0.0000	0.0007	0.0000	0.0000	0.0007	0.0000
063-221-350		803 PAUL ROBESON CT, EAST PALO ALTO	T20	0.00	0	474	0.0000	0.0007	0.0000	0.0000	0.0007	0.0000
063-221-360		805 PAUL ROBESON CT, EAST PALO ALTO	T20	0.00	0	397	0.0000	0.0006	0.0000	0.0000	0.0006	0.0000
063-221-370		807 PAUL ROBESON CT, EAST PALO ALTO	T20	0.00	0	491	0.0000	0.0008	0.0000	0.0000	0.0008	0.0000
063-221-380		809 PAUL ROBESON CT, EAST PALO ALTO	T20	0.00	0	458	0.0000	0.0007	0.0000	0.0000	0.0007	0.0000
063-221-390		791 WEEKS ST, EAST PALO ALTO	T20	0.00	0	3,813	0.0000	0.0059	0.0000	0.0000	0.0059	0.0000
063-221-410		731 WEEKS ST, EAST PALO ALTO	T20	0.00	0	1,302	0.0000	0.0020	0.0000	0.0000	0.0020	0.0000
063-221-420		717 WEEKS ST, EAST PALO ALTO	T20	0.00	0	957	0.0000	0.0015	0.0000	0.0000	0.0015	0.0000
063-221-430		2360 COOLEY AVE, EAST PALO ALTO	H3	0.00	0	619	0.0000	0.0010	0.0000	0.0000	0.0010	0.0000
063-221-440		2362-2362 COOLEY AVE, EAST PALO ALTO	H3	0.00	0	583	0.0000	0.0009	0.0000	0.0000	0.0009	0.0000
063-221-450		2364 COOLEY AVE, EAST PALO ALTO	H3	0.00	0	681	0.0000	0.0010	0.0000	0.0000	0.0010	0.0000
063-221-460		2370 COOLEY AVE, EAST PALO ALTO	H3	0.00	36,440	5,720	0.0561	0.0088	0.0000	0.0000	0.0649	0.0000
063-221-480		2380 COOLEY AVE, EAST PALO ALTO	H3	0.00	22,962	3,614	0.0354	0.0056	0.0000	0.0000	0.0409	0.0000
063-221-490		, EAST PALO ALTO	A15	0.00	16,498	2,606	0.0254	0.0040	0.0000	0.0000	0.0294	0.0000
063-221-500		863 WEEKS ST, EAST PALO ALTO	T20	0.00	0	561	0.0000	0.0009	0.0000	0.0000	0.0009	0.0000
063-221-510		761 WEEKS ST, EAST PALO ALTO	T20	0.00	0	742	0.0000	0.0011	0.0000	0.0000	0.0011	0.0000
063-221-520		767 CAROLE CT, EAST PALO ALTO	T20	0.00	0	621	0.0000	0.0010	0.0000	0.0000	0.0010	0.0000
063-221-530		773 CAROLE CT, EAST PALO ALTO	T20	0.00	0	563	0.0000	0.0009	0.0000	0.0000	0.0009	0.0000
063-221-540		779 CAROLE CT, EAST PALO ALTO	T20	0.00	0	551	0.0000	0.0008	0.0000	0.0000	0.0008	0.0000
063-221-550		785 CAROLE CT, EAST PALO ALTO	T20	0.00	0	565	0.0000	0.0009	0.0000	0.0000	0.0009	0.0000
063-221-560		1794 BAY RD, EAST PALO ALTO	A15	0.00	11,434	1,805	0.0176	0.0028	0.0000	0.0000	0.0204	0.0000
063-221-570		, EAST PALO ALTO	H3	0.00	3,267	516	0.0050	0.0008	0.0000	0.0000	0.0058	0.0000
063-221-580		, EAST PALO ALTO	H3	0.00	1,416	224	0.0022	0.0003	0.0000	0.0000	0.0025	0.0000
063-221-590		1730 BAY RD, EAST PALO ALTO	A15	0.00	86,607	13,614	0.1334	0.0210	0.0000	0.0000	0.1543	0.0000
063-231-210		2495 PULGAS AVE, EAST PALO ALTO	T20	0.00	0	2,102	0.0000	0.0032	0.0000	0.0000	0.0032	0.0000
063-231-220		1800 BAY RD, EAST PALO ALTO	A15	0.00	0	1,129	0.0000	0.0017	0.0000	0.0000	0.0017	0.0000
063-231-230		1890 BAY RD, EAST PALO ALTO	T20	0.00	0	718	0.0000	0.0011	0.0000	0.0000	0.0011	0.0000
063-231-240		1804 BAY RD, EAST PALO ALTO	A15	0.00	0	4,509	0.0000	0.0069	0.0000	0.0000	0.0069	0.0000
063-231-250		1798 BAY RD, EAST PALO ALTO	A15	0.00	0	6,882	0.0000	0.0106	0.0000	0.0000	0.0106	0.0000
063-231-260		1836 BAY RD, EAST PALO ALTO	T20	0.00	0	7,149	0.0000	0.0110	0.0000	0.0000	0.0110	0.0000
063-231-270		1894 BAY RD, EAST PALO ALTO	T20	0.00	0	484	0.0000	0.0007	0.0000	0.0000	0.0007	0.0000
063-231-280		1896 BAY RD, EAST PALO ALTO	T20	0.00	0	484	0.0000	0.0007	0.0000	0.0000	0.0007	0.0000
063-231-300		, EAST PALO ALTO	T20	0.00	0	1,240	0.0000	0.0019	0.0000	0.0000	0.0019	0.0000
063-232-090		1003 WEEKS ST, EAST PALO ALTO	T20	0.00	0	2,488	0.0000	0.0038	0.0000	0.0000	0.0038	0.0000
063-232-150		2421 PULGAS AVE, EAST PALO ALTO	T20	0.00	0	3,299	0.0000	0.0051	0.0000	0.0000	0.0051	0.0000
063-232-160		2447 PULGAS AVE, EAST PALO ALTO	T20	0.00	0	1,387	0.0000	0.0021	0.0000	0.0000	0.0021	0.0000
063-232-200		2373 CLARKE AVE, EAST PALO ALTO	T20	0.00	13,339	2,106	0.0205	0.0032	0.0000	0.0000	0.0238	0.0000
063-232-210	(9)	WEEKS ST, EAST PALO ALTO	T20	0.00	0	11,564	0.0000	0.0178	0.0000	0.0000	0.0178	0.0000
063-232-220	(9)	WEEKS ST, EAST PALO ALTO	T20	0.00	0	6,560	0.0000	0.0101	0.0000	0.0000	0.0101	0.0000
063-232-230	(9)	WEEKS ST, EAST PALO ALTO	T20	0.00	0	9,065	0.0000	0.0140	0.0000	0.0000	0.0140	0.0000
063-232-240		1045 WEEKS ST, EAST PALO ALTO	T20	0.00	0	4,217	0.0000	0.0065	0.0000	0.0000	0.0065	0.0000
063-232-250		1085 WEEKS ST, EAST PALO ALTO	T20	0.00	0	461	0.0000	0.0007	0.0000	0.0000	0.0007	0.0000
063-232-260		1001 WEEKS ST, EAST PALO ALTO	T20	0.00	0	1,504	0.0000	0.0023	0.0000	0.0000	0.0023	0.0000
063-232-300		1095 WEEKS ST, EAST PALO ALTO	T20	0.00	0	890	0.0000	0.0014	0.0000	0.0000	0.0014	0.0000
063-232-310		2368 CLARKE AVE, EAST PALO ALTO	T20	0.00	8,711	1,375	0.0134	0.0021	0.0000	0.0000	0.0155	0.0000
063-232-340		2386 CLARKE AVE, EAST PALO ALTO	T20	0.00	9,746	1,538	0.0150	0.0024	0.0000	0.0000	0.0174	0.0000
063-232-350		901 WEEKS ST, EAST PALO ALTO	T20	0.00	24,865	3,927	0.0383	0.0060	0.0000	0.0000	0.0443	0.0000
063-240-210		NO DATA, EAST PALO ALTO	T20	0.00	10,716	0	0.0165	0.0000	0.0000	0.0000	0.0165	0.0000
063-240-220		NO DATA, EAST PALO ALTO	T20	0.00	10,237	0	0.0158	0.0000	0.0000	0.0000	0.0158	0.0000
063-240-270		NO DATA, EAST PALO ALTO	T20	0.00	0	746	0.0000	0.0011	0.0000	0.0000	0.0011	0.0000
063-240-310		NO DATA, EAST PALO ALTO	T20	0.00	0	11,779	0.0000	0.0181	0.0000	0.0000	0.0181	0.0000
063-240-320		1950 BAY RD, EAST PALO ALTO	T20	0.00	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
063-240-330		BAY RD, EAST PALO ALTO	T20	0.00	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
063-240-350		NO DATA, EAST PALO ALTO	T20	0.00	1,416	0	0.0022	0.0000	0.0000	0.0000	0.0022	0.0000
063-240-360		NO DATA, EAST PALO ALTO	T20	0.00	0	676	0.0000	0.0010	0.0000	0.0000	0.0010	0.0000
063-240-370		NO DATA, EAST PALO ALTO	T20	0.00	0	766	0.0000	0.0012	0.0000	0.0000	0.0012	0.0000
063-240-380		NO DATA, EAST PALO ALTO	T20	0.00	0	5,853	0.0000	0.0090	0.0000	0.0000	0.0090	0.0000
063-240-390		NO DATA, EAST PALO ALTO	T20	0.00	0	3,986	0.0000	0.0061	0.0000	0.0000	0.0061	0.0000
063-240-420		NO DATA, EAST PALO ALTO	T20	0.00	183,315	0	0.2823	0.0000	0.0000	0.0000	0.2823	0.0000
063-240-440		NO DATA, EAST PALO ALTO	T20	0.00	1,590	0	0.0024	0.0000	0.0000	0.0000	0.0024	0.0000
063-240-460		NO DATA, EAST PALO ALTO	T20	0.00	0	7,694	0.0000	0.0118	0.0000	0.0000	0.0118	0.0000
063-253-320	(9)	NO DATA, EAST PALO ALTO	T20	0.00	0	2,068	0.0000	0.0032	0.0000	0.0000	0.0032	0.0000
063-271-070		1275 RUNNYMEDE ST, EAST PALO ALTO	T20	0.00	0	5,368	0.0000	0.0083	0.0000	0.0000	0.0083	0.0000
063-271-090	(9)	1201 RUNNYMEDE ST, EAST PALO ALTO	T20	0.00	0	4,006	0.0000	0.0062	0.0000	0.0000	0.0062	0.0000
063-271-370		1171 RUNNYMEDE ST, EAST PALO ALTO	T20	0.00	0	3,850	0.0000	0.0059	0.0000	0.0000	0.0059	0.0000
063-271-410		NO DATA, EAST PALO ALTO	T20	0.00	2,438	0	0.0038	0.0000	0.0000	0.0000	0.0038	0.0000
063-271-420		NO DATA, EAST PALO ALTO	T20	0.00	3,462	0	0.0053	0.0000	0.0000	0.0000	0.0053	0.0000
063-271-440		1191 RUNNYMEDE ST, EAST PALO ALTO	T20	0.00	0	635	0.0000	0.0010	0.0000	0.0000	0.0010	0.0000
063-271-450		1200 WEEKS ST, EAST PALO ALTO	T20	0.00	0	3,212	0.0000	0.0049	0.0000	0.0000	0.0049	0.0000
063-271-470		1249 RUNNYMEDE ST, EAST PALO ALTO	T20	0.00	0	941	0.0000	0.0014	0.0000	0.0000	0.0014	0.0000
063-271-480		, EAST PALO ALTO	T20	0.00	45,961	0	0.0708	0.0000	0.0000	0.0000	0.0708	0.0000

Appendix C: Table 6
Scenario 3: 2035 Enhanced Proposed Additional Sanitary Sewer Flows

APN (1)		Address (1)	Sanitary Sewer Sub-Basins	Peaking Factor (2)	Delta Residential Average Daily Flow, GPD (3)	Delta Non-Residential Average Daily Flow, GPD (4)	Residential ADWF, CFS (5)	Non-Residential ADWF, CFS (6)	Residential PDWF, CFS (7)	Non-Residential PDWF, CFS (8)	Total ADWF, CFS	Total PDWF, CFS
063-271-490		NO DATA, EAST PALO ALTO	T20	0.00	59,285	0	0.0913	0.0000	0.0000	0.0000	0.0913	0.0000
063-271-500		1269 RUNNYMEDE ST, EAST PALO ALTO	T20	0.00	0	1,001	0.0000	0.0015	0.0000	0.0000	0.0015	0.0000
063-271-510		1265 RUNNYMEDE ST, EAST PALO ALTO	T20	0.00	0	644	0.0000	0.0010	0.0000	0.0000	0.0010	0.0000
063-271-520		1261 RUNNYMEDE ST, EAST PALO ALTO	T20	0.00	0	653	0.0000	0.0010	0.0000	0.0000	0.0010	0.0000
063-271-530		1257 RUNNYMEDE ST, EAST PALO ALTO	T20	0.00	0	653	0.0000	0.0010	0.0000	0.0000	0.0010	0.0000
063-271-540		NO DATA, EAST PALO ALTO	T20	0.00	6,054	0	0.0093	0.0000	0.0000	0.0000	0.0093	0.0000
063-271-550		NO DATA, EAST PALO ALTO	T20	0.00	2,482	0	0.0038	0.0000	0.0000	0.0000	0.0038	0.0000
063-271-560		NO DATA, EAST PALO ALTO	T20	0.00	2,482	0	0.0038	0.0000	0.0000	0.0000	0.0038	0.0000
063-271-570		NO DATA, EAST PALO ALTO	T29	0.00	2,504	0	0.0039	0.0000	0.0000	0.0000	0.0039	0.0000
063-281-020	(9)	2021 EUCLID AVE	E2	0.00	0	5,284	0.0000	0.0081	0.0000	0.0000	0.0081	0.0000
063-281-030	(9)	2025 EUCLID AVE	E2	0.00	0	4,304	0.0000	0.0066	0.0000	0.0000	0.0066	0.0000
063-281-040	(9)	2031 EUCLID AVE	E2	0.00	0	7,209	0.0000	0.0111	0.0000	0.0000	0.0111	0.0000
063-281-100	(9)	2043 EUCLID AVE	E2	0.00	0	4,304	0.0000	0.0066	0.0000	0.0000	0.0066	0.0000
063-281-110	(9)	2041 EUCLID AVE	E2	0.00	0	4,164	0.0000	0.0064	0.0000	0.0000	0.0064	0.0000
063-282-010	(9)	501 O'CONNOR STREET	E2	0.00	0	11,339	0.0000	0.0175	0.0000	0.0000	0.0175	0.0000
063-282-020	(9)	2012 EUCLID AVE	E2	0.00	0	11,864	0.0000	0.0183	0.0000	0.0000	0.0183	0.0000
063-282-030	(9)	2032 EUCLID AVE	E2	0.00	0	5,669	0.0000	0.0087	0.0000	0.0000	0.0087	0.0000
063-282-040	(9)	2036 EUCLID AVE	E2	0.00	0	5,389	0.0000	0.0083	0.0000	0.0000	0.0083	0.0000
063-282-050	(9)	2040/2042 EUCLID AVE	E2	0.00	0	4,899	0.0000	0.0075	0.0000	0.0000	0.0075	0.0000
063-282-060	(9)	2044 EUCLID AVE	E2	0.00	0	6,194	0.0000	0.0095	0.0000	0.0000	0.0095	0.0000
063-282-070	(9)	2054 EUCLID AVE	E2	0.00	0	8,434	0.0000	0.0130	0.0000	0.0000	0.0130	0.0000
063-282-080	(9)	2033 MANHATTAN AVE, EAST PALO ALTO	E2	0.00	0	17,842	0.0000	0.0275	0.0000	0.0000	0.0275	0.0000
063-282-090	(9)	2001 MANHATTAN AVE, EAST PALO ALTO	E2	0.00	0	24,198	0.0000	0.0373	0.0000	0.0000	0.0373	0.0000
063-291-010		1489 E BAYSHORE RD, EAST PALO ALTO	E2	0.00	9,782	987	0.0151	0.0015	0.0000	0.0000	0.0166	0.0000
063-292-180		2101 UNIVERSITY AVE, EAST PALO ALTO	E2	0.00	17,858	2,819	0.0275	0.0043	0.0000	0.0000	0.0318	0.0000
063-292-370	(9)	2117 UNIVERSITY AVE, EAST PALO ALTO	E2	0.00	41,772	6,593	0.0643	0.0102	0.0000	0.0000	0.0745	0.0000
063-292-380		2160 EUCLID AVE, EAST PALO ALTO	E1	0.00	217,234	85,973	0.3345	0.1324	0.0000	0.0000	0.4669	0.0000
063-302-170		2283 UNIVERSITY AVE, EAST PALO ALTO	E1	0.00	9,102	1,551	0.0140	0.0024	0.0000	0.0000	0.0164	0.0000
063-302-180		2281 UNIVERSITY AVE, EAST PALO ALTO	E1	0.00	7,996	1,363	0.0123	0.0021	0.0000	0.0000	0.0144	0.0000
063-302-210		2263 UNIVERSITY AVE, EAST PALO ALTO	E1	0.00	17,652	3,010	0.0272	0.0046	0.0000	0.0000	0.0318	0.0000
063-302-220		2253 UNIVERSITY AVE, EAST PALO ALTO	E1	0.00	7,982	1,360	0.0123	0.0021	0.0000	0.0000	0.0144	0.0000
063-302-230		2247 UNIVERSITY AVE, EAST PALO ALTO	E1	0.00	11,257	1,919	0.0173	0.0030	0.0000	0.0000	0.0203	0.0000
063-302-280		575A BELL ST, EAST PALO ALTO	E1	0.00	7,475	1,274	0.0115	0.0020	0.0000	0.0000	0.0135	0.0000
063-302-290		565 BELL ST, EAST PALO ALTO	E1	0.00	7,241	1,234	0.0112	0.0019	0.0000	0.0000	0.0131	0.0000
063-302-330		2201 UNIVERSITY AVE, EAST PALO ALTO	E1	0.00	53,811	9,176	0.0829	0.0141	0.0000	0.0000	0.0970	0.0000
063-302-340		584 RUNNYMEDE ST, EAST PALO ALTO	E1	0.00	14,887	2,538	0.0229	0.0039	0.0000	0.0000	0.0268	0.0000
063-302-460		2277 UNIVERSITY AVE, EAST PALO ALTO	E1	0.00	13,568	2,313	0.0209	0.0036	0.0000	0.0000	0.0245	0.0000
063-302-470		2279 UNIVERSITY AVE, EAST PALO ALTO	E1	0.00	8,787	1,498	0.0135	0.0023	0.0000	0.0000	0.0158	0.0000
063-312-400	(9)	, NO DATA	E1	0.00	22,555	0	0.0347	0.0000	0.0000	0.0000	0.0347	0.0000
063-321-050		2124 UNIVERSITY AVE, EAST PALO ALTO	E1	0.00	10,642	1,814	0.0164	0.0028	0.0000	0.0000	0.0192	0.0000
063-321-060		2126 UNIVERSITY AVE, EAST PALO ALTO	E1	0.00	8,711	1,485	0.0134	0.0023	0.0000	0.0000	0.0157	0.0000
063-321-070		, EAST PALO ALTO	E1	0.00	1,984	338	0.0031	0.0005	0.0000	0.0000	0.0036	0.0000
063-321-080		2142 UNIVERSITY AVE, EAST PALO ALTO	E1	0.00	7,127	1,215	0.0110	0.0019	0.0000	0.0000	0.0128	0.0000
063-321-100		2160 UNIVERSITY AVE, EAST PALO ALTO	E1	0.00	13,971	2,381	0.0215	0.0037	0.0000	0.0000	0.0252	0.0000
063-321-110		2164 UNIVERSITY AVE, EAST PALO ALTO	E1	0.00	6,771	1,154	0.0104	0.0018	0.0000	0.0000	0.0122	0.0000
063-321-120		2166 UNIVERSITY AVE, EAST PALO ALTO	E1	0.00	6,660	1,135	0.0103	0.0017	0.0000	0.0000	0.0120	0.0000
063-321-130		2172 UNIVERSITY AVE, EAST PALO ALTO	E1	0.00	6,659	1,135	0.0103	0.0017	0.0000	0.0000	0.0120	0.0000
063-321-140		2178 UNIVERSITY AVE, EAST PALO ALTO	E1	0.00	6,370	1,085	0.0098	0.0017	0.0000	0.0000	0.0115	0.0000
063-321-180		612 BELL ST, EAST PALO ALTO	E1	0.00	4,281	729	0.0066	0.0011	0.0000	0.0000	0.0077	0.0000
063-321-190		616 BELL ST, EAST PALO ALTO	E1	0.00	4,547	775	0.0070	0.0012	0.0000	0.0000	0.0082	0.0000
063-321-200		644 BELL ST, EAST PALO ALTO	E1	0.00	5,728	976	0.0088	0.0015	0.0000	0.0000	0.0103	0.0000
063-321-210		2189 CAPITOL AVE, EAST PALO ALTO	E1	0.00	5,401	920	0.0083	0.0014	0.0000	0.0000	0.0097	0.0000
063-321-220		2187 CAPITOL AVE, EAST PALO ALTO	E1	0.00	4,431	755	0.0068	0.0012	0.0000	0.0000	0.0080	0.0000
063-321-230		2181 CAPITOL AVE, EAST PALO ALTO	E1	0.00	6,625	1,129	0.0102	0.0017	0.0000	0.0000	0.0119	0.0000
063-321-240		2171 CAPITOL AVE, EAST PALO ALTO	E1	0.00	5,775	984	0.0089	0.0015	0.0000	0.0000	0.0104	0.0000
063-321-250		2165 CAPITOL AVE, EAST PALO ALTO	E1	0.00	5,589	952	0.0086	0.0015	0.0000	0.0000	0.0101	0.0000
063-321-260		2161 CAPITOL AVE, EAST PALO ALTO	E1	0.00	5,778	985	0.0089	0.0015	0.0000	0.0000	0.0104	0.0000
063-321-270		2157 CAPITOL AVE, EAST PALO ALTO	E1	0.00	5,849	997	0.0090	0.0015	0.0000	0.0000	0.0105	0.0000
063-321-280		2153 CAPITOL AVE, EAST PALO ALTO	E1	0.00	5,681	968	0.0087	0.0015	0.0000	0.0000	0.0102	0.0000
063-321-290		2149 CAPITOL AVE, EAST PALO ALTO	E1	0.00	5,920	1,009	0.0091	0.0016	0.0000	0.0000	0.0107	0.0000
063-321-300		2145 CAPITOL AVE, EAST PALO ALTO	E1	0.00	5,987	1,020	0.0092	0.0016	0.0000	0.0000	0.0108	0.0000
063-321-310		2141 CAPITOL AVE, EAST PALO ALTO	E1	0.00	5,900	1,005	0.0091	0.0015	0.0000	0.0000	0.0106	0.0000
063-321-320		2133 CAPITOL AVE, EAST PALO ALTO	E1	0.00	5,668	966	0.0087	0.0015	0.0000	0.0000	0.0102	0.0000
063-321-330		2129 CAPITOL AVE, EAST PALO ALTO	E1	0.00	4,006	682	0.0062	0.0011	0.0000	0.0000	0.0072	0.0000
063-321-400		2194 UNIVERSITY AVE, EAST PALO ALTO	E1	0.00	16,236	2,768	0.0250	0.0043	0.0000	0.0000	0.0293	0.0000
063-321-410		2148 UNIVERSITY AVE, EAST PALO ALTO	E1	0.00	9,619	1,640	0.0148	0.0025	0.0000	0.0000	0.0173	0.0000
063-321-420	(9)	, NO DATA	E1	0.00	107,404	0	0.1654	0.0000	0.0000	0.0000	0.1654	0.0000
063-322-040		2124 CAPITOL AVE, EAST PALO ALTO	E1	0.00	0	348	0.0000	0.0005	0.0000	0.0000	0.0005	0.0000
063-322-050		2132 CAPITOL AVE, EAST PALO ALTO	E1	0.00	0	378	0.0000	0.0006	0.0000	0.0000	0.0006	0.0000
063-322-060		2134 CAPITOL AVE, EAST PALO ALTO	E1	0.00	0	349	0.0000	0.0005	0.0000	0.0000	0.0005	0.0000
063-322-070		2138 CAPITOL AVE, EAST PALO ALTO	E1	0.00	0	348	0.0000	0.0005	0.0000	0.0000	0.0005	0.0000
063-322-080		2142 CAPITOL AVE, EAST PALO ALTO	E1	0.00	0	344	0.0000	0.0005	0.0000	0.0000	0.0005	0.0000
063-322-090		2144 CAPITOL AVE, EAST PALO ALTO	E1	0.00	0	362	0.0000	0.0006	0.0000	0.0000	0.0006	0.0000
063-322-100		2154 CAPITOL AVE, EAST PALO ALTO	E1	0.00	0	433	0.0000	0.0007	0.0000	0.0000	0.0007	0.0000
063-322-110		2162 CAPITOL AVE, EAST PALO ALTO	E1	0.00	0	476	0.0000	0.0007	0.0000	0.0000	0.0007	0.0000
063-322-130		2184 CAPITOL AVE, EAST PALO ALTO	E1	0.00	0	424	0.0000	0.0007	0.0000	0.0000	0.0007	0.0000
063-322-140		2194 CAPITOL AVE, EAST PALO ALTO	E1	0.00	0	537	0.0000	0.0008	0.0000	0.0000	0.0008	0.0000
063-322-150		2198 CAPITOL AVE, EAST PALO ALTO	E1	0.00	0	296	0.0000	0.0005	0.0000	0.0000	0.0005	0.0000
063-322-160		660 BELL ST, EAST PALO ALTO	E1	0.00	0	285	0.0000	0.0004	0.0000	0.0000	0.0004	0.0000
063-322-340		2169 COOLEY AVE, EAST PALO ALTO	E1	0.00	0	1,507	0.0000	0.0023	0.0000	0.0000	0.0023	0.0000
063-322-410	(9)	, NO DATA	E1	0.00	11,099	0	0.0171	0.0000	0.0000	0.0000	0.0171	0.0000
063-322-500		2159 COOLEY AVE, EAST PALO ALTO	E1	0.00	0	493	0.0000	0.0008	0.0000	0.0000	0.0008	0.0000

Appendix C: Table 6
Scenario 3: 2035 Enhanced Proposed Additional Sanitary Sewer Flows

APN (1)		Address (1)	Sanitary Sewer Sub-Basins	Peaking Factor (2)	Delta Residential Average Daily Flow, GPD (3)	Delta Non-Residential Average Daily Flow, GPD (4)	Residential ADWF, CFS (5)	Non-Residential ADWF, CFS (6)	Residential PDWF, CFS (7)	Non-Residential PDWF, CFS (8)	Total ADWF, CFS	Total PDWF, CFS
063-322-560	(9)	DONOHOE ST, EAST PALO ALTO	E1	0.00	46,919	0	0.0723	0.0000	0.0000	0.0000	0.0723	0.0000
063-322-580		2118 CAPITOL AVE, EAST PALO ALTO	E1	0.00	0	359	0.0000	0.0006	0.0000	0.0000	0.0006	0.0000
063-331-030		2212 UNIVERSITY AVE, EAST PALO ALTO	E1	0.00	7,655	1,305	0.0118	0.0020	0.0000	0.0000	0.0138	0.0000
063-331-060		2242 UNIVERSITY AVE, EAST PALO ALTO	E1	0.00	6,117	1,042	0.0094	0.0016	0.0000	0.0000	0.0110	0.0000
063-331-070		2248 UNIVERSITY AVE, EAST PALO ALTO	E1	0.00	6,104	1,040	0.0094	0.0016	0.0000	0.0000	0.0110	0.0000
063-331-080		2252 UNIVERSITY AVE, EAST PALO ALTO	E1	0.00	6,091	1,038	0.0094	0.0016	0.0000	0.0000	0.0110	0.0000
063-331-090		2264 UNIVERSITY AVE, EAST PALO ALTO	E1	0.00	6,077	1,035	0.0094	0.0016	0.0000	0.0000	0.0110	0.0000
063-331-100		2268 UNIVERSITY AVE, EAST PALO ALTO	E1	0.00	6,064	1,033	0.0093	0.0016	0.0000	0.0000	0.0109	0.0000
063-331-110		2272 UNIVERSITY AVE, EAST PALO ALTO	E1	0.00	6,051	1,031	0.0093	0.0016	0.0000	0.0000	0.0109	0.0000
063-331-120		2274 UNIVERSITY AVE, EAST PALO ALTO	E1	0.00	8,186	1,395	0.0126	0.0021	0.0000	0.0000	0.0148	0.0000
063-331-130		2276 UNIVERSITY AVE, EAST PALO ALTO	E1	0.00	5,448	928	0.0084	0.0014	0.0000	0.0000	0.0098	0.0000
063-331-140		2280 UNIVERSITY AVE, EAST PALO ALTO	E1	0.00	5,442	927	0.0084	0.0014	0.0000	0.0000	0.0098	0.0000
063-331-150		2284 UNIVERSITY AVE, EAST PALO ALTO	E1	0.00	5,435	926	0.0084	0.0014	0.0000	0.0000	0.0098	0.0000
063-331-190		2291 CAPITOL AVE, EAST PALO ALTO	E1	0.00	5,554	946	0.0086	0.0015	0.0000	0.0000	0.0100	0.0000
063-331-200		2287 CAPITOL AVE, EAST PALO ALTO	E1	0.00	5,591	953	0.0086	0.0015	0.0000	0.0000	0.0101	0.0000
063-331-210		2285 CAPITOL AVE, EAST PALO ALTO	E1	0.00	5,628	959	0.0087	0.0015	0.0000	0.0000	0.0101	0.0000
063-331-220		2277 CAPITOL AVE, EAST PALO ALTO	E1	0.00	5,332	908	0.0082	0.0014	0.0000	0.0000	0.0096	0.0000
063-331-230		2267 CAPITOL AVE, EAST PALO ALTO	E1	0.00	5,119	872	0.0079	0.0013	0.0000	0.0000	0.0092	0.0000
063-331-240		2263 CAPITOL AVE, EAST PALO ALTO	E1	0.00	5,148	877	0.0079	0.0014	0.0000	0.0000	0.0093	0.0000
063-331-250		2255 CAPITOL AVE, EAST PALO ALTO	E1	0.00	5,178	882	0.0080	0.0014	0.0000	0.0000	0.0093	0.0000
063-331-260		2251 CAPITOL AVE, EAST PALO ALTO	E1	0.00	5,207	887	0.0080	0.0014	0.0000	0.0000	0.0094	0.0000
063-331-270		2249 CAPITOL AVE, EAST PALO ALTO	E1	0.00	5,237	892	0.0081	0.0014	0.0000	0.0000	0.0094	0.0000
063-331-280		2245 CAPITOL AVE, EAST PALO ALTO	E1	0.00	5,266	897	0.0081	0.0014	0.0000	0.0000	0.0095	0.0000
063-331-290		2239 CAPITOL AVE, EAST PALO ALTO	E1	0.00	6,725	1,146	0.0104	0.0018	0.0000	0.0000	0.0121	0.0000
063-331-300		2233 CAPITOL AVE, EAST PALO ALTO	E1	0.00	6,807	1,160	0.0105	0.0018	0.0000	0.0000	0.0123	0.0000
063-331-310		2227 CAPITOL AVE, EAST PALO ALTO	E1	0.00	5,529	942	0.0085	0.0015	0.0000	0.0000	0.0100	0.0000
063-331-320		2219 CAPITOL AVE, EAST PALO ALTO	E1	0.00	5,464	931	0.0084	0.0014	0.0000	0.0000	0.0098	0.0000
063-331-330		2217 CAPITOL AVE, EAST PALO ALTO	E1	0.00	4,463	760	0.0069	0.0012	0.0000	0.0000	0.0080	0.0000
063-331-340		2205 CAPITOL AVE, EAST PALO ALTO	E1	0.00	6,150	1,048	0.0095	0.0016	0.0000	0.0000	0.0111	0.0000
063-331-350		643 BELL ST, EAST PALO ALTO	E1	0.00	5,923	1,009	0.0091	0.0016	0.0000	0.0000	0.0107	0.0000
063-331-370		2200 UNIVERSITY AVE, EAST PALO ALTO	E1	0.00	15,311	2,610	0.0236	0.0040	0.0000	0.0000	0.0276	0.0000
063-331-380		2240 UNIVERSITY AVE, EAST PALO ALTO	E1	0.00	9,055	1,543	0.0139	0.0024	0.0000	0.0000	0.0163	0.0000
063-331-410		2220 UNIVERSITY AVE, EAST PALO ALTO	E1	0.00	16,705	2,843	0.0257	0.0044	0.0000	0.0000	0.0301	0.0000
063-442-360	(9)	330 DONOHOE ST, EAST PALO ALTO	E2	0.00	0	4,212	0.0000	0.0065	0.0000	0.0000	0.0065	0.0000
063-473-150	(9)	1995 MANHATTAN AVE, EAST PALO ALTO	E2	0.00	0	711	0.0000	0.0011	0.0000	0.0000	0.0011	0.0000
063-473-160	(9)	1991 MANHATTAN AVE, EAST PALO ALTO	E2	0.00	0	1,616	0.0000	0.0025	0.0000	0.0000	0.0025	0.0000
063-473-170	(9)	1965 MANHATTAN AVE, EAST PALO ALTO	E2	0.00	0	1,193	0.0000	0.0018	0.0000	0.0000	0.0018	0.0000
063-473-180	(9)	1955 MANHATTAN AVE, EAST PALO ALTO	E2	0.00	0	1,434	0.0000	0.0022	0.0000	0.0000	0.0022	0.0000
063-473-190	(9)	1919 MANHATTAN AVE, EAST PALO ALTO	E2	0.00	0	1,948	0.0000	0.0030	0.0000	0.0000	0.0030	0.0000
063-473-200	(9)	1901 MANHATTAN AVE, EAST PALO ALTO	E2	0.00	0	2,488	0.0000	0.0038	0.0000	0.0000	0.0038	0.0000
063-481-010		1699 WOODLAND AVE, EAST PALO ALTO	E2	0.00	0	366	0.0000	0.0006	0.0000	0.0000	0.0006	0.0000
063-481-020		1681 WOODLAND AVE, EAST PALO ALTO	I12	0.00	0	344	0.0000	0.0005	0.0000	0.0000	0.0005	0.0000
063-481-030		1671 WOODLAND AVE, EAST PALO ALTO	I12	0.00	0	359	0.0000	0.0006	0.0000	0.0000	0.0006	0.0000
063-481-040		1669 WOODLAND AVE, EAST PALO ALTO	I12	0.00	0	395	0.0000	0.0006	0.0000	0.0000	0.0006	0.0000
063-481-050		1651 WOODLAND AVE, EAST PALO ALTO	I12	0.00	0	530	0.0000	0.0008	0.0000	0.0000	0.0008	0.0000
063-481-060		1643 WOODLAND AVE, EAST PALO ALTO	I12	0.00	0	402	0.0000	0.0006	0.0000	0.0000	0.0006	0.0000
063-481-070		1637 WOODLAND AVE, EAST PALO ALTO	I12	0.00	0	422	0.0000	0.0007	0.0000	0.0000	0.0007	0.0000
063-481-080		1629 WOODLAND AVE, EAST PALO ALTO	I12	0.00	0	383	0.0000	0.0006	0.0000	0.0000	0.0006	0.0000
063-481-090		1621 WOODLAND AVE, EAST PALO ALTO	I12	0.00	0	362	0.0000	0.0006	0.0000	0.0000	0.0006	0.0000
063-481-100		644 SCOFIELD AVE, EAST PALO ALTO	I12	0.00	0	462	0.0000	0.0007	0.0000	0.0000	0.0007	0.0000
063-481-110		652 SCOFIELD AVE, EAST PALO ALTO	I12	0.00	0	321	0.0000	0.0005	0.0000	0.0000	0.0005	0.0000
063-481-120		660 SCOFIELD AVE, EAST PALO ALTO	I12	0.00	0	395	0.0000	0.0006	0.0000	0.0000	0.0006	0.0000
063-481-130		610 CIRCLE DR, EAST PALO ALTO	I12	0.00	0	395	0.0000	0.0006	0.0000	0.0000	0.0006	0.0000
063-481-140		620 CIRCLE DR, EAST PALO ALTO	I12	0.00	0	414	0.0000	0.0006	0.0000	0.0000	0.0006	0.0000
063-481-150		630 CIRCLE DR, EAST PALO ALTO	I12	0.00	0	386	0.0000	0.0006	0.0000	0.0000	0.0006	0.0000
063-481-160		640 CIRCLE DR, EAST PALO ALTO	I12	0.00	0	398	0.0000	0.0006	0.0000	0.0000	0.0006	0.0000
063-481-170		650 CIRCLE DR, EAST PALO ALTO	I12	0.00	0	460	0.0000	0.0007	0.0000	0.0000	0.0007	0.0000
063-481-180		1917 COOLEY AVE, EAST PALO ALTO	I12	0.00	0	469	0.0000	0.0007	0.0000	0.0000	0.0007	0.0000
063-481-190		1909 COOLEY AVE, EAST PALO ALTO	I12	0.00	0	456	0.0000	0.0007	0.0000	0.0000	0.0007	0.0000
063-481-210		1901 COOLEY AVE, EAST PALO ALTO	I12	0.00	0	440	0.0000	0.0007	0.0000	0.0000	0.0007	0.0000
063-481-220		1905 COOLEY AVE, EAST PALO ALTO	I12	0.00	0	406	0.0000	0.0006	0.0000	0.0000	0.0006	0.0000
063-482-010		641 CIRCLE DR, EAST PALO ALTO	I12	0.00	0	321	0.0000	0.0005	0.0000	0.0000	0.0005	0.0000
063-482-020		621 CIRCLE DR, EAST PALO ALTO	I12	0.00	0	358	0.0000	0.0006	0.0000	0.0000	0.0006	0.0000
063-482-030		611 CIRCLE DR, EAST PALO ALTO	I12	0.00	0	413	0.0000	0.0006	0.0000	0.0000	0.0006	0.0000
063-483-030		1909 CAPITOL AVE, EAST PALO ALTO	I12	0.00	0	495	0.0000	0.0008	0.0000	0.0000	0.0008	0.0000
063-483-040		1943 CAPITOL AVE, EAST PALO ALTO	I12	0.00	0	1,067	0.0000	0.0016	0.0000	0.0000	0.0016	0.0000
063-483-050		1609 WOODLAND AVE, EAST PALO ALTO	I12	0.00	0	2,168	0.0000	0.0033	0.0000	0.0000	0.0033	0.0000
063-484-010		655 SCOFIELD AVE, EAST PALO ALTO	I12	0.00	0	406	0.0000	0.0006	0.0000	0.0000	0.0006	0.0000
063-484-020		1902 CAPITOL AVE, EAST PALO ALTO	I12	0.00	0	496	0.0000	0.0008	0.0000	0.0000	0.0008	0.0000
063-484-030		1908 CAPITOL AVE, EAST PALO ALTO	I12	0.00	0	906	0.0000	0.0014	0.0000	0.0000	0.0014	0.0000
063-484-040		1916 CAPITOL AVE, EAST PALO ALTO	I12	0.00	0	1,406	0.0000	0.0022	0.0000	0.0000	0.0022	0.0000
063-484-050		1920 CAPITOL AVE, EAST PALO ALTO	I12	0.00	0	864	0.0000	0.0013	0.0000	0.0000	0.0013	0.0000
063-484-060		1934 CAPITOL AVE, EAST PALO ALTO	I12	0.00	0	2,326	0.0000	0.0036	0.0000	0.0000	0.0036	0.0000
063-484-090		1949 COOLEY AVE, EAST PALO ALTO	I12	0.00	0	1,318	0.0000	0.0020	0.0000	0.0000	0.0020	0.0000
063-484-100		1941 COOLEY AVE, EAST PALO ALTO	I12	0.00	0	1,463	0.0000	0.0023	0.0000	0.0000	0.0023	0.0000
063-484-110		685 SCOFIELD AVE, EAST PALO ALTO	I12	0.00	0	1,742	0.0000	0.0027	0.0000	0.0000	0.0027	0.0000
063-484-130		1957 COOLEY AVE, EAST PALO ALTO	I12	0.00	0	3,196	0.0000	0.0049	0.0000	0.0000	0.0049	0.0000
063-492-070		1927 E BAYSHORE RD, EAST PALO ALTO	I12	0.00	7,138	1,216	0.0110	0.0019	0.0000	0.0000	0.0129	0.0000
063-492-280		1933 PULGAS AVE, EAST PALO ALTO	K4	0.00	0	4,704	0.0000	0.0072	0.0000	0.0000	0.0072	0.0000
063-492-350	(9)	1805 E BAYSHORE RD #1-94, EAST PALO ALTO	K4	0.00	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
063-492-480		1895 E BAYSHORE RD, EAST PALO ALTO	K4	0.00	9,520	1,623	0.0147	0.0025	0.0000	0.0000	0.0172	0.0000
063-501-020		1874 W BAYSHORE RD, EAST PALO ALTO	K4	0.00	10,817	1,092	0.0167	0.0017	0.0000	0.0000	0.0183	0.0000

Appendix C: Table 6
Scenario 3: 2035 Enhanced Proposed Additional Sanitary Sewer Flows

APN (1)		Address (1)	Sanitary Sewer Sub-Basins	Peaking Factor (2)	Delta Residential Average Daily Flow, GPD (3)	Delta Non-Residential Average Daily Flow, GPD (4)	Residential ADWF, CFS (5)	Non-Residential ADWF, CFS (6)	Residential PDWF, CFS (7)	Non-Residential PDWF, CFS (8)	Total ADWF, CFS	Total PDWF, CFS
063-501-030		1870 W BAYSHORE RD, EAST PALO ALTO	K4	0.00	5,051	509	0.0078	0.0008	0.0000	0.0000	0.0086	0.0000
063-501-040		1879 WOODLAND AVE, EAST PALO ALTO	K4	0.00	5,118	516	0.0079	0.0008	0.0000	0.0000	0.0087	0.0000
063-501-050		1875 WOODLAND AVE, EAST PALO ALTO	K4	0.00	4,455	449	0.0069	0.0007	0.0000	0.0000	0.0076	0.0000
063-511-020		2039 CLARKE AVE, EAST PALO ALTO	K4	0.00	4,697	800	0.0072	0.0012	0.0000	0.0000	0.0085	0.0000
063-511-030		2035 CLARKE AVE, EAST PALO ALTO	I3	0.00	5,093	868	0.0078	0.0013	0.0000	0.0000	0.0092	0.0000
063-511-040		2029 CLARKE AVE, EAST PALO ALTO	I3	0.00	9,896	1,687	0.0152	0.0026	0.0000	0.0000	0.0178	0.0000
063-511-050		2027 CLARKE AVE, EAST PALO ALTO	I3	0.00	4,481	763	0.0069	0.0012	0.0000	0.0000	0.0081	0.0000
063-511-060		2023 CLARKE AVE, EAST PALO ALTO	I3	0.00	5,274	898	0.0081	0.0014	0.0000	0.0000	0.0095	0.0000
063-511-070		2017 CLARKE AVE, EAST PALO ALTO	I3	0.00	4,907	836	0.0076	0.0013	0.0000	0.0000	0.0088	0.0000
063-511-080		2013 CLARKE AVE, EAST PALO ALTO	I3	0.00	4,856	827	0.0075	0.0013	0.0000	0.0000	0.0088	0.0000
063-511-090		2009 CLARKE AVE, EAST PALO ALTO	I3	0.00	4,833	823	0.0074	0.0013	0.0000	0.0000	0.0087	0.0000
063-511-190		872 DONOHOE ST, EAST PALO ALTO	I3	0.00	8,006	1,365	0.0123	0.0021	0.0000	0.0000	0.0144	0.0000
063-511-200		866 DONOHOE ST, EAST PALO ALTO	I3	0.00	6,897	1,175	0.0106	0.0018	0.0000	0.0000	0.0124	0.0000
063-511-210		864 DONOHOE ST, EAST PALO ALTO	I3	0.00	5,843	996	0.0090	0.0015	0.0000	0.0000	0.0105	0.0000
063-511-220		862 DONOHOE ST, EAST PALO ALTO	I3	0.00	4,039	688	0.0062	0.0011	0.0000	0.0000	0.0073	0.0000
063-511-240		896 DONOHOE ST, EAST PALO ALTO	I3	0.00	4,243	723	0.0065	0.0011	0.0000	0.0000	0.0076	0.0000
063-511-250		860 DONOHOE ST, EAST PALO ALTO	I3	0.00	6,144	1,047	0.0095	0.0016	0.0000	0.0000	0.0111	0.0000
063-511-260		890 DONOHOE ST, EAST PALO ALTO	I3	0.00	4,565	778	0.0070	0.0012	0.0000	0.0000	0.0082	0.0000
063-511-490		1731 E BAYSHORE RD, EAST PALO ALTO	I3	0.00	136,864	21,597	0.2108	0.0333	0.0000	0.0000	0.2440	0.0000
063-511-520		1761 E BAYSHORE RD, EAST PALO ALTO	I12	0.00	143,789	22,710	0.2214	0.0350	0.0000	0.0000	0.2564	0.0000
063-511-630		1721 E BAYSHORE RD, EAST PALO ALTO	I12	0.00	36,216	5,703	0.0558	0.0088	0.0000	0.0000	0.0646	0.0000
063-511-660		899 OCONNOR ST, EAST PALO ALTO	I12	0.00	2,871	489	0.0044	0.0008	0.0000	0.0000	0.0052	0.0000
063-511-680		1751 EAST BAYSHORE RD, EAST PALO ALTO	I12	0.00	231,025	36,488	0.3558	0.0562	0.0000	0.0000	0.4120	0.0000
063-511-690		1745 E BAYSHORE BLVD, EAST PALO ALTO	I12	0.00	36,736	5,797	0.0566	0.0089	0.0000	0.0000	0.0655	0.0000
063-511-720		1775 E BAYSHORE RD, EAST PALO ALTO	I12	0.00	333,263	52,631	0.5132	0.0811	0.0000	0.0000	0.5943	0.0000
063-515-060		1821 CLARKE AVE, EAST PALO ALTO	I12	0.00	0	225	0.0000	0.0003	0.0000	0.0000	0.0003	0.0000
063-515-070		1805 CLARKE AVE, EAST PALO ALTO	K4	0.00	0	423	0.0000	0.0007	0.0000	0.0000	0.0007	0.0000
063-515-080		1787 WOODLAND AVE, EAST PALO ALTO	K4	0.00	0	217	0.0000	0.0003	0.0000	0.0000	0.0003	0.0000
063-515-230		1785 WOODLAND AVE, EAST PALO ALTO	K4	0.00	0	422	0.0000	0.0006	0.0000	0.0000	0.0006	0.0000
063-571-060		1985 E BAYSHORE RD, EAST PALO ALTO	K4	0.00	52,596	8,969	0.0810	0.0138	0.0000	0.0000	0.0948	0.0000
063-571-070		1981 E BAYSHORE RD, EAST PALO ALTO	K28	0.00	25,211	4,299	0.0388	0.0066	0.0000	0.0000	0.0454	0.0000
063-571-080		1961 E BAYSHORE RD, EAST PALO ALTO	K28	0.00	54,785	9,342	0.0844	0.0144	0.0000	0.0000	0.0988	0.0000
063-571-090		1905 E BAYSHORE RD, EAST PALO ALTO	K28	0.00	9,438	1,609	0.0145	0.0025	0.0000	0.0000	0.0170	0.0000
063-680-020	(9)	1900 UNIVERSITY AVE, EAST PALO ALTO	K28	0.00	150,722	0	0.2321	0.0000	0.0000	0.0000	0.2321	0.0000
063-680-050	(9)	, NO DATA	E2	0.00	1,551	0	0.0024	0.0000	0.0000	0.0000	0.0024	0.0000
063-680-060	(9)	, NO DATA	E2	0.00	1,551	0	0.0024	0.0000	0.0000	0.0000	0.0024	0.0000
063-680-090	(9)	, EAST PALO ALTO	E2	0.00	8,177	0	0.0126	0.0000	0.0000	0.0000	0.0126	0.0000
063-680-100	(9)	, EAST PALO ALTO	E2	0.00	8,272	0	0.0127	0.0000	0.0000	0.0000	0.0127	0.0000
063-680-110	(9)	, EAST PALO ALTO	E2	0.00	22,594	0	0.0348	0.0000	0.0000	0.0000	0.0348	0.0000
063-680-130	(9)	2000 UNIVERSITY AVE, EAST PALO ALTO	E2	0.00	139,566	0	0.2149	0.0000	0.0000	0.0000	0.2149	0.0000
063-680-150	(9)	2050 UNIVERSITY AVE, EAST PALO ALTO	E2	0.00	218,918	0	0.3371	0.0000	0.0000	0.0000	0.3371	0.0000
063-680-180	(9)	, EAST PALO ALTO	E2	0.00	533	0	0.0008	0.0000	0.0000	0.0000	0.0008	0.0000
063-680-190	(9)	2000 UNIVERSITY AVE, EAST PALO ALTO	E2	0.00	256,075	0	0.3944	0.0000	0.0000	0.0000	0.3944	0.0000
063-730-010		2477 PULGAS AVE, EAST PALO ALTO	E2	0.00	0	200	0.0000	0.0003	0.0000	0.0000	0.0003	0.0000
063-730-020		2477 PULGAS AVE, EAST PALO ALTO	T20	0.00	0	200	0.0000	0.0003	0.0000	0.0000	0.0003	0.0000
063-730-030		2477 PULGAS AVE, EAST PALO ALTO	T20	0.00	0	200	0.0000	0.0003	0.0000	0.0000	0.0003	0.0000
063-730-040		2477 PULGAS AVE, EAST PALO ALTO	T20	0.00	0	200	0.0000	0.0003	0.0000	0.0000	0.0003	0.0000
063-730-050		2477 PULGAS AVE, EAST PALO ALTO	T20	0.00	0	200	0.0000	0.0003	0.0000	0.0000	0.0003	0.0000
063-730-060		2477 PULGAS AVE, EAST PALO ALTO	T20	0.00	0	200	0.0000	0.0003	0.0000	0.0000	0.0003	0.0000
063-730-070		2477 PULGAS AVE, EAST PALO ALTO	T20	0.00	0	200	0.0000	0.0003	0.0000	0.0000	0.0003	0.0000
063-730-080		2477 PULGAS AVE, EAST PALO ALTO	T20	0.00	0	200	0.0000	0.0003	0.0000	0.0000	0.0003	0.0000
063-730-090		2477 PULGAS AVE, EAST PALO ALTO	T20	0.00	0	200	0.0000	0.0003	0.0000	0.0000	0.0003	0.0000
063-730-100		2477 PULGAS AVE, EAST PALO ALTO	T20	0.00	0	200	0.0000	0.0003	0.0000	0.0000	0.0003	0.0000
063-730-110		2477 PULGAS AVE, EAST PALO ALTO	T20	0.00	0	200	0.0000	0.0003	0.0000	0.0000	0.0003	0.0000
063-730-120		2477 PULGAS AVE, EAST PALO ALTO	T20	0.00	0	200	0.0000	0.0003	0.0000	0.0000	0.0003	0.0000
063-730-130		2477 PULGAS AVE, EAST PALO ALTO	T20	0.00	0	200	0.0000	0.0003	0.0000	0.0000	0.0003	0.0000
063-730-140		2477 PULGAS AVE, EAST PALO ALTO	T20	0.00	0	200	0.0000	0.0003	0.0000	0.0000	0.0003	0.0000
063-730-150		2477 PULGAS AVE, EAST PALO ALTO	T20	0.00	0	200	0.0000	0.0003	0.0000	0.0000	0.0003	0.0000
063-730-160		2477 PULGAS AVE, EAST PALO ALTO	T20	0.00	0	200	0.0000	0.0003	0.0000	0.0000	0.0003	0.0000
063-730-170		2477 PULGAS AVE, EAST PALO ALTO	T20	0.00	0	200	0.0000	0.0003	0.0000	0.0000	0.0003	0.0000
063-730-180		2477 PULGAS AVE, EAST PALO ALTO	T20	0.00	0	200	0.0000	0.0003	0.0000	0.0000	0.0003	0.0000
063-730-190		2477 PULGAS AVE, EAST PALO ALTO	T20	0.00	0	200	0.0000	0.0003	0.0000	0.0000	0.0003	0.0000
063-730-200		2477 PULGAS AVE, EAST PALO ALTO	T20	0.00	0	200	0.0000	0.0003	0.0000	0.0000	0.0003	0.0000
063-730-210		2477 PULGAS AVE, EAST PALO ALTO	T20	0.00	0	200	0.0000	0.0003	0.0000	0.0000	0.0003	0.0000
063-730-220		2477 PULGAS AVE, EAST PALO ALTO	T20	0.00	0	200	0.0000	0.0003	0.0000	0.0000	0.0003	0.0000
063-730-230		2477 PULGAS AVE, EAST PALO ALTO	T20	0.00	0	200	0.0000	0.0003	0.0000	0.0000	0.0003	0.0000
063-730-240		2477 PULGAS AVE, EAST PALO ALTO	T20	0.00	0	200	0.0000	0.0003	0.0000	0.0000	0.0003	0.0000
063-730-250		2477 PULGAS AVE, EAST PALO ALTO	T20	0.00	0	200	0.0000	0.0003	0.0000	0.0000	0.0003	0.0000
063-730-260		2477 PULGAS AVE, EAST PALO ALTO	T20	0.00	0	200	0.0000	0.0003	0.0000	0.0000	0.0003	0.0000
063-730-270		2477 PULGAS AVE, EAST PALO ALTO	T20	0.00	0	200	0.0000	0.0003	0.0000	0.0000	0.0003	0.0000
063-730-280		2477 PULGAS AVE, EAST PALO ALTO	T20	0.00	0	200	0.0000	0.0003	0.0000	0.0000	0.0003	0.0000
063-730-290		2477 PULGAS AVE, EAST PALO ALTO	T20	0.00	0	200	0.0000	0.0003	0.0000	0.0000	0.0003	0.0000
063-730-300		2477 PULGAS AVE, EAST PALO ALTO	T20	0.00	0	200	0.0000	0.0003	0.0000	0.0000	0.0003	0.0000
063-730-310		2477 PULGAS AVE, EAST PALO ALTO	T20	0.00	0	200	0.0000	0.0003	0.0000	0.0000	0.0003	0.0000
063-730-320		2477 PULGAS AVE, EAST PALO ALTO	T20	0.00	0	200	0.0000	0.0003	0.0000	0.0000	0.0003	0.0000
063-730-330		2477 PULGAS AVE, EAST PALO ALTO	T20	0.00	0	200	0.0000	0.0003	0.0000	0.0000	0.0003	0.0000
063-730-340		2477 PULGAS AVE, EAST PALO ALTO	T20	0.00	0	200	0.0000	0.0003	0.0000	0.0000	0.0003	0.0000
063-730-350		2477 PULGAS AVE, EAST PALO ALTO	T20	0.00	0	200	0.0000	0.0003	0.0000	0.0000	0.0003	0.0000
063-730-360		2477 PULGAS AVE, EAST PALO ALTO	T20	0.00	0	200	0.0000	0.0003	0.0000	0.0000	0.0003	0.0000
063-730-370		2477 PULGAS AVE, EAST PALO ALTO	T20	0.00	0	200	0.0000	0.0003	0.0000	0.0000	0.0003	0.0000
063-730-380		2477 PULGAS AVE, EAST PALO ALTO	T20	0.00	0	200	0.0000	0.0003	0.0000	0.0000	0.0003	0.0000
063-730-390		2477 PULGAS AVE, EAST PALO ALTO	T20	0.00	0	200	0.0000	0.0003	0.0000	0.0000	0.0003	0.0000

Appendix C: Table 6
Scenario 3: 2035 Enhanced Proposed Additional Sanitary Sewer Flows

APN (1)		Address (1)	Sanitary Sewer Sub-Basins	Peaking Factor (2)	Delta Residential Average Daily Flow, GPD (3)	Delta Non-Residential Average Daily Flow, GPD (4)	Residential ADWF, CFS (5)	Non-Residential ADWF, CFS (6)	Residential PDWF, CFS (7)	Non-Residential PDWF, CFS (8)	Total ADWF, CFS	Total PDWF, CFS
063-730-400		2477 PULGAS AVE, EAST PALO ALTO	T20	0.00	0	200	0.0000	0.0003	0.0000	0.0000	0.0003	0.0000
063-730-410		2477 PULGAS AVE, EAST PALO ALTO	T20	0.00	0	200	0.0000	0.0003	0.0000	0.0000	0.0003	0.0000
063-730-420		2477 PULGAS AVE, EAST PALO ALTO	T20	0.00	0	200	0.0000	0.0003	0.0000	0.0000	0.0003	0.0000
063-730-430		2477 PULGAS AVE, EAST PALO ALTO	T20	0.00	0	200	0.0000	0.0003	0.0000	0.0000	0.0003	0.0000
063-730-440		2477 PULGAS AVE, EAST PALO ALTO	T20	0.00	0	200	0.0000	0.0003	0.0000	0.0000	0.0003	0.0000
063-730-450		2477 PULGAS AVE, EAST PALO ALTO	T20	0.00	0	200	0.0000	0.0003	0.0000	0.0000	0.0003	0.0000
063-730-460		2477 PULGAS AVE, EAST PALO ALTO	T20	0.00	0	200	0.0000	0.0003	0.0000	0.0000	0.0003	0.0000
063-730-470		2477 PULGAS AVE, EAST PALO ALTO	T20	0.00	0	200	0.0000	0.0003	0.0000	0.0000	0.0003	0.0000
063-730-480		2477 PULGAS AVE, EAST PALO ALTO	T20	0.00	0	200	0.0000	0.0003	0.0000	0.0000	0.0003	0.0000
063-730-490		2477 PULGAS AVE, EAST PALO ALTO	T20	0.00	0	200	0.0000	0.0003	0.0000	0.0000	0.0003	0.0000
063-730-500		2477 PULGAS AVE, EAST PALO ALTO	T20	0.00	0	200	0.0000	0.0003	0.0000	0.0000	0.0003	0.0000
063-730-510		2477 PULGAS AVE, EAST PALO ALTO	T20	0.00	0	200	0.0000	0.0003	0.0000	0.0000	0.0003	0.0000
113-530-010 to 113-530-999		2420 GLORIA WAY, EAST PALO ALTO	NEW	0	0	2,029	0.0000	0.0031	0.0000	0.0000	0.0031	0.0000
113-710-010 to 113-710-999		2440 GLORIA WAY, EAST PALO ALTO	NEW	0	0	1,057	0.0000	0.0016	0.0000	0.0000	0.0016	0.0000
113-720-010 to 113-720-999		2460 GLORIA WAY, EAST PALO ALTO	NEW	0	0	890	0.0000	0.0014	0.0000	0.0000	0.0014	0.0000
113-740-010 to 113-740-999		2470 GLORIA WAY, EAST PALO ALTO	NEW	0	0	1,393	0.0000	0.0021	0.0000	0.0000	0.0021	0.0000
114-240-010 to 114-240-300		2330 UNIVERSITY AVE, EAST PALO ALTO	NEW	0	17,563	2,970	0.0270	0.0046	0.0000	0.0000	0.0316	0.0000
114-450-010 to 114-460-300		1765 EAST BAYSHORE RD, EAST PALO ALTO	NEW	0	39,561	6,717	0.0609	0.0103	0.0000	0.0000	0.0713	0.0000
114-590-050		NO DATA, EAST PALO ALTO	T20	0.00	235,877	0	0.3633	0.0000	0.0000	0.0000	0.3633	0.0000

Notes:

(1) Properties that have changed Zoning Figure 4-12: General Plan Land Use and Figure 4-16: Ravenswood / 4 Corners TOP Specific Plan Land Use City of East Palo Alto General Plan "Existing Conditions Report, February 2014" Vs Figure 4-2: General Plan Land Use Designations City of East Palo Alto General Plan "Vista 2035, Final Version: March 2017"

(2) Per Section 5.3.2 of the "East Palo Alto Sanitary District Master Plan Update, March 2015". For modeling scenarios, peak sanitary flows based on the collected data. Collected data for Peaking Factors for each sub-basin are shown in Table 2.

(3) Delta Residential Flows is calculated by taking the Average Daily Flow for Residential areas from Table 3 minus the Average Daily Flow for Residential area from Table 2. If calculation resulted in a decrease of flow, the flow change is shown as "0" because it is not anticipated that the land use changes will result in flow reductions.

(4) Delta Non-Residential Flows is calculated by taking the Average Faily Flow for Non-Residential areas from Table 3 minus the Average Daily Flow for Non-Residential areas from Table 2.

(5) ADWF Residential Dwellings, calculated by multiplying 200 gallons per dwelling unit per day by the total number of units. Based on internal F&L meeting, 2/13/2025. Units converted from GPD (Gallons Per Day) to CFS based off 24 hours in a day, 60 minutes in a hour, and 60 seconds in a minute.

(6) ADWF Non-Residential , calculated by multiplying 0.1 gallons per day per square foot. Based on Section B1.03.3 for Office and Retail of the East Palo Alto Sanitary District Standard Specifications for Design and Construction of Sanitray Collection and Conveyance Facilities dated June 6, 2002. Units converted from GPD (Gallons Per Day) to CFS. Based off 24 hours in a day, 60 minutes in a hour, and 60 seconds in a minute.

(7) PDWF Residential Dwellings, calculated by multiplying Average Dry Weather Flows (5) by the Peaking Factor (2). Units converted from GPD to CFS. Based off 24 hours a day, 60 minutes in a hour, and 60 seconds in a minute.

(8) PDWF Non-Residential, calculated by multiplying Average Dry Weather Flows (6) by the Peaking Factor (2). Units converted from GPD to CFS. Based off 24 hours a day, 60 minutes in a hour, and 60 seconds in a minute.

(9) Number of units planned are approved development projects by the City. Average Daily Flow, Residential is calculated using the known unit count.

Abbreviations

ADWF: Average Dry Weather Flow
APN: Assessors Parcel Number
CFS: Cubic Feet per Second
MGD: Million Gallons Per Day
PDWF: Peak Dry Weather Flow

Appendix C: Table 7
Scenario 3: Summary of Additional Sanitary Sewer Flows

APN		Address	2014 Zoning	2035 Zoning	ADWF Increase (CFS) (1) (2)	PDWF Increase (CFS) (1) (2)
063-103-310		1585 BAY RD, EAST PALO ALTO	Low Density Residential	0	0.0174	0.0277
063-103-360		, EAST PALO ALTO	, EAST PALO ALTO	0	0.0278	0.0443
063-103-370		, EAST PALO ALTO	, EAST PALO ALTO	0	0.0165	0.0263
063-103-380		, EAST PALO ALTO	, EAST PALO ALTO	0	0.0033	0.0052
063-103-390		, EAST PALO ALTO	, EAST PALO ALTO	0	0.0049	0.0078
063-103-440		2400 GLORIA WAY, EAST PALO ALTO	Low Density Residential	0	0.0132	0.0210
063-111-230		BETWEEN 1585 AND 1675 BAY RD, EAST PALO ALTO	Parks/Recreation/Conservation	0	0.0050	0.0079
063-111-250		1675 BAY RD, EAST PALO ALTO	Low Density ResidentialOffice	0	0.1303	0.2076
063-121-030		, EAST PALO ALTO	Industrial Transition	Wholesale/Warehousing	0.0026	0.0039
063-121-040		, EAST PALO ALTO	General Industrial	Wholesale/Warehousing	0.0189	0.0284
063-121-050		TARA RD, EAST PALO ALTO	Industrial Buffer	Wholesale/Warehousing	0.0018	0.0027
063-121-060		264 TARA RD, EAST PALO ALTO	Industrial Buffer	Wholesale/Warehousing	0.0120	0.0180
063-121-070		2081 BAY RD, EAST PALO ALTO	Office	Wholesale/Warehousing	0.0524	0.0786
063-121-110		2077 BAY RD, EAST PALO ALTO	Office	Wholesale/Warehousing	0.0130	0.0195
063-121-120		2005 BAY RD, EAST PALO ALTO	Office	Wholesale/Warehousing	0.0259	0.0388
063-121-150		, EAST PALO ALTO	Industrial Transition	0	0.0030	0.0046
063-121-160		180 TARA ROAD, EAST PALO ALTO	Industrial Transition	0	0.0118	0.0177
063-121-170		240 TARA ROAD, EAST PALO ALTO	Industrial Transition	0	0.0130	0.0195
063-121-190		2560 PULGAS AVE, EAST PALO ALTO	General Industrial	0	0.0031	0.0046
063-121-200		2555 PULGAS AVE, EAST PALO ALTO	General Industrial	0	0.0092	0.0138
063-121-210		2555 PULGAS AVE, EAST PALO ALTO	General Industrial	0	0.0092	0.0138
063-121-240		, EAST PALO ALTO	General Industrial	0	0.0191	0.0304
063-121-290		218 DEMETER ST, EAST PALO ALTO	General Industrial	0	0.0049	0.0078
063-121-320		350 DEMETER ST, EAST PALO ALTO	General Industrial	0	0.0201	0.0320
063-121-330		, EAST PALO ALTO	General Industrial	0	0.0200	0.0319
063-121-350		, EAST PALO ALTO	General Industrial	0	0.0066	0.0099
063-121-360		, EAST PALO ALTO	Industrial Transition	0	0.0004	0.0007
063-121-370		2535 PULGAS AVE, EAST PALO ALTO	General Industrial	0	0.0131	0.0196
063-121-390		, EAST PALO ALTO	Office	Wholesale/Warehousing	0.0063	0.0095
063-121-400		2091 BAY RD, EAST PALO ALTO	Office	Parks/Recreation/Conservation	0.0084	0.0126
063-121-410		2091 BAY RD, EAST PALO ALTO	Office	Wholesale/Warehousing	0.0101	0.0151
063-121-490		, EAST PALO ALTO	Office	Wholesale/Warehousing	0.0198	0.0297
063-121-500		, EAST PALO ALTO	Office	Wholesale/Warehousing	0.0255	0.0382
063-121-510		, EAST PALO ALTO	Office	Wholesale/Warehousing	0.0072	0.0109
063-122-040		1990 BAY RD, EAST PALO ALTO	Office	Wholesale/Warehousing	0.0474	0.0711
063-123-010		351 DEMETER ST, EAST PALO ALTO	Industrial Transition	0	0.0042	0.0063
063-123-030		225 DEMETER ST, EAST PALO ALTO	Industrial Transition	0	0.0027	0.0040
063-123-060		325 DEMETER ST, EAST PALO ALTO	Industrial Transition	0	0.0034	0.0051
063-123-070		245 DEMETER ST, EAST PALO ALTO	Industrial Transition	0	0.0031	0.0046
063-123-080		, EAST PALO ALTO	Industrial Transition	0	0.0003	0.0005
063-131-220	(4)	2519 PULGAS AVE, EAST PALO ALTO	Industrial	0	0.0168	0.0252
063-131-230		, EAST PALO ALTO	Mixed Use Corridor	0	0.0024	0.0036
063-131-240		1885 BAY RD, EAST PALO ALTO	Mixed Use Corridor	0	0.0023	0.0035
063-131-250		1861 BAY RD, EAST PALO ALTO	Mixed Use Corridor	0	0.0031	0.0046
063-131-260		1879 BAY RD, EAST PALO ALTO	Mixed Use Corridor	0	0.0057	0.0086
063-131-270		1873 BAY RD, EAST PALO ALTO	Mixed Use Corridor	0	0.0011	0.0016
063-131-290		140 DEMETER ST, EAST PALO ALTO	General Industrial	0	0.0090	0.0143
063-131-300		, EAST PALO ALTO	Mixed Use Corridor	0	0.0010	0.0015
063-131-310		1891 BAY RD, EAST PALO ALTO	Mixed Use Corridor	0	0.0015	0.0022
063-131-320		1847 BAY RD, EAST PALO ALTO	Mixed Use Corridor	0	0.0022	0.0033
063-131-330		1851 BAY RD, EAST PALO ALTO	Mixed Use Corridor	0	0.0012	0.0018
063-131-340		2509 PULGAS AVE, EAST PALO ALTO	Mixed Use Corridor	0	0.0022	0.0033
063-132-020		151 TARA RD, EAST PALO ALTO	General Industrial	0	0.0006	0.0008
063-132-060		150 TARA RD, EAST PALO ALTO	Industrial Buffer	0	0.0034	0.0051
063-132-090		, EAST PALO ALTO	Industrial Buffer	0	0.0003	0.0005
063-132-110		1923 BAY RD, EAST PALO ALTO	Mixed Use Corridor	0	0.0099	0.0149
063-132-120		1907 BAY RD, EAST PALO ALTO	Mixed Use Corridor	0	0.0016	0.0024
063-132-130		1911 BAY RD, EAST PALO ALTO	Mixed Use Corridor	0	0.0013	0.0020
063-132-140		1905 BAY RD, EAST PALO ALTO	Parks/Recreation/Conservation	0	0.0043	0.0064
063-132-150		2520 PULGAS AVE, EAST PALO ALTO	Mixed Use Corridor	0	0.0095	0.0143
063-132-170		, EAST PALO ALTO	General Industrial	0	0.0017	0.0025
063-132-190		2532 PULGAS AVE, EAST PALO ALTO	General Industrial	0	0.0032	0.0047
063-132-210		2524 PULGAS AVE, EAST PALO ALTO	General Industrial	0	0.0030	0.0046
063-132-220		1987 BAY RD, EAST PALO ALTO	Industrial Buffer	0	0.0124	0.0186
063-133-070		195 DEMETER ST, EAST PALO ALTO	Industrial Transition	0	0.0010	0.0017
063-133-080		175 DEMETER ST, EAST PALO ALTO	Industrial Transition	0	0.0011	0.0017
063-133-090		75 DEMETER ST, EAST PALO ALTO	Industrial Transition	0	0.0009	0.0015
063-133-100		215 DEMETER ST, EAST PALO ALTO	Industrial Transition	0	0.0028	0.0045
063-133-110		, EAST PALO ALTO	Mixed Use Corridor	0	0.0089	0.0141
063-133-130		1805 BAY RD, EAST PALO ALTO	Mixed Use Corridor	0	0.0107	0.0171
063-151-170		2159 POPLAR AVE, EAST PALO ALTO	Commercial	0	0.0009	0.0017
063-151-200		1001 E BAYSHORE RD, EAST PALO ALTO	Commercial	0	0.0005	0.0010
063-152-230		1199 E BAYSHORE RD, EAST PALO ALTO	Commercial	0	0.0017	0.0032
063-153-010		1205 E BAYSHORE RD, EAST PALO ALTO	Commercial	0	0.0008	0.0015
063-153-250		2119 ADDISON AVE, EAST PALO ALTO	Commercial	0	0.0008	0.0015
063-154-200		2110 ADDISON AVE, EAST PALO ALTO	Commercial	0	0.0010	0.0019
063-154-260		2119 OAKWOOD DR, EAST PALO ALTO	Commercial	0	0.0018	0.0033
063-155-010		2106 OAKWOOD DR, EAST PALO ALTO	Commercial	0	0.0012	0.0017
063-155-180		2123 DUMBARTON AVE, EAST PALO ALTO	Commercial	0	0.0008	0.0011
063-155-190		2109 DUMBARTON AVE, EAST PALO ALTO	Commercial	0	0.0012	0.0017
063-181-010		2110 DUMBARTON AVE, EAST PALO ALTO	Commercial	0	0.0015	0.0021
063-181-220		2111 LINCOLN ST, EAST PALO ALTO	Low Density Residential	0	0.0008	0.0012
063-181-230		2097 LINCOLN ST, EAST PALO ALTO	Low Density Residential	0	0.0008	0.0011
063-181-240		1385 E BAYSHORE RD, EAST PALO ALTO	Commercial	0	0.0007	0.0010
063-183-010		2088 LINCOLN ST, EAST PALO ALTO	Commercial	0	0.0008	0.0013

Appendix C: Table 7
Scenario 3: Summary of Additional Sanitary Sewer Flows

APN		Address	2014 Zoning	2035 Zoning	ADWF Increase (CFS) (1) (2)	PDWF Increase (CFS) (1) (2)
063-183-070		2045 GLEN WAY, EAST PALO ALTO	Commercial	0	0.0012	0.0021
063-183-080		1441 E BAYSHORE RD, EAST PALO ALTO	Commercial	0	0.0016	0.0028
063-183-090		, EAST PALO ALTO	Commercial	0	0.0006	0.0010
063-183-110		1401 E BAYSHORE RD 2, EAST PALO ALTO	Commercial	0	0.0014	0.0024
063-184-010		1475 E BAYSHORE RD, EAST PALO ALTO	Commercial	0	0.0016	0.0027
063-184-020		2056 GLEN WAY, EAST PALO ALTO	Low Density Residential	0	0.0014	0.0024
063-184-030		2070 GLEN WAY, EAST PALO ALTO	Low Density Residential	0	0.0012	0.0021
063-184-040		2080 GLEN WAY, EAST PALO ALTO	Low Density Residential	0	0.0013	0.0022
063-201-080		566 SACRAMENTO ST, EAST PALO ALTO	High Density Residential	0	0.0003	0.0006
063-201-090		576 SACRAMENTO ST, EAST PALO ALTO	High Density Residential	0	0.0034	0.0056
063-201-220		2337 UNIVERSITY AVE, EAST PALO ALTO	High Density Residential	0	0.0021	0.0034
063-201-240		2343 UNIVERSITY AVE, EAST PALO ALTO	High Density Residential	0	0.0022	0.0036
063-201-250		RUNNYMEDE ST, EAST PALO ALTO	High Density Residential	0	0.0055	0.0090
063-201-260		RUNNYMEDE ST, EAST PALO ALTO	High Density Residential	0	0.0018	0.0029
063-201-270		578 SACRAMENTO ST, EAST PALO ALTO	High Density Residential	0	0.0023	0.0038
063-201-290	(4)	2331 UNIVERSITY AVE, EAST PALO ALTO	High Density Residential	0	0.0071	0.0117
063-202-080		556 WEEKS ST, EAST PALO ALTO	High Density Residential	0	0.0003	0.0005
063-202-090		564 WEEKS ST, EAST PALO ALTO	High Density Residential	0	0.0003	0.0005
063-202-100		566 WEEKS ST, EAST PALO ALTO	High Density Residential	0	0.0003	0.0005
063-202-160		561 SACRAMENTO ST, EAST PALO ALTO	High Density Residential	0	0.0082	0.0135
063-202-280		2361-2369 UNIVERSITY AVE 101-308, EAST PALO ALTO	High Density Residential	0	0.0161	0.0264
063-203-160		2387 UNIVERSITY AVE, EAST PALO ALTO	Mixed Use High	0	0.0024	0.0039
063-203-170		2381 UNIVERSITY AVE, EAST PALO ALTO	Mixed Use High	0	0.0032	0.0052
063-203-180		2373 UNIVERSITY AVE, EAST PALO ALTO	Mixed Use High	0	0.0039	0.0064
063-203-200		593 WEEKS ST, EAST PALO ALTO	Mixed Use High	0	0.0046	0.0075
063-203-210		585 WEEKS ST, EAST PALO ALTO	Commercial	0	0.0032	0.0052
063-203-220		579 WEEKS ST, EAST PALO ALTO	Commercial	0	0.0003	0.0004
063-203-230		563 WEEKS ST, EAST PALO ALTO	Commercial	0	0.0008	0.0013
063-203-240		549 WEEKS ST, EAST PALO ALTO	Commercial	0	0.0003	0.0004
063-203-250		541 WEEKS ST, EAST PALO ALTO	Commercial	0	0.0003	0.0004
063-203-260		533 WEEKS ST, EAST PALO ALTO	Commercial	0	0.0003	0.0004
063-203-270		, EAST PALO ALTO	Commercial	0	0.0002	0.0004
063-203-300		2395 UNIVERSITY AVE, EAST PALO ALTO	Mixed Use High	0	0.0038	0.0063
063-203-310		2371 UNIVERSITY AVE, EAST PALO ALTO	Mixed Use High	0	0.0014	0.0024
063-203-320		1586 BAY RD, EAST PALO ALTO	Mixed Use High	0	0.0038	0.0061
063-203-330		1590 BAY RD, EAST PALO ALTO	Mixed Use High	0	0.0060	0.0095
063-203-340		2387 UNIVERSITY AVE, EAST PALO ALTO	Mixed Use High	0	0.0043	0.0071
063-203-350		1574 BAY RD, EAST PALO ALTO	Commercial	0	0.0006	0.0009
063-203-360		1546 BAY RD, EAST PALO ALTO	Commercial	0	0.0005	0.0008
063-203-370		1508 BAY RD, EAST PALO ALTO	Commercial	0	0.0009	0.0014
063-203-380		, NO DATA	Commercial	0	0.0004	0.0006
063-203-390		1518 BAY RD, EAST PALO ALTO	Commercial	0	0.0011	0.0018
063-203-400		1560 BAY RD, EAST PALO ALTO	Commercial	0	0.0005	0.0008
063-203-410		1568 BAY RD, EAST PALO ALTO	Commercial	0	0.0005	0.0008
063-203-430		1530 BAY RD, EAST PALO ALTO	Commercial	0	0.0005	0.0008
063-203-440		1554 BAY RD, EAST PALO ALTO	Commercial	0	0.0005	0.0007
063-203-450		1538 BAY RD, EAST PALO ALTO	Commercial	0	0.0005	0.0008
063-210-310		2346 UNIVERSITY AVE, EAST PALO ALTO	High Density Residential	0	0.0033	0.0054
063-210-340		2369 COOLEY AVE, EAST PALO ALTO	Commercial	0	0.0008	0.0013
063-210-350		2365 COOLEY AVE, EAST PALO ALTO	Commercial	0	0.0008	0.0013
063-210-360		2300 UNIVERSITY AVE, EAST PALO ALTO	High Density Residential	0	0.0032	0.0052
063-210-380		2354 UNIVERSITY AVE, EAST PALO ALTO	High Density Residential	0	0.0027	0.0045
063-210-410		2371 COOLEY AVE, EAST PALO ALTO	Commercial	0	0.0018	0.0029
063-210-450		2377 COOLEY AVE, EAST PALO ALTO	Commercial	0	0.0014	0.0022
063-210-460		2396 UNIVERSITY AVE, EAST PALO ALTO	Mixed Use High	0	0.0051	0.0084
063-210-470		633 RUNNYMEDE ST, EAST PALO ALTO	High Density Residential	0	0.0018	0.0029
063-210-480		2361 COOLEY AVE, EAST PALO ALTO	Commercial	0	0.0010	0.0017
063-210-490		2355 COOLEY AVE, EAST PALO ALTO	Commercial	0	0.0011	0.0018
063-210-520		2338 UNIVERSITY AVE, EAST PALO ALTO	High Density Residential	0	0.0034	0.0056
063-210-610		661 RUNNYMEDE ST, EAST PALO ALTO	High Density Residential	0	0.0037	0.0060
063-210-630		2358 UNIVERSITY AVE, EAST PALO ALTO	Commercial	0	0.0028	0.0046
063-221-010		, EAST PALO ALTO	Mixed Use High	0	0.0054	0.0086
063-221-020		1620 BAY RD, EAST PALO ALTO	Mixed Use High	0	0.0090	0.0144
063-221-030		, EAST PALO ALTO	Mixed Use High	0	0.0027	0.0043
063-221-040		1640 BAY RD, EAST PALO ALTO	Mixed Use High	0	0.0142	0.0226
063-221-050		1650 BAY RD, EAST PALO ALTO	Mixed Use High	0	0.0040	0.0063
063-221-060		1660 BAY RD, EAST PALO ALTO	Mixed Use High	0	0.0091	0.0144
063-221-070		1670 BAY RD, EAST PALO ALTO	Mixed Use High	0	0.0084	0.0134
063-221-100		1760 BAY RD, EAST PALO ALTO	Mixed Use High	0	0.0226	0.0361
063-221-110		1796 BAY RD, EAST PALO ALTO	Mixed Use High	0	0.0223	0.0355
063-221-140		2397 CLARKE AVE, EAST PALO ALTO	Mixed Use High	0	0.0027	0.0040
063-221-150		2387 CLARKE AVE, EAST PALO ALTO	Mixed Use High	0	0.0029	0.0043
063-221-160		2377 CLARKE AVE, EAST PALO ALTO	Mixed Use High	0	0.0032	0.0048
063-221-170		2373 CLARKE AVE, EAST PALO ALTO	Mixed Use High	0	0.0029	0.0043
063-221-180		2371 CLARKE AVE, EAST PALO ALTO	Low Density Residential	0	0.0009	0.0013
063-221-190		2369 CLARKE AVE, EAST PALO ALTO	Low Density Residential	0	0.0010	0.0015
063-221-200		891 WEEKS ST, EAST PALO ALTO	Low Density Residential	0	0.0019	0.0029
063-221-210		871 WEEKS ST, EAST PALO ALTO	Low Density Residential	0	0.0009	0.0013
063-221-220		867 WEEKS ST, EAST PALO ALTO	Low Density Residential	0	0.0012	0.0018
063-221-230		865 WEEKS ST, EAST PALO ALTO	Low Density Residential	0	0.0013	0.0019
063-221-240		, NO DATA	Low Density Residential	0	0.0043	0.0065
063-221-250		831 WEEKS ST, EAST PALO ALTO	Low Density Residential	0	0.0013	0.0019
063-221-260		819 JAMIE LN, EAST PALO ALTO	Low Density Residential	0	0.0008	0.0011

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Scenario 3: Summary of Additional Sanitary Sewer Flows

APN		Address	2014 Zoning	2035 Zoning	ADWF Increase (CFS) (1) (2)	PDWF Increase (CFS) (1) (2)
063-221-270		823 JAMIE LN, EAST PALO ALTO	Low Density Residential	0	0.0010	0.0015
063-221-280		827 JAMIE LN, EAST PALO ALTO	Low Density Residential	0	0.0013	0.0019
063-221-290		811 PAUL ROBESON CT, EAST PALO ALTO	Low Density Residential	0	0.0008	0.0012
063-221-300		813 PAUL ROBESON CT, EAST PALO ALTO	Low Density Residential	0	0.0007	0.0010
063-221-310		815 PAUL ROBESON CT, EAST PALO ALTO	Low Density Residential	0	0.0007	0.0011
063-221-320		817 PAUL ROBESON CT, EAST PALO ALTO	Low Density Residential	0	0.0007	0.0011
063-221-340		801 WEEKS ST, EAST PALO ALTO	Low Density Residential	0	0.0007	0.0011
063-221-350		803 PAUL ROBESON CT, EAST PALO ALTO	Low Density Residential	0	0.0007	0.0011
063-221-360		805 PAUL ROBESON CT, EAST PALO ALTO	Low Density Residential	0	0.0006	0.0009
063-221-370		807 PAUL ROBESON CT, EAST PALO ALTO	Low Density Residential	0	0.0008	0.0011
063-221-380		809 PAUL ROBESON CT, EAST PALO ALTO	Low Density Residential	0	0.0007	0.0011
063-221-390		791 WEEKS ST, EAST PALO ALTO	Low Density Residential	0	0.0059	0.0088
063-221-410		731 WEEKS ST, EAST PALO ALTO	Low Density Residential	0	0.0020	0.0030
063-221-420		717 WEEKS ST, EAST PALO ALTO	Low Density Residential	0	0.0015	0.0022
063-221-430		2360 COOLEY AVE, EAST PALO ALTO	Low Density Residential	0	0.0010	0.0016
063-221-440		2362-2362 COOLEY AVE, EAST PALO ALTO	Low Density Residential	0	0.0009	0.0015
063-221-450		2364 COOLEY AVE, EAST PALO ALTO	Low Density Residential	0	0.0010	0.0017
063-221-460		2370 COOLEY AVE, EAST PALO ALTO	Mixed Use High	0	0.0144	0.0237
063-221-480		2380 COOLEY AVE, EAST PALO ALTO	Mixed Use High	0	0.0091	0.0150
063-221-490		, EAST PALO ALTO	Mixed Use High	0	0.0066	0.0104
063-221-500		863 WEEKS ST, EAST PALO ALTO	Low Density Residential	0	0.0009	0.0013
063-221-510		761 WEEKS ST, EAST PALO ALTO	Low Density Residential	0	0.0011	0.0017
063-221-520		767 CAROLE CT, EAST PALO ALTO	Low Density Residential	0	0.0010	0.0014
063-221-530		773 CAROLE CT, EAST PALO ALTO	Low Density Residential	0	0.0009	0.0013
063-221-540		779 CAROLE CT, EAST PALO ALTO	Low Density Residential	0	0.0008	0.0013
063-221-550		785 CAROLE CT, EAST PALO ALTO	Low Density Residential	0	0.0009	0.0013
063-221-560		1794 BAY RD, EAST PALO ALTO	Mixed Use High	0	0.0045	0.0072
063-221-570		, EAST PALO ALTO	Mixed Use High	0	0.0013	0.0021
063-221-580		, EAST PALO ALTO	Mixed Use High	0	0.0006	0.0009
063-221-590		1730 BAY RD, EAST PALO ALTO	Mixed Use High	0	0.0343	0.0547
063-231-210		2495 PULGAS AVE, EAST PALO ALTO	Mixed Use Corridor	0	0.0032	0.0049
063-231-220		1800 BAY RD, EAST PALO ALTO	Office	0	0.0017	0.0028
063-231-230		1890 BAY RD, EAST PALO ALTO	Mixed Use Corridor	0	0.0011	0.0017
063-231-240		1804 BAY RD, EAST PALO ALTO	Office	0	0.0069	0.0111
063-231-250		1798 BAY RD, EAST PALO ALTO	Office	0	0.0106	0.0169
063-231-260		1836 BAY RD, EAST PALO ALTO	Mixed Use Corridor	0	0.0110	0.0165
063-231-270		1894 BAY RD, EAST PALO ALTO	Mixed Use Corridor	0	0.0007	0.0011
063-231-280		1896 BAY RD, EAST PALO ALTO	Mixed Use Corridor	0	0.0007	0.0011
063-231-300		, EAST PALO ALTO	Mixed Use Corridor	0	0.0019	0.0029
063-232-090		1003 WEEKS ST, EAST PALO ALTO	Office	0	0.0038	0.0057
063-232-150		2421 PULGAS AVE, EAST PALO ALTO	Office	0	0.0051	0.0076
063-232-160		2447 PULGAS AVE, EAST PALO ALTO	Office	0	0.0021	0.0032
063-232-200		2373 CLARKE AVE, EAST PALO ALTO	Mixed Use Corridor	0	0.0053	0.0079
063-232-210	(4)	WEEKS ST, EAST PALO ALTO	(4)	(4)	0.0178	0.0267
063-232-220	(4)	WEEKS ST, EAST PALO ALTO	(4)	(4)	0.0101	0.0152
063-232-230	(4)	WEEKS ST, EAST PALO ALTO	(4)	(4)	0.0140	0.0209
063-232-240		1045 WEEKS ST, EAST PALO ALTO	Office	0	0.0065	0.0097
063-232-250		1085 WEEKS ST, EAST PALO ALTO	Office	0	0.0007	0.0011
063-232-260		1001 WEEKS ST, EAST PALO ALTO	Office	0	0.0023	0.0035
063-232-300		1095 WEEKS ST, EAST PALO ALTO	Office	0	0.0014	0.0021
063-232-310		2368 CLARKE AVE, EAST PALO ALTO	Mixed Use High	0	0.0035	0.0052
063-232-340		2386 CLARKE AVE, EAST PALO ALTO	Mixed Use High	0	0.0039	0.0058
063-232-350		901 WEEKS ST, EAST PALO ALTO	Office	0	0.0099	0.0148
063-240-210		NO DATA, EAST PALO ALTO	General Industrial	0	0.0017	0.0025
063-240-220		NO DATA, EAST PALO ALTO	General Industrial	0	0.0016	0.0024
063-240-270		NO DATA, EAST PALO ALTO	General Industrial	0	0.0011	0.0017
063-240-310		NO DATA, EAST PALO ALTO	General Industrial	0	0.0181	0.0272
063-240-320		1950 BAY RD, EAST PALO ALTO	Mixed Use Corridor	0	0.0151	0.0227
063-240-330		BAY RD, EAST PALO ALTO	Mixed Use Corridor	0	0.0044	0.0066
063-240-350		NO DATA, EAST PALO ALTO	General Industrial	0	0.0002	0.0003
063-240-360		NO DATA, EAST PALO ALTO	General Industrial	0	0.0010	0.0016
063-240-370		NO DATA, EAST PALO ALTO	General Industrial	0	0.0012	0.0018
063-240-380		NO DATA, EAST PALO ALTO	General Industrial	0	0.0090	0.0135
063-240-390		NO DATA, EAST PALO ALTO	General Industrial	0	0.0061	0.0092
063-240-420		NO DATA, EAST PALO ALTO	General Industrial	0	0.0282	0.0423
063-240-440		NO DATA, EAST PALO ALTO	General Industrial	0	0.0002	0.0004
063-240-460		NO DATA, EAST PALO ALTO	General Industrial	0	0.0118	0.0178
063-253-320	(4)	NO DATA, EAST PALO ALTO	(4)	(4)	0.0032	0.0048
063-271-070		1275 RUNNYMEDE ST, EAST PALO ALTO	High Density Residential	0	0.0083	0.0124
063-271-090	(4)	1201 RUNNYMEDE ST, EAST PALO ALTO	High Density Residential	0	0.0062	0.0093
063-271-370		1171 RUNNYMEDE ST, EAST PALO ALTO	Low Density Residential	0	0.0059	0.0089
063-271-410		NO DATA, EAST PALO ALTO	Industrial	0	0.0004	0.0006
063-271-420		NO DATA, EAST PALO ALTO	Industrial Transition	0	0.0005	0.0008
063-271-440		1191 RUNNYMEDE ST, EAST PALO ALTO	High Density Residential	0	0.0010	0.0015
063-271-450		1200 WEEKS ST, EAST PALO ALTO	High Density Residential	0	0.0049	0.0074
063-271-470		1249 RUNNYMEDE ST, EAST PALO ALTO	High Density Residential	0	0.0014	0.0022
063-271-480		, EAST PALO ALTO	Parks/Recreation/Conservation	0	0.0071	0.0106
063-271-490		NO DATA, EAST PALO ALTO	Industrial Transition	0	0.0091	0.0137
063-271-500		1269 RUNNYMEDE ST, EAST PALO ALTO	High Density Residential	0	0.0015	0.0023
063-271-510		1265 RUNNYMEDE ST, EAST PALO ALTO	High Density Residential	0	0.0010	0.0015
063-271-520		1261 RUNNYMEDE ST, EAST PALO ALTO	High Density Residential	0	0.0010	0.0015
063-271-530		1257 RUNNYMEDE ST, EAST PALO ALTO	High Density Residential	0	0.0010	0.0015
063-271-540		NO DATA, EAST PALO ALTO	Industrial Transition	0	0.0009	0.0014
063-271-550		NO DATA, EAST PALO ALTO	Industrial Transition	0	0.0004	0.0006
063-271-560		NO DATA, EAST PALO ALTO	Industrial Transition	0	0.0004	0.0006

Appendix C: Table 7
Scenario 3: Summary of Additional Sanitary Sewer Flows

APN		Address	2014 Zoning	2035 Zoning	ADWF Increase (CFS) (1) (2)	PDWF Increase (CFS) (1) (2)
063-271-570		NO DATA, EAST PALO ALTO	Industrial Transition	0	0.0004	0.0000
063-281-020	(4)	2021 EUCLID AVE	(4)	(4)	0.0081	0.0140
063-281-030	(4)	2025 EUCLID AVE	(4)	(4)	0.0066	0.0114
063-281-040	(4)	2031 EUCLID AVE	(4)	(4)	0.0111	0.0191
063-281-100	(4)	2043 EUCLID AVE	(4)	(4)	0.0066	0.0114
063-281-110	(4)	2041 EUCLID AVE	(4)	(4)	0.0064	0.0110
063-282-010	(4)	501 O'CONNOR STREET	(4)	(4)	0.0175	0.0300
063-282-020	(4)	2012 EUCLID AVE	(4)	(4)	0.0183	0.0314
063-282-030	(4)	2032 EUCLID AVE	(4)	(4)	0.0087	0.0150
063-282-040	(4)	2036 EUCLID AVE	(4)	(4)	0.0083	0.0143
063-282-050	(4)	2040/2042 EUCLID AVE	(4)	(4)	0.0075	0.0130
063-282-060	(4)	2044 EUCLID AVE	(4)	(4)	0.0095	0.0164
063-282-070	(4)	2054 EUCLID AVE	(4)	(4)	0.0130	0.0223
063-282-080	(4)	2033 MANHATTAN AVE, EAST PALO ALTO	(4)	(4)	0.0275	0.0473
063-282-090	(4)	2001 MANHATTAN AVE, EAST PALO ALTO	(4)	(4)	0.0373	0.0641
063-291-010		1489 E BAYSHORE RD, EAST PALO ALTO	Commercial	0	0.0030	0.0052
063-292-180		2101 UNIVERSITY AVE, EAST PALO ALTO	Commercial	0	0.0071	0.0122
063-292-370	(4)	2117 UNIVERSITY AVE, EAST PALO ALTO	Office, High Density Residential	0	0.0166	0.0285
063-292-380		2160 EUCLID AVE, EAST PALO ALTO	(4)	(4)	0.1659	0.2424
063-302-170		2283 UNIVERSITY AVE, EAST PALO ALTO	Office	0	0.0038	0.0055
063-302-180		2281 UNIVERSITY AVE, EAST PALO ALTO	Office	0	0.0033	0.0049
063-302-210		2263 UNIVERSITY AVE, EAST PALO ALTO	Office	0	0.0074	0.0107
063-302-220		2253 UNIVERSITY AVE, EAST PALO ALTO	Office	0	0.0033	0.0049
063-302-230		2247 UNIVERSITY AVE, EAST PALO ALTO	Office	0	0.0047	0.0069
063-302-280		575A BELL ST, EAST PALO ALTO	Office	0	0.0031	0.0046
063-302-290		565 BELL ST, EAST PALO ALTO	Office	0	0.0030	0.0044
063-302-330		2201 UNIVERSITY AVE, EAST PALO ALTO	Office	0	0.0224	0.0328
063-302-340		584 RUNNYMEDE ST, EAST PALO ALTO	Office	0	0.0062	0.0091
063-302-460		2277 UNIVERSITY AVE, EAST PALO ALTO	Office	0	0.0057	0.0083
063-302-470		2279 UNIVERSITY AVE, EAST PALO ALTO	Office	0	0.0037	0.0053
063-312-400	(4)	, NO DATA	Commercial	0	0.0035	0.0051
063-321-050		2124 UNIVERSITY AVE, EAST PALO ALTO	Commercial	0	0.0044	0.0065
063-321-060		2126 UNIVERSITY AVE, EAST PALO ALTO	Commercial	0	0.0036	0.0053
063-321-070		, EAST PALO ALTO	Commercial	0	0.0008	0.0012
063-321-080		2142 UNIVERSITY AVE, EAST PALO ALTO	Commercial	0	0.0030	0.0043
063-321-100		2160 UNIVERSITY AVE, EAST PALO ALTO	Commercial	0	0.0058	0.0085
063-321-110		2164 UNIVERSITY AVE, EAST PALO ALTO	Commercial	0	0.0028	0.0041
063-321-120		2166 UNIVERSITY AVE, EAST PALO ALTO	Commercial	0	0.0028	0.0041
063-321-130		2172 UNIVERSITY AVE, EAST PALO ALTO	Commercial	0	0.0028	0.0041
063-321-140		2178 UNIVERSITY AVE, EAST PALO ALTO	Commercial	0	0.0027	0.0039
063-321-180		612 BELL ST, EAST PALO ALTO	Commercial	0	0.0018	0.0026
063-321-190		616 BELL ST, EAST PALO ALTO	Commercial	0	0.0019	0.0028
063-321-200		644 BELL ST, EAST PALO ALTO	Commercial	0	0.0024	0.0035
063-321-210		2189 CAPITOL AVE, EAST PALO ALTO	Commercial	0	0.0022	0.0033
063-321-220		2187 CAPITOL AVE, EAST PALO ALTO	Commercial	0	0.0018	0.0027
063-321-230		2181 CAPITOL AVE, EAST PALO ALTO	Commercial	0	0.0028	0.0040
063-321-240		2171 CAPITOL AVE, EAST PALO ALTO	Commercial	0	0.0024	0.0035
063-321-250		2165 CAPITOL AVE, EAST PALO ALTO	Commercial	0	0.0023	0.0034
063-321-260		2161 CAPITOL AVE, EAST PALO ALTO	Commercial	0	0.0024	0.0035
063-321-270		2157 CAPITOL AVE, EAST PALO ALTO	Commercial	0	0.0024	0.0036
063-321-280		2153 CAPITOL AVE, EAST PALO ALTO	Commercial	0	0.0024	0.0035
063-321-290		2149 CAPITOL AVE, EAST PALO ALTO	Commercial	0	0.0025	0.0036
063-321-300		2145 CAPITOL AVE, EAST PALO ALTO	Commercial	0	0.0025	0.0036
063-321-310		2141 CAPITOL AVE, EAST PALO ALTO	Commercial	0	0.0025	0.0036
063-321-320		2133 CAPITOL AVE, EAST PALO ALTO	Commercial	0	0.0024	0.0034
063-321-330		2129 CAPITOL AVE, EAST PALO ALTO	Commercial	0	0.0017	0.0024
063-321-400		2194 UNIVERSITY AVE, EAST PALO ALTO	Commercial	0	0.0068	0.0099
063-321-410		2148 UNIVERSITY AVE, EAST PALO ALTO	Commercial	0	0.0040	0.0059
063-321-420	(4)	, NO DATA	Commercial	0	0.0165	0.0242
063-322-040		2124 CAPITOL AVE, EAST PALO ALTO	Commercial	0	0.0005	0.0008
063-322-050		2132 CAPITOL AVE, EAST PALO ALTO	Commercial	0	0.0006	0.0009
063-322-060		2134 CAPITOL AVE, EAST PALO ALTO	Commercial	0	0.0005	0.0008
063-322-070		2138 CAPITOL AVE, EAST PALO ALTO	Commercial	0	0.0005	0.0008
063-322-080		2142 CAPITOL AVE, EAST PALO ALTO	Commercial	0	0.0005	0.0008
063-322-090		2144 CAPITOL AVE, EAST PALO ALTO	Commercial	0	0.0006	0.0008
063-322-100		2154 CAPITOL AVE, EAST PALO ALTO	Commercial	0	0.0007	0.0010
063-322-110		2162 CAPITOL AVE, EAST PALO ALTO	Commercial	0	0.0007	0.0011
063-322-130		2184 CAPITOL AVE, EAST PALO ALTO	Commercial	0	0.0007	0.0010
063-322-140		2194 CAPITOL AVE, EAST PALO ALTO	Commercial	0	0.0008	0.0012
063-322-150		2198 CAPITOL AVE, EAST PALO ALTO	Commercial	0	0.0005	0.0007
063-322-160		660 BELL ST, EAST PALO ALTO	Commercial	0	0.0004	0.0006
063-322-340		2169 COOLEY AVE, EAST PALO ALTO	Commercial	0	0.0023	0.0034
063-322-410	(4)	, NO DATA	High Density Residential	0	0.0017	0.0025
063-322-500		2159 COOLEY AVE, EAST PALO ALTO	Commercial	0	0.0008	0.0011
063-322-560	(4)	DONOHOE ST, EAST PALO ALTO	High Density Residential	0	0.0072	0.0106
063-322-580		2118 CAPITOL AVE, EAST PALO ALTO	Commercial	0	0.0006	0.0008
063-331-030		2212 UNIVERSITY AVE, EAST PALO ALTO	Commercial	0	0.0032	0.0047
063-331-060		2242 UNIVERSITY AVE, EAST PALO ALTO	Commercial	0	0.0025	0.0037
063-331-070		2248 UNIVERSITY AVE, EAST PALO ALTO	Commercial	0	0.0025	0.0037
063-331-080		2252 UNIVERSITY AVE, EAST PALO ALTO	Commercial	0	0.0025	0.0037
063-331-090		2264 UNIVERSITY AVE, EAST PALO ALTO	Commercial	0	0.0025	0.0037
063-331-100		2268 UNIVERSITY AVE, EAST PALO ALTO	Commercial	0	0.0025	0.0037
063-331-110		2272 UNIVERSITY AVE, EAST PALO ALTO	Commercial	0	0.0025	0.0037
063-331-120		2274 UNIVERSITY AVE, EAST PALO ALTO	Commercial	0	0.0034	0.0050
063-331-130		2276 UNIVERSITY AVE, EAST PALO ALTO	Commercial	0	0.0023	0.0033

Appendix C: Table 7
Scenario 3: Summary of Additional Sanitary Sewer Flows

APN		Address	2014 Zoning	2035 Zoning	ADWF Increase (CFS) (1) (2)	PDWF Increase (CFS) (1) (2)
063-331-140		2280 UNIVERSITY AVE, EAST PALO ALTO	Commercial	0	0.0023	0.0033
063-331-150		2284 UNIVERSITY AVE, EAST PALO ALTO	Commercial	0	0.0023	0.0033
063-331-190		2291 CAPITOL AVE, EAST PALO ALTO	Commercial	0	0.0023	0.0034
063-331-200		2287 CAPITOL AVE, EAST PALO ALTO	Commercial	0	0.0023	0.0034
063-331-210		2285 CAPITOL AVE, EAST PALO ALTO	Commercial	0	0.0023	0.0034
063-331-220		2277 CAPITOL AVE, EAST PALO ALTO	Commercial	0	0.0022	0.0032
063-331-230		2267 CAPITOL AVE, EAST PALO ALTO	Commercial	0	0.0021	0.0031
063-331-240		2263 CAPITOL AVE, EAST PALO ALTO	Commercial	0	0.0021	0.0031
063-331-250		2255 CAPITOL AVE, EAST PALO ALTO	Commercial	0	0.0022	0.0032
063-331-260		2251 CAPITOL AVE, EAST PALO ALTO	Commercial	0	0.0022	0.0032
063-331-270		2249 CAPITOL AVE, EAST PALO ALTO	Commercial	0	0.0022	0.0032
063-331-280		2245 CAPITOL AVE, EAST PALO ALTO	Commercial	0	0.0022	0.0032
063-331-290		2239 CAPITOL AVE, EAST PALO ALTO	Commercial	0	0.0028	0.0041
063-331-300		2233 CAPITOL AVE, EAST PALO ALTO	Commercial	0	0.0028	0.0041
063-331-310		2227 CAPITOL AVE, EAST PALO ALTO	Commercial	0	0.0023	0.0034
063-331-320		2219 CAPITOL AVE, EAST PALO ALTO	Commercial	0	0.0023	0.0033
063-331-330		2217 CAPITOL AVE, EAST PALO ALTO	Commercial	0	0.0019	0.0027
063-331-340		2205 CAPITOL AVE, EAST PALO ALTO	Commercial	0	0.0026	0.0037
063-331-350		643 BELL ST, EAST PALO ALTO	Commercial	0	0.0025	0.0036
063-331-370		2200 UNIVERSITY AVE, EAST PALO ALTO	Commercial	0	0.0064	0.0093
063-331-380		2240 UNIVERSITY AVE, EAST PALO ALTO	Commercial	0	0.0038	0.0055
063-331-410		2220 UNIVERSITY AVE, EAST PALO ALTO	Commercial	0	0.0070	0.0102
063-442-360	(4)	330 DONOHOE ST, EAST PALO ALTO	Low Density Residential	0	0.0065	0.0112
063-473-150	(4)	1995 MANHATTAN AVE, EAST PALO ALTO	Commercial	0	0.0011	0.0019
063-473-160	(4)	1991 MANHATTAN AVE, EAST PALO ALTO	Commercial	0	0.0025	0.0043
063-473-170	(4)	1965 MANHATTAN AVE, EAST PALO ALTO	Commercial	0	0.0018	0.0032
063-473-180	(4)	1955 MANHATTAN AVE, EAST PALO ALTO	Commercial	0	0.0022	0.0038
063-473-190	(4)	1919 MANHATTAN AVE, EAST PALO ALTO	Commercial	0	0.0030	0.0052
063-473-200	(4)	1901 MANHATTAN AVE, EAST PALO ALTO	Commercial	0	0.0038	0.0066
063-481-010		1699 WOODLAND AVE, EAST PALO ALTO	Commercial	0	0.0006	0.0010
063-481-020		1681 WOODLAND AVE, EAST PALO ALTO	Commercial	0	0.0005	0.0009
063-481-030		1671 WOODLAND AVE, EAST PALO ALTO	Commercial	0	0.0006	0.0009
063-481-040		1669 WOODLAND AVE, EAST PALO ALTO	Commercial	0	0.0006	0.0010
063-481-050		1651 WOODLAND AVE, EAST PALO ALTO	Commercial	0	0.0008	0.0014
063-481-060		1643 WOODLAND AVE, EAST PALO ALTO	Commercial	0	0.0006	0.0011
063-481-070		1637 WOODLAND AVE, EAST PALO ALTO	Commercial	0	0.0007	0.0011
063-481-080		1629 WOODLAND AVE, EAST PALO ALTO	Commercial	0	0.0006	0.0010
063-481-090		1621 WOODLAND AVE, EAST PALO ALTO	Commercial	0	0.0006	0.0009
063-481-100		644 SCOFIELD AVE, EAST PALO ALTO	Commercial	0	0.0007	0.0012
063-481-110		652 SCOFIELD AVE, EAST PALO ALTO	Commercial	0	0.0005	0.0008
063-481-120		660 SCOFIELD AVE, EAST PALO ALTO	Commercial	0	0.0006	0.0010
063-481-130		610 CIRCLE DR, EAST PALO ALTO	Commercial	0	0.0006	0.0010
063-481-140		620 CIRCLE DR, EAST PALO ALTO	Commercial	0	0.0006	0.0011
063-481-150		630 CIRCLE DR, EAST PALO ALTO	Commercial	0	0.0006	0.0010
063-481-160		640 CIRCLE DR, EAST PALO ALTO	Commercial	0	0.0006	0.0010
063-481-170		650 CIRCLE DR, EAST PALO ALTO	Commercial	0	0.0007	0.0012
063-481-180		1917 COOLEY AVE, EAST PALO ALTO	Commercial	0	0.0007	0.0012
063-481-190		1909 COOLEY AVE, EAST PALO ALTO	Commercial	0	0.0007	0.0012
063-481-210		1901 COOLEY AVE, EAST PALO ALTO	Commercial	0	0.0007	0.0011
063-481-220		1905 COOLEY AVE, EAST PALO ALTO	Commercial	0	0.0006	0.0011
063-482-010		641 CIRCLE DR, EAST PALO ALTO	Commercial	0	0.0005	0.0008
063-482-020		621 CIRCLE DR, EAST PALO ALTO	Commercial	0	0.0006	0.0009
063-482-030		611 CIRCLE DR, EAST PALO ALTO	Commercial	0	0.0006	0.0011
063-483-030		1909 CAPITOL AVE, EAST PALO ALTO	Commercial	0	0.0008	0.0013
063-483-040		1943 CAPITOL AVE, EAST PALO ALTO	Commercial	0	0.0016	0.0028
063-483-050		1609 WOODLAND AVE, EAST PALO ALTO	Commercial	0	0.0033	0.0057
063-484-010		655 SCOFIELD AVE, EAST PALO ALTO	Commercial	0	0.0006	0.0011
063-484-020		1902 CAPITOL AVE, EAST PALO ALTO	Commercial	0	0.0008	0.0013
063-484-030		1908 CAPITOL AVE, EAST PALO ALTO	Commercial	0	0.0014	0.0024
063-484-040		1916 CAPITOL AVE, EAST PALO ALTO	Commercial	0	0.0022	0.0037
063-484-050		1920 CAPITOL AVE, EAST PALO ALTO	Commercial	0	0.0013	0.0023
063-484-060		1934 CAPITOL AVE, EAST PALO ALTO	Commercial	0	0.0036	0.0061
063-484-090		1949 COOLEY AVE, EAST PALO ALTO	Commercial	0	0.0020	0.0034
063-484-100		1941 COOLEY AVE, EAST PALO ALTO	Commercial	0	0.0023	0.0038
063-484-110		685 SCOFIELD AVE, EAST PALO ALTO	Commercial	0	0.0027	0.0045
063-484-130		1957 COOLEY AVE, EAST PALO ALTO	Commercial	0	0.0049	0.0083
063-492-070		1927 E BAYSHORE RD, EAST PALO ALTO	Commercial	0	0.0030	0.0050
063-492-280		1933 PULGAS AVE, EAST PALO ALTO	Commercial	0	0.0072	0.0115
063-492-350	(4)	1805 E BAYSHORE RD #1-94, EAST PALO ALTO	(4)	(4)	0.0481	0.0765
063-492-480		1895 E BAYSHORE RD, EAST PALO ALTO	Commercial	0	0.0040	0.0063
063-501-020		1874 W BAYSHORE RD, EAST PALO ALTO	Commercial	0	0.0033	0.0053
063-501-030		1870 W BAYSHORE RD, EAST PALO ALTO	Commercial	0	0.0016	0.0025
063-501-040		1879 WOODLAND AVE, EAST PALO ALTO	Commercial	0	0.0016	0.0025
063-501-050		1875 WOODLAND AVE, EAST PALO ALTO	Commercial	0	0.0014	0.0022
063-511-020		2039 CLARKE AVE, EAST PALO ALTO	Commercial	0	0.0020	0.0031
063-511-030		2035 CLARKE AVE, EAST PALO ALTO	Commercial	0	0.0021	0.0031
063-511-040		2029 CLARKE AVE, EAST PALO ALTO	Commercial	0	0.0041	0.0061
063-511-050		2027 CLARKE AVE, EAST PALO ALTO	Commercial	0	0.0019	0.0027
063-511-060		2023 CLARKE AVE, EAST PALO ALTO	Commercial	0	0.0022	0.0032
063-511-070		2017 CLARKE AVE, EAST PALO ALTO	Commercial	0	0.0020	0.0030
063-511-080		2013 CLARKE AVE, EAST PALO ALTO	Commercial	0	0.0020	0.0030
063-511-090		2009 CLARKE AVE, EAST PALO ALTO	Commercial	0	0.0020	0.0030
063-511-190		872 DONOHOE ST, EAST PALO ALTO	Commercial	0	0.0033	0.0049
063-511-200		866 DONOHOE ST, EAST PALO ALTO	Commercial	0	0.0029	0.0042
063-511-210		864 DONOHOE ST, EAST PALO ALTO	Commercial	0	0.0024	0.0036

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Scenario 3: Summary of Additional Sanitary Sewer Flows

APN		Address	2014 Zoning	2035 Zoning	ADWF Increase (CFS) (1) (2)	PDWF Increase (CFS) (1) (2)
063-511-220		862 DONOHOE ST, EAST PALO ALTO	Commercial	0	0.0017	0.0025
063-511-240		896 DONOHOE ST, EAST PALO ALTO	Commercial	0	0.0018	0.0026
063-511-250		860 DONOHOE ST, EAST PALO ALTO	Commercial	0	0.0026	0.0038
063-511-260		890 DONOHOE ST, EAST PALO ALTO	Commercial	0	0.0019	0.0028
063-511-490		1731 E BAYSHORE RD, EAST PALO ALTO	Commercial	0	0.0543	0.0799
063-511-520		1761 E BAYSHORE RD, EAST PALO ALTO	Commercial	0	0.0571	0.0968
063-511-630		1721 E BAYSHORE RD, EAST PALO ALTO	Commercial	0	0.0144	0.0244
063-511-660		899 OCONNOR ST, EAST PALO ALTO	Commercial	0	0.0012	0.0020
063-511-680		1751 EAST BAYSHORE RD, EAST PALO ALTO	Commercial	0	0.0918	0.1556
063-511-690		1745 E BAYSHORE BLVD, EAST PALO ALTO	Commercial	0	0.0146	0.0247
063-511-720		1775 E BAYSHORE RD, EAST PALO ALTO	Commercial	0	0.1324	0.2245
063-515-060		1821 CLARKE AVE, EAST PALO ALTO	High Density Residential	0	0.0003	0.0006
063-515-070		1805 CLARKE AVE, EAST PALO ALTO	High Density Residential	0	0.0007	0.0010
063-515-080		1787 WOODLAND AVE, EAST PALO ALTO	High Density Residential	0	0.0003	0.0005
063-515-230		1785 WOODLAND AVE, EAST PALO ALTO	High Density Residential	0	0.0006	0.0010
063-571-060		1985 E BAYSHORE RD, EAST PALO ALTO	Commercial	0	0.0219	0.0349
063-571-070		1981 E BAYSHORE RD, EAST PALO ALTO	Commercial	0	0.0105	0.0162
063-571-080		1961 E BAYSHORE RD, EAST PALO ALTO	Commercial	0	0.0228	0.0353
063-571-090		1905 E BAYSHORE RD, EAST PALO ALTO	Commercial	0	0.0039	0.0061
063-680-020	(4)	1900 UNIVERSITY AVE, EAST PALO ALTO	Commercial	0	0.0232	0.0358
063-680-050	(4)	, NO DATA	Commercial	0	0.0002	0.0004
063-680-060	(4)	, NO DATA	Commercial	0	0.0002	0.0004
063-680-090	(4)	, EAST PALO ALTO	Commercial	0	0.0013	0.0022
063-680-100	(4)	, EAST PALO ALTO	Commercial	0	0.0013	0.0022
063-680-110	(4)	, EAST PALO ALTO	Commercial	0	0.0035	0.0060
063-680-130	(4)	2000 UNIVERSITY AVE, EAST PALO ALTO	Commercial	0	0.0215	0.0369
063-680-150	(4)	2050 UNIVERSITY AVE, EAST PALO ALTO	Commercial	0	0.0337	0.0579
063-680-180	(4)	, EAST PALO ALTO	Commercial	0	0.0001	0.0001
063-680-190	(4)	2000 UNIVERSITY AVE, EAST PALO ALTO	Commercial	0	0.0394	0.0678
063-730-010		2477 PULGAS AVE, EAST PALO ALTO	High Density Residential	Medium Density Residential	0.0003	0.0005
063-730-020		2477 PULGAS AVE, EAST PALO ALTO	High Density Residential	Medium Density Residential	0.0003	0.0005
063-730-030		2477 PULGAS AVE, EAST PALO ALTO	High Density Residential	Medium Density Residential	0.0003	0.0005
063-730-040		2477 PULGAS AVE, EAST PALO ALTO	High Density Residential	Medium Density Residential	0.0003	0.0005
063-730-050		2477 PULGAS AVE, EAST PALO ALTO	High Density Residential	Medium Density Residential	0.0003	0.0005
063-730-060		2477 PULGAS AVE, EAST PALO ALTO	High Density Residential	Medium Density Residential	0.0003	0.0005
063-730-070		2477 PULGAS AVE, EAST PALO ALTO	High Density Residential	Medium Density Residential	0.0003	0.0005
063-730-080		2477 PULGAS AVE, EAST PALO ALTO	High Density Residential	Medium Density Residential	0.0003	0.0005
063-730-090		2477 PULGAS AVE, EAST PALO ALTO	High Density Residential	Medium Density Residential	0.0003	0.0005
063-730-100		2477 PULGAS AVE, EAST PALO ALTO	High Density Residential	Medium Density Residential	0.0003	0.0005
063-730-110		2477 PULGAS AVE, EAST PALO ALTO	High Density Residential	Medium Density Residential	0.0003	0.0005
063-730-120		2477 PULGAS AVE, EAST PALO ALTO	High Density Residential	Medium Density Residential	0.0003	0.0005
063-730-130		2477 PULGAS AVE, EAST PALO ALTO	High Density Residential	Medium Density Residential	0.0003	0.0005
063-730-140		2477 PULGAS AVE, EAST PALO ALTO	High Density Residential	Medium Density Residential	0.0003	0.0005
063-730-150		2477 PULGAS AVE, EAST PALO ALTO	High Density Residential	Medium Density Residential	0.0003	0.0005
063-730-160		2477 PULGAS AVE, EAST PALO ALTO	High Density Residential	Medium Density Residential	0.0003	0.0005
063-730-170		2477 PULGAS AVE, EAST PALO ALTO	High Density Residential	Medium Density Residential	0.0003	0.0005
063-730-180		2477 PULGAS AVE, EAST PALO ALTO	High Density Residential	Medium Density Residential	0.0003	0.0005
063-730-190		2477 PULGAS AVE, EAST PALO ALTO	High Density Residential	0	0.0003	0.0005
063-730-200		2477 PULGAS AVE, EAST PALO ALTO	High Density Residential	0	0.0003	0.0005
063-730-210		2477 PULGAS AVE, EAST PALO ALTO	High Density Residential	0	0.0003	0.0005
063-730-220		2477 PULGAS AVE, EAST PALO ALTO	High Density Residential	0	0.0003	0.0005
063-730-230		2477 PULGAS AVE, EAST PALO ALTO	High Density Residential	Medium Density Residential	0.0003	0.0005
063-730-240		2477 PULGAS AVE, EAST PALO ALTO	High Density Residential	Medium Density Residential	0.0003	0.0005
063-730-250		2477 PULGAS AVE, EAST PALO ALTO	High Density Residential	Medium Density Residential	0.0003	0.0005
063-730-260		2477 PULGAS AVE, EAST PALO ALTO	High Density Residential	Medium Density Residential	0.0003	0.0005
063-730-270		2477 PULGAS AVE, EAST PALO ALTO	High Density Residential	Medium Density Residential	0.0003	0.0005
063-730-280		2477 PULGAS AVE, EAST PALO ALTO	High Density Residential	Medium Density Residential	0.0003	0.0005
063-730-290		2477 PULGAS AVE, EAST PALO ALTO	High Density Residential	Medium Density Residential	0.0003	0.0005
063-730-300		2477 PULGAS AVE, EAST PALO ALTO	High Density Residential	Medium Density Residential	0.0003	0.0005
063-730-310		2477 PULGAS AVE, EAST PALO ALTO	High Density Residential	Medium Density Residential	0.0003	0.0005
063-730-320		2477 PULGAS AVE, EAST PALO ALTO	High Density Residential	Medium Density Residential	0.0003	0.0005
063-730-330		2477 PULGAS AVE, EAST PALO ALTO	High Density Residential	Medium Density Residential	0.0003	0.0005
063-730-340		2477 PULGAS AVE, EAST PALO ALTO	High Density Residential	Medium Density Residential	0.0003	0.0005
063-730-350		2477 PULGAS AVE, EAST PALO ALTO	High Density Residential	Medium Density Residential	0.0003	0.0005
063-730-360		2477 PULGAS AVE, EAST PALO ALTO	High Density Residential	Medium Density Residential	0.0003	0.0005
063-730-370		2477 PULGAS AVE, EAST PALO ALTO	High Density Residential	Medium Density Residential	0.0003	0.0005
063-730-380		2477 PULGAS AVE, EAST PALO ALTO	High Density Residential	Medium Density Residential	0.0003	0.0005
063-730-390		2477 PULGAS AVE, EAST PALO ALTO	High Density Residential	Medium Density Residential	0.0003	0.0005
063-730-400		2477 PULGAS AVE, EAST PALO ALTO	High Density Residential	Medium Density Residential	0.0003	0.0005
063-730-410		2477 PULGAS AVE, EAST PALO ALTO	High Density Residential	Medium Density Residential	0.0003	0.0005
063-730-420		2477 PULGAS AVE, EAST PALO ALTO	High Density Residential	Medium Density Residential	0.0003	0.0005
063-730-430		2477 PULGAS AVE, EAST PALO ALTO	High Density Residential	Medium Density Residential	0.0003	0.0005
063-730-440		2477 PULGAS AVE, EAST PALO ALTO	High Density Residential	Medium Density Residential	0.0003	0.0005
063-730-450		2477 PULGAS AVE, EAST PALO ALTO	High Density Residential	Medium Density Residential	0.0003	0.0005
063-730-460		2477 PULGAS AVE, EAST PALO ALTO	High Density Residential	Medium Density Residential	0.0003	0.0005
063-730-470		2477 PULGAS AVE, EAST PALO ALTO	High Density Residential	Medium Density Residential	0.0003	0.0005
063-730-480		2477 PULGAS AVE, EAST PALO ALTO	High Density Residential	Medium Density Residential	0.0003	0.0005
063-730-490		2477 PULGAS AVE, EAST PALO ALTO	High Density Residential	Medium Density Residential	0.0003	0.0005
063-730-500		2477 PULGAS AVE, EAST PALO ALTO	High Density Residential	Medium Density Residential	0.0003	0.0005
063-730-510		2477 PULGAS AVE, EAST PALO ALTO	High Density Residential	Medium Density Residential	0.0003	0.0005
113-530-010 to 113-530-999		2420 GLORIA WAY, EAST PALO ALTO	Low Density Residential	0	0.0031	0.0050
113-710-010 to 113-710-999		2440 GLORIA WAY, EAST PALO ALTO	Low Density Residential	0	0.0016	0.0026

Appendix C: Table 7
Scenario 3: Summary of Additional Sanitary Sewer Flows

APN		Address	2014 Zoning	2035 Zoning	ADWF Increase (CFS) (1) (2)	PDWF Increase (CFS) (1) (2)
113-720-010 to 113-720-999		2460 GLORIA WAY, EAST PALO ALTO	Low Density Residential	0	0.0014	0.0022
113-740-010 to 113-740-999		2470 GLORIA WAY, EAST PALO ALTO	Low Density Residential	0	0.0021	0.0034
114-240-010 to 114-240-300		2330 UNIVERSITY AVE, EAST PALO ALTO	High Density Residential	0	0.0073	0.0120
114-450-010 to 114-460-300		1765 EAST BAYSHORE RD, EAST PALO ALTO	Commercial	0	0.0164	0.0242
114-590-050		NO DATA, EAST PALO ALTO	Office	0	0.0363	0.0545
				Total (CFS)	**2.84**	**4.47**
				Total (MGD) (3)	**1.85**	**2.90**

Notes:
(1) Increase in ADWF and PDWF is the difference between the estimated flows from 2014 presented in Table 2 and the projected flows based on the Vision 2035 General Plan Update presented in Table 3.
(2) ADWF and PDWF assumes that flows are contributed from all land uses over a standard 24-hour day.
(3) Total ADWF Increase in MGD is consistent with the projected increase in water demand in the Year 2040 presented in Section 3 of the City of East Palo Alto's 2015 Urban Water Management Plan date Ju 2016.The City of East Palo Alto water supply allocation from the San Francisco Public Utilities Commission was 1.96 MGD and the General Plan projects a maximum demand of 3.03 MGD in the Year 2040 representing an increase of 1.07 MGD in average day demand.
(4) Flows from parcels based on New Service Applications submitted to the District. Please see Table 6 for calculation of injected flows.

Abbreviations
ADWF: Average Dry Weather Flow
APN: Assessors Parcel Number
CFS: Cubic Feet per Second
MGD: Million Gallons Per Day
PDWF: Peak Dry Weather Flow

APPENDIX D

MODEL OUTPUT AND RESULTS

Scenario 1: 2025 Model Output and Results

Scenario 2: 205 Model Output and Results

Scenario 3: 2035 Enhanced Model Output and Results

Appendix D: Table 1
Scenario 1: 2025 PWWF Loadings

MH	Load Definition	Pattern	Base Flow (cfs)
A14	Sanitary Pattern Load	Fixed	0.0645
A16	Sanitary Pattern Load	Fixed	0.0465
A17	Sanitary Pattern Load	Fixed	0.0260
A20	Sanitary Pattern Load	Fixed	0.0448
A27	Sanitary Pattern Load	Fixed	0.0399
A30	Sanitary Pattern Load	Fixed	0.0129
A34	Sanitary Pattern Load	Fixed	0.0037
A36	Sanitary Pattern Load	Fixed	0.0028
A38	Sanitary Pattern Load	Fixed	0.0018
A4	Sanitary Pattern Load	Fixed	0.0340
A41	Sanitary Pattern Load	Fixed	0.0008
A42	Sanitary Pattern Load	Fixed	0.0018
A43	Sanitary Pattern Load	Fixed	0.0005
A45	Sanitary Pattern Load	Fixed	0.0009
A46	Sanitary Pattern Load	Fixed	0.0039
A7	Sanitary Pattern Load	Fixed	0.0340
B18	Sanitary Pattern Load	Fixed	0.1020
B20	Sanitary Pattern Load	Fixed	0.1020
B23	Sanitary Pattern Load	Fixed	0.1020
B26	Sanitary Pattern Load	Fixed	0.0666
B28	Sanitary Pattern Load	Fixed	0.0666
B30	Sanitary Pattern Load	Fixed	0.0330
B32	Sanitary Pattern Load	Fixed	0.0330
B33	Sanitary Pattern Load	Fixed	0.0330
B36	Sanitary Pattern Load	Fixed	0.0527
B40	Sanitary Pattern Load	Fixed	0.0360
B42	Sanitary Pattern Load	Fixed	0.0360
B43	Sanitary Pattern Load	Fixed	0.0360
B45	Sanitary Pattern Load	Fixed	0.0343
B47	Sanitary Pattern Load	Fixed	0.0097
B48	Sanitary Pattern Load	Fixed	0.0328
B51	Sanitary Pattern Load	Fixed	0.0260
C13	Sanitary Pattern Load	Fixed	0.0472
C15	Sanitary Pattern Load	Fixed	0.0572
C18	Sanitary Pattern Load	Fixed	0.0572
C20	Sanitary Pattern Load	Fixed	0.0330
C22	Sanitary Pattern Load	Fixed	0.0330
C24	Sanitary Pattern Load	Fixed	0.0283
C25	Sanitary Pattern Load	Fixed	0.0283
C26	Sanitary Pattern Load	Fixed	0.2000
C29	Sanitary Pattern Load	Fixed	0.0195

Appendix D: Table 1
Scenario 1: 2025 PWWF Loadings

MH	Load Definition	Pattern	Base Flow (cfs)
C31	Sanitary Pattern Load	Fixed	0.0195
C33	Sanitary Pattern Load	Fixed	0.0195
C34	Sanitary Pattern Load	Fixed	0.0095
C37	Sanitary Pattern Load	Fixed	0.0458
C39	Sanitary Pattern Load	Fixed	0.0458
C42	Sanitary Pattern Load	Fixed	0.0458
C43	Sanitary Pattern Load	Fixed	0.0132
C47	Sanitary Pattern Load	Fixed	0.0911
C51	Sanitary Pattern Load	Fixed	0.1755
D1	Sanitary Pattern Load	Fixed	0.0374
D17	Sanitary Pattern Load	Fixed	0.2000
D28	Sanitary Pattern Load	Fixed	0.1700
D31	Sanitary Pattern Load	Fixed	0.0765
D32	Sanitary Pattern Load	Fixed	0.0765
D39	Sanitary Pattern Load	Fixed	0.0100
D40	Sanitary Pattern Load	Fixed	0.0100
D42	Sanitary Pattern Load	Fixed	0.0214
D44	Sanitary Pattern Load	Fixed	0.1500
D50	Sanitary Pattern Load	Fixed	0.3500
D55	Sanitary Pattern Load	Fixed	0.1200
D61	Sanitary Pattern Load	Fixed	0.1336
D62	Sanitary Pattern Load	Fixed	0.0150
D66	Sanitary Pattern Load	Fixed	0.1989
D68	Sanitary Pattern Load	Fixed	0.0300
D69	Sanitary Pattern Load	Fixed	0.0300
D70	Sanitary Pattern Load	Fixed	0.1400
D71	Sanitary Pattern Load	Fixed	0.1200
D74	Sanitary Pattern Load	Fixed	0.0770
E21	Sanitary Pattern Load	Fixed	0.0609
E23	Sanitary Pattern Load	Fixed	0.0609
E26	Sanitary Pattern Load	Fixed	0.0670
E28	Sanitary Pattern Load	Fixed	0.0427
E30	Sanitary Pattern Load	Fixed	0.0670
E32	Sanitary Pattern Load	Fixed	0.0610
E33	Sanitary Pattern Load	Fixed	0.0088
E34	Sanitary Pattern Load	Fixed	0.0400
E35	Sanitary Pattern Load	Fixed	0.0305
E37	Sanitary Pattern Load	Fixed	0.0609
E39	Sanitary Pattern Load	Fixed	0.0609
E40	Sanitary Pattern Load	Fixed	0.0609
E41	Sanitary Pattern Load	Fixed	0.0183

Appendix D: Table 1
Scenario 1: 2025 PWWF Loadings

MH	Load Definition	Pattern	Base Flow (cfs)
E45	Sanitary Pattern Load	Fixed	0.0609
E47	Sanitary Pattern Load	Fixed	0.0609
E49	Sanitary Pattern Load	Fixed	0.0609
F13	Sanitary Pattern Load	Fixed	0.0260
F14	Sanitary Pattern Load	Fixed	0.0190
F16	Sanitary Pattern Load	Fixed	0.0648
F18	Sanitary Pattern Load	Fixed	0.0260
F21	Sanitary Pattern Load	Fixed	0.0260
F26	Sanitary Pattern Load	Fixed	0.0129
F28	Sanitary Pattern Load	Fixed	0.0129
G11	Sanitary Pattern Load	Fixed	0.0382
G12	Sanitary Pattern Load	Fixed	0.0116
G13	Sanitary Pattern Load	Fixed	0.0190
G16	Sanitary Pattern Load	Fixed	0.0097
G18	Sanitary Pattern Load	Fixed	0.0097
G21	Sanitary Pattern Load	Fixed	0.0050
G22	Sanitary Pattern Load	Fixed	0.0050
G8	Sanitary Pattern Load	Fixed	0.0382
H23	Sanitary Pattern Load	Fixed	0.0100
H27	Sanitary Pattern Load	Fixed	0.0372
H28	Sanitary Pattern Load	Fixed	0.0302
H30	Sanitary Pattern Load	Fixed	0.0529
H31	Sanitary Pattern Load	Fixed	0.0415
H33	Sanitary Pattern Load	Fixed	0.1119
H38	Sanitary Pattern Load	Fixed	0.0792
H39	Sanitary Pattern Load	Fixed	0.1020
H41	Sanitary Pattern Load	Fixed	0.0920
H43	Sanitary Pattern Load	Fixed	0.0920
H44	Sanitary Pattern Load	Fixed	0.1020
H45	Sanitary Pattern Load	Fixed	0.0100
H49	Sanitary Pattern Load	Fixed	0.0100
H51	Sanitary Pattern Load	Fixed	0.0372
H53	Sanitary Pattern Load	Fixed	0.0529
H58	Sanitary Pattern Load	Fixed	0.0406
H61	Sanitary Pattern Load	Fixed	0.0406
H63	Sanitary Pattern Load	Fixed	0.0110
H67	Sanitary Pattern Load	Fixed	0.0100
H69	Sanitary Pattern Load	Fixed	0.0100
H70	Sanitary Pattern Load	Fixed	0.0090
H72	Sanitary Pattern Load	Fixed	0.0090
I16	Sanitary Pattern Load	Fixed	0.0050

Appendix D: Table 1
Scenario 1: 2025 PWWF Loadings

MH	Load Definition	Pattern	Base Flow (cfs)
I17	Sanitary Pattern Load	Fixed	0.0050
I19	Sanitary Pattern Load	Fixed	0.0050
I20	Sanitary Pattern Load	Fixed	0.0050
I22	Sanitary Pattern Load	Fixed	0.0590
I25	Sanitary Pattern Load	Fixed	0.0789
I26	Sanitary Pattern Load	Fixed	0.0690
I29	Sanitary Pattern Load	Fixed	0.0690
I33	Sanitary Pattern Load	Fixed	0.0050
I34	Sanitary Pattern Load	Fixed	0.0050
J10	Sanitary Pattern Load	Fixed	0.0545
J14	Sanitary Pattern Load	Fixed	0.0290
J7	Sanitary Pattern Load	Fixed	0.0227
K10	Sanitary Pattern Load	Fixed	0.0100
K14	Sanitary Pattern Load	Fixed	0.0205
K15	Sanitary Pattern Load	Fixed	0.0100
K20	Sanitary Pattern Load	Fixed	0.0205
K23	Sanitary Pattern Load	Fixed	0.0050
K24	Sanitary Pattern Load	Fixed	0.0050
K25	Sanitary Pattern Load	Fixed	0.0160
K36	Sanitary Pattern Load	Fixed	0.0595
K37	Sanitary Pattern Load	Fixed	0.0595
L11	Sanitary Pattern Load	Fixed	0.0160
L12	Sanitary Pattern Load	Fixed	0.0536
L19	Sanitary Pattern Load	Fixed	0.1600
L20	Sanitary Pattern Load	Fixed	0.0058
L22	Sanitary Pattern Load	Fixed	0.0255
L29	Sanitary Pattern Load	Fixed	0.0790
L33	Sanitary Pattern Load	Fixed	0.0790
L36	Sanitary Pattern Load	Fixed	0.1100
L38	Sanitary Pattern Load	Fixed	0.1200
L41	Sanitary Pattern Load	Fixed	0.0050
L46	Sanitary Pattern Load	Fixed	0.0128
L51	Sanitary Pattern Load	Fixed	0.0077
L55	Sanitary Pattern Load	Fixed	0.0425
L56	Sanitary Pattern Load	Fixed	0.0510
L60	Sanitary Pattern Load	Fixed	0.1028
L61	Sanitary Pattern Load	Fixed	0.0340
L62	Sanitary Pattern Load	Fixed	0.0140
L8	Sanitary Pattern Load	Fixed	0.0340
M14	Sanitary Pattern Load	Fixed	0.0200
M16	Sanitary Pattern Load	Fixed	0.0100

Appendix D: Table 1
Scenario 1: 2025 PWWF Loadings

MH	Load Definition	Pattern	Base Flow (cfs)
M23	Sanitary Pattern Load	Fixed	0.2800
M28	Sanitary Pattern Load	Fixed	0.0109
M30	Sanitary Pattern Load	Fixed	0.0109
M32	Sanitary Pattern Load	Fixed	0.0446
M32	Sanitary Pattern Load	Fixed	0.0123
M35	Sanitary Pattern Load	Fixed	0.0123
M36	Sanitary Pattern Load	Fixed	0.0287
M38	Sanitary Pattern Load	Fixed	0.2463
N15	Sanitary Pattern Load	Fixed	0.0123
N18	Sanitary Pattern Load	Fixed	0.0123
N30	Sanitary Pattern Load	Fixed	0.0109
O16	Sanitary Pattern Load	Fixed	0.0279
O20	Sanitary Pattern Load	Fixed	0.0057
O24	Sanitary Pattern Load	Fixed	0.0300
O27	Sanitary Pattern Load	Fixed	0.0066
O28	Sanitary Pattern Load	Fixed	0.0065
O30	Sanitary Pattern Load	Fixed	0.0164
O33	Sanitary Pattern Load	Fixed	0.0164
O36	Sanitary Pattern Load	Fixed	0.0164
O38	Sanitary Pattern Load	Fixed	0.0066
O41	Sanitary Pattern Load	Fixed	0.0066
O44	Sanitary Pattern Load	Fixed	0.0066
O46	Sanitary Pattern Load	Fixed	0.0070
O48	Sanitary Pattern Load	Fixed	0.0070
O50	Sanitary Pattern Load	Fixed	0.0070
O53	Sanitary Pattern Load	Fixed	0.0100
O56	Sanitary Pattern Load	Fixed	0.0672
O58	Sanitary Pattern Load	Fixed	0.0394
O60	Sanitary Pattern Load	Fixed	0.3413
O63	Sanitary Pattern Load	Fixed	0.0136
F8	Sanitary Pattern Load	Fixed	0.0628

Abbreviations

PWWF: Peak Wet Weather Flow

CFS: Cubic Feet per Second

Appendix D: Table 2
Scenario 1: 2025 PWWF Model Results

Label	Start Node	Rim (Start) (ft)	Invert (Start) (ft)	Stop Node	Rim (Stop) (ft)	Invert (Stop) (ft)	Length (ft)	Slope (Calculated) (ft/ft)	Diameter (in)	Number of Barrels	Manning's n	Flow (Middle) (cfs)	Velocity (ft/s)	Velocity (Maximum Calculated) (ft/s)	Depth (Middle) (ft)	Flow (Maximum) (cfs)	Capacity (Full Flow) (cfs)	Flow / Capacity (Design) (%)	Depth/Rise (%)	Depth (Maximum) / Rise (%)	Is Ever Surcharged?	Hydraulic Grade (Maximum) (ft)
A1+A2	A1	16.28	2	A2	15.82	1.92	79.9	0.001	12	1	0.013	1.5360	2.20	2.20	0.83	1.5360	1.1275	136.2	83.3	83.3	FALSE	2.85
A2+A5	A2	15.82	1.82	A5	14.53	1.57	244.2	0.001	12	1	0.013	1.5700	2.21	2.21	0.85	1.5700	1.1400	137.7	84.8	84.8	FALSE	2.79
A3+A2	A3	14.86	8.76	A2	15.82	2.12	287.5	0.023	6	1	0.013	0.0340	1.11	1.11	0.09	0.0340	0.8527	4.0	17.5	17.6	TRUE	8.85
A4+A3	A4	14	9.48	A3	14.86	8.86	312	0.002	6	1	0.013	0.0340	0.62	0.89	0.16	0.0378	0.2501	13.6	32.1	26.8	FALSE	9.66
A5+A8	A5	14.53	1.57	A8	13.85	1.53	124.3	0	15	1	0.013	1.6040	2.35	2.35	0.68	1.6040	1.1588	138.4	54.5	54.5	FALSE	2.35
A6+A5	A6	13.72	7.32	A5	14.53	5.81	286.8	0.005	6	1	0.013	0.0340	0.82	0.85	0.13	0.0344	0.4071	8.4	26.3	26.0	FALSE	7.45
A7+A6	A7	14	8.03	A6	13.72	7.42	306	0.002	6	1	0.013	0.0340	0.63	0.87	0.16	0.0377	0.2505	13.6	32.0	27.2	FALSE	8.21
A8+A9	A8	13.85	1.43	A9	12.82	1.16	61.2	0.004	15	1	0.013	1.6040	3.28	3.28	0.52	1.6040	4.2913	37.4	42.0	42.0	FALSE	1.97
A9+A10	A9	12.82	0.62	A10	11.42	0.57	181.2	0	15	1	0.013	1.6040	2.08	2.08	0.75	1.6040	1.0731	149.5	60.2	60.2	FALSE	1.47
A10+A15	A10	11.42	0.47	A15	9.93	0.03	299.3	0.001	15	1	0.013	1.6688	2.00	2.00	0.80	1.6688	2.4766	67.4	64.3	64.3	FALSE	1.26
A11+A10	A11	11.83	2.53	A10	11.42	1.12	417.5	0.003	6	1	0.013	0.0645	0.95	0.95	0.19	0.0646	0.3260	19.8	37.9	37.8	FALSE	2.72
A12+A11	A12	9.52	4.07	A11	11.83	2.63	485.1	0.003	6	1	0.013	0.0645	0.90	0.90	0.20	0.0645	0.3057	21.1	39.2	39.2	FALSE	4.27
A13+A12	A13	7.19	5.15	A12	9.52	4.07	412.1	0.003	6	1	0.013	0.0645	0.86	0.86	0.20	0.0645	0.2872	22.5	40.6	40.6	FALSE	5.35
A14+A13	A14	8.06	5.91	A13	7.19	5.19	288.3	0.002	6	1	0.013	0.0645	0.84	0.84	0.21	0.0645	0.2804	23.0	41.2	41.2	FALSE	6.13
A15+A16	A15	9.93	-0.03	A16	8.08	-0.17	435.1	0	15	1	0.013	1.6686	1.71	1.71	0.93	1.6686	1.1586	144.0	74.3	74.3	FALSE	1.00
A16+A21	A16	8.08	-0.22	A21	7.13	-0.42	296.3	0.001	15	1	0.013	1.8020	2.08	2.08	0.83	1.8020	1.6783	107.4	66.4	66.4	FALSE	0.69
A17+A31	A17	8.77	1.57	A31	8.39	1.1	235.4	0.002	6	1	0.013	0.0260	0.71	0.71	0.12	0.0261	0.2507	10.4	24.1	24.2	FALSE	1.71
A18+A16	A18	7.05	1.45	A16	8.08	0.73	441.8	0.002	6	1	0.013	0.0448	0.59	0.59	0.20	0.0448	0.2265	19.8	41.0	41.0	FALSE	1.66
A19+A18	A19	6.77	2.98	A18	7.05	1.45	213.5	0.007	6	1	0.013	0.0448	1.01	1.01	0.14	0.0448	0.4749	9.4	27.7	27.7	FALSE	3.13
A20+A19	A20	5.62	3.73	A19	6.77	3.05	339.8	0.002	6	1	0.013	0.0448	0.64	0.64	0.19	0.0448	0.2510	17.8	38.7	38.7	FALSE	3.92
A21+A23	A21	7.13	-0.52	A23	7.01	-0.8	155.1	0.002	15	1	0.013	1.8020	2.68	2.68	0.67	1.8020	2.7445	65.7	53.8	53.8	FALSE	0.20
A22+A29	A22	6.99	-0.92	A29	6.36	-1.21	369.1	0.001	18	1	0.013	1.8419	1.96	1.96	0.79	1.8419	2.9441	62.6	52.5	52.5	FALSE	-0.09
A23+A22	A23	7.01	-0.8	A22	6.99	-0.92	13.8	0.009	15	1	0.013	1.8419	2.32	2.32	0.77	1.8421	6.0236	30.6	61.6	61.6	FALSE	-0.09
A24+A23	A24	7.7	1.62	A23	7.01	0.37	250.6	0.005	6	1	0.013	0.0399	0.81	1.14	0.15	0.0526	0.3962	10.1	29.8	15.2	FALSE	1.77
A25+A24	A25	8.36	2.89	A24	7.7	1.62	253.1	0.005	6	1	0.013	0.0399	0.81	0.84	0.15	0.0419	0.3975	10.0	29.7	30.1	FALSE	3.06
A26+A25	A26	7.42	4.06	A25	8.36	2.89	234.1	0.005	6	1	0.013	0.0399	0.95	0.95	0.13	0.0403	0.3967	10.1	26.7	26.7	FALSE	4.22
A27+A26	A27	6.96	5	A26	7.42	4.06	310.9	0.003	6	1	0.013	0.0399	0.69	0.80	0.17	0.0437	0.3085	12.9	33.5	32.3	FALSE	5.18
A28+A29	A28	6.24	0.21	A29	6.36	-0.25	14.8	0.031	6	1	0.013	0.0129	0.72	0.73	0.03	0.0131	0.9884	1.3	6.4	6.5	FALSE	0.25
A29+T29	A29	6.36	-1.24	T29	4.98	-1.62	345.5	0.001	18	1	0.013	1.8548	2.13	2.13	0.74	1.8548	3.4837	53.2	49.4	49.4	FALSE	-0.46
A30+A28	A30	6.07	1.27	A28	6.24	0.32	301	0.003	6	1	0.013	0.0129	0.83	0.89	0.07	0.0148	0.3152	4.1	13.3	12.5	FALSE	1.34
A31+A16	A31	8.39	1.1	A16	8.08	0.73	187.3	0.002	6	1	0.013	0.0422	0.61	0.70	0.19	0.0540	0.2494	16.9	38.2	41.6	FALSE	1.30
A32+A31	A32	8.62	1.83	A31	8.39	1.1	118.6	0.006	6	1	0.01	0.0162	0.55	1.26	0.10	0.0534	0.5722	2.8	20.8	26.8	FALSE	1.96
A33+A32	A33	9.45	2.67	A32	8.62	1.83	149.8	0.006	6	1	0.01	0.0123	0.83	1.01	0.05	0.0287	0.5462	2.3	10.6	14.8	FALSE	2.72
A34+A33	A34	9.45	2.93	A33	9.45	2.67	55.6	0.005	6	1	0.01	0.0037	0.61	0.61	0.02	0.0037	0.4986	0.7	3.7	3.7	FALSE	2.95
A35+A33	A35	10.05	3.68	A33	9.45	2.67	173.6	0.006	6	1	0.01	0.0086	0.79	0.74	0.05	0.0088	0.5563	1.5	9.9	8.0	FALSE	3.74
A36+A47	A36	10.05	4.57	A47	10.36	4.36	40.9	0.005	6	1	0.01	0.0028	0.54	0.54	0.01	0.0028	0.5228	0.5	1.0	1.0	FALSE	4.59
A37+A35	A37	10.51	4.46	A35	10.05	3.68	182.3	0.004	6	1	0.01	0.0057	0.65	0.65	0.02	0.0057	0.4771	1.2	5.0	5.0	FALSE	4.49
A38+A37	A38	11.26	6.07	A37	10.51	5.37	109	0.006	6	1	0.01	0.0018	0.53	0.53	0.00	0.0018	0.5845	0.3	0.9	0.9	FALSE	6.07
A39+A37	A39	10.5	4.77	A37	10.51	4.46	52.7	0.006	6	1	0.01	0.0040	0.61	0.61	0.02	0.0040	0.5594	0.7	3.6	3.6	FALSE	4.79
A40+A39	A40	10.8	5.24	A39	10.5	4.77	80.2	0.006	6	1	0.01	0.0040	0.61	0.61	0.02	0.0040	0.5583	0.7	3.5	3.5	FALSE	5.26
A41+A40	A41	11.38	5.82	A40	10.8	5.24	79.5	0.007	6	1	0.01	0.0008	0.52	0.52	0.00	0.0008	0.6231	0.1	0.7	0.7	FALSE	5.82
A42+A40	A42	11.13	6.17	A40	10.8	5.49	109.2	0.006	6	1	0.01	0.0018	0.53	0.53	0.00	0.0018	0.5757	0.3	0.9	0.9	FALSE	6.18
A43+A44	A43	12.15	6.64	A44	11.23	6.12	85.9	0.006	6	1	0.01	0.0005	0.47	0.47	0.00	0.0005	0.5675	0.1	0.6	0.6	FALSE	6.64
A44+A40	A44	11.23	6.12	A40	10.8	5.24	146.4	0.006	6	1	0.01	0.0014	0.53	0.53	0.00	0.0014	0.5656	0.2	0.8	0.8	FALSE	6.12
A45+A44	A45	11.14	6.83	A44	11.23	6.12	103.1	0.007	6	1	0.01	0.0009	0.52	0.52	0.00	0.0009	0.6052	0.1	0.7	0.7	FALSE	6.83
A46+A32	A46	9.92	3.47	A32	8.62	1.83	256.9	0.006	6	1	0.01	0.0039	0.55	0.55	0.01	0.0041	0.5828	0.7	1.1	1.2	FALSE	3.48
A47+A35	A47	10.36	4.36	A35	10.05	3.68	100	0.007	6	1	0.01	0.0028	0.54	0.54	0.01	0.0028	0.6014	0.5	1.0	1.0	FALSE	4.37
B2+A1	B2	16	2.46	A1	16.28	2.1	180.8	0.002	12	1	0.013	1.5360	2.50	2.50	0.73	1.5360	1.5899	96.6	72.9	72.9	FALSE	3.25
B3+B2	B3	18.59	2.64	B2	16	2.46	239.4	0.001	12	1	0.013	1.5017	2.10	2.10	0.86	1.5017	0.9769	153.7	85.6	85.6	FALSE	3.61
B4+B3	B4	20.32	3.42	B3	18.59	2.74	464.8	0.001	12	1	0.013	1.5017	2.07	2.07	0.87	1.5017	1.3627	110.2	87.1	87.1	FALSE	4.34
B5+B52	B5	18.61	4.51	B52	20.58	4.29	176.2	0.001	12	1	0.013	1.5017	2.28	2.28	0.78	1.5017	1.2589	119.3	78.2	78.2	FALSE	5.37
B6+B5	B6	18.29	5.6	B5	18.61	4.56	158.4	0.007	12	1	0.013	1.4920	3.57	3.57	0.53	1.4920	2.8864	51.7	52.5	52.5	FALSE	6.14
B7+B6	B7	18.66	5.76	B6	18.29	5.6	380.1	0	12	1	0.013	1.3580	1.83	1.83	0.90	1.3580	0.7309	185.8	89.7	89.7	TRUE	6.84
B8+B7	B8	20.55	6.5	B7	18.66	5.81	371	0.002	12	1	0.013	1.3252	1.96	1.96	0.80	1.3252	1.5364	86.3	80.5	80.5	TRUE	7.28
B9+B8	B9	18.41	7.16	B8	20.55	6.55	350.9	0.002	12	1	0.013	1.2725	2.15	2.15	0.71	1.2725	1.4854	85.7	70.6	70.6	FALSE	7.90
B10+B9	B10	16.86	7.61	B9	18.41	7.16	289.7	0.002	12	1	0.013	1.1735	2.03	2.03	0.69	1.1735	1.4040	83.6	69.1	69.1	FALSE	8.33
B11+B10	B11	16.46	8.71	B10	16.86	7.66	201.4	0.005	12	1	0.013	1.0403	3.03	3.03	0.45	1.0403	2.5723	40.4	45.1	45.1	FALSE	9.18
B12+B11	B12	15.83	9.18	B11	16.46	8.76	277	0.002	10	1	0.013	0.9383	1.97	1.97	0.68	0.9383	0.8530	110.0	81.6	81.6	FALSE	9.92
B13+B12	B13	15.33	9.53	B12	15.83	9.18	262.7	0.001	12	1	0.013	0.8363	1.67	1.67	0.61	0.8363	1.3003	64.3	60.9	60.9	FALSE	10.14
B14+B13	B14	15.47	10.07	B13	15.33	9.53	253.1	0.002	12	1	0.013	0.7343	1.96	1.96	0.48	0.7343	1.6455	44.6	48.2	48.2	FALSE	10.55
B15+B49	B15	20.29	12.19	B49	17.11	11.21	330.9	0.003	8	1	0.013	0.7344	2.12	2.12	0.65	0.7343	0.6575	111.7	96.9	96.9	TRUE	13.01
B16+B15	B16	20.39	13.24	B15	20.29	12.19	327.3	0.003	8	1	0.013	0.7344	2.10	2.10	0.67	0.7344	0.6844	107.3	100.0	100.0	TRUE	14.24
B17+B13	B17	19.31	13.31	B13	15.33	9.73	501.1	0.007	6	1	0.013	0.1020	1.62	1.57	0.18	0.1020	0.4742	21.5	35.7	36.6	FALSE	13.50
B18+B17	B18	22.26	14.3	B17	19.31	13.31	497.2	0.002	6	1	0.013	0.1020	0.97	0.97	0.26	0.1020	0.2504	40.7	52.7	52.7	FALSE	14.56
B19+B12	B19	20.74	14.44	B12	15.83	9.88	499.6	0.009	6	1	0.013	0.1020	1.70	1.70	0.17	0.1020	0.5360	19.0	34.5	34.5	FALSE	14.61
B20+B19	B20	23.22	19.12	B19	20.74	14.44	585	0.008	6	1	0.013	0.1020	1.62	1.62	0.18	0.1021	0.5019	20.3	35.7	35.7	FALSE	19.30

Appendix D: Table 2
Scenario 1: 2025 PWWF Model Results

Label	Start Node	Rim (Start) (ft)	Invert (Start) (ft)	Stop Node	Rim (Stop) (ft)	Invert (Stop) (ft)	Length (ft)	Slope (Calculated) (ft/ft)	Diameter (in)	Number of Barrels	Manning's n	Flow (Middle) (cfs)	Velocity (ft/s)	Velocity (Maximum Calculated) (ft/s)	Depth (Middle) (ft)	Flow (Maximum) (cfs)	Capacity (Full Flow) (cfs)	Flow / Capacity (Design) (%)	Depth/Rise (%)	Depth (Maximum) / Rise (%)	Is Ever Surcharged?	Hydraulic Grade (Maximum) (ft)
B21+B11	B21	18.68	13.54	B11	16.46	9.36	399.6	0.01	6	1	0.013	0.1020	1.78	1.78	0.17	0.1020	0.5739	17.8	33.2	33.2	FALSE	13.71
B22+B21	B22	24.77	18.67	B21	18.68	13.58	399.5	0.013	6	1	0.013	0.1020	1.80	1.80	0.16	0.1020	0.6333	16.1	31.6	31.6	FALSE	18.83
B23+B22	B23	28	23.55	B22	24.77	18.67	380.2	0.013	6	1	0.013	0.1020	1.80	1.80	0.16	0.1020	0.6356	16.0	31.5	31.5	FALSE	23.71
B24+B10	B24	22.52	15.82	B10	16.86	9.61	492.5	0.013	6	1	0.013	0.1332	2.05	2.05	0.18	0.1338	0.6300	21.1	35.3	35.3	FALSE	16.00
B25+B24	B25	27.09	18.84	B24	22.52	15.82	406.2	0.007	6	1	0.013	0.1332	1.77	1.78	0.20	0.1339	0.4838	27.5	40.7	40.8	FALSE	19.06
B26+B25	B26	27.62	21.62	B25	27.09	18.84	401.5	0.007	6	1	0.013	0.0666	1.24	1.24	0.16	0.0666	0.4669	14.3	31.7	31.7	FALSE	21.79
B27+B25	B27	25.46	19.69	B25	27.09	18.99	318	0.002	6	1	0.013	0.0666	0.82	1.21	0.22	0.0945	0.2633	25.3	43.1	41.8	FALSE	19.92
B28+B27	B28	24.83	20.93	B27	25.46	19.69	202	0.006	6	1	0.013	0.0666	1.20	1.21	0.16	0.0667	0.4397	15.1	32.5	32.5	FALSE	21.10
B29+B9	B29	19.43	13.68	B9	18.41	7.61	211.2	0.029	6	1	0.013	0.0990	1.63	1.62	0.13	0.1022	0.9513	10.4	25.3	24.4	FALSE	13.82
B30+B29	B30	23.55	14.31	B29	19.43	13.83	243.2	0.002	6	1	0.013	0.0330	0.66	1.39	0.15	0.0552	0.2493	13.2	30.3	25.5	FALSE	14.48
B31+B29	B31	21.81	15.76	B29	19.43	13.68	256.8	0.008	6	1	0.013	0.0660	1.31	1.31	0.15	0.0660	0.5049	13.1	30.3	30.3	FALSE	15.92
B32+B31	B32	26.3	16.37	B31	21.81	15.86	253.7	0.002	6	1	0.013	0.0330	0.63	0.88	0.16	0.0397	0.2515	13.1	31.1	28.1	FALSE	16.54
B33+B31	B33	25.73	19.18	B31	21.81	15.76	279.8	0.012	6	1	0.013	0.0330	1.16	1.14	0.10	0.0332	0.6204	5.3	19.9	20.5	FALSE	19.28
B34+B8	B34	24.69	15.24	B8	20.55	7.1	251.1	0.032	6	1	0.013	0.0527	1.27	1.27	0.10	0.0527	1.0103	5.2	20.1	20.1	FALSE	15.34
B35+B34	B35	26.3	20	B34	24.69	15.24	363.8	0.013	6	1	0.013	0.0527	1.37	1.37	0.12	0.0527	0.6418	8.2	24.9	24.9	FALSE	20.13
B36+B35	B36	24.45	20.41	B35	26.3	20	207	0.002	6	1	0.013	0.0527	0.70	0.94	0.20	0.0677	0.2497	21.1	40.9	39.3	FALSE	20.63
B37+B6	B37	14.71	7.31	B6	18.29	6.74	262.3	0.002	6	1	0.013	0.1340	1.12	1.12	0.29	0.1340	0.2615	51.2	58.5	58.5	FALSE	7.61
B38+B50	B38	12.43	7.93	B50	13.27	7.77	38.9	0.004	6	1	0.013	0.0720	1.10	1.10	0.18	0.0720	0.3599	20.0	36.7	36.7	FALSE	8.12
B39+B38	B39	13	8.56	B38	12.43	8.03	265.5	0.002	6	1	0.013	0.0360	0.62	0.62	0.17	0.0360	0.2507	14.4	33.7	33.7	FALSE	8.73
B40+B39	B40	13	9.17	B39	13	8.56	306.1	0.002	6	1	0.013	0.0360	0.62	0.90	0.17	0.0416	0.2505	14.4	33.7	28.5	FALSE	9.36
B41+B38	B41	11.68	8.37	B38	12.43	8.03	170	0.002	8	1	0.013	0.0360	0.61	1.06	0.15	0.0573	0.5404	6.7	22.5	21.2	FALSE	8.54
B42+B41	B42	11.68	8.7	B41	11.68	8.37	166.3	0.002	6	1	0.013	0.0360	0.62	0.62	0.17	0.0360	0.2499	14.4	33.8	33.8	FALSE	8.89
B43+B37	B43	15.97	8.74	B37	14.71	8.01	363.4	0.002	6	1	0.013	0.0360	0.62	0.84	0.17	0.0402	0.2515	14.3	33.6	29.2	FALSE	8.93
B44+B2	B44	15.76	9.16	B2	16	2.46	296.4	0.023	6	1	0.013	0.0343	1.11	1.04	0.09	0.0416	0.8436	4.1	17.7	13.4	TRUE	9.25
B45+B44	B45	14.05	9.86	B44	15.76	9.26	301	0.002	6	1	0.013	0.0343	0.62	0.62	0.16	0.0343	0.2505	13.7	32.3	32.3	FALSE	10.04
B46+B5	B46	19	13.75	B5	18.61	12.56	16.9	0.07	6	1	0.013	0.0097	0.63	0.63	0.02	0.0098	1.4875	0.7	3.1	3.1	FALSE	13.77
B47+B46	B47	20.58	14.06	B46	19	13.75	157.8	0.002	6	1	0.013	0.0097	0.80	0.80	0.05	0.0098	0.2486	3.9	10.0	10.0	FALSE	14.12
B48+B7	B48	22.9	7.11	B7	18.66	6.21	450.2	0.002	6	1	0.013	0.0328	0.59	0.63	0.16	0.0328	0.2509	13.1	32.5	31.0	TRUE	7.28
B49+B14	B49	17.11	11.16	B14	15.47	10.07	327.7	0.003	8	1	0.013	0.7343	2.23	2.23	0.60	0.7343	0.6969	105.4	89.4	89.4	FALSE	11.80
B50+B37	B50	13.27	7.77	B37	14.71	7.31	204.7	0.002	6	1	0.013	0.0980	1.00	1.00	0.25	0.0980	0.2659	36.8	50.0	50.0	FALSE	8.02
B51+B50	B51	14.15	9.95	B50	13.27	7.97	281.7	0.007	6	1	0.013	0.0260	1.03	1.03	0.09	0.0317	0.4704	5.5	18.6	15.0	FALSE	10.04
B52+B4	B52	20.58	4.29	B4	20.32	3.57	359.8	0.002	12	1	0.013	1.5017	2.34	2.34	0.76	1.5017	1.5936	94.2	76.1	76.1	FALSE	5.07
C1+B16	C1	23.15	14.77	B16	20.39	13.24	401.9	0.004	8	1	0.013	0.7344	2.10	2.11	0.67	0.7352	0.7455	98.5	100.0	99.4	TRUE	15.78
C2+C1	C2	21.54	15.19	C1	23.15	14.77	204.3	0.002	8	1	0.013	0.5728	1.64	1.64	0.67	0.5728	0.5479	104.5	100.0	100.0	TRUE	16.21
C3+C2	C3	22.97	17.37	C2	21.54	15.24	397.8	0.005	6	1	0.013	0.5068	2.58	2.58	0.50	0.5068	0.4106	123.4	100.0	100.0	TRUE	19.84
C4+C3	C4	25.03	19.53	C3	22.97	17.42	436	0.005	6	1	0.013	0.4502	2.29	2.29	0.50	0.4502	0.3903	115.3	100.0	100.0	TRUE	23.02
C5+C4	C5	25.49	20.95	C4	25.03	19.53	327.7	0.004	6	1	0.013	0.4502	2.29	2.29	0.50	0.4502	0.3693	121.9	100.0	100.0	TRUE	25.39
C6+C5	C6	25.82	21.42	C5	25.49	20.99	87.5	0.005	6	1	0.013	0.3822	1.95	1.95	0.50	0.3822	0.3934	97.2	100.0	100.0	TRUE	25.78
C7+C6	C7	34.43	23.65	C6	25.82	21.42	447.8	0.005	6	1	0.013	0.3822	1.95	1.95	0.50	0.3822	0.3960	96.5	100.0	100.0	TRUE	28.17
C8+C7	C8	29.93	24.33	C7	34.43	23.65	400.9	0.002	6	1	0.013	0.2797	1.42	1.42	0.50	0.2797	0.2311	121.0	100.0	100.0	TRUE	29.34
C9+C8	C9	30	24.55	C8	29.93	24.38	84.1	0.002	6	1	0.013	0.2665	1.36	1.36	0.50	0.2665	0.2522	105.7	100.0	100.0	TRUE	29.49
C10+C9	C10	31.71	25.71	C9	30	24.55	300.8	0.004	6	1	0.013	0.2665	1.36	1.36	0.50	0.2665	0.3484	76.5	100.0	100.0	TRUE	30.26
C11+C10	C11	41.2	28.9	C10	31.71	25.76	508	0.006	6	1	0.013	0.1754	0.89	1.92	0.50	0.1760	0.4411	39.8	100.0	47.4	TRUE	30.88
C12+C1	C12	23.43	14.9	C1	23.15	14.77	264.8	0	6	1	0.01	0.1616	0.82	0.83	0.50	0.1631	0.1616	100.0	100.0	100.0	TRUE	15.93
C13+C12	C13	23	15.99	C12	23.43	15.03	480.7	0.002	6	1	0.013	0.0472	0.31	0.66	0.37	0.0472	0.2507	18.8	73.3	39.3	TRUE	16.20
C14+C12	C14	24.3	15.8	C12	23.43	14.9	282.1	0.003	6	1	0.01	0.1144	0.59	1.53	0.49	0.1145	0.4120	27.8	97.1	40.6	TRUE	16.02
C15+C14	C15	22.5	18.05	C14	24.3	16.1	565.3	0.003	6	1	0.013	0.0572	0.89	0.89	0.18	0.0572	0.3295	17.4	36.1	36.1	FALSE	18.25
C16+C14	C16	26.5	17.4	C14	24.3	15.8	272.9	0.006	6	1	0.01	0.0572	1.30	1.30	0.14	0.0572	0.5585	10.2	27.5	27.5	FALSE	17.54
C17+C16	C17	27.07	19.62	C16	26.5	17.4	332.8	0.007	6	1	0.013	0.0572	1.13	1.13	0.15	0.0572	0.4582	12.5	30.4	30.4	FALSE	19.77
C18+C17	C18	28	20.36	C17	27.07	19.62	369.6	0.002	6	1	0.013	0.0572	0.73	0.73	0.21	0.0572	0.2510	22.8	41.9	41.9	FALSE	20.58
C19+C2	C19	21.59	15.49	C2	21.54	15.24	264.1	0.001	6	1	0.013	0.0660	0.34	0.38	0.50	0.0738	0.1726	38.2	100.0	100.0	TRUE	16.24
C20+C19	C20	23.19	17.64	C19	21.59	15.54	198.5	0.011	6	1	0.013	0.0330	1.16	1.16	0.10	0.0330	0.5771	5.7	20.2	20.2	TRUE	17.74
C21+C19	C21	23.94	17.74	C19	21.59	15.54	284.2	0.008	6	1	0.013	0.0330	0.65	0.72	0.15	0.0331	0.4937	6.7	30.5	2.2	TRUE	17.88
C22+C21	C22	24.43	18.08	C21	23.94	17.79	91.8	0.003	6	1	0.013	0.0330	0.75	0.75	0.14	0.0330	0.3154	10.5	27.5	27.5	FALSE	18.24
C23+C3	C23	23.27	18.07	C3	22.97	17.42	400.5	0.002	6	1	0.013	0.0566	0.29	0.85	0.50	0.0566	0.2260	25.0	100.0	2.6	TRUE	19.89
C24+C23	C24	25.53	18.72	C23	23.27	18.42	151.2	0.002	6	1	0.013	0.0283	0.14	0.66	0.50	0.0284	0.2500	11.3	100.0	27.1	TRUE	19.89
C25+C23	C25	25.08	19.73	C23	23.27	18.17	303.1	0.005	6	1	0.013	0.0283	0.14	0.52	0.50	0.0284	0.4025	7.0	100.0	32.3	TRUE	19.89
C26+D9	C26	29.07	24.47	D9	27.55	21.3	435.8	0.007	6	1	0.013	0.2000	2.06	2.21	0.25	0.2111	0.4785	41.8	49.5	49.0	FALSE	24.72
C27+C5	C27	25	21.41	C5	25.49	20.97	221.6	0.002	6	1	0.013	0.0680	0.35	0.81	0.50	0.0704	0.2500	27.2	100.0	45.4	TRUE	25.41
C28+C27	C28	27.89	23.34	C27	25	21.41	43	0.045	6	1	0.013	0.0195	0.10	0.79	0.50	0.0198	1.1891	1.6	100.0	7.7	TRUE	25.41
C29+C28	C29	32.14	23.94	C28	27.89	23.34	298.4	0.002	6	1	0.013	0.0195	0.10	1.03	0.50	0.0250	0.2516	7.8	100.0	16.3	TRUE	25.41
C30+C27	C30	28.53	23.63	C27	25	21.41	162.9	0.014	6	1	0.013	0.0485	0.25	1.34	0.50	0.0486	0.6551	7.4	100.0	24.0	TRUE	25.41
C31+C30	C31	29.09	23.76	C30	28.53	23.63	67.1	0.002	6	1	0.013	0.0195	0.10	0.10	0.50	0.0195	0.2469	7.9	100.0	100.0	TRUE	25.41
C32+C30	C32	30.12	24.36	C30	28.53	23.63	146.7	0.005	6	1	0.013	0.0290	0.15	1.16	0.50	0.0387	0.3958	7.3	100.0	18.7	TRUE	25.41
C33+C32	C33	31.26	24.53	C32	30.12	24.39	70.7	0.002	6	1	0.013	0.0195	0.10	0.82	0.50	0.0195	0.2497	7.8	100.0	17.8	TRUE	25.41
C34+C32	C34	30	24.5	C32	30.12	24.39	56.9	0.002	6	1	0.013	0.0095	0.05	0.81	0.50	0.0100	0.2468	3.8	100.0	10.5	TRUE	25.41

Appendix D: Table 2
Scenario 1: 2025 PWWF Model Results

Label	Start Node	Rim (Start) (ft)	Invert (Start) (ft)	Stop Node	Rim (Stop) (ft)	Invert (Stop) (ft)	Length (ft)	Slope (Calculated) (ft/ft)	Diameter (in)	Number of Barrels	Manning's n	Flow (Middle) (cfs)	Velocity (ft/s)	Velocity (Maximum Calculated) (ft/s)	Depth (Middle) (ft)	Flow (Maximum) (cfs)	Capacity (Full Flow) (cfs)	Flow / Capacity (Design) (%)	Depth/Rise (%)	Depth (Maximum) / Rise (%)	Is Ever Surcharged?	Hydraulic Grade (Maximum) (ft)
C35+C7	C35	31.98	25.2	C7	34.43	23.65	403.4	0.004	6	1	0.013	0.1025	0.52	1.26	0.50	0.1027	0.3478	29.5	100.0	43.4	TRUE	28.17
C36+C35	C36	32.58	25.7	C35	31.98	25.2	92	0.005	6	1	0.013	0.1025	0.52	0.52	0.50	0.1025	0.4137	24.8	100.0	100.0	TRUE	28.17
C37+C36	C37	34.3	26.67	C36	32.58	25.73	153.2	0.006	6	1	0.013	0.0567	0.29	1.10	0.50	0.0567	0.4394	12.9	100.0	30.9	TRUE	28.17
C39+C37	C39	33.37	27.03	C37	34.3	26.7	164.1	0.002	6	1	0.013	0.0458	0.23	0.65	0.50	0.0458	0.2516	18.2	100.0	39.0	TRUE	28.17
C40+C36	C40	32.93	26.9	C36	32.58	25.83	257.5	0.004	6	1	0.013	0.0458	0.23	0.82	0.50	0.0458	0.3617	12.7	100.0	32.6	TRUE	28.17
C41+C40	C41	33.56	27.26	C40	32.93	26.93	191.4	0.002	6	1	0.013	0.0458	0.23	0.61	0.50	0.0458	0.2330	19.7	100.0	40.7	TRUE	28.17
C42+C41	C42	34.21	27.91	C41	33.56	27.31	300.1	0.002	6	1	0.013	0.0458	0.23	0.65	0.50	0.0458	0.2509	18.3	100.0	39.0	TRUE	28.17
C43+C8	C43	30.16	24.53	C8	29.93	24.33	101	0.002	6	1	0.013	0.0132	0.07	0.84	0.50	0.0134	0.2496	5.3	100.0	13.5	TRUE	29.34
C44+C10	C44	32.45	26.73	C10	31.71	25.76	154.5	0.006	6	1	0.013	0.0911	0.46	1.50	0.50	0.0914	0.4445	20.5	100.0	34.8	TRUE	30.26
C45+C44	C45	33.66	27.91	C44	32.45	26.77	166.1	0.007	6	1	0.013	0.0911	0.46	1.84	0.50	0.1032	0.4648	19.6	100.0	32.8	TRUE	30.26
C46+C45	C46	36.3	29.85	C45	33.66	27.91	255.5	0.008	6	1	0.013	0.0911	0.46	1.51	0.50	0.0911	0.4889	18.6	100.0	34.7	TRUE	30.26
C47+C46	C47	35.05	30.62	C46	36.3	30	309.1	0.002	6	1	0.013	0.0911	0.92	1.00	0.25	0.0924	0.2513	36.3	50.1	47.5	FALSE	30.90
C48+C11	C48	43.08	29.1	C11	41.2	28.98	178.7	0.001	6	1	0.013	0.1755	0.89	1.03	0.50	0.1755	0.1454	120.7	100.0	80.6	TRUE	31.03
C49+C48	C49	41.32	29.82	C48	43.08	29.1	247.7	0.003	6	1	0.013	0.1755	0.89	1.39	0.50	0.1755	0.3025	58.0	100.0	61.4	TRUE	31.28
C50+C49	C50	40.78	30.68	C49	41.32	29.82	361.2	0.002	6	1	0.013	0.1755	0.89	1.28	0.50	0.1755	0.2738	64.1	100.0	65.7	TRUE	31.69
C51+C50	C51	38.55	32.75	C50	40.78	30.68	556.1	0.004	6	1	0.013	0.1755	1.52	1.53	0.28	0.1755	0.3423	51.3	56.8	56.7	TRUE	33.04
D1+E4	D1	17.33	6.83	E4	16.28	6.08	354.5	0.002	12	1	0.013	2.1663	2.76	2.76	1.00	2.1663	1.6388	132.2	100.0	100.0	TRUE	8.91
D2+D1	D2	17.54	6.91	D1	17.33	6.88	53.3	0.001	12	1	0.013	2.1289	2.71	2.71	1.00	2.1289	0.8455	251.8	100.0	100.0	TRUE	9.00
D3+D2	D3	18.91	7.46	D2	17.54	6.99	363.3	0.001	12	1	0.013	2.1289	2.71	2.71	1.00	2.1289	1.2815	166.1	100.0	100.0	TRUE	10.25
D4+D3	D4	19	8.15	D3	18.91	7.56	296.1	0.002	8	1	0.013	0.8389	2.40	2.40	0.67	0.8389	0.5393	155.5	100.0	100.0	TRUE	11.76
D5+D4	D5	19	8.29	D4	19	8.15	69.6	0.002	8	1	0.013	0.8389	2.40	2.40	0.67	0.8389	0.5418	154.8	100.0	100.0	TRUE	12.04
D6+D5	D6	19.87	13.77	D5	19	8.29	246.1	0.022	8	1	0.013	0.5800	1.66	1.66	0.67	0.5800	1.8033	32.2	100.0	100.0	TRUE	14.04
D7+D6	D7	19.85	15.5	D6	19.87	13.82	398	0.004	6	1	0.013	0.5800	2.95	2.95	0.50	0.5800	0.3646	159.1	100.0	100.0	TRUE	19.06
D8+D7	D8	21.51	16.11	D7	19.85	15.5	157.8	0.004	6	1	0.013	0.2000	1.02	1.02	0.50	0.2000	0.3488	57.3	100.0	100.0	TRUE	19.06
D9+D8	D9	27.55	21.3	D8	21.51	16.11	496	0.01	6	1	0.013	0.2000	2.55	2.48	0.21	0.2101	0.5739	34.8	41.9	44.6	TRUE	21.53
D10+D3	D10	21.78	10.58	D3	18.91	7.81	489.1	0.006	10	1	0.013	1.2900	2.36	2.36	0.83	1.2900	1.6487	78.2	100.0	100.0	TRUE	11.93
D16+D20	D16	23	13.91	D20	22	13	453.9	0.002	10	1	0.013	0.2000	1.26	1.26	0.28	0.2005	0.9810	20.4	33.3	33.3	FALSE	14.19
D17+D16	D17	23.1	14.18	D16	23	13.91	136.3	0.002	10	1	0.013	0.2000	1.27	1.31	0.27	0.2010	0.9751	20.5	33.0	32.4	FALSE	14.48
D19+D10	D19	21.54	12.39	D10	21.78	10.63	48.1	0.037	10	1	0.013	1.2900	4.64	4.64	0.42	1.2900	4.1895	30.8	50.8	50.8	TRUE	12.74
D20+D19	D20	22	13	D19	21.54	12.89	52.7	0.002	6	1	0.013	0.2770	1.78	1.78	0.37	0.2770	0.2564	108.0	74.1	74.1	FALSE	13.42
D21+D19	D21	20.93	15.08	D19	21.54	12.84	390.8	0.006	8	1	0.013	1.0130	2.90	2.90	0.67	1.0130	0.9148	110.7	100.0	100.0	TRUE	16.28
D22+D21	D22	22.23	15.84	D21	20.93	15.13	149	0.005	8	1	0.013	1.0130	2.90	2.90	0.67	1.0130	0.8341	121.5	100.0	100.0	TRUE	17.33
D23+D22	D23	22.62	16.12	D22	22.23	15.88	73.3	0.003	8	1	0.013	0.6630	1.90	1.90	0.67	0.6630	0.6914	95.9	100.0	100.0	TRUE	17.48
D24+D23	D24	24.01	17.46	D23	22.62	16.12	349.8	0.004	8	1	0.013	0.6630	1.90	1.90	0.67	0.6630	0.7478	88.7	100.0	100.0	TRUE	18.54
D25+D24	D25	24.45	18.45	D24	24.01	17.56	300.9	0.003	6	1	0.013	0.3230	1.64	1.64	0.50	0.3230	0.3052	105.8	100.0	100.0	TRUE	19.62
D26+D25	D26	24.79	19.26	D25	24.45	18.5	156.7	0.005	6	1	0.013	0.3230	1.64	1.64	0.50	0.3230	0.3907	82.7	100.0	100.0	TRUE	20.17
D27+D26	D27	26.68	20.86	D26	24.79	19.28	392.4	0.004	6	1	0.013	0.1700	1.58	1.56	0.27	0.1700	0.3560	47.7	53.6	54.4	TRUE	21.13
D28+D27	D28	27.45	21.65	D27	26.68	20.9	81.1	0.009	6	1	0.013	0.1700	2.12	2.12	0.21	0.1700	0.5394	31.5	42.7	42.7	FALSE	21.87
D29+C37	D29	34.53	27.53	C37	34.3	26.7	129.5	0.006	6	1	0.013	0.0000	0.00	0.00	0.50	0.0000	0.4492	0.0	100.0	0.0	TRUE	28.17
D29+D28	D29	34.53	27.53	D28	27.45	21.67	465.5	0.013	6	1	0.013	0.0000	0.00	0.00	0.00	0.0000	0.6295	0.0	0.0	0.0	FALSE	27.53
D30+D26	D30	26.26	21.18	D26	24.79	19.29	436.5	0.004	6	1	0.013	0.1530	1.55	1.62	0.25	0.1635	0.3692	41.4	50.1	51.0	TRUE	21.44
D31+D30	D31	26.68	21.76	D30	26.26	21.46	152.5	0.002	6	1	0.013	0.0765	0.85	0.98	0.23	0.0866	0.2488	30.7	46.6	46.1	FALSE	22.02
D32+D30	D32	26.44	21.71	D30	26.26	21.46	126.2	0.002	6	1	0.013	0.0765	0.86	0.94	0.23	0.0840	0.2497	30.6	46.2	46.6	FALSE	21.97
D33+D24	D33	28.14	19.34	D24	24.01	17.51	450.4	0.004	8	1	0.013	0.1686	1.55	1.54	0.23	0.1686	0.7702	21.9	35.0	35.0	TRUE	19.58
D34+D33	D34	34.45	22.3	D33	28.14	19.34	293.3	0.01	8	1	0.013	0.1686	2.14	2.14	0.18	0.1686	1.2139	13.9	27.7	27.7	FALSE	22.49
D35+D34	D35	33.56	22.51	D34	34.45	22.3	177.8	0.001	6	1	0.013	0.1686	1.09	1.09	0.37	0.1686	0.1928	87.4	73.7	73.7	FALSE	22.91
D36+D35	D36	31.3	25.05	D35	33.56	22.56	250.8	0.01	6	1	0.013	0.0200	0.95	0.77	0.07	0.0250	0.5591	3.6	13.9	5.7	FALSE	25.13
D37+D36	D37	31.11	26.01	D36	31.3	25.05	367.8	0.003	6	1	0.013	0.0200	0.81	1.07	0.09	0.0298	0.2866	7.0	18.3	19.9	FALSE	26.17
D38+D37	D38	32	26.64	D37	31.11	26.16	237.7	0.002	6	1	0.013	0.0100	0.76	0.79	0.04	0.0107	0.2521	4.0	8.6	9.5	FALSE	26.76
D39+D38	D39	32.14	26.81	D38	32	26.64	84.1	0.002	6	1	0.013	0.0100	0.80	0.80	0.05	0.0100	0.2522	4.0	10.0	10.1	FALSE	26.87
D40+D37	D40	32	26.6	D37	31.11	26.21	193.6	0.002	6	1	0.013	0.0100	0.79	0.73	0.05	0.0159	0.2518	4.0	9.5	5.9	FALSE	26.66
D41+D24	D41	31.35	25.75	D24	24.01	17.51	190.6	0.043	6	1	0.013	0.1714	2.07	2.07	0.14	0.1714	1.1666	14.7	28.5	28.5	TRUE	25.90
D42+D41	D42	30	26	D41	31.35	25.8	100.2	0.002	6	1	0.013	0.0214	0.72	0.72	0.10	0.0214	0.2506	8.5	20.8	20.8	FALSE	26.11
D43+D41	D43	32	26.89	D41	31.35	25.85	517.4	0.002	6	1	0.013	0.1500	1.14	1.14	0.32	0.1500	0.2516	59.6	63.7	63.7	FALSE	27.21
D44+D43	D44	32	27.12	D43	32	26.89	113	0.002	6	1	0.013	0.1500	1.21	1.21	0.30	0.1500	0.2531	59.3	60.3	60.2	FALSE	27.44
D47+D22	D47	20.69	17.09	D22	22.23	15.86	299.2	0.004	8	1	0.013	0.3500	1.00	1.00	0.67	0.3500	0.7748	45.2	100.0	100.0	TRUE	17.43
D48+D47	D48	22.05	18.7	D47	20.69	17.09	401	0.004	6	1	0.013	0.3500	1.86	1.86	0.46	0.3500	0.3555	98.4	91.2	91.2	FALSE	19.18
D49+D48	D49	27.59	21.99	D48	22.05	18.7	399.7	0.008	6	1	0.013	0.3500	2.59	2.59	0.33	0.3500	0.5090	68.8	65.0	65.0	FALSE	22.32
D50+D49	D50	31.35	22.83	D49	27.59	21.99	421.6	0.002	6	1	0.013	0.3500	1.78	1.78	0.50	0.3500	0.2504	139.8	100.0	100.0	TRUE	24.38
D51+D7	D51	23.54	18.66	D7	19.85	15.5	457.8	0.007	6	1	0.013	0.3800	1.93	1.93	0.50	0.3800	0.4661	81.5	100.0	100.0	TRUE	21.48
D52+D51	D52	27.31	20.31	D51	23.54	18.69	267	0.006	6	1	0.013	0.2400	1.22	2.11	0.50	0.2405	0.4370	54.9	100.0	56.4	TRUE	22.02
D53+D52	D53	29.62	21.22	D52	27.31	20.31	247.8	0.004	6	1	0.013	0.1200	0.61	1.34	0.50	0.1204	0.3400	35.3	100.0	46.6	TRUE	22.11
D54+D53	D54	29.68	21.68	D53	29.62	21.27	74.9	0.005	6	1	0.013	0.1200	0.61	1.52	0.50	0.1206	0.4152	28.9	100.0	42.4	TRUE	22.11
D55+D54	D55	30.37	22.39	D54	29.68	21.88	252.3	0.002	6	1	0.013	0.1200	1.05	1.05	0.28	0.1200	0.2523	47.6	56.6	56.6	FALSE	22.67
D56+D35	D56	35.05	23.65	D35	33.56	22.51	286.3	0.004	6	1	0.013	0.1486	1.48	1.48	0.25	0.1486	0.3540	42.0	51.0	51.0	FALSE	23.91
D57+D56	D57	37.86	26.21	D56	35.05	23.7	197.1	0.013	6	1	0.013	0.1486	2.16	2.16	0.18	0.1486	0.6331	23.5	36.8	36.8	FALSE	26.40

Appendix D: Table 2
Scenario 1: 2025 PWWF Model Results

Label	Start Node	Rim (Start) (ft)	Invert (Start) (ft)	Stop Node	Rim (Stop) (ft)	Invert (Stop) (ft)	Length (ft)	Slope (Calculated) (ft/ft)	Diameter (in)	Number of Barrels	Manning's n	Flow (Middle) (cfs)	Velocity (ft/s)	Velocity (Maximum Calculated) (ft/s)	Depth (Middle) (ft)	Flow (Maximum) (cfs)	Capacity (Full Flow) (cfs)	Flow / Capacity (Design) (%)	Depth/Rise (%)	Depth (Maximum) / Rise (%)	Is Ever Surcharged?	Hydraulic Grade (Maximum) (ft)
D58+D57	D58	37.67	27.07	D57	37.86	26.36	158	0.004	6	1	0.013	0.1486	1.55	1.55	0.25	0.1486	0.3761	39.5	49.1	49.1	FALSE	27.32
D59+D58	D59	37.27	28.53	D58	37.67	27.12	151.4	0.009	6	1	0.013	0.1486	2.02	2.02	0.20	0.1486	0.5414	27.4	40.1	40.1	FALSE	28.74
D60+D59	D60	37.44	29.8	D59	37.27	28.57	112.6	0.011	6	1	0.013	0.1336	2.05	2.05	0.18	0.1336	0.5864	22.8	36.7	36.7	FALSE	29.99
D61+D60	D61	37.37	30.05	D60	37.44	29.84	101	0.002	6	1	0.013	0.1336	1.17	1.17	0.28	0.1336	0.2559	52.2	56.4	56.4	FALSE	30.35
D62+D59	D62	32.76	29.07	D59	37.27	28.57	247.7	0.002	6	1	0.013	0.0150	0.80	0.82	0.08	0.0151	0.2521	6.0	15.2	14.9	FALSE	29.16
D63+D5	D63	19.63	8.6	D5	19	8.29	296.6	0.001	8	1	0.013	0.2589	0.74	0.76	0.67	0.2652	0.3906	66.3	100.0	100.0	TRUE	12.11
D64+D63	D64	24.68	17.38	D63	19.63	8.56	470.5	0.019	6	1	0.013	0.1989	2.08	2.25	0.24	0.1995	0.7682	25.9	49.0	30.1	TRUE	17.61
D65+D64	D65	28.98	20.08	D64	24.68	17.38	448	0.006	6	1	0.013	0.1989	1.92	1.92	0.26	0.1989	0.4356	45.7	52.2	52.2	FALSE	20.34
D66+D65	D66	29.37	20.96	D65	28.98	20.13	412.5	0.002	8	1	0.013	0.1989	1.27	1.27	0.31	0.1989	0.5420	36.7	45.9	45.9	FALSE	21.28
D67+D63	D67	18.77	12.39	D63	19.63	8.6	294.1	0.013	6	1	0.013	0.0597	0.30	1.69	0.50	0.1123	0.6369	9.4	100.0	25.3	TRUE	12.52
D68+D67	D68	19	12.7	D67	18.77	12.42	138.9	0.002	6	1	0.013	0.0299	0.64	0.96	0.14	0.0423	0.2519	11.9	28.7	27.6	FALSE	12.86
D69+D67	D69	19	12.94	D67	18.77	12.42	259	0.002	6	1	0.013	0.0299	0.64	0.66	0.14	0.0303	0.2514	11.9	28.8	28.3	FALSE	13.10
D70+D51	D70	24	18.86	D51	23.54	18.72	70.8	0.002	6	1	0.013	0.1400	0.71	0.71	0.50	0.1400	0.2494	56.1	100.0	100.0	TRUE	21.49
D71+D52	D71	28.07	22.62	D52	27.31	21.11	130	0.012	6	1	0.013	0.1200	1.96	1.96	0.17	0.1200	0.6047	19.8	34.5	34.4	TRUE	22.79
D72+D20	D72	22.5	13.56	D20	22	13	279.6	0.002	10	1	0.013	0.0770	0.82	0.82	0.19	0.0772	0.9806	7.9	22.8	22.9	FALSE	13.75
D73+D72	D73	23	14.16	D72	22.5	13.56	297.4	0.002	8	1	0.013	0.0770	0.84	0.85	0.21	0.0781	0.5428	14.2	30.8	30.9	FALSE	14.37
D74+D73	D74	23.2	14.58	D73	23	14.16	210.2	0.002	8	1	0.013	0.0770	0.84	0.84	0.21	0.0772	0.5401	14.3	30.9	30.9	FALSE	14.81
E1+H9	E1	12.09	3.59	H9	11.84	3.09	269.8	0.002	18	1	0.013	3.0237	2.90	2.90	0.86	3.0237	4.5221	66.9	57.0	57.0	FALSE	4.49
E2+E1	E2	13.48	4.23	E1	12.09	3.64	283.2	0.002	12	1	0.013	2.1663	2.76	2.76	1.00	2.1663	1.6261	133.2	100.0	100.0	TRUE	5.46
E3+E2	E3	15.11	4.76	E2	13.48	4.33	279.6	0.002	12	1	0.013	2.1663	2.76	2.76	1.00	2.1663	1.3970	155.1	100.0	100.0	TRUE	6.42
E4+E3	E4	16.28	6.08	E3	15.11	5.01	356.7	0.003	12	1	0.013	2.1663	2.76	2.76	1.00	2.1663	1.9512	111.0	100.0	100.0	TRUE	7.67
E6+E1	E6	11.14	4.84	E1	12.09	4.04	501	0.002	12	1	0.013	0.8574	1.87	1.87	0.57	0.8574	1.4236	60.2	56.7	56.7	FALSE	5.42
E7+E6	E7	11.77	6.02	E6	11.14	4.84	310.5	0.004	12	1	0.013	0.7965	2.49	2.49	0.43	0.7965	2.1961	36.3	42.7	42.7	FALSE	6.45
E8+E7	E8	13.72	6.77	E7	11.77	6.07	354.7	0.002	12	1	0.013	0.6747	1.87	1.87	0.47	0.6747	1.5826	42.6	46.8	46.8	FALSE	7.25
E9+E8	E9	13.77	7.32	E8	13.72	6.82	341.1	0.001	12	1	0.013	0.5529	1.61	1.61	0.45	0.5529	1.3640	40.5	45.1	45.1	FALSE	7.78
E10+E9	E10	14.53	7.78	E9	13.77	7.32	192.1	0.002	12	1	0.013	0.5529	1.90	1.90	0.40	0.5529	1.7432	31.7	39.8	39.8	FALSE	8.19
E11+E10	E11	14.94	8.04	E10	14.53	7.93	194.9	0.001	12	1	0.013	0.4161	1.30	1.30	0.43	0.4161	0.8465	49.2	42.7	42.7	FALSE	8.51
E12+E11	E12	20.13	9.13	E11	14.94	8.14	494.5	0.002	12	1	0.013	0.4161	1.61	1.61	0.36	0.4161	1.5941	26.1	36.4	36.4	FALSE	9.50
E13+E12	E13	18.72	10	E12	20.13	9.18	450.3	0.002	8	1	0.013	0.2802	1.38	1.38	0.38	0.2802	0.5157	54.3	56.4	56.4	FALSE	10.38
E14+E13	E14	17.24	10.39	E13	18.72	10.12	185.5	0.001	8	1	0.013	0.2315	1.25	1.25	0.35	0.2315	0.4609	50.2	52.3	52.3	FALSE	10.76
E15+E14	E15	15.27	10.72	E14	17.24	10.49	246.2	0.001	8	1	0.013	0.2009	1.04	1.04	0.36	0.2011	0.3693	54.4	54.3	54.3	FALSE	11.10
E20+E7	E20	12.61	7.71	E7	11.77	6.12	504.5	0.003	6	1	0.013	0.0609	0.89	0.90	0.19	0.0613	0.3150	19.3	37.8	37.9	FALSE	7.90
E21+E20	E21	14.72	8.53	E20	12.61	7.76	385.6	0.002	6	1	0.013	0.0609	0.76	0.97	0.21	0.0768	0.2507	24.3	42.9	42.3	FALSE	8.76
E22+E8	E22	15.38	8.48	E8	13.72	6.87	449.9	0.004	6	1	0.013	0.0609	0.93	0.94	0.18	0.0613	0.3356	18.1	36.6	36.6	FALSE	8.67
E23+E22	E23	16.82	10.42	E22	15.38	8.48	438.8	0.004	6	1	0.013	0.0609	1.02	1.02	0.17	0.0614	0.3731	16.3	34.4	34.5	FALSE	10.61
E25+E50	E25	16.75	10.9	E50	16.04	9.64	231.9	0.005	6	1	0.013	0.0670	1.17	1.47	0.17	0.0801	0.4136	16.2	33.3	32.1	FALSE	11.07
E26+E25	E26	19.82	13.82	E25	16.75	10.9	488.2	0.006	6	1	0.013	0.0670	1.18	1.18	0.17	0.0670	0.4339	15.4	33.0	33.0	FALSE	14.00
E27+E12	E27	21.28	15.85	E12	20.13	9.53	576.2	0.011	6	1	0.013	0.0427	1.14	1.14	0.12	0.0428	0.5876	7.3	24.5	24.5	FALSE	15.97
E28+E27	E28	22	15.93	E27	21.28	15.81	61.8	0.002	6	1	0.013	0.0427	0.71	0.71	0.17	0.0427	0.2472	17.3	34.4	34.4	FALSE	16.13
E29+E12	E29	23.08	15.79	E12	20.13	9.58	247	0.025	6	1	0.013	0.0932	1.61	1.61	0.13	0.0932	0.8896	10.5	25.6	25.6	FALSE	15.92
E30+E29	E30	27	20.5	E29	23.08	15.83	502.3	0.009	6	1	0.013	0.0670	1.39	1.39	0.15	0.0670	0.5410	12.4	29.4	29.4	FALSE	20.65
E31+E29	E31	27.93	20.63	E29	23.08	15.83	252.3	0.019	6	1	0.013	0.0610	1.40	1.40	0.12	0.0610	0.7739	7.9	23.8	23.8	FALSE	20.75
E32+E31	E32	28	21.21	E31	27.93	20.68	263.2	0.002	6	1	0.013	0.0610	0.76	0.90	0.21	0.0689	0.2518	24.2	42.8	41.2	FALSE	21.44
E33+E13	E33	21.41	15.78	E13	18.72	10.02	228.9	0.025	8	1	0.013	0.0487	1.21	1.21	0.09	0.0487	1.9166	2.5	14.0	14.0	FALSE	15.87
E33+E29	E33	21.41	17.11	E29	23.08	15.86	455.1	0.003	6	1	0.013	0.0000	0.00	0.00	0.00	0.0000	0.2941	0.0	0.0	0.0	FALSE	17.11
E34+E33	E34	24.94	18.94	E33	21.41	15.83	278.9	0.011	6	1	0.013	0.0400	1.12	1.10	0.12	0.0401	0.5925	6.8	23.7	24.0	FALSE	19.06
E35+E14	E35	19.06	11.41	E14	17.24	10.74	333	0.002	6	1	0.013	0.0305	0.64	1.43	0.15	0.0677	0.2517	12.1	29.1	23.6	FALSE	11.60
E36+E15	E36	17.4	12.35	E15	15.27	10.82	420.2	0.004	6	1	0.013	0.1827	1.54	1.54	0.29	0.1827	0.3385	54.0	58.3	58.3	FALSE	12.65
E37+E36	E37	18	13.11	E36	17.4	12.4	353.2	0.002	6	1	0.013	0.0609	0.76	0.76	0.21	0.0609	0.2515	24.2	42.8	42.8	FALSE	13.34
E38+E36	E38	18.78	13.33	E36	17.4	12.35	233.6	0.004	6	1	0.013	0.1218	1.41	1.41	0.23	0.1218	0.3634	33.5	45.2	45.2	FALSE	13.56
E39+E38	E39	19	14.13	E38	18.78	13.53	300.6	0.002	6	1	0.013	0.0609	0.76	0.89	0.21	0.0662	0.2507	24.3	42.9	40.5	FALSE	14.36
E40+E38	E40	22.91	14.25	E38	18.78	13.33	458.2	0.002	6	1	0.013	0.0609	0.76	0.76	0.21	0.0609	0.2514	24.2	42.8	42.8	FALSE	14.48
E41+E15	E41	16	11.07	E15	15.27	10.87	98.3	0.002	6	1	0.013	0.0183	0.44	0.49	0.13	0.0183	0.2530	7.2	26.5	24.4	FALSE	11.17
E42+E10	E42	14.56	10.06	E10	14.53	7.88	550.5	0.004	6	1	0.013	0.0698	1.04	1.04	0.19	0.0699	0.3531	19.8	37.3	37.3	FALSE	10.25
E44+E8	E44	12.57	8.62	E8	13.72	6.82	630.5	0.003	6	1	0.013	0.0609	0.86	0.86	0.19	0.0609	0.2998	20.3	38.9	38.9	FALSE	8.82
E45+E44	E45	13.15	9.55	E44	12.57	8.57	319.4	0.003	6	1	0.013	0.0609	0.88	0.88	0.19	0.0609	0.3108	19.6	38.3	38.3	FALSE	9.76
E46+E7	E46	11	7.4	E7	11.77	6.02	500.5	0.003	6	1	0.013	0.0609	0.85	0.85	0.20	0.0609	0.2946	20.7	39.2	39.2	FALSE	7.60
E47+E46	E47	11.54	8.31	E46	11	7.4	455.2	0.002	6	1	0.013	0.0609	0.76	0.76	0.21	0.0609	0.2509	24.3	42.9	42.8	FALSE	8.54
E48+E6	E48	11.94	7.54	E6	11.14	5.19	498.5	0.005	6	1	0.013	0.0609	1.04	1.03	0.17	0.0609	0.3852	15.8	33.9	34.0	FALSE	7.71
E49+E48	E49	11.53	8.46	E48	11.94	7.54	457.8	0.002	6	1	0.013	0.0609	0.76	0.76	0.21	0.0609	0.2515	24.2	42.8	42.8	FALSE	8.69
E50+E10	E50	16.04	9.64	E10	14.53	7.88	217.9	0.008	6	1	0.013	0.0670	1.32	1.55	0.15	0.0783	0.5043	13.3	30.5	26.4	FALSE	9.79
F7+T25	F7	4.65	0.3	T25	3.95	-2.2	477	0.005	6	1	0.013	0.1876	1.78	1.78	0.26	0.1876	0.4062	46.2	52.9	52.8	TRUE	0.57
F8+F7	F8	8.3	1.38	F7	4.65	0.3	356.7	0.003	6	1	0.013	0.1876	1.44	1.44	0.31	0.1876	0.3087	60.8	62.9	62.9	FALSE	1.70
F9+F23	F9	8.21	3.11	F23	8.23	2.7	110	0.004	6	1	0.013	0.1428	1.42	1.42	0.26	0.1428	0.3425	41.7	51.0	51.0	FALSE	3.37
F10+F9	F10	11.76	4.96	F9	8.21	3.21	462.6	0.004	6	1	0.013	0.1428	1.42	1.42	0.25	0.1428	0.3451	41.4	50.9	50.9	FALSE	5.22
F11+F10	F11	13	6.84	F10	11.76	5.06	419.8	0.004	6	1	0.013	0.1428	1.48	1.48	0.25	0.1428	0.3653	39.1	49.2	49.2	FALSE	7.09

Appendix D: Table 2
Scenario 1: 2025 PWWF Model Results

Label	Start Node	Rim (Start) (ft)	Invert (Start) (ft)	Stop Node	Rim (Stop) (ft)	Invert (Stop) (ft)	Length (ft)	Slope (Calculated) (ft/ft)	Diameter (in)	Number of Barrels	Manning's n	Flow (Middle) (cfs)	Velocity (ft/s)	Velocity (Maximum Calculated) (ft/s)	Depth (Middle) (ft)	Flow (Maximum) (cfs)	Capacity (Full Flow) (cfs)	Flow / Capacity (Design) (%)	Depth/Rise (%)	Depth (Maximum) / Rise (%)	Is Ever Surcharged?	Hydraulic Grade (Maximum) (ft)
F12+F11	F12	13	7.65	F11	13	6.94	355.2	0.002	6	1	0.013	0.0780	0.86	0.86	0.24	0.0780	0.2508	31.1	47.0	47.0	FALSE	7.89
F13+F19	F13	15.24	10.24	F19	15.18	10.23	24.2	0	6	1	0.013	0.0260	0.34	0.35	0.21	0.0260	0.1141	22.8	41.1	40.1	FALSE	10.44
F14+F8	F14	9.56	5.64	F8	8.3	1.76	463.1	0.008	6	1	0.013	0.0190	0.94	0.94	0.07	0.0190	0.5136	3.7	13.7	13.7	FALSE	5.71
F15+F11	F15	13.27	7.77	F11	13	7.17	301.1	0.002	6	1	0.013	0.0648	0.78	0.79	0.22	0.0662	0.2505	25.9	43.9	44.1	FALSE	7.99
F16+F15	F16	13.27	8.24	F15	13.27	7.77	238	0.002	6	1	0.013	0.0650	0.78	0.91	0.22	0.0753	0.2494	26.1	43.9	43.6	FALSE	8.48
F17+F22	F17	15.11	8.76	F22	13	8.39	130.3	0.003	6	1	0.013	0.0780	0.98	1.03	0.21	0.0786	0.2990	26.1	42.6	41.3	FALSE	8.98
F18+F17	F18	15.34	9.94	F17	15.11	8.89	197.5	0.005	6	1	0.013	0.0260	1.07	1.07	0.09	0.0260	0.4091	6.4	17.8	17.8	FALSE	10.04
F19+F20	F19	15.18	10.33	F20	15.15	9.7	188.8	0.003	6	1	0.013	0.0260	0.94	0.93	0.10	0.0261	0.3241	8.0	19.8	20.1	FALSE	10.44
F20+F17	F20	15.15	9.7	F17	15.11	8.86	281.2	0.003	6	1	0.013	0.0520	0.80	0.80	0.18	0.0521	0.3067	17.0	36.7	36.7	FALSE	9.89
F21+F20	F21	15.15	10.38	F20	15.15	9.7	136.4	0.005	6	1	0.013	0.0260	0.80	0.80	0.11	0.0260	0.3961	6.6	22.2	22.2	FALSE	10.49
F22+F12	F22	13	8.39	F12	13	7.65	158.8	0.005	6	1	0.013	0.0780	1.19	1.19	0.18	0.0782	0.3830	20.4	36.8	36.8	FALSE	8.58
F23+F8	F23	8.23	2.7	F8	8.3	1.48	327.4	0.004	6	1	0.013	0.1686	1.50	1.50	0.28	0.1686	0.3425	49.2	55.5	55.5	FALSE	2.98
F24+F23	F24	8.23	3.19	F23	8.23	2.7	98	0.005	6	1	0.013	0.0258	1.07	0.94	0.09	0.0259	0.3967	6.5	17.8	19.7	FALSE	3.30
F25+F24	F25	8.73	3.77	F24	8.23	3.19	115	0.005	6	1	0.013	0.0129	0.84	0.84	0.06	0.0129	0.3985	3.2	11.2	11.2	FALSE	3.83
F26+F25	F26	8.73	4.36	F25	8.73	3.77	118	0.005	6	1	0.013	0.0129	0.80	0.75	0.05	0.0129	0.3967	3.3	9.6	7.3	FALSE	4.42
F27+F24	F27	8.73	3.78	F24	8.23	3.19	118	0.005	6	1	0.013	0.0129	0.80	0.80	0.05	0.0129	0.3967	3.3	9.6	9.6	FALSE	3.84
F28+F27	F28	8.73	4.57	F27	8.73	3.78	158	0.005	6	1	0.013	0.0129	0.79	0.79	0.04	0.0129	0.3967	3.3	8.8	8.8	FALSE	4.62
G2+G19	G2	4.2	0.05	G19	2.65	-0.76	154	0.005	6	1	0.013	0.1265	1.54	1.54	0.22	0.1265	0.4069	31.1	43.5	43.5	FALSE	0.27
G3+G14	G3	7	1.85	G14	6.79	1.05	208.1	0.004	6	1	0.013	0.1071	1.28	1.28	0.22	0.1071	0.3479	30.8	44.2	44.2	FALSE	2.08
G4+G3	G4	7.49	2.26	G3	7	1.95	212.7	0.001	6	1	0.013	0.0881	0.82	0.82	0.27	0.0881	0.2142	41.1	53.7	53.7	FALSE	2.53
G6+G4	G6	10.75	5.12	G4	7.49	2.36	387.6	0.007	6	1	0.013	0.0764	1.35	1.35	0.16	0.0765	0.4735	16.1	33.0	33.0	FALSE	5.29
G7+G6	G7	10.12	5.81	G6	10.75	5.22	294.7	0.002	6	1	0.013	0.0383	0.62	1.43	0.18	0.0603	0.2511	15.2	35.4	25.2	FALSE	5.99
G8+G7	G8	10.83	6.45	G7	10.12	5.8	326.8	0.002	6	1	0.013	0.0383	0.61	0.61	0.18	0.0383	0.2502	15.3	35.4	35.4	FALSE	6.64
G9+G6	G9	8.88	5.78	G6	10.75	5.2	290.8	0.002	6	1	0.013	0.0382	0.60	0.61	0.18	0.0383	0.2506	15.2	35.7	35.4	FALSE	5.96
G10+G9	G10	11.09	6.24	G9	8.88	5.78	270.6	0.002	6	1	0.013	0.0382	0.57	1.00	0.19	0.0477	0.2313	16.5	37.3	29.2	FALSE	6.43
G11+G10	G11	11.78	6.87	G10	11.09	6.34	265.7	0.002	6	1	0.013	0.0381	0.61	0.61	0.18	0.0383	0.2506	15.2	35.6	35.4	FALSE	7.06
G12+G4	G12	8.32	3.02	G4	7.49	2.47	277	0.002	6	1	0.013	0.0116	0.83	0.81	0.06	0.0121	0.2500	4.6	12.4	12.9	FALSE	3.10
G13+G3	G13	8.34	2.8	G3	7	1.9	452.5	0.002	6	1	0.013	0.0190	0.73	0.70	0.09	0.0208	0.2502	7.6	19.0	20.8	FALSE	2.90
G14+G17	G14	6.79	1.05	G17	5.65	0.6	151.1	0.003	6	1	0.013	0.1168	1.20	1.20	0.25	0.1168	0.3062	38.1	49.7	49.7	FALSE	1.30
G15+G14	G15	6.2	2.15	G14	6.79	1.05	214.7	0.005	8	1	0.013	0.0097	0.26	0.69	0.11	0.0098	0.8648	1.1	16.3	4.4	FALSE	2.22
G16+G15	G16	6.21	3.21	G15	6.2	2.2	154.5	0.007	8	1	0.013	0.0097	0.72	0.72	0.03	0.0097	0.9771	1.0	5.1	5.1	FALSE	3.24
G17+G2	G17	5.65	0.5	G2	4.2	0.15	143.7	0.002	6	1	0.013	0.1265	1.16	1.16	0.27	0.1265	0.2769	45.7	54.4	54.4	FALSE	0.78
G18+G17	G18	5.86	1.15	G17	5.65	0.57	291.5	0.002	6	1	0.013	0.0097	0.80	0.79	0.05	0.0128	0.2503	3.9	10.2	9.2	FALSE	1.21
G19+T23	G19	2.65	-0.76	T23	6.87	-2.3	290.9	0.005	6	1	0.013	0.1365	1.57	1.57	0.23	0.1365	0.4083	33.4	45.5	45.5	FALSE	-0.53
G20+G19	G20	2.66	0.11	G19	2.65	-0.76	173.9	0.005	6	1	0.013	0.0100	0.29	0.81	0.11	0.0100	0.3968	2.5	22.9	11.3	FALSE	0.18
G21+G20	G21	2.67	0.37	G20	2.66	0.11	51.4	0.005	6	1	0.013	0.0050	0.64	0.64	0.02	0.0050	0.3991	1.3	4.7	4.6	FALSE	0.40
G22+G20	G22	2.67	0.25	G20	2.66	0.11	71.7	0.002	6	1	0.013	0.0050	0.67	0.71	0.04	0.0050	0.2479	2.0	8.0	7.4	FALSE	0.28
H2+I11	H2	7.99	0.59	I11	8.07	-0.03	36.6	0.017	24	1	0.01	3.9436	7.01	7.01	0.47	3.9466	38.2777	10.3	23.5	23.5	FALSE	1.04
H3+H2	H3	8.2	0.7	H2	7.99	0.59	30.8	0.004	24	1	0.01	3.9432	4.13	4.13	0.69	3.9471	17.5858	22.4	34.3	34.3	FALSE	1.41
H4+H3	H4	8.13	0.71	H3	8.2	0.7	7.1	0.001	24	1	0.01	3.0520	3.04	3.04	0.71	3.0555	11.0311	27.7	35.6	35.6	FALSE	1.42
H5+H4	H5	8.95	0.95	H4	8.13	0.71	259.3	0.001	24	1	0.01	3.0481	2.88	2.88	0.74	3.0594	8.9462	34.1	37.1	37.1	FALSE	1.74
H6+H5	H6	8.89	0.99	H5	8.95	0.95	9	0.004	20	1	0.01	3.0211	3.05	3.07	0.77	3.0464	12.0730	25.0	46.4	46.5	FALSE	1.75
H7+H75	H7	10.51	1.76	H75	10.09	1.58	89.8	0.002	20	1	0.013	3.0240	3.31	3.33	0.73	3.0435	6.2294	48.5	43.6	43.6	FALSE	2.53
H8+H7	H8	10.95	2.05	H7	10.51	1.76	233.4	0.001	20	1	0.01	3.0314	3.20	3.20	0.75	3.0361	6.3751	47.6	44.8	44.8	FALSE	2.84
H9+H73	H9	11.84	3.09	H73	11.36	2.56	246.2	0.002	18	1	0.01	3.0337	3.62	3.62	0.72	3.0337	6.3351	47.9	48.0	48.0	FALSE	3.85
H11+H64	H11	9.92	1.44	H64	9.05	0.99	198.2	0.002	14	1	0.01	0.8534	2.55	2.55	0.41	0.8534	3.3286	25.6	35.1	35.1	FALSE	1.86
H12+H11	H12	10.15	2.2	H11	9.92	1.54	333.5	0.002	8	1	0.013	0.7488	2.14	2.14	0.67	0.7488	0.5376	139.3	100.0	100.0	TRUE	3.43
H13+H12	H13	10.85	2.55	H12	10.15	2.3	107.9	0.002	8	1	0.013	0.6430	1.84	1.84	0.67	0.6430	0.5815	110.6	100.0	100.0	TRUE	3.67
H14+H13	H14	11.02	3.54	H13	10.85	2.65	446.5	0.002	8	1	0.013	0.6430	1.84	1.84	0.67	0.6430	0.5395	119.2	100.0	100.0	TRUE	4.99
H15+H62	H15	14.61	5.6	H62	12.95	4.64	201.4	0.005	8	1	0.013	0.5905	1.84	1.84	0.57	0.5905	0.8342	70.8	86.2	86.2	TRUE	6.04
H16+H60	H16	14.43	6.48	H60	14.57	5.9	351.2	0.002	8	1	0.01	0.5499	2.01	2.01	0.49	0.5499	0.6384	86.1	73.2	73.2	FALSE	6.98
H17+H57	H17	12.03	6.83	H57	14.21	6.69	396.8	0	8	1	0.013	0.5093	1.46	1.46	0.67	0.5093	0.2270	224.4	100.0	100.0	TRUE	7.94
H18+H5	H18	8.92	1.27	H5	8.95	1.25	7.9	0.003	6	1	0.013	0.0212	0.11	1.23	0.48	0.0423	0.2825	7.5	95.4	20.7	FALSE	1.74
H19+H18	H19	8.88	2.58	H18	8.92	1.27	386.9	0.003	6	1	0.013	0.0200	0.88	0.71	0.09	0.0283	0.3265	6.1	17.2	2.8	FALSE	2.67
H20+H19	H20	9.1	3.65	H19	8.88	2.63	270.8	0.004	6	1	0.013	0.0200	0.78	0.98	0.09	0.0270	0.3443	5.8	18.8	13.8	FALSE	3.81
H21+H56	H21	9.3	5.04	H56	9.2	4.75	143.8	0.002	6	1	0.013	0.0100	0.81	0.81	0.05	0.0100	0.2520	4.0	10.3	10.3	FALSE	5.09
H22+H21	H22	9.3	5.34	H21	9.3	5.04	151.4	0.002	6	1	0.013	0.0100	0.81	0.59	0.05	0.0100	0.2498	4.0	10.3	1.5	FALSE	5.40
H23+H22	H23	9.4	6.15	H22	9.3	5.34	404.8	0.002	6	1	0.013	0.0100	0.81	0.82	0.05	0.0103	0.2510	4.0	10.4	10.6	FALSE	6.20
H24+H20	H24	10.14	5.82	H20	9.1	3.65	332.8	0.007	6	1	0.013	0.0000	0.00	0.00	0.00	0.0000	0.4530	0.0	0.0	0.0	FALSE	5.82
H25+H11	H25	11.2	3.3	H11	9.92	1.7	378	0.004	6	1	0.013	0.1046	1.30	1.31	0.21	0.1057	0.3650	28.7	42.9	43.0	FALSE	3.52
H26+H25	H26	10.63	4.58	H25	11.2	3.3	412.5	0.003	6	1	0.013	0.1046	1.16	1.17	0.23	0.1062	0.3125	33.5	46.8	47.1	FALSE	4.83
H27+H26	H27	11.38	5.66	H26	10.63	5.43	114.6	0.002	6	1	0.013	0.0372	0.63	0.63	0.17	0.0372	0.2514	14.8	34.2	34.2	FALSE	5.85
H28+H50	H28	10.4	5.41	H50	10.13	5.03	191.6	0.002	6	1	0.013	0.0303	0.66	1.30	0.14	0.0497	0.2499	12.1	28.3	22.2	FALSE	5.57
H29+H12	H29	8.35	5.83	H12	10.15	2.65	550.5	0.006	6	1	0.013	0.1058	1.46	1.46	0.20	0.1059	0.4264	24.8	39.5	39.5	TRUE	6.03
H30+H46	H30	11.57	7.74	H46	11.27	7.47	135.4	0.002	6	1	0.013	0.0529	0.70	0.70	0.20	0.0529	0.2506	21.1	40.7	40.8	FALSE	7.96
H31+H14	H31	13.28	4.5	H14	11.02	3.69	403.7	0.002	6	1	0.013	0.0415	0.21	0.21	0.50	0.0417	0.2513	16.5	100.0	100.0	TRUE	5.01

Appendix D: Table 2
Scenario 1: 2025 PWWF Model Results

Label	Start Node	Rim (Start) (ft)	Invert (Start) (ft)	Stop Node	Rim (Stop) (ft)	Invert (Stop) (ft)	Length (ft)	Slope (Calculated) (ft/ft)	Diameter (in)	Number of Barrels	Manning's n	Flow (Middle) (cfs)	Velocity (ft/s)	Velocity (Maximum Calculated) (ft/s)	Depth (Middle) (ft)	Flow (Maximum) (cfs)	Capacity (Full Flow) (cfs)	Flow / Capacity (Design) (%)	Depth/Rise (%)	Depth (Maximum) / Rise (%)	Is Ever Surcharged?	Hydraulic Grade (Maximum) (ft)
H32+H17	H32	16.06	10.26	H17	12.03	6.88	549.9	0.006	6	1	0.013	0.1119	1.50	1.55	0.20	0.1119	0.4399	25.4	40.5	39.4	TRUE	10.46
H33+H32	H33	20	11.29	H32	16.06	10.26	515	0.002	8	1	0.013	0.1119	1.00	1.03	0.24	0.1133	0.5404	20.7	35.6	35.1	FALSE	11.54
H34+H17	H34	12.74	7.69	H17	12.03	6.83	268.6	0.003	6	1	0.013	0.3974	2.02	2.02	0.50	0.3974	0.3175	125.2	100.0	100.0	TRUE	9.44
H35+H34	H35	14.34	9.56	H34	12.74	7.69	321.9	0.006	6	1	0.013	0.3974	2.02	2.02	0.50	0.3974	0.4277	92.9	100.0	100.0	TRUE	11.27
H36+H35	H36	15.37	9.87	H35	14.34	9.56	473.9	0.001	6	1	0.013	0.2860	1.46	1.46	0.50	0.2860	0.1435	199.3	100.0	100.0	TRUE	12.78
H37+H36	H37	17.89	12.09	H36	15.37	9.87	370.1	0.006	6	1	0.013	0.1940	0.99	1.95	0.50	0.1954	0.4346	44.6	100.0	50.7	TRUE	13.30
H38+E42	H38	17.69	11.79	E42	14.56	10.11	518.8	0.003	6	1	0.013	0.0698	0.97	0.97	0.20	0.0699	0.3193	21.9	39.4	39.4	FALSE	11.99
H38+H47	H38	17.69	11.79	H47	15.05	10.1	205.2	0.008	6	1	0.013	0.1114	0.74	1.97	0.36	0.1443	0.5092	21.9	71.3	39.9	TRUE	12.02
H39+H38	H39	18	12.1	H38	17.69	11.84	131.9	0.002	6	1	0.013	0.1020	0.99	0.99	0.26	0.1020	0.2491	40.9	51.8	51.8	FALSE	12.36
H40+H36	H40	22.17	15.97	H36	15.37	9.87	496.1	0.012	6	1	0.013	0.0920	1.73	1.74	0.15	0.0938	0.6221	14.8	30.6	30.9	TRUE	16.12
H41+H40	H41	24.38	16.27	H40	22.17	15.97	150.4	0.002	6	1	0.013	0.0920	0.94	0.94	0.25	0.0922	0.2506	36.7	49.9	50.0	FALSE	16.55
H42+H37	H42	21.01	14.76	H37	17.89	12.19	387.7	0.007	6	1	0.013	0.0920	1.39	1.45	0.19	0.0921	0.4568	20.1	37.0	35.9	TRUE	14.95
H43+H42	H43	22.12	16.57	H42	21.01	14.76	346.3	0.005	6	1	0.013	0.0920	1.30	1.30	0.19	0.0920	0.4056	22.7	38.8	38.8	FALSE	16.79
H44+H37	H44	20.24	14.24	H37	17.89	12.14	272.4	0.008	6	1	0.013	0.1020	1.43	1.79	0.08	0.1024	0.4927	20.7	16.7	33.3	TRUE	14.44
H45+H9	H45	12.4	3.93	H9	11.84	3.49	222.4	0.002	6	1	0.013	0.0100	0.22	0.76	0.14	0.0130	0.2496	4.0	27.7	7.9	FALSE	3.99
H46+H52	H46	11.27	7.47	H52	12.58	6.18	360.9	0.004	6	1	0.013	0.0529	0.87	1.22	0.17	0.0554	0.3355	15.8	34.8	28.1	FALSE	7.65
H47+H35	H47	15.05	10.1	H35	14.34	9.62	192.4	0.002	6	1	0.013	0.1114	0.57	1.07	0.50	0.1133	0.2803	39.7	100.0	53.0	TRUE	11.30
H48+H55	H48	9.12	6.64	H55	9.3	4.32	217.4	0.011	6	1	0.013	0.0100	0.72	0.72	0.03	0.0100	0.5797	1.7	6.9	6.9	FALSE	6.72
H49+H48	H49	8.35	6.77	H48	9.12	6.72	32.6	0.002	6	1	0.013	0.0100	0.66	0.59	0.02	0.0100	0.2199	4.5	4.4	1.5	FALSE	6.81
H50+H26	H50	10.13	5.03	H26	10.63	4.58	154.3	0.003	6	1	0.013	0.0676	0.92	1.02	0.20	0.0757	0.3030	22.3	40.0	40.4	FALSE	5.26
H51+H50	H51	10.5	6.35	H50	10.13	5.13	189.2	0.006	6	1	0.013	0.0372	1.02	1.02	0.12	0.0372	0.4505	8.3	24.0	24.0	FALSE	6.48
H52+H29	H52	12.58	6.18	H29	8.35	5.83	94.4	0.004	6	1	0.013	0.1058	1.25	1.25	0.22	0.1060	0.3416	31.0	44.7	44.7	FALSE	6.41
H53+H52	H53	12.4	8.3	H52	12.58	6.23	233.2	0.009	6	1	0.013	0.0529	1.20	1.20	0.14	0.0529	0.5286	10.0	27.6	27.6	FALSE	8.44
H54+H20	H54	9.2	4	H20	9.1	3.7	152.6	0.002	6	1	0.013	0.0200	0.71	0.98	0.10	0.0200	0.2487	8.0	20.0	15.0	FALSE	4.17
H55+H54	H55	9.3	4.32	H54	9.2	4.22	157.2	0.001	6	1	0.013	0.0200	0.81	1.08	0.09	0.0354	0.1415	14.1	18.3	16.3	FALSE	4.45
H56+H55	H56	9.2	4.75	H55	9.3	4.32	215.8	0.002	6	1	0.013	0.0100	0.78	0.72	0.05	0.0279	0.2505	4.0	9.3	3.2	FALSE	4.81
H57+H16	H57	14.21	6.69	H16	14.43	6.48	40.5	0.005	8	1	0.013	0.5499	2.52	2.52	0.40	0.5499	0.8706	63.2	59.9	59.9	FALSE	7.11
H58+H57	H58	15.13	7.62	H57	14.21	6.69	184.6	0.005	6	1	0.013	0.0406	1.23	0.79	0.11	0.0408	0.3982	10.2	22.4	31.0	FALSE	7.78
H59+H58	H59	16.1	8.59	H58	15.13	7.62	194.6	0.005	6	1	0.013	0.0000	0.00	0.00	0.00	0.0000	0.3962	0.0	0.0	0.0	FALSE	8.59
H59+H61	H59	16.1	8.59	H61	15.42	6.28	194.6	0.012	6	1	0.013	0.0000	0.00	0.00	0.00	0.0000	0.6114	0.0	0.0	0.0	FALSE	8.59
H60+H15	H60	14.57	5.9	H15	14.61	5.6	98.7	0.003	8	1	0.01	0.5905	2.65	2.65	0.41	0.5905	0.8661	68.2	61.0	61.0	FALSE	6.34
H61+H60	H61	15.42	6.28	H60	14.57	5.9	189.5	0.002	6	1	0.013	0.0406	0.42	0.89	0.25	0.0577	0.2513	16.2	49.7	36.4	FALSE	6.49
H62+H14	H62	12.95	4.64	H14	11.02	3.54	232.8	0.005	8	1	0.013	0.6015	1.72	1.72	0.67	0.6015	0.8305	72.4	100.0	100.0	TRUE	5.54
H63+H62	H63	13.79	5.49	H62	12.95	4.64	169.8	0.005	6	1	0.013	0.0110	0.06	0.83	0.48	0.0181	0.3970	2.8	95.1	9.6	TRUE	5.60
H64+H71	H64	9.05	0.99	H71	8.35	0.77	160.6	0.001	14	1	0.01	0.8824	1.84	1.84	0.54	0.8824	2.5853	34.1	46.0	46.0	FALSE	1.49
H65+H64	H65	9.89	1.83	H64	9.05	0.99	168.3	0.005	6	1	0.013	0.0290	1.02	1.08	0.07	0.0292	0.3963	7.3	15.0	17.5	FALSE	1.95
H66+H65	H66	9.89	2.09	H65	9.89	1.83	51.4	0.005	6	1	0.013	0.0290	0.91	0.90	0.11	0.0294	0.3989	7.3	21.9	22.2	FALSE	2.21
H67+H66	H67	9.89	2.32	H66	9.89	2.09	46	0.005	6	1	0.013	0.0100	0.77	0.77	0.04	0.0100	0.3968	2.5	8.7	8.7	FALSE	2.37
H68+H66	H68	9.89	2.42	H66	9.89	2.09	67	0.005	6	1	0.013	0.0190	0.98	1.13	0.08	0.0345	0.3937	4.8	15.3	18.1	FALSE	2.50
H69+H68	H69	9.89	2.64	H68	9.89	2.42	45.6	0.005	6	1	0.013	0.0100	0.77	0.76	0.04	0.0110	0.3898	2.6	8.8	8.2	FALSE	2.69
H70+H68	H70	9.89	2.67	H68	9.89	2.42	51.2	0.005	6	1	0.013	0.0090	0.74	0.74	0.04	0.0179	0.3921	2.3	8.0	6.2	FALSE	2.71
H71+H3	H71	8.35	0.77	H3	8.2	0.7	35	0.002	14	1	0.01	0.8917	1.38	1.38	0.68	0.8917	3.1237	28.5	58.1	58.1	FALSE	1.42
H72+H71	H72	9.26	1.54	H71	8.35	0.77	182.4	0.004	6	1	0.013	0.0090	0.09	0.69	0.26	0.0095	0.3646	2.5	52.0	5.9	TRUE	1.62
H73+H74	H73	11.36	2.56	H74	11.16	2.34	101	0.002	20	1	0.01	3.0310	3.70	3.71	0.67	3.0365	8.4400	35.9	40.2	40.1	FALSE	3.25
H74+H8	H74	11.16	2.34	H8	10.95	2.05	112.9	0.003	20	1	0.01	3.0269	3.76	3.77	0.66	3.0406	9.1668	33.0	39.6	39.7	FALSE	3.01
H75+H6	H75	10.09	1.58	H6	8.89	0.99	259.7	0.002	20	1	0.01	3.0270	3.61	3.62	0.68	3.0405	8.6193	35.1	40.9	40.9	FALSE	2.27
I3+I35	I3	1.69	-3.99	I35	1.2	-4.42	133	0.003	30	1	0.01	4.8589	1.31	1.31	1.77	4.8592	30.3207	16.0	70.8	70.7	FALSE	-2.43
I4+I3	I4	1.84	-3.31	I3	1.69	-3.56	242.6	0.001	18	1	0.013	4.8589	3.32	3.32	1.16	4.8591	3.3716	144.1	77.2	77.2	FALSE	-1.99
I5+I31	I5	3.41	-3.19	I31	2.94	-3.23	135	0	18	1	0.013	4.8484	2.74	2.74	1.50	4.8495	1.8081	268.2	100.0	100.0	TRUE	-1.27
I6+I5	I6	4.62	-3.08	I5	3.41	-3.19	410.7	0	18	1	0.013	4.8483	2.74	2.74	1.50	4.8496	1.7191	282.0	100.0	100.0	TRUE	-0.50
I7+I37	I7	5.18	-2.32	I37	4.72	-2.94	210.5	0.003	30	1	0.01	3.9795	0.87	0.87	2.20	3.9795	28.9378	13.8	87.9	87.9	TRUE	-0.42
I8+I7	I8	6.15	-1.45	I7	5.18	-2.32	238.1	0.004	30	1	0.01	3.9739	1.33	1.33	1.47	3.9739	32.2300	12.3	58.8	58.8	FALSE	-0.41
I9+I8	I9	5.69	-1.31	I8	6.15	-1.45	154.7	0.001	30	1	0.01	3.9710	2.23	2.23	0.98	3.9710	16.0402	24.8	39.2	39.2	FALSE	-0.39
I10+I9	I10	7.26	-0.74	I9	5.69	-1.31	221.1	0.003	24	1	0.01	3.9451	3.99	3.99	0.70	3.9452	14.9310	26.4	35.2	35.2	FALSE	-0.03
I11+I10	I11	8.07	-0.03	I10	7.26	-0.74	379.8	0.002	24	1	0.01	3.9447	3.59	3.59	0.76	3.9456	12.7144	31.0	38.1	38.1	FALSE	0.74
I12+I6	I12	4.46	-2.19	I6	4.62	-2.83	338.5	0.002	12	1	0.013	0.8460	1.08	1.08	1.00	0.8460	1.5492	54.6	100.0	100.0	TRUE	-0.36
I13+I12	I13	5.54	-1.56	I12	4.46	-2.14	319.8	0.002	12	1	0.013	0.8460	1.08	1.08	1.00	0.8460	1.5173	55.8	100.0	100.0	TRUE	-0.27
I14+I13	I14	4.22	-0.83	I13	5.54	-1.51	443.5	0.002	12	1	0.013	0.5698	0.76	0.76	0.90	0.5703	1.3950	40.8	90.4	90.3	TRUE	-0.23
I15+I14	I15	5.32	-0.53	I14	4.22	-0.78	386	0.001	12	1	0.013	0.5701	1.28	1.28	0.55	0.5701	0.9066	62.9	55.1	55.1	FALSE	0.05
I16+I6	I16	4.85	0.96	I6	4.62	-2.38	492.8	0.007	8	1	0.013	0.0097	0.67	0.67	0.03	0.0097	0.9948	1.0	3.8	3.8	TRUE	1.02
I17+I7	I17	5.54	1.51	I7	5.18	-1.27	525.8	0.005	6	1	0.013	0.0050	0.39	0.60	0.06	0.0051	0.4080	1.2	11.7	2.8	TRUE	1.54
I18+I8	I18	5.2	1.01	I8	6.15	-0.65	236.8	0.007	6	1	0.013	0.0050	0.63	0.70	0.02	0.0064	0.4697	1.1	4.3	6.7	FALSE	1.12
I19+I18	I19	6.48	1.59	I18	5.2	1.11	238.8	0.002	6	1	0.013	0.0050	0.61	0.61	0.02	0.0052	0.2516	2.0	3.2	3.5	FALSE	1.63
I20+I9	I20	5.86	1.26	I9	5.69	-0.81	278.4	0.007	6	1	0.013	0.0050	0.56	0.57	0.01	0.0078	0.4838	1.0	1.2	1.4	FALSE	1.28
I21+I24	I21	7.17	1.52	I24	7	-0.08	364.1	0.004	6	1	0.013	0.1970	1.70	1.70	0.29	0.1970	0.3719	53.0	57.2	57.2	TRUE	1.81
I22+I23	I22	8.69	3.44	I23	8.52	3.17	44.5	0.006	6	1	0.013	0.0590	1.11	1.11	0.16	0.0590	0.4372	13.5	31.5	31.5	FALSE	3.61

Appendix D: Table 2
Scenario 1: 2025 PWWF Model Results

Label	Start Node	Rim (Start) (ft)	Invert (Start) (ft)	Stop Node	Rim (Stop) (ft)	Invert (Stop) (ft)	Length (ft)	Slope (Calculated) (ft/ft)	Diameter (in)	Number of Barrels	Manning's n	Flow (Middle) (cfs)	Velocity (ft/s)	Velocity (Maximum Calculated) (ft/s)	Depth (Middle) (ft)	Flow (Maximum) (cfs)	Capacity (Full Flow) (cfs)	Flow / Capacity (Design) (%)	Depth/Rise (%)	Depth (Maximum) / Rise (%)	Is Ever Surcharged?	Hydraulic Grade (Maximum) (ft)
I23+I27	I23	8.52	3.12	I27	8.3	2.86	80.1	0.003	6	1	0.013	0.1280	1.31	1.31	0.25	0.1283	0.3197	40.0	49.8	49.8	FALSE	3.38
I24+I13	I24	7	-0.08	I13	5.54	-0.56	236.9	0.002	6	1	0.013	0.2774	1.44	1.44	0.48	0.2774	0.2526	109.8	95.5	95.5	TRUE	0.53
I25+I24	I25	7	0.22	I24	7	-0.08	153.5	0.002	6	1	0.013	0.0763	0.41	0.45	0.46	0.0816	0.2480	30.8	91.1	87.7	TRUE	0.53
I26+I23	I26	9.29	4.04	I23	8.52	3.27	153.5	0.005	6	1	0.013	0.0690	1.15	1.15	0.17	0.0690	0.3974	17.4	34.5	34.5	FALSE	4.23
I27+I28	I27	8.3	2.86	I28	8.04	2.57	89.9	0.003	6	1	0.013	0.1280	1.29	1.30	0.25	0.1290	0.3188	40.2	50.2	50.3	FALSE	3.12
I28+I21	I28	8.04	2.57	I21	7.17	1.57	311.5	0.003	6	1	0.013	0.1970	1.50	1.50	0.32	0.1970	0.3179	62.0	63.4	63.4	FALSE	2.89
I29+I28	I29	8.81	3.34	I28	8.04	2.57	153.5	0.005	6	1	0.013	0.0690	1.09	1.12	0.18	0.0704	0.3974	17.4	35.7	35.7	FALSE	3.53
I31+I4	I31	2.94	-3.23	I4	1.84	-3.31	321.1	0	18	1	0.013	4.8585	2.76	2.76	1.48	4.8595	1.6581	293.0	98.4	98.4	TRUE	-1.42
I32+I31	I32	3.97	-2.18	I31	2.94	-3.23	207.6	0.005	6	1	0.013	0.0100	0.05	0.59	0.50	0.0110	0.3990	2.5	100.0	1.6	TRUE	-1.42
I33+I32	I33	4.43	-1.73	I32	3.97	-2.18	90.2	0.005	6	1	0.013	0.0050	0.03	0.60	0.50	0.0050	0.3963	1.3	100.0	3.1	TRUE	-1.42
I34+I32	I34	4.56	-1.6	I32	3.97	-2.18	117.2	0.005	6	1	0.013	0.0050	0.03	0.63	0.47	0.0050	0.3947	1.3	94.8	4.2	TRUE	-1.42
I35+I36	I35	1.2	-4.42	I36	1.7	-4.47	11.4	0.004	24	1	0.01	2.2865	0.73	0.73	1.97	2.2865	19.4782	11.7	98.5	98.5	FALSE	-2.47
I35+T19	I35	1.2	-4.42	T19	2.23	-4.72	55.4	0.005	24	1	0.01	2.5724	0.82	0.85	2.00	2.6527	21.6427	11.9	100.0	96.6	TRUE	-2.45
I36+T36	I36	1.7	-4.47	T36	2.125	-4.74	47.3	0.006	24	1	0.01	2.2865	0.73	0.73	2.00	2.2865	22.2278	10.3	100.0	100.0	TRUE	-2.47
I37+I6	I37	4.72	-2.94	I6	4.62	-3.08	48.5	0.003	15	1	0.013	3.9809	3.24	3.24	1.25	3.9809	3.4711	114.7	100.0	100.0	TRUE	-0.44
J5+J16	J5	4.44	-1.06	J16	3.8	-2.17	275.2	0.004	8	1	0.01	0.0772	1.30	1.30	0.15	0.0772	0.9977	7.7	22.6	22.6	FALSE	-0.91
J6+J5	J6	5.85	0.6	J5	4.44	-0.96	558.5	0.003	6	1	0.013	0.0772	0.97	0.97	0.21	0.0772	0.2965	26.0	42.6	42.6	FALSE	0.82
J7+J6	J7	5.96	1.9	J6	5.85	1.02	441.1	0.002	6	1	0.013	0.0227	0.70	0.70	0.11	0.0230	0.2506	9.1	22.3	22.5	FALSE	2.02
J8+J6	J8	7.5	2.81	J6	5.85	0.7	442.1	0.005	6	1	0.013	0.0545	0.99	0.99	0.16	0.0545	0.3876	14.1	32.4	32.4	FALSE	2.97
J9+J8	J9	8.19	3.23	J8	7.5	2.81	400.5	0.001	6	1	0.013	0.0545	0.56	0.71	0.25	0.0562	0.1817	30.0	49.3	42.4	FALSE	3.48
J10+J9	J10	9.91	4.26	J9	8.19	3.34	299.8	0.003	6	1	0.013	0.0545	0.83	0.94	0.18	0.0594	0.3108	17.5	36.9	35.7	FALSE	4.46
J11+J15	J11	1.31	-2.3	J15	2.31	-3.24	199.7	0.005	8	1	0.013	0.0292	0.17	0.17	0.33	0.0292	0.8290	3.5	49.4	49.1	TRUE	-2.20
J12+J11	J12	1.94	-1.61	J11	1.31	-2.2	299.4	0.002	8	1	0.013	0.0290	0.62	0.63	0.13	0.0291	0.5364	5.4	19.2	19.1	FALSE	-1.47
J13+J12	J13	2.73	-0.51	J12	1.94	-1.51	298.6	0.003	8	1	0.013	0.0291	0.72	0.72	0.11	0.0291	0.6993	4.2	17.2	17.2	FALSE	-0.40
J14+J13	J14	3.27	-0.03	J13	2.73	-0.41	190	0.002	8	1	0.013	0.0290	0.66	0.66	0.12	0.0290	0.5404	5.4	18.4	18.4	FALSE	0.11
J15+T20	J15	2.31	-3.49	T20	2.72	-4.06	82.7	0.007	7.6	1	0.01	0.0296	0.10	0.10	0.63	0.0296	1.1178	2.6	100.0	100.0	TRUE	-2.44
J16+J17	J16	3.8	-2.17	J17	3.3	-3.02	210.2	0.004	7.6	1	0.01	0.0772	1.15	1.25	0.17	0.0772	0.8560	9.0	26.7	25.3	FALSE	-2.02
J17+J18	J17	3.3	-3.02	J18	2.4	-3.24	45	0.005	8	1	0.01	0.0772	0.22	0.32	0.67	0.0772	1.0983	7.0	100.0	65.8	TRUE	-2.43
J18+T21	J18	2.4	-3.24	T21	3.07	-3.99	63	0.012	8	1	0.01	0.0772	0.22	0.22	0.67	0.0772	1.7140	4.5	100.0	100.0	TRUE	-2.43
K1+T16	K1	2.25	-6.28	T16	2.25	-6.5	30.8	0.007	18	1	0.01	1.8542	1.71	1.71	0.89	1.8545	11.5437	16.1	59.0	59.0	TRUE	-3.90
K2+K38	K2	3.35	-5.2	K38	2.67	-5.61	193.7	0.002	18	1	0.01	1.8496	3.12	3.12	0.55	1.8496	6.2817	29.4	36.9	36.9	TRUE	-3.90
K3+K2	K3	4.05	-4.8	K2	3.35	-5.2	189.7	0.002	18	1	0.01	1.8463	3.12	3.12	0.55	1.8463	6.2704	29.4	36.9	36.9	FALSE	-3.90
K4+K43	K4	3.55	-4.28	K43	3.81	-4.75	204.6	0.002	18	1	0.01	1.8369	3.18	3.18	0.54	1.8369	6.5448	28.1	36.2	36.2	FALSE	-3.73
K5+K4	K5	3.31	-3.71	K4	3.55	-4.28	248.1	0.002	18	1	0.01	0.7401	2.36	2.36	0.35	0.7401	6.5445	11.3	23.4	23.4	FALSE	-3.36
K6+K5	K6	4.44	-2.86	K5	3.31	-3.71	251.1	0.003	18	1	0.01	0.7036	2.68	2.68	0.31	0.7036	7.9454	8.9	20.6	20.6	FALSE	-2.54
K7+K6	K7	3.35	-1.85	K6	4.44	-2.66	362.1	0.002	8	1	0.013	0.0200	0.72	0.71	0.09	0.0200	0.5715	3.5	13.4	13.4	FALSE	-1.76
K8+K7	K8	2.87	-1.18	K7	3.35	-1.85	355.5	0.002	8	1	0.013	0.0200	0.67	0.66	0.09	0.0202	0.5246	3.8	14.0	14.2	FALSE	-1.08
K9+K8	K9	3.87	-0.58	K8	2.87	-1.18	355.9	0.002	8	1	0.013	0.0200	0.64	0.71	0.10	0.0222	0.4961	4.0	14.4	14.4	FALSE	-0.47
K10+K9	K10	4.11	0.11	K9	3.87	-0.48	155.5	0.004	6	1	0.013	0.0100	0.73	0.73	0.04	0.0100	0.3456	2.9	7.3	7.4	FALSE	0.16
K11+K5	K11	3.67	-2.23	K5	3.31	-2.99	369.8	0.002	6	1	0.013	0.0205	0.72	0.72	0.10	0.0217	0.2544	8.1	20.1	21.1	FALSE	-2.12
K12+K11	K12	3.54	-0.86	K11	3.67	-2.08	353.5	0.003	6	1	0.013	0.0205	0.91	0.92	0.09	0.0255	0.3296	6.2	17.1	11.7	FALSE	-0.73
K13+K12	K13	2.97	0.27	K12	3.54	-0.86	362	0.003	6	1	0.013	0.0205	0.87	0.90	0.09	0.0214	0.3135	6.5	17.7	17.8	FALSE	0.37
K14+K13	K14	3.19	0.45	K13	2.97	0.27	90.4	0.002	6	1	0.013	0.0205	0.75	0.77	0.10	0.0216	0.2503	8.2	19.7	19.9	FALSE	0.58
K15+K9	K15	3.43	-0.33	K9	3.87	-0.48	73.9	0.002	6	1	0.013	0.0100	0.79	0.79	0.05	0.0100	0.2528	4.0	9.7	9.7	FALSE	-0.27
K16+K4	K16	3.55	-2.65	K4	3.55	-3.45	273.7	0.003	6	1	0.013	0.0205	0.75	1.06	0.10	0.0456	0.3033	6.8	19.7	13.3	FALSE	-2.53
K17+K16	K17	2.92	-1.88	K16	3.55	-2.6	267.2	0.003	6	1	0.013	0.0205	0.75	0.65	0.10	0.0205	0.2912	7.0	19.7	1.9	FALSE	-1.75
K18+K17	K18	3.64	-1.31	K17	2.92	-1.88	268.7	0.002	6	1	0.013	0.0205	0.72	1.03	0.10	0.0341	0.2584	7.9	20.3	14.4	FALSE	-1.21
K19+K18	K19	3.25	-0.65	K18	3.64	-1.31	272	0.002	6	1	0.013	0.0205	0.73	0.73	0.10	0.0205	0.2764	7.4	20.0	20.0	FALSE	-0.52
K20+K19	K20	2.67	-0.53	K19	3.25	-0.6	134.6	0.001	6	1	0.013	0.0205	0.94	0.94	0.07	0.0205	0.1279	16.0	13.5	13.5	FALSE	-0.42
K21+K3	K21	3.15	-2.1	K3	4.05	-4.25	246.4	0.009	6	1	0.013	0.0100	0.73	0.65	0.04	0.0207	0.5241	1.9	7.3	1.9	FALSE	-2.06
K22+K21	K22	3.29	-1.16	K21	3.15	-2.05	256.2	0.003	6	1	0.013	0.0050	0.69	0.69	0.03	0.0050	0.3307	1.5	6.7	6.7	FALSE	-1.13
K23+K22	K23	3.52	-0.91	K22	3.29	-1.11	99.5	0.002	6	1	0.013	0.0050	0.66	0.66	0.03	0.0050	0.2515	2.0	5.4	5.4	FALSE	-0.88
K24+K21	K24	3.55	-1.7	K21	3.15	-2	148.6	0.002	6	1	0.013	0.0050	0.65	0.65	0.03	0.0050	0.2521	2.0	5.1	5.1	FALSE	-1.67
K25+K44	K25	3.6	-1.7	K44	3.23	-2.92	346.2	0.004	6	1	0.01	0.0160	0.90	0.93	0.06	0.0186	0.4330	3.7	12.9	13.5	FALSE	-1.64
K26+K6	K26	4.36	-1.29	K6	4.44	-2.76	293.6	0.005	6	1	0.013	0.0000	0.00	0.44	0.00	0.0172	0.3970	0.0	0.0	25.4	FALSE	-1.18
K27+K26	K27	3.95	-0.6	K26	4.36	-1.29	199.5	0.003	6	1	0.013	0.0000	0.00	0.53	0.00	0.0246	0.3300	0.0	0.0	28.6	FALSE	-0.46
K28+K4	K28	3.27	-4	K4	3.55	-4.1	242	0	10	1	0.013	1.0749	1.98	1.98	0.81	1.0750	0.4454	241.4	97.7	97.7	TRUE	-2.93
K30+K31	K30	3.78	-3.21	K31	3.08	-3.43	108.2	0.002	8	1	0.013	0.1208	0.35	0.35	0.67	0.1208	0.5449	22.2	100.0	100.0	TRUE	-2.38
K31+L1	K31	3.08	-3.43	L1	2.82	-3.73	147.8	0.002	8	1	0.013	0.1208	0.35	0.35	0.67	0.1208	0.5443	22.2	100.0	100.0	TRUE	-2.38
K32+K30	K32	3.16	-2.76	K30	3.78	-3.21	226.9	0.002	8	1	0.013	0.1190	0.36	0.73	0.61	0.1190	0.5381	22.1	91.1	47.6	TRUE	-2.38
K33+K32	K33	2.74	-2.37	K32	3.16	-2.76	130.8	0.003	6	1	0.013	0.0595	0.87	0.87	0.19	0.0595	0.3064	19.4	38.1	38.1	FALSE	-2.18
K34+K33	K34	3.08	-1.54	K33	2.74	-2.37	278.4	0.003	6	1	0.013	0.0595	0.86	0.86	0.19	0.0596	0.3064	19.4	38.3	38.3	FALSE	-1.34
K35+K34	K35	2.78	-0.7	K34	3.08	-1.54	279.8	0.003	6	1	0.013	0.0595	0.86	1.34	0.19	0.0859	0.3074	19.4	38.2	36.2	FALSE	-0.51
K36+K35	K36	2.75	0.15	K35	2.78	-0.7	281.5	0.003	6	1	0.013	0.0595	0.86	0.86	0.19	0.0598	0.3083	19.3	38.2	38.2	FALSE	0.36
K37+K32	K37	2.51	-1.01	K32	3.16	-2.76	350.2	0.005	6	1	0.013	0.0595	1.02	1.03	0.17	0.0595	0.3966	15.0	33.7	33.6	FALSE	-0.83
K38+K39	K38	2.67	-5.61	K39	2.49	-5.63	7.8	0.003	18	1	0.01	1.8565	3.25	3.25	0.54	1.8565	6.9194	26.8	36.0	36.0	TRUE	-3.90

Appendix D: Table 2
Scenario 1: 2025 PWWF Model Results

Label	Start Node	Rim (Start) (ft)	Invert (Start) (ft)	Stop Node	Rim (Stop) (ft)	Invert (Stop) (ft)	Length (ft)	Slope (Calculated) (ft/ft)	Diameter (in)	Number of Barrels	Manning's n	Flow (Middle) (cfs)	Velocity (ft/s)	Velocity (Maximum Calculated) (ft/s)	Depth (Middle) (ft)	Flow (Maximum) (cfs)	Capacity (Full Flow) (cfs)	Flow / Capacity (Design) (%)	Depth/Rise (%)	Depth (Maximum) / Rise (%)	Is Ever Surcharged?	Hydraulic Grade (Maximum) (ft)
K39+K40	K39	2.49	-5.63	K40	2.25	-6.24	249.4	0.002	18	1	0.01	1.8507	3.23	3.23	0.54	1.8507	6.7531	27.4	36.0	36.0	TRUE	-3.90
K40+K1	K40	2.25	-6.24	K1	2.25	-6.28	5.6	0.007	18	1	0.01	1.8552	2.06	2.06	0.76	1.8552	11.4992	16.1	50.8	50.8	TRUE	-3.90
K41+K42	K41	5.23	-2.2	K42	7.35	-2.73	191.9	0.003	18	1	0.01	0.6820	2.47	2.47	0.32	0.6820	7.1761	9.5	21.3	21.3	FALSE	-1.88
K42+K6	K42	7.35	-2.73	K6	4.44	-2.86	36.7	0.004	12	2	0.01	0.6820	2.19	2.19	0.25	0.6820	5.5095	12.4	25.2	25.2	FALSE	-2.48
K43+K3	K43	3.81	-4.75	K3	4.05	-4.8	23.5	0.002	18	1	0.01	1.8362	3.08	3.08	0.56	1.8362	6.2985	29.2	37.1	37.1	FALSE	-3.90
K44+K5	K44	3.23	-2.92	K5	3.31	-3.09	30	0.006	6	1	0.013	0.0160	0.90	1.00	0.06	0.0376	0.4224	3.8	12.8	24.7	FALSE	-2.81
L1+L21	L1	2.82	-3.73	L21	2.74	-3.95	223.2	0.001	10	1	0.013	1.0749	1.97	1.97	0.83	1.0749	0.6879	156.3	100.0	100.0	TRUE	-2.38
L2+L1	L2	2.72	-3.28	L1	2.82	-3.73	178.7	0.003	10	1	0.013	0.9542	1.75	1.75	0.83	0.9542	1.0993	86.8	100.0	100.0	TRUE	-2.12
L3+L2	L3	2.93	-3.17	L2	2.72	-3.28	83.4	0.001	10	1	0.013	0.9542	1.75	1.75	0.83	0.9542	0.7957	119.9	100.0	100.0	TRUE	-2.05
L4+L3	L4	3.39	-2.3	L3	2.93	-3.12	247.6	0.003	10	1	0.013	0.5072	1.26	1.26	0.58	0.5072	1.2607	40.2	69.3	69.3	TRUE	-1.90
L5+L47	L5	4.17	-1.38	L47	3.21	-2.04	276.3	0.002	6	1	0.013	0.0680	0.86	0.86	0.21	0.0680	0.2742	24.8	42.5	42.5	FALSE	-1.17
L6+L5	L6	4.69	-0.51	L5	4.17	-1.38	214.9	0.004	6	1	0.013	0.0340	0.95	0.95	0.12	0.0340	0.3570	9.5	23.7	23.7	FALSE	-0.38
L7+L6	L7	5.31	-0.39	L6	4.69	-0.51	260.6	0	6	1	0.013	0.0340	0.47	0.47	0.20	0.0340	0.1204	28.2	39.5	39.5	FALSE	-0.16
L8+L7	L8	5.39	-0.24	L7	5.31	-0.39	72.8	0.002	6	1	0.013	0.0340	0.64	0.64	0.16	0.0340	0.2547	13.4	31.5	31.5	FALSE	-0.07
L9+L4	L9	3.42	-1.78	L4	3.39	-2.05	162.3	0.002	6	1	0.013	0.2352	1.36	1.36	0.41	0.2352	0.2288	102.8	82.6	82.6	FALSE	-1.32
L10+K27	L10	3.59	0.24	K27	3.95	-0.55	197.2	0.004	6	1	0.013	0.0000	0.00	0.49	0.00	0.0250	0.3551	0.0	0.0	30.7	FALSE	0.24
L10+L9	L10	3.59	-0.76	L9	3.42	-1.78	274.7	0.004	6	1	0.013	0.0694	1.00	1.03	0.19	0.0696	0.3419	20.3	38.3	37.6	FALSE	-0.57
L11+L10	L11	4.97	0.57	L10	3.59	-0.56	359.8	0.003	6	1	0.013	0.0696	0.96	0.96	0.20	0.0696	0.3144	22.1	39.7	39.7	FALSE	0.77
L12+L11	L12	4.97	0.62	L11	4.97	0.57	81.8	0.001	6	1	0.013	0.0536	0.88	0.88	0.17	0.0536	0.1387	38.7	34.9	34.9	FALSE	0.88
L13+L9	L13	4.47	-0.58	L9	3.42	-1.73	310.9	0.004	6	1	0.013	0.1658	1.49	1.49	0.28	0.1658	0.3412	48.6	55.2	55.2	FALSE	-0.30
L14+L13	L14	5.25	0.6	L13	4.47	-0.58	301.6	0.004	6	1	0.013	0.1658	1.52	1.52	0.27	0.1658	0.3509	47.2	54.2	54.2	FALSE	0.87
L15+L14	L15	6.17	1.92	L14	5.25	0.6	310.2	0.004	6	1	0.013	0.1658	1.57	1.57	0.26	0.1658	0.3660	45.3	52.9	52.9	FALSE	2.19
L16+L15	L16	7.37	2.67	L15	6.17	1.92	311.1	0.002	6	1	0.013	0.1658	1.26	1.26	0.32	0.1658	0.2755	60.2	63.3	63.3	FALSE	2.99
L17+L16	L17	7.38	3.53	L16	7.37	2.67	236.3	0.004	6	1	0.013	0.1600	1.48	1.48	0.27	0.1600	0.3385	47.3	54.1	54.1	FALSE	3.80
L18+L17	L18	8.22	4.37	L17	7.38	3.53	330.9	0.003	6	1	0.013	0.1600	1.27	1.27	0.31	0.1600	0.2827	56.6	61.0	61.0	FALSE	4.68
L19+L18	L19	9.56	5.51	L18	8.22	4.37	332.7	0.003	6	1	0.013	0.1600	1.43	1.45	0.28	0.1610	0.3284	48.7	55.5	55.3	FALSE	5.80
L20+L16	L20	8.52	2.97	L16	7.37	2.77	101.4	0.002	6	1	0.013	0.0058	0.15	0.69	0.12	0.0058	0.2492	2.3	24.5	6.3	FALSE	3.01
L21+K28	L21	2.74	-3.95	K28	3.27	-4	68.3	0.001	10	1	0.013	1.0749	1.97	1.97	0.83	1.0749	0.5929	181.3	100.0	100.0	TRUE	-2.86
L22+L3	L22	3.32	-0.13	L3	2.93	-2.72	365.6	0.007	6	1	0.013	0.0255	0.68	0.54	0.01	0.0256	0.4722	5.4	2.0	29.1	TRUE	0.00
L23+L3	L23	3.05	-2.75	L3	2.93	-3.17	351.1	0.001	8	1	0.01	0.4198	1.20	1.20	0.67	0.4198	0.5433	77.3	100.0	100.0	TRUE	-1.81
L24+L23	L24	2.38	-2.17	L23	3.05	-2.75	386.3	0.002	8	1	0.01	0.4198	1.20	1.20	0.67	0.4198	0.6087	69.0	100.0	100.0	TRUE	-1.60
L25+L24	L25	3.54	-1.91	L24	2.38	-2.17	342	0.001	8	1	0.01	0.4198	1.45	1.45	0.52	0.4198	0.4331	96.9	77.5	77.5	FALSE	-1.36
L26+L25	L26	3.77	-1.38	L25	3.54	-1.91	215.6	0.002	8	1	0.013	0.2820	1.50	1.50	0.35	0.2820	0.5991	47.1	53.0	53.0	FALSE	-1.03
L27+L26	L27	3.7	-0.86	L26	3.77	-1.38	260.1	0.002	8	1	0.013	0.1580	1.16	1.16	0.28	0.1580	0.5403	29.2	41.3	41.3	FALSE	-0.58
L28+L27	L28	3.81	0.26	L27	3.7	-0.86	362.9	0.003	6	1	0.013	0.0790	1.01	1.01	0.21	0.0790	0.3117	25.3	41.8	41.8	FALSE	0.47
L29+L28	L29	4.59	1.14	L28	3.81	0.26	366	0.002	6	1	0.013	0.0790	0.92	0.92	0.22	0.0790	0.2751	28.7	44.8	44.8	FALSE	1.39
L30+L27	L30	3.71	-0.19	L27	3.7	-0.86	236	0.003	6	1	0.013	0.0790	0.98	0.99	0.21	0.0798	0.2989	26.4	42.9	43.0	FALSE	0.03
L31+L30	L31	4.39	0.64	L30	3.71	-0.19	178.8	0.005	6	1	0.013	0.0790	1.20	1.41	0.18	0.0902	0.3823	20.7	36.9	36.1	FALSE	0.84
L32+L31	L32	5.42	1.62	L31	4.39	0.64	293.5	0.003	6	1	0.013	0.0790	1.04	1.04	0.21	0.0790	0.3242	24.4	41.2	41.2	FALSE	1.83
L33+L32	L33	5.85	1.8	L32	5.42	1.62	90.7	0.002	6	1	0.013	0.0790	0.90	0.90	0.23	0.0790	0.2500	31.6	45.8	45.8	FALSE	2.06
L34+L26	L34	4.66	-0.24	L26	3.77	-1.28	287.3	0.004	6	1	0.013	0.1240	1.32	1.32	0.24	0.1240	0.3376	36.7	48.4	48.4	FALSE	0.01
L35+L34	L35	5.3	0.7	L34	4.66	-0.24	253.5	0.004	6	1	0.013	0.1100	1.26	1.26	0.23	0.1100	0.3417	32.2	45.6	45.6	FALSE	0.93
L36+L35	L36	5.75	1.65	L35	5.3	0.7	277.7	0.003	6	1	0.013	0.1100	1.22	1.27	0.23	0.1126	0.3282	33.5	46.6	46.1	FALSE	1.89
L37+L36	L37	6.21	2.76	L36	5.75	1.65	322.8	0.003	6	1	0.013	0.0000	0.00	0.00	0.00	0.0000	0.3290	0.0	0.0	0.0	FALSE	2.76
L37+L38	L37	6.21	2.76	L38	5.64	2.24	210.4	0.002	6	1	0.013	0.0000	0.00	0.00	0.00	0.0000	0.2789	0.0	0.0	0.0	FALSE	2.76
L38+L39	L38	5.64	2.24	L39	4.89	1.54	215.2	0.003	6	1	0.013	0.1200	1.26	1.42	0.24	0.1326	0.3200	37.5	48.8	48.2	FALSE	2.49
L39+L40	L39	4.89	1.54	L40	4.16	0.81	345.7	0.002	6	1	0.013	0.1200	1.06	1.06	0.28	0.1200	0.2578	46.6	55.9	55.9	FALSE	1.82
L40+L42	L40	4.16	0.61	L42	3.25	0.2	345.8	0.001	8	1	0.013	0.1250	0.88	0.88	0.29	0.1250	0.4161	30.0	42.8	42.8	FALSE	0.90
L41+L40	L41	6.09	0.95	L40	4.16	0.81	70.6	0.002	6	1	0.013	0.0050	0.64	0.64	0.02	0.0050	0.2499	2.0	4.7	4.7	FALSE	0.98
L42+L43	L42	3.25	0.2	L43	2.56	-0.34	330.1	0.002	8	1	0.013	0.1250	0.98	0.98	0.26	0.1250	0.4887	25.6	39.3	39.3	FALSE	0.46
L43+L44	L43	2.56	-0.34	L44	3.5	-0.85	334.4	0.002	8	1	0.013	0.1250	0.96	0.96	0.27	0.1250	0.4719	26.5	40.1	40.1	FALSE	-0.07
L44+L45	L44	3.5	-0.85	L45	2.57	-1.33	238.4	0.002	8	1	0.013	0.1250	1.06	1.06	0.25	0.1250	0.5422	23.1	37.2	37.2	FALSE	-0.60
L45+L25	L45	2.57	-1.38	L25	3.54	-1.76	201.8	0.002	8	1	0.013	0.1378	1.03	1.03	0.27	0.1378	0.5244	26.3	40.6	40.6	FALSE	-1.11
L46+L45	L46	2.92	-0.93	L45	2.57	-1.23	136	0.002	6	1	0.013	0.0128	0.88	0.95	0.06	0.0221	0.2635	4.9	12.7	13.5	FALSE	-0.85
L47+L4	L47	3.21	-2.04	L4	3.39	-2.3	88	0.003	8	1	0.013	0.2720	1.66	1.66	0.32	0.2720	0.6568	41.4	47.6	47.6	FALSE	-1.71
L48+L47	L48	3.22	-1.35	L47	3.21	-2.04	228.9	0.003	8	1	0.013	0.2040	1.50	1.50	0.28	0.2040	0.6635	30.7	41.4	41.4	FALSE	-1.07
L49+L48	L49	4.08	-1.2	L48	3.22	-1.35	233.3	0.001	8	1	0.013	0.2040	0.99	0.99	0.38	0.2040	0.3064	66.6	56.9	56.9	FALSE	-0.79
L50+L49	L50	4.26	-0.68	L49	4.08	-1.2	223.6	0.002	8	1	0.013	0.2040	1.35	1.35	0.30	0.2040	0.5827	35.0	44.6	44.6	FALSE	-0.38
L51+L50	L51	3.85	-0.28	L50	4.26	-0.68	79.7	0.005	6	1	0.013	0.0077	0.27	0.69	0.10	0.0085	0.3975	1.9	20.3	5.7	FALSE	-0.24
L52+L50	L52	4.54	-0.36	L50	4.26	-0.68	223.9	0.001	6	1	0.013	0.1963	1.17	1.17	0.40	0.1963	0.2121	92.5	79.9	79.9	FALSE	0.07
L53+L52	L53	5.4	0.6	L52	4.54	-0.36	218.4	0.004	6	1	0.013	0.1963	1.69	1.69	0.29	0.1963	0.3720	52.8	57.2	57.2	FALSE	0.89
L54+L53	L54	6.47	2.07	L53	5.4	0.6	369.4	0.004	6	1	0.013	0.0935	1.21	1.21	0.21	0.0935	0.3539	26.4	41.6	41.6	FALSE	2.28
L55+L54	L55	6.53	2.37	L54	6.47	2.07	148.7	0.002	6	1	0.013	0.0425	0.62	0.62	0.19	0.0425	0.2520	16.9	38.0	38.0	FALSE	2.57
L56+L54	L56	7.59	3.34	L54	6.47	2.17	326.7	0.004	6	1	0.013	0.0510	0.84	0.84	0.17	0.0510	0.3357	15.2	34.8	34.8	FALSE	3.52
L57+L53	L57	5.49	1.29	L53	5.4	0.65	202.8	0.003	6	1	0.013	0.1028	1.16	1.16	0.23	0.1028	0.3152	32.6	46.0	46.0	FALSE	1.52
L58+L57	L58	6.75	2.35	L57	5.49	1.29	295.3	0.004	6	1	0.013	0.1028	1.21	1.34	0.22	0.1060	0.3361	30.6	44.8	42.2	FALSE	2.57

Appendix D: Table 2
Scenario 1: 2025 PWWF Model Results

Label	Start Node	Rim (Start) (ft)	Invert (Start) (ft)	Stop Node	Rim (Stop) (ft)	Invert (Stop) (ft)	Length (ft)	Slope (Calculated) (ft/ft)	Diameter (in)	Number of Barrels	Manning's n	Flow (Middle) (cfs)	Velocity (ft/s)	Velocity (Maximum Calculated) (ft/s)	Depth (Middle) (ft)	Flow (Maximum) (cfs)	Capacity (Full Flow) (cfs)	Flow / Capacity (Design) (%)	Depth/Rise (%)	Depth (Maximum) / Rise (%)	Is Ever Surcharged?	Hydraulic Grade (Maximum) (ft)
L59+L58	L59	7.91	3.31	L58	6.75	2.35	250	0.004	6	1	0.013	0.1028	1.24	1.24	0.22	0.1028	0.3477	29.6	43.9	43.9	FALSE	3.53
L60+L59	L60	8.08	3.53	L59	7.91	3.31	108.8	0.002	6	1	0.013	0.1028	1.02	1.02	0.26	0.1028	0.2523	40.7	51.1	51.1	FALSE	3.79
L61+L5	L61	4.57	-0.73	L5	4.17	-1.13	152.5	0.003	6	1	0.013	0.0340	0.71	0.71	0.15	0.0340	0.2874	11.8	29.3	29.3	FALSE	-0.56
L62+L34	L62	4.95	0.45	L34	4.66	-0.19	146.7	0.004	6	1	0.013	0.0140	0.66	0.75	0.08	0.0157	0.3705	3.8	16.4	16.2	FALSE	0.52
M2+M44	M2	5.62	0.3	M44	5.62	0.22	42.2	0.002	8	1	0.013	0.5701	2.32	2.32	0.44	0.5701	0.5262	108.3	66.2	66.2	FALSE	0.80
M2+N1	M2	5.62	2.62	N1	5.32	2.32	82	0.004	12	1	0.013	0.0000	0.00	0.00	0.03	0.0000	2.1554	0.0	2.5	0.0	FALSE	2.66
M3+M2	M3	6.98	1.33	M2	5.62	0.3	379.8	0.003	8	1	0.013	0.5704	1.95	1.95	0.52	0.5704	0.6293	90.7	78.1	78.1	FALSE	1.86
M4+M31	M4	9.9	3	M31	7	2.52	142.5	0.003	8	1	0.013	0.2904	1.73	1.73	0.32	0.2904	0.7012	41.4	48.6	48.6	FALSE	3.32
M5+M4	M5	11.95	3.9	M4	9.9	3.05	372.5	0.002	8	1	0.013	0.2904	1.52	1.52	0.36	0.2905	0.5772	50.3	53.7	53.7	FALSE	4.26
M6+M46	M6	12.3	6.22	M46	12.8	6.1	50.4	0.002	16	1	0.01	0.1751	1.48	1.48	0.19	0.1754	4.8649	3.6	13.9	13.9	FALSE	6.41
M7+M36	M7	12.4	6.45	M36	7.3	3.24	79.9	0.04	10	1	0.01	0.3390	2.91	2.91	0.14	0.3390	5.7102	5.9	17.1	17.1	FALSE	6.59
M7+M45	M7	12.4	6.45	M45	12.36	6.35	46.6	0.002	12	2	0.01	0.1751	1.22	1.22	0.15	0.1754	4.2891	4.1	14.7	14.7	FALSE	6.60
M8+M7	M8	14.41	7.71	M7	12.4	6.45	192.5	0.007	16	1	0.01	0.5141	3.11	3.11	0.23	0.5141	8.0706	6.4	17.6	17.6	FALSE	7.95
M12+M40	M12	14.95	7.4	M40	13.27	5.72	338.1	0.005	8	1	0.013	0.2462	1.91	1.91	0.26	0.2464	0.8518	28.9	39.7	39.6	FALSE	7.67
M13+M12	M13	16.33	8.78	M12	14.95	7.4	276	0.005	8	1	0.013	0.2461	1.91	1.92	0.26	0.2465	0.8544	28.8	39.6	39.6	FALSE	9.05
M14+M5	M14	10.14	5.82	M5	11.95	3.95	327.8	0.006	10	1	0.013	0.0200	0.65	0.65	0.01	0.0201	1.6547	1.2	1.1	1.1	FALSE	5.91
M16+M8	M16	14.85	8.05	M8	14.41	7.81	19.7	0.012	6	1	0.013	0.0100	0.42	0.79	0.09	0.0100	0.6193	1.6	18.0	9.5	FALSE	8.09
M18+M5	M18	12	4.51	M5	11.95	4.2	153.9	0.002	10	1	0.013	0.0171	0.32	0.32	0.13	0.0171	0.9833	1.7	15.5	15.5	FALSE	4.64
M19+M18	M19	12.1	4.7	M18	12	4.51	94.8	0.002	10	1	0.013	0.0171	0.31	0.31	0.13	0.0171	0.9807	1.7	15.6	15.6	FALSE	4.83
M20+M19	M20	12.2	4.86	M19	12.1	4.7	78	0.002	10	1	0.013	0.0171	0.32	0.32	0.13	0.0171	0.9925	1.7	15.5	15.5	FALSE	4.99
M21+M20	M21	12.3	5.45	M20	12.2	4.86	296.6	0.002	10	1	0.013	0.0171	0.31	0.31	0.13	0.0171	0.9772	1.7	15.8	15.8	FALSE	5.58
M22+M21	M22	12.3	5.54	M21	12.3	5.45	43.3	0.002	10	1	0.013	0.0171	0.33	0.33	0.13	0.0171	0.9992	1.7	15.1	15.1	FALSE	5.67
M23+M24	M23	7.5	4.92	M24	7.4	4.53	195	0.002	8	1	0.013	0.2800	1.45	1.45	0.36	0.2800	0.5404	51.8	54.1	54.1	FALSE	5.30
M24+M25	M24	7.4	4.56	M25	7.3	4.04	260	0.002	8	1	0.013	0.2800	1.44	1.44	0.36	0.2800	0.5404	51.8	54.6	54.6	FALSE	4.93
M25+M26	M25	7.3	4.04	M26	7.3	3.5	270	0.002	8	1	0.013	0.2800	1.43	1.43	0.36	0.2800	0.5404	51.8	54.7	54.7	FALSE	4.41
M26+M27	M26	7.3	3.5	M27	7.2	3.25	124.9	0.002	8	1	0.013	0.2800	1.52	1.52	0.35	0.2800	0.5406	51.8	52.3	52.3	FALSE	3.86
M27+M29	M27	7.2	3.25	M29	7.1	3.18	35.2	0.002	8	1	0.013	0.2815	1.78	1.78	0.31	0.2815	0.5385	52.3	46.2	46.2	FALSE	3.58
M28+N11	M28	7.3	0.37	N11	7.2	-0.1	236.4	0.002	8	1	0.013	0.0109	0.78	0.78	0.04	0.0111	0.5388	2.0	6.7	6.8	FALSE	0.44
M29+M31	M29	7.1	3.18	M31	7	2.52	328.8	0.002	8	1	0.01	0.2802	1.71	1.71	0.32	0.2802	0.7038	39.8	47.5	47.5	FALSE	3.50
M30+N29	M30	7.3	0.64	N29	7.2	0.13	255.2	0.002	8	1	0.013	0.0109	0.74	0.84	0.06	0.0127	0.5402	2.0	8.7	8.4	FALSE	0.71
M31+M3	M31	7	2.52	M3	6.98	1.33	357.1	0.003	8	1	0.013	0.5704	2.12	2.12	0.48	0.5704	0.6975	81.8	71.9	71.9	FALSE	3.01
M32+M33	M32	7.3	2.88	M33	7.3	2.49	195	0.002	8	1	0.013	0.2149	1.32	1.32	0.32	0.2151	0.5403	39.8	47.4	47.4	FALSE	3.20
M33+M34	M33	7.3	2.49	M34	7.2	1.91	257.5	0.002	8	1	0.013	0.2149	1.36	1.36	0.31	0.2150	0.5735	37.5	46.2	46.2	FALSE	2.80
M34+N22	M34	7.2	1.91	N22	7.1	1.4	283.5	0.002	8	1	0.013	0.2272	1.28	1.28	0.34	0.2272	0.5125	44.3	50.6	50.6	FALSE	2.25
M35+M34	M35	7.2	2.16	M34	7.2	1.91	124.1	0.002	8	1	0.013	0.0123	0.12	0.75	0.22	0.0124	0.5423	2.3	32.6	9.3	FALSE	2.25
M36+M37	M36	7.3	3.24	M37	7.4	2.73	256.7	0.002	8	1	0.013	0.3677	1.57	1.57	0.42	0.3677	0.5386	68.3	63.7	63.7	FALSE	3.67
M37+N24	M37	7.4	2.73	N24	7.3	2.21	259.3	0.002	8	1	0.013	0.3677	1.57	1.57	0.42	0.3677	0.5411	67.9	63.5	63.5	FALSE	3.16
M38+M39	M38	19.58	12.03	M39	18.79	11.24	157.5	0.005	8	1	0.013	0.2463	1.93	1.96	0.26	0.2498	0.8558	28.8	39.4	39.3	FALSE	12.32
M39+M43	M39	18.79	11.24	M43	17.59	10.04	240.5	0.005	8	1	0.013	0.2463	1.94	2.11	0.26	0.2666	0.8535	28.9	39.2	39.0	FALSE	11.51
M40+M5	M40	13.27	5.72	M5	11.95	4.4	263	0.005	8	1	0.013	0.2465	1.92	1.92	0.26	0.2465	0.8561	28.8	39.6	39.6	FALSE	5.99
M41+M13	M41	16.89	9.34	M13	16.33	8.78	111	0.005	8	1	0.013	0.2463	1.93	1.92	0.26	0.2466	0.8583	28.7	39.4	39.5	FALSE	9.61
M42+M41	M42	17.07	9.82	M41	16.89	9.34	37.3	0.013	8	1	0.013	0.2463	2.70	2.70	0.20	0.2463	1.3699	18.0	30.7	30.7	FALSE	10.03
M43+M42	M43	17.59	10.04	M42	17.07	9.82	103.8	0.002	8	1	0.013	0.2463	1.48	1.55	0.32	0.2556	0.5563	44.3	48.1	47.8	FALSE	10.38
M44+I15	M44	5.62	0.12	I15	5.32	-0.53	61.7	0.011	12	1	0.013	0.5701	3.16	3.16	0.28	0.5701	3.6568	15.6	28.0	28.0	FALSE	0.40
M45+M6	M45	12.36	6.35	M6	12.3	6.22	63.5	0.002	16	1	0.01	0.1751	1.41	1.41	0.19	0.1754	4.5115	3.9	14.4	14.4	FALSE	6.55
M46+M22	M46	12.8	6.12	M22	12.3	5.54	290.6	0.002	10	1	0.013	0.0171	0.31	0.31	0.13	0.0171	0.9788	1.7	15.8	15.8	FALSE	6.21
M46+M32	M46	12.8	6.1	M32	7.3	2.88	76	0.042	10	1	0.01	0.1581	1.81	1.81	0.10	0.1589	5.8625	2.7	12.4	12.3	FALSE	6.21
METERING STATION+T2	METERING STATION	0	-14.66	T2	3.04	-14.76	444.9	0	24	1	0.013	8.9898	3.05	3.05	1.78	8.9898	3.3913	265.1	88.9	88.9	TRUE	-12.59
N1+K41	N1	5.32	-2.08	K41	5.23	-2.2	30.8	0.004	18	1	0.01	0.6820	2.67	2.67	0.30	0.6820	8.5232	8.0	20.2	20.2	FALSE	-1.77
N2+N1	N2	5.71	-1.39	N1	5.32	-2.08	295.7	0.002	16	1	0.01	0.7165	2.39	2.39	0.36	0.7165	4.8180	14.9	26.7	26.7	FALSE	-1.03
N3+N21	N3	6	-0.64	N21	6	-0.82	88.8	0.002	16	1	0.01	0.6592	2.31	2.31	0.34	0.6592	4.4899	14.7	25.8	25.8	FALSE	-0.29
N4+N3	N4	6.14	0.24	N3	6	-0.64	334.7	0.003	16	1	0.01	0.6592	2.43	2.43	0.33	0.6592	5.1141	12.9	24.9	24.9	FALSE	0.58
N5+N4	N5	7.28	1.13	N4	6.14	0.29	332.5	0.003	10	1	0.013	0.0643	0.81	0.81	0.17	0.0643	1.1012	5.8	20.4	20.4	FALSE	1.30
N6+N5	N6	8.64	1.99	N5	7.28	1.13	332.5	0.003	10	1	0.013	0.0643	0.81	0.81	0.17	0.0643	1.1142	5.8	20.3	20.3	FALSE	2.16
N7+N6	N7	9.69	2.84	N6	8.64	1.99	332.7	0.003	10	1	0.013	0.0643	0.81	0.81	0.17	0.0643	1.1074	5.8	20.4	20.4	FALSE	3.01
N8+N9	N8	13.8	4.05	N9	11.48	3.68	118.7	0.003	10	1	0.013	0.0643	0.88	0.88	0.16	0.0643	1.2230	5.3	19.2	19.2	FALSE	4.21
N9+N7	N9	11.48	3.68	N7	9.69	2.84	284	0.003	10	1	0.013	0.0643	0.84	0.84	0.16	0.0643	1.1916	5.4	19.7	19.7	FALSE	3.84
N10+N13	N10	7.1	-0.52	N13	7	-0.88	176	0.002	8	1	0.013	0.0109	0.78	0.78	0.06	0.0109	0.5465	2.0	8.4	8.4	FALSE	-0.46
N11+N12	N11	7.2	-0.1	N12	7.1	-0.56	227.2	0.002	8	1	0.013	0.0218	0.77	1.14	0.09	0.0391	0.5437	4.0	13.6	13.3	FALSE	0.00
N12+N13	N12	7.1	-0.56	N13	7	-0.88	157.9	0.002	8	1	0.013	0.0218	0.69	0.70	0.10	0.0231	0.5440	4.0	14.6	15.1	FALSE	-0.42
N13+N14	N13	7	-0.88	N14	6	-1.21	167	0.002	8	1	0.013	0.0327	0.35	0.61	0.21	0.0328	0.5371	6.1	31.3	21.1	FALSE	-0.74
N14+N2	N14	6	-1.21	N2	5.71	-1.39	88.4	0.002	16	1	0.01	0.7165	2.39	2.39	0.36	0.7165	4.5003	15.9	26.8	26.8	FALSE	-0.84
N15+N16	N15	7.3	0.75	N16	7.2	0.25	251.8	0.002	8	1	0.013	0.0123	0.72	0.96	0.06	0.0360	0.5384	2.3	9.5	8.3	FALSE	0.83
N16+N17	N16	7.2	0.25	N17	7.1	-0.21	228.2	0.002	8	1	0.013	0.0123	0.81	0.63	0.05	0.0174	0.5426	2.3	7.6	1.3	FALSE	0.36
N17+N20	N17	7.1	-0.27	N20	7	-0.67	197	0.002	8	1	0.013	0.0123	0.70	0.82	0.06	0.0178	0.5445	2.3	9.7	11.3	FALSE	-0.18
N18+N19	N18	7.2	0.29	N19	7.1	-0.22	255.9	0.002	8	1	0.013	0.0123	0.72	0.87	0.06	0.0235	0.5394	2.3	9.5	7.7	FALSE	0.36

Appendix D: Table 2
Scenario 1: 2025 PWWF Model Results

Label	Start Node	Rim (Start) (ft)	Invert (Start) (ft)	Stop Node	Rim (Stop) (ft)	Invert (Stop) (ft)	Length (ft)	Slope (Calculated) (ft/ft)	Diameter (in)	Number of Barrels	Manning's n	Flow (Middle) (cfs)	Velocity (ft/s)	Velocity (Maximum Calculated) (ft/s)	Depth (Middle) (ft)	Flow (Maximum) (cfs)	Capacity (Full Flow) (cfs)	Flow / Capacity (Design) (%)	Depth/Rise (%)	Depth (Maximum) / Rise (%)	Is Ever Surcharged?	Hydraulic Grade (Maximum) (ft)
N19+N20	N19	7.1	-0.22	N20	7	-0.67	224.1	0.002	8	1	0.013	0.0123	0.83	0.82	0.05	0.0136	0.5415	2.3	8.1	7.7	FALSE	-0.10
N20+N21	N20	7	-0.67	N21	6	-0.82	72	0.002	8	1	0.013	0.0246	0.17	0.72	0.29	0.0322	0.5516	4.5	44.2	18.5	FALSE	-0.45
N21+N14	N21	6	-0.82	N14	6	-1.21	195.8	0.002	16	1	0.01	0.6838	2.25	2.25	0.36	0.6838	4.4512	15.4	27.0	27.0	FALSE	-0.45
N22+N23	N22	7.1	1.4	N23	7.1	0.98	212	0.002	8	1	0.013	0.2272	1.34	1.34	0.33	0.2272	0.5378	42.3	49.0	49.0	FALSE	1.73
N23+N28	N23	7.1	0.98	N28	7	0.59	193.2	0.002	8	1	0.013	0.2272	1.35	1.35	0.32	0.2272	0.5430	41.9	48.6	48.6	FALSE	1.31
N24+N25	N24	7.3	2.21	N25	7.3	1.98	116.3	0.002	8	1	0.013	0.3677	1.67	1.67	0.40	0.3677	0.5374	68.4	60.2	60.2	FALSE	2.63
N25+N26	N25	7.3	1.98	N26	7.2	1.46	262.5	0.002	8	1	0.013	0.3677	1.56	1.56	0.43	0.3677	0.5379	68.4	63.8	63.8	FALSE	2.41
N26+N27	N26	7.2	1.46	N27	7.1	0.96	247.5	0.002	8	1	0.013	0.3677	1.58	1.58	0.42	0.3677	0.5431	67.7	63.3	63.3	FALSE	1.89
N27+N28	N27	7.1	0.96	N28	7	0.59	183	0.002	8	1	0.013	0.3677	1.63	1.63	0.41	0.3677	0.5433	67.7	61.7	61.7	FALSE	1.39
N28+N31	N28	7	0.59	N31	6.87	0.54	21.4	0.002	6	2	0.01	0.5949	2.08	2.08	0.34	0.5949	0.7050	84.4	68.2	68.2	FALSE	0.93
N29+N10	N29	7.2	0.13	N10	7.1	-0.52	325.6	0.002	8	1	0.013	0.0109	0.72	0.72	0.06	0.0109	0.5399	2.0	8.8	8.8	FALSE	0.19
N30+N11	N30	7.3	0.17	N11	7.2	-0.1	134	0.002	8	1	0.013	0.0109	0.79	0.82	0.06	0.0113	0.5424	2.0	8.3	7.9	FALSE	0.24
N31+N4	N31	6.87	0.54	N4	6.14	0.24	128.8	0.002	12	1	0.01	0.5949	2.35	2.35	0.36	0.5949	2.2348	26.6	35.8	35.8	FALSE	0.91
O3+N8	O3	17.6	8.2	N8	13.8	4.1	205.1	0.02	8	1	0.013	0.0643	1.36	1.36	0.11	0.0643	1.7083	3.8	16.1	16.1	FALSE	8.31
O4+O3	O4	15.39	9.13	O3	17.6	8.3	277.4	0.003	8	1	0.013	0.0329	1.03	0.72	0.07	0.0329	0.6609	5.0	11.0	1.6	FALSE	9.20
O5+O4	O5	14.73	10.25	O4	15.39	9.13	398.6	0.003	8	1	0.013	0.0329	0.99	0.72	0.06	0.0329	0.6405	5.1	9.7	1.6	FALSE	10.34
O6+O5	O6	13.82	11.05	O5	14.73	10.25	399.4	0.002	8	1	0.013	0.0329	1.03	0.72	0.07	0.0329	0.5408	6.1	10.8	1.6	FALSE	11.13
O7+O6	O7	15.16	11.56	O6	13.82	11.05	426.9	0.001	8	1	0.013	0.0329	1.07	0.72	0.08	0.0329	0.4177	7.9	12.2	1.6	FALSE	11.64
O8+O59	O8	16.28	12.23	O59	16.36	11.92	102.7	0.003	8	1	0.013	0.1798	1.43	1.43	0.26	0.1798	0.6639	27.1	38.9	38.9	FALSE	12.50
O9+O8	O9	17.01	12.76	O8	16.28	12.23	139.7	0.004	8	1	0.013	0.1588	1.47	1.47	0.23	0.1588	0.7443	21.3	34.8	34.8	FALSE	12.99
O10+O9	O10	17.95	13.1	O9	17.01	12.76	156.6	0.002	8	1	0.013	0.1588	1.21	1.21	0.27	0.1588	0.5631	28.2	40.3	40.3	FALSE	13.37
O11+O10	O11	19.41	14.01	O10	17.95	13.15	259.2	0.003	8	1	0.013	0.1445	1.34	1.34	0.23	0.1445	0.6960	20.8	34.7	34.7	FALSE	14.24
O12+O11	O12	19.9	14.5	O11	19.41	14.01	394.2	0.001	8	1	0.013	0.1445	0.94	0.94	0.30	0.1445	0.4260	33.9	45.2	45.2	FALSE	14.80
O13+O12	O13	22.22	16.47	O12	19.9	14.5	414.6	0.005	8	1	0.013	0.1445	1.53	1.53	0.21	0.1445	0.8329	17.3	31.5	31.5	FALSE	16.68
O14+O13	O14	21.75	17.35	O13	22.22	16.87	129.7	0.004	8	1	0.013	0.0279	0.88	0.69	0.10	0.0279	0.7351	3.8	14.6	1.6	FALSE	17.45
O15+O14	O15	24.85	19.05	O14	21.75	17.35	307.9	0.006	8	1	0.013	0.0279	0.87	0.87	0.10	0.0279	0.8978	3.1	14.8	14.8	FALSE	19.14
O16+O15	O16	28.01	22.56	O15	24.85	19.2	234.7	0.014	6	1	0.013	0.0279	1.04	1.04	0.08	0.0279	0.6714	4.2	15.9	15.9	FALSE	22.64
O17+O3	O17	10.93	8.62	O3	17.6	8.3	161.2	0.002	8	1	0.013	0.0493	0.66	0.66	0.18	0.0498	0.5383	9.2	26.7	26.8	FALSE	8.80
O18+O17	O18	15.83	11.93	O17	10.93	8.62	264	0.013	8	1	0.013	0.0136	0.74	0.76	0.04	0.0147	1.3530	1.0	5.3	5.5	FALSE	11.97
O19+O17	O19	17.6	10.75	O17	10.93	8.62	85.9	0.025	6	1	0.013	0.0357	1.09	1.11	0.08	0.0363	0.8837	4.0	16.6	17.0	FALSE	10.84
O20+O19	O20	17	10.98	O19	17.6	10.75	115.6	0.002	6	1	0.013	0.0057	0.68	0.56	0.03	0.0057	0.2503	2.3	6.2	1.3	FALSE	11.02
O21+O19	O21	20.09	12.64	O19	17.6	10.75	393.6	0.005	6	1	0.013	0.0300	0.92	0.92	0.11	0.0307	0.3888	7.7	22.2	22.5	FALSE	12.76
O22+O21	O22	20	13.27	O21	20.09	12.64	318.2	0.002	6	1	0.013	0.0300	0.64	0.64	0.14	0.0315	0.2497	12.0	28.8	29.9	FALSE	13.42
O23+O22	O23	21.65	15.65	O22	20	13.27	469.8	0.005	6	1	0.013	0.0301	0.89	0.78	0.11	0.0319	0.3993	7.5	22.8	26.2	FALSE	15.78
O24+O23	O24	21.18	15.84	O23	21.65	15.65	96.7	0.002	6	1	0.013	0.0300	0.67	0.70	0.14	0.0334	0.2488	12.1	27.8	29.1	FALSE	16.00
O25+O7	O25	16.12	12.07	O7	15.16	11.61	177.4	0.003	6	1	0.013	0.0329	0.73	0.73	0.14	0.0329	0.2857	11.5	28.1	28.1	FALSE	12.22
O26+O25	O26	18.86	13.26	O25	16.12	12.12	332.8	0.003	6	1	0.013	0.0131	0.80	0.80	0.07	0.0131	0.3284	4.0	13.8	13.8	FALSE	13.32
O27+O26	O27	19.94	13.44	O26	18.86	13.31	65.4	0.002	6	1	0.013	0.0066	0.68	0.68	0.03	0.0066	0.2501	2.6	6.0	6.0	FALSE	13.48
O28+O26	O28	19	14.28	O26	18.86	13.41	434.3	0.002	6	1	0.013	0.0065	0.70	0.70	0.03	0.0065	0.2511	2.6	6.8	6.8	FALSE	14.32
O29+O28	O29	23	19.53	O28	19	14.28	174	0.03	6	1	0.013	0.0000	0.00	0.00	0.00	0.0000	0.9746	0.0	0.0	0.0	FALSE	19.53
O29+O30	O29	23	19.53	O30	22.78	19.08	226	0.002	6	1	0.013	0.0000	0.00	0.00	0.04	0.0000	0.2504	0.0	7.4	0.0	FALSE	19.59
O30+O35	O30	22.78	17.63	O35	21.74	16.44	175.9	0.007	6	1	0.013	0.0492	0.99	1.01	0.05	0.0492	0.4615	10.7	9.8	10.7	FALSE	17.74
O31+O30	O31	23	18.76	O30	22.78	18.58	89.5	0.002	6	1	0.013	0.0164	0.80	0.79	0.08	0.0190	0.2516	6.5	16.1	18.0	FALSE	18.91
O32+O31	O32	24	19.18	O31	23	18.76	210.5	0.002	6	1	0.013	0.0164	0.83	0.67	0.08	0.0181	0.2506	6.5	15.6	3.3	FALSE	19.33
O33+O32	O33	25	19.71	O32	24	19.18	262.5	0.002	6	1	0.013	0.0164	0.76	0.92	0.08	0.0170	0.2521	6.5	16.7	15.0	FALSE	19.80
O34+O10	O34	23.33	14.69	O10	17.95	13.35	267.7	0.005	6	1	0.013	0.0492	1.09	0.81	0.07	0.0492	0.3970	12.4	13.9	2.5	FALSE	14.80
O35+O34	O35	21.74	16.44	O34	23.33	14.69	316.4	0.006	6	1	0.013	0.0492	1.08	0.81	0.07	0.0492	0.4173	11.8	13.5	2.5	FALSE	16.53
O36+O30	O36	24.12	18.01	O30	22.78	17.68	164.4	0.002	6	1	0.013	0.0164	0.78	0.78	0.08	0.0164	0.2514	6.5	16.3	16.3	FALSE	18.10
O37+O25	O37	16.63	12.23	O25	16.12	12.07	80.9	0.002	6	1	0.013	0.0198	0.71	0.71	0.10	0.0198	0.2495	7.9	19.9	19.9	FALSE	12.33
O38+O37	O38	17.23	12.46	O37	16.63	12.23	117.5	0.002	6	1	0.013	0.0066	0.71	0.71	0.04	0.0067	0.2482	2.7	7.1	7.0	FALSE	12.50
O39+O37	O39	16.48	12.31	O37	16.63	12.23	40.8	0.002	6	1	0.013	0.0132	0.89	0.89	0.06	0.0132	0.2486	5.3	12.8	12.8	FALSE	12.38
O40+O39	O40	16.65	12.38	O39	16.48	12.31	37.3	0.002	6	1	0.013	0.0066	0.28	0.28	0.09	0.0066	0.2431	2.7	17.7	17.7	FALSE	12.43
O41+O40	O41	16.5	12.47	O40	16.65	12.38	44.5	0.002	6	1	0.013	0.0066	0.64	0.64	0.02	0.0066	0.2523	2.6	4.2	4.2	FALSE	12.51
O42+O39	O42	16.78	12.41	O39	16.48	12.31	47.6	0.002	6	1	0.013	0.0066	0.65	0.65	0.02	0.0066	0.2572	2.6	4.8	4.8	FALSE	12.45
O43+O42	O43	17.92	13.6	O42	16.78	12.41	181.9	0.007	6	1	0.013	0.0066	0.65	0.65	0.02	0.0067	0.4538	1.5	4.5	4.8	FALSE	13.63
O44+O43	O44	18.13	13.78	O43	17.92	13.64	69.2	0.002	6	1	0.013	0.0066	0.69	0.69	0.03	0.0066	0.2524	2.6	6.3	6.3	FALSE	13.82
O45+O8	O45	17.06	12.55	O8	16.28	12.23	65.8	0.005	6	1	0.013	0.0210	0.69	0.98	0.11	0.0210	0.3912	5.4	21.2	16.6	FALSE	12.64
O46+O45	O46	18	13.61	O45	17.06	12.55	212.5	0.005	6	1	0.013	0.0070	0.75	0.75	0.04	0.0070	0.3963	1.8	8.5	8.5	FALSE	13.65
O47+O45	O47	16.84	12.91	O45	17.06	12.55	71.5	0.005	6	1	0.013	0.0140	0.85	0.85	0.06	0.0140	0.3981	3.5	11.3	11.3	FALSE	12.97
O48+O47	O48	17.43	13.52	O47	16.84	12.91	122	0.005	6	1	0.013	0.0070	0.69	0.69	0.03	0.0070	0.3968	1.8	6.3	6.3	FALSE	13.55
O49+O47	O49	17.41	13.27	O47	16.84	12.91	72.6	0.005	6	1	0.013	0.0070	0.68	0.68	0.03	0.0070	0.3952	1.8	5.9	5.9	FALSE	13.30
O50+O49	O50	17.95	14.13	O49	17.41	13.27	172.1	0.005	6	1	0.013	0.0070	0.63	0.63	0.02	0.0070	0.3967	1.8	3.9	3.9	FALSE	14.16
O51+O13	O51	24.5	18.4	O13	22.22	16.57	467.6	0.004	6	1	0.013	0.1166	1.32	1.32	0.23	0.1166	0.3510	33.2	45.9	45.9	FALSE	18.63
O52+O51	O52	26.81	19.11	O51	24.5	18.4	213.3	0.003	6	1	0.013	0.0772	1.04	1.04	0.20	0.0772	0.3237	23.8	40.3	40.3	FALSE	19.32
O53+O52	O53	27	19.48	O52	26.81	19.11	188.5	0.002	6	1	0.013	0.0100	0.81	0.84	0.05	0.0150	0.2486	4.0	10.5	10.5	FALSE	19.54
O54+O52	O54	31.19	20.39	O52	26.81	19.11	380.1	0.003	6	1	0.013	0.0672	0.97	0.97	0.19	0.0672	0.3256	20.6	38.4	38.4	FALSE	20.58

Appendix D: Table 2
Scenario 1: 2025 PWWF Model Results

Label	Start Node	Rim (Start) (ft)	Invert (Start) (ft)	Stop Node	Rim (Stop) (ft)	Invert (Stop) (ft)	Length (ft)	Slope (Calculated) (ft/ft)	Diameter (in)	Number of Barrels	Manning's n	Flow (Middle) (cfs)	Velocity (ft/s)	Velocity (Maximum Calculated) (ft/s)	Depth (Middle) (ft)	Flow (Maximum) (cfs)	Capacity (Full Flow) (cfs)	Flow / Capacity (Design) (%)	Depth/Rise (%)	Depth (Maximum) / Rise (%)	Is Ever Surcharged?	Hydraulic Grade (Maximum) (ft)
O55+O54	O55	28.75	20.95	O54	31.19	20.44	399.4	0.001	6	1	0.013	0.0672	0.68	0.68	0.25	0.0672	0.2005	33.5	50.4	50.4	FALSE	21.20
O56+O55	O56	27.04	22.24	O55	28.75	20.95	376.5	0.003	6	1	0.013	0.0672	0.97	0.99	0.19	0.0681	0.3284	20.5	38.2	38.1	FALSE	22.45
O57+O51	O57	25.61	19.76	O51	24.5	18.4	365.2	0.004	6	1	0.013	0.0394	0.78	0.78	0.15	0.0394	0.3424	11.5	30.3	30.3	FALSE	19.92
O58+O57	O58	26.81	20.57	O57	25.61	19.76	403.4	0.002	6	1	0.013	0.0394	0.61	0.62	0.18	0.0396	0.2514	15.7	36.4	36.2	FALSE	20.76
O59+O60	O59	16.36	11.92	O60	15.68	9.18	24.1	0.114	12	1	0.013	0.1628	1.75	1.75	0.09	0.1628	12.0125	1.4	8.8	8.8	FALSE	12.06
O59+O7	O59	16.36	11.92	O7	15.16	11.56	182.3	0.002	8	1	0.013	0.0000	0.00	0.00	0.13	0.0000	0.5370	0.0	19.2	0.0	FALSE	12.06
O60+O61	O60	15.68	9.18	O61	14.55	7.85	199	0.007	14	1	0.013	0.5041	2.61	2.61	0.28	0.5041	4.3937	11.5	23.6	23.6	FALSE	9.49
O61+M8	O61	14.55	7.85	M8	14.41	7.81	11.8	0.003	16	1	0.01	0.5041	2.39	2.39	0.28	0.5041	5.8139	8.7	20.8	20.8	FALSE	8.13
O62+O18	O62	17.08	13.18	O18	15.83	11.93	249	0.005	6	1	0.013	0.0136	0.89	0.82	0.07	0.0198	0.3975	3.4	13.1	8.8	FALSE	13.24
O63+O62	O63	17.27	13.37	O62	17.08	13.18	38	0.005	6	1	0.013	0.0136	0.85	0.84	0.06	0.0136	0.3968	3.4	11.4	10.8	FALSE	13.43
T1+T0	T1	4.57	-15.43	T0	#N/A	-17.68	329.2	0.007	24	1	0.013	8.9898	5.87	5.87	0.98	8.9898	18.7022	48.1	49.0	49.0	FALSE	-14.44
T2+T1	T2	3.04	-14.76	T1	4.57	-15.43	505.8	0.001	24	1	0.013	8.9898	3.62	3.62	1.47	8.9898	8.2329	109.2	73.6	73.6	FALSE	-13.15
T3+METERING STATION	T3	2.52	-14.63	METERING STATION	0	-14.66	55	0.001	24	1	0.013	8.9898	2.86	2.86	2.00	8.9898	5.2820	170.2	100.0	100.0	TRUE	-12.56
T4+T3	T4	1.41	-12.09	T3	2.52	-14.63	474.9	0.005	24	1	0.013	8.9898	5.17	5.17	1.08	8.9899	16.5440	54.3	54.2	54.2	TRUE	-11.03
T5+T4	T5	0.16	-11.76	T4	1.41	-11.99	352.3	0.001	24	1	0.013	8.9898	3.50	3.50	1.52	8.9899	5.7802	155.5	76.1	76.1	FALSE	-10.07
T6+T5	T6	0.17	-11.38	T5	0.16	-11.66	359.1	0.001	24	1	0.013	8.9897	3.25	3.25	1.65	8.9898	6.3165	142.3	82.3	82.3	FALSE	-9.61
T7+T6	T7	-0.07	-10.42	T6	0.17	-11.38	503.8	0.002	24	1	0.013	8.9897	3.46	3.46	1.54	8.9899	9.8749	91.0	77.0	77.0	FALSE	-8.90
T8+T7	T8	0.14	-10.08	T7	-0.07	-10.32	501.9	0	24	1	0.013	8.9898	3.20	3.20	1.67	8.9900	4.9469	181.7	83.6	83.6	FALSE	-8.15
T9+T8	T9	0.14	-9.67	T8	0.14	-9.98	497.7	0.001	24	1	0.013	8.9900	2.95	2.95	1.86	8.9894	5.6455	159.2	93.1	93.1	TRUE	-7.59
T10+T9	T10	0.07	-9.12	T9	0.14	-9.57	446.9	0.001	24	1	0.013	8.9904	2.93	2.93	1.88	8.9892	7.1784	125.2	94.2	94.1	FALSE	-7.14
T11+T10	T11	-0.24	-8.44	T10	0.07	-9.02	325.8	0.002	24	1	0.013	8.9913	3.25	3.25	1.65	8.9890	9.5439	94.2	82.4	82.4	FALSE	-6.82
T12+T11	T12	0.55	-8.25	T11	-0.24	-8.49	482.2	0	24	1	0.013	8.9922	3.01	3.01	1.80	8.9897	5.0468	178.2	90.2	90.2	TRUE	-6.24
T16+T33	T16	2.25	-6.5	T33	2.25	-6.55	66.2	0.001	17.8	1	0.01	1.8507	1.48	1.48	1.01	1.8528	3.6203	51.1	68.4	68.4	TRUE	-3.90
T17+T34	T17	0.96	-5.84	T34	1.75	-6.3	407.1	0.001	21	1	0.013	7.1443	3.46	3.46	1.40	7.1443	5.3261	134.1	80.2	80.2	TRUE	-3.90
T18+T17	T18	1.12	-5.23	T17	0.96	-5.79	540.4	0.001	21	1	0.013	7.1441	3.06	3.06	1.63	7.1441	5.1005	140.1	93.1	93.1	TRUE	-3.35
T19+T36	T19	2.23	-4.72	T36	2.125	-4.74	6.3	0.003	21	1	0.013	4.8577	2.02	2.02	1.75	4.8585	8.9021	54.6	100.0	100.0	TRUE	-2.46
T20+T19	T20	2.72	-4.06	T19	2.23	-4.62	331.9	0.002	18	1	0.013	2.2850	1.29	1.29	1.50	2.2850	4.3143	53.0	100.0	100.0	TRUE	-2.44
T21+T20	T21	3.07	-3.99	T20	2.72	-4.06	338.4	0	21	1	0.013	2.2562	0.98	0.98	1.59	2.2562	2.2788	99.0	90.9	90.9	FALSE	-2.43
T22+T37	T22	2.81	-3.24	T37	3	-3.63	191.4	0.002	21	1	0.01	2.1789	1.50	1.50	1.02	2.1789	9.2972	23.4	58.3	58.3	FALSE	-2.41
T23+T22	T23	6.87	-3.03	T22	2.81	-3.24	373	0.001	18	1	0.013	2.1789	2.06	2.06	0.87	2.1789	2.4921	87.4	57.8	57.8	FALSE	-2.08
T24+T23	T24	3.66	-2.69	T23	6.87	-2.93	316.7	0.001	18	1	0.013	2.0425	2.03	2.03	0.83	2.0424	2.8914	70.6	55.5	55.5	FALSE	-1.81
T25+T24	T25	3.95	-2.59	T24	3.66	-2.62	282.2	0	18	1	0.013	2.0425	1.84	1.84	0.90	2.0424	1.0830	188.6	60.2	60.2	FALSE	-1.60
T26+T25	T26	7.03	-2.32	T25	3.95	-2.52	305.6	0.001	18	1	0.013	1.8548	1.80	1.80	0.85	1.8548	2.6873	69.0	56.6	56.6	FALSE	-1.44
T27+T26	T27	7.85	-2.05	T26	7.03	-2.22	355.8	0	18	1	0.013	1.8548	1.83	1.83	0.84	1.8548	2.2958	80.8	55.7	55.7	FALSE	-1.16
T28+T27	T28	8.67	-1.93	T27	7.85	-1.95	162.1	0	18	1	0.013	1.8548	1.97	1.97	0.79	1.8548	1.1667	159.0	52.6	52.6	FALSE	-1.07
T29+T28	T29	4.98	-1.62	T28	8.67	-1.93	233.8	0.001	18	1	0.013	1.8548	2.12	2.12	0.74	1.8548	3.8245	48.5	49.7	49.7	FALSE	-0.87
T30+T12	T30	0.25	-7.24	T12	0.55	-8.25	285.1	0.004	24	1	0.01	8.9921	3.73	3.73	1.44	8.9922	17.5030	51.4	71.8	71.8	TRUE	-6.07
T31+T30	T31	2.05	-7.15	T30	0.25	-7.24	350.8	0	24.2	1	0.01	8.9909	3.78	4.25	1.41	9.6219	4.8253	186.3	69.7	66.7	FALSE	-5.55
T32+T31	T32	1.25	-7.11	T31	2.05	-7.15	125.2	0	24.2	1	0.01	8.9931	3.39	5.06	1.56	13.8287	5.3740	167.3	77.4	79.8	FALSE	-5.40
T33+Transition 1	T33	2.25	-6.55	Transition 1	#N/A	-24.75	157	0.116	17.8	2	0.01	8.9983	2.62	2.62	1.48	9.0058	89.7137	10.0	100.0	100.0	TRUE	-3.90
T34+T33	T34	1.75	-6.3	T33	2.25	-6.55	76.4	0.003	17.8	1	0.01	7.1518	5.33	5.33	1.08	7.1518	7.5365	94.9	72.7	72.7	TRUE	-3.90
T36+T18	T36	2.125	-4.74	T18	1.12	-5.23	493.7	0.001	21	1	0.013	7.1441	2.97	2.97	1.75	7.1441	4.9915	143.1	100.0	100.0	TRUE	-2.47
T37+T21	T37	3	-3.63	T21	3.07	-3.99	83.4	0.004	21	1	0.01	2.1789	1.07	1.07	1.39	2.1789	13.5420	16.1	79.2	79.2	FALSE	-2.42
Transition 1+Transition 2	Transition 1	#N/A	-24.75	Transition 2	#N/A	-24.75	143	0	17.8	2	0.01	8.9981	2.62	5.07	1.48	17.4335	0.2635	3414.9	100.0	100.0	TRUE	-3.91
Transition 2+Transition 3	Transition 2	#N/A	-24.75	Transition 3	#N/A	-15.75	99	-0.091	17.8	2	0.01	8.9971	2.61	5.00	1.48	17.1900	79.4468	11.3	100.0	100.0	TRUE	-4.56
Transition 3+T32	Transition 3	#N/A	-15.75	T32	1.25	-7.11	117.6	-0.073	17.8	2	0.01	8.9965	2.61	4.70	1.48	16.1870	71.4274	12.6	100.0	100.0	TRUE	-4.91

Abbreviations
PWWF: Peak Wet Weather Flow
CFS: Cubic Feet per Second
ft: Feet
s: Seconds
in: Inches

Appendix D: Table 3
Scenario 3: 2035 PWWF Loadings

MH	Load Definition	Pattern	Base Flow (cfs)
A10	Sanitary Pattern Load	Fixed	0.0267
A11	Sanitary Pattern Load	Fixed	0.0230
A12	Sanitary Pattern Load	Fixed	0.0151
A13	Sanitary Pattern Load	Fixed	0.0051
A14	Sanitary Pattern Load	Fixed	0.1000
A14	Sanitary Pattern Load	Fixed	0.0645
A15	Sanitary Pattern Load	Fixed	0.0102
A16	Sanitary Pattern Load	Fixed	0.0577
A17	Sanitary Pattern Load	Fixed	0.0048
A17	Sanitary Pattern Load	Fixed	0.0260
A18	Sanitary Pattern Load	Fixed	0.0286
A19	Sanitary Pattern Load	Fixed	0.0268
A2	Sanitary Pattern Load	Fixed	0.0079
A20	Sanitary Pattern Load	Fixed	0.0271
A20	Sanitary Pattern Load	Fixed	0.0448
A21	Sanitary Pattern Load	Fixed	0.0475
A23	Sanitary Pattern Load	Fixed	0.0190
A24	Sanitary Pattern Load	Fixed	0.0068
A25	Sanitary Pattern Load	Fixed	0.0229
A26	Sanitary Pattern Load	Fixed	0.0295
A27	Sanitary Pattern Load	Fixed	0.0530
A27	Sanitary Pattern Load	Fixed	0.0399
A28	Sanitary Pattern Load	Fixed	0.0388
A30	Sanitary Pattern Load	Fixed	0.2830
A30	Sanitary Pattern Load	Fixed	0.0129
A31	Sanitary Pattern Load	Fixed	0.0041
A34	Sanitary Pattern Load	Fixed	0.0021
A36	Sanitary Pattern Load	Fixed	0.0028
A38	Sanitary Pattern Load	Fixed	0.0018
A4	Sanitary Pattern Load	Fixed	0.0340
A41	Sanitary Pattern Load	Fixed	0.0036
A42	Sanitary Pattern Load	Fixed	0.0018
A43	Sanitary Pattern Load	Fixed	0.0005
A45	Sanitary Pattern Load	Fixed	0.0009
A46	Sanitary Pattern Load	Fixed	0.0039
A5	Sanitary Pattern Load	Fixed	0.0349
A7	Sanitary Pattern Load	Fixed	0.0340
A8	Sanitary Pattern Load	Fixed	0.0356
B18	Sanitary Pattern Load	Fixed	0.1020

Appendix D: Table 3
Scenario 3: 2035 PWWF Loadings

MH	Load Definition	Pattern	Base Flow (cfs)
B2	Sanitary Pattern Load	Fixed	0.0129
B20	Sanitary Pattern Load	Fixed	0.1020
B23	Sanitary Pattern Load	Fixed	0.1020
B26	Sanitary Pattern Load	Fixed	0.0666
B28	Sanitary Pattern Load	Fixed	0.0666
B3	Sanitary Pattern Load	Fixed	0.0490
B30	Sanitary Pattern Load	Fixed	0.0330
B32	Sanitary Pattern Load	Fixed	0.0330
B33	Sanitary Pattern Load	Fixed	0.0330
B36	Sanitary Pattern Load	Fixed	0.0527
B4	Sanitary Pattern Load	Fixed	0.2612
B40	Sanitary Pattern Load	Fixed	0.0752
B40	Sanitary Pattern Load	Fixed	0.0360
B42	Sanitary Pattern Load	Fixed	0.0360
B43	Sanitary Pattern Load	Fixed	0.0360
B45	Sanitary Pattern Load	Fixed	0.0343
B47	Sanitary Pattern Load	Fixed	0.0097
B48	Sanitary Pattern Load	Fixed	0.0328
B51	Sanitary Pattern Load	Fixed	0.0260
C13	Sanitary Pattern Load	Fixed	0.0472
C15	Sanitary Pattern Load	Fixed	0.0572
C16	Sanitary Pattern Load	Fixed	0.0100
C18	Sanitary Pattern Load	Fixed	0.0572
C20	Sanitary Pattern Load	Fixed	0.0330
C22	Sanitary Pattern Load	Fixed	0.0330
C24	Sanitary Pattern Load	Fixed	0.0283
C25	Sanitary Pattern Load	Fixed	0.0283
C26	Sanitary Pattern Load	Fixed	0.2000
C29	Sanitary Pattern Load	Fixed	0.0195
C31	Sanitary Pattern Load	Fixed	0.0195
C33	Sanitary Pattern Load	Fixed	0.0195
C34	Sanitary Pattern Load	Fixed	0.0095
C37	Sanitary Pattern Load	Fixed	0.0458
C39	Sanitary Pattern Load	Fixed	0.0458
C42	Sanitary Pattern Load	Fixed	0.0458
C43	Sanitary Pattern Load	Fixed	0.0132
C47	Sanitary Pattern Load	Fixed	0.0911
C51	Sanitary Pattern Load	Fixed	0.1755
D1	Sanitary Pattern Load	Fixed	0.0842

Appendix D: Table 3
Scenario 3: 2035 PWWF Loadings

MH	Load Definition	Pattern	Base Flow (cfs)
D17	Sanitary Pattern Load	Fixed	0.1131
D17	Sanitary Pattern Load	Fixed	0.2000
D22	Sanitary Pattern Load	Fixed	0.1082
D28	Sanitary Pattern Load	Fixed	0.1700
D31	Sanitary Pattern Load	Fixed	0.0765
D32	Sanitary Pattern Load	Fixed	0.0765
D39	Sanitary Pattern Load	Fixed	0.0100
D40	Sanitary Pattern Load	Fixed	0.0100
D42	Sanitary Pattern Load	Fixed	0.0214
D44	Sanitary Pattern Load	Fixed	0.1500
D5	Sanitary Pattern Load	Fixed	0.0216
D50	Sanitary Pattern Load	Fixed	0.3500
D55	Sanitary Pattern Load	Fixed	0.1200
D61	Sanitary Pattern Load	Fixed	0.1336
D62	Sanitary Pattern Load	Fixed	0.0150
D66	Sanitary Pattern Load	Fixed	0.1989
D68	Sanitary Pattern Load	Fixed	0.0300
D69	Sanitary Pattern Load	Fixed	0.0300
D70	Sanitary Pattern Load	Fixed	0.1400
D71	Sanitary Pattern Load	Fixed	0.1200
D73	Sanitary Pattern Load	Fixed	0.0249
D74	Sanitary Pattern Load	Fixed	0.0399
D74	Sanitary Pattern Load	Fixed	0.0770
D8	Sanitary Pattern Load	Fixed	0.0105
E1	Sanitary Pattern Load	Fixed	0.0006
E20	Sanitary Pattern Load	Fixed	0.0497
E21	Sanitary Pattern Load	Fixed	0.0609
E22	Sanitary Pattern Load	Fixed	0.0546
E23	Sanitary Pattern Load	Fixed	0.0609
E25	Sanitary Pattern Load	Fixed	0.0849
E26	Sanitary Pattern Load	Fixed	0.0670
E28	Sanitary Pattern Load	Fixed	0.0427
E30	Sanitary Pattern Load	Fixed	0.0067
E30	Sanitary Pattern Load	Fixed	0.0670
E32	Sanitary Pattern Load	Fixed	0.0610
E33	Sanitary Pattern Load	Fixed	0.0088
E34	Sanitary Pattern Load	Fixed	0.0400
E35	Sanitary Pattern Load	Fixed	0.0305
E37	Sanitary Pattern Load	Fixed	0.0609

Appendix D: Table 3
Scenario 3: 2035 PWWF Loadings

MH	Load Definition	Pattern	Base Flow (cfs)
E39	Sanitary Pattern Load	Fixed	0.0609
E40	Sanitary Pattern Load	Fixed	0.0609
E41	Sanitary Pattern Load	Fixed	0.0183
E45	Sanitary Pattern Load	Fixed	0.1471
E45	Sanitary Pattern Load	Fixed	0.0609
E47	Sanitary Pattern Load	Fixed	0.0483
E47	Sanitary Pattern Load	Fixed	0.0609
E49	Sanitary Pattern Load	Fixed	0.0609
F11	Sanitary Pattern Load	Fixed	0.0377
F13	Sanitary Pattern Load	Fixed	0.0260
F14	Sanitary Pattern Load	Fixed	0.0172
F14	Sanitary Pattern Load	Fixed	0.0190
F15	Sanitary Pattern Load	Fixed	0.0127
F16	Sanitary Pattern Load	Fixed	0.0648
F18	Sanitary Pattern Load	Fixed	0.0260
F20	Sanitary Pattern Load	Fixed	0.0190
F21	Sanitary Pattern Load	Fixed	0.0260
F26	Sanitary Pattern Load	Fixed	0.0129
F28	Sanitary Pattern Load	Fixed	0.0129
F7	Sanitary Pattern Load	Fixed	0.0153
F8	Sanitary Pattern Load	Fixed	0.1373
G11	Sanitary Pattern Load	Fixed	0.0382
G12	Sanitary Pattern Load	Fixed	0.0116
G13	Sanitary Pattern Load	Fixed	0.0190
G14	Sanitary Pattern Load	Fixed	0.0083
G16	Sanitary Pattern Load	Fixed	0.0097
G17	Sanitary Pattern Load	Fixed	0.0083
G18	Sanitary Pattern Load	Fixed	0.0097
G19	Sanitary Pattern Load	Fixed	0.0034
G2	Sanitary Pattern Load	Fixed	0.0081
G20	Sanitary Pattern Load	Fixed	0.0010
G21	Sanitary Pattern Load	Fixed	0.0009
G21	Sanitary Pattern Load	Fixed	0.0050
G22	Sanitary Pattern Load	Fixed	0.0010
G22	Sanitary Pattern Load	Fixed	0.0050
G8	Sanitary Pattern Load	Fixed	0.0382
H23	Sanitary Pattern Load	Fixed	0.0100
H24	Sanitary Pattern Load	Fixed	0.0479
H27	Sanitary Pattern Load	Fixed	0.0372

Appendix D: Table 3
Scenario 3: 2035 PWWF Loadings

MH	Load Definition	Pattern	Base Flow (cfs)
H28	Sanitary Pattern Load	Fixed	0.0302
H30	Sanitary Pattern Load	Fixed	0.0529
H31	Sanitary Pattern Load	Fixed	0.0415
H32	Sanitary Pattern Load	Fixed	0.0161
H33	Sanitary Pattern Load	Fixed	0.0117
H33	Sanitary Pattern Load	Fixed	0.1119
H36	Sanitary Pattern Load	Fixed	0.1046
H37	Sanitary Pattern Load	Fixed	0.0264
H38	Sanitary Pattern Load	Fixed	0.0792
H39	Sanitary Pattern Load	Fixed	0.1020
H41	Sanitary Pattern Load	Fixed	0.0920
H42	Sanitary Pattern Load	Fixed	0.0078
H43	Sanitary Pattern Load	Fixed	0.0920
H44	Sanitary Pattern Load	Fixed	0.0027
H44	Sanitary Pattern Load	Fixed	0.1020
H45	Sanitary Pattern Load	Fixed	0.0100
H49	Sanitary Pattern Load	Fixed	0.0100
H51	Sanitary Pattern Load	Fixed	0.0372
H53	Sanitary Pattern Load	Fixed	0.0529
H58	Sanitary Pattern Load	Fixed	0.0406
H61	Sanitary Pattern Load	Fixed	0.0406
H63	Sanitary Pattern Load	Fixed	0.0110
H67	Sanitary Pattern Load	Fixed	0.0100
H69	Sanitary Pattern Load	Fixed	0.0100
H70	Sanitary Pattern Load	Fixed	0.0090
H72	Sanitary Pattern Load	Fixed	0.0090
I16	Sanitary Pattern Load	Fixed	0.0050
I17	Sanitary Pattern Load	Fixed	0.0050
I19	Sanitary Pattern Load	Fixed	0.0050
I20	Sanitary Pattern Load	Fixed	0.0050
I22	Sanitary Pattern Load	Fixed	0.0590
I25	Sanitary Pattern Load	Fixed	0.0789
I26	Sanitary Pattern Load	Fixed	0.0690
I29	Sanitary Pattern Load	Fixed	0.0690
I33	Sanitary Pattern Load	Fixed	0.0050
I34	Sanitary Pattern Load	Fixed	0.0050
J10	Sanitary Pattern Load	Fixed	0.0545
J14	Sanitary Pattern Load	Fixed	0.0290
J7	Sanitary Pattern Load	Fixed	0.0227

Appendix D: Table 3
Scenario 3: 2035 PWWF Loadings

MH	Load Definition	Pattern	Base Flow (cfs)
K10	Sanitary Pattern Load	Fixed	0.0100
K14	Sanitary Pattern Load	Fixed	0.0205
K15	Sanitary Pattern Load	Fixed	0.0100
K20	Sanitary Pattern Load	Fixed	0.0205
K23	Sanitary Pattern Load	Fixed	0.0050
K24	Sanitary Pattern Load	Fixed	0.0050
K25	Sanitary Pattern Load	Fixed	0.0160
K36	Sanitary Pattern Load	Fixed	0.0595
K37	Sanitary Pattern Load	Fixed	0.0595
L11	Sanitary Pattern Load	Fixed	0.0160
L12	Sanitary Pattern Load	Fixed	0.0536
L19	Sanitary Pattern Load	Fixed	0.1600
L20	Sanitary Pattern Load	Fixed	0.0058
L22	Sanitary Pattern Load	Fixed	0.0255
L29	Sanitary Pattern Load	Fixed	0.0790
L33	Sanitary Pattern Load	Fixed	0.0790
L36	Sanitary Pattern Load	Fixed	0.1100
L38	Sanitary Pattern Load	Fixed	0.1200
L41	Sanitary Pattern Load	Fixed	0.0050
L46	Sanitary Pattern Load	Fixed	0.0128
L51	Sanitary Pattern Load	Fixed	0.0077
L55	Sanitary Pattern Load	Fixed	0.0425
L56	Sanitary Pattern Load	Fixed	0.0510
L60	Sanitary Pattern Load	Fixed	0.1028
L61	Sanitary Pattern Load	Fixed	0.0340
L62	Sanitary Pattern Load	Fixed	0.0140
L8	Sanitary Pattern Load	Fixed	0.0340
M14	Sanitary Pattern Load	Fixed	0.0200
M16	Sanitary Pattern Load	Fixed	0.0100
M23	Sanitary Pattern Load	Fixed	0.2800
M28	Sanitary Pattern Load	Fixed	0.0109
M30	Sanitary Pattern Load	Fixed	0.0109
M32	Sanitary Pattern Load	Fixed	0.0765
M32	Sanitary Pattern Load	Fixed	0.0123
M35	Sanitary Pattern Load	Fixed	0.0123
M36	Sanitary Pattern Load	Fixed	0.0287
M38	Sanitary Pattern Load	Fixed	0.5832
M38	Sanitary Pattern Load	Fixed	0.2463
N15	Sanitary Pattern Load	Fixed	0.0123

Appendix D: Table 3
Scenario 3: 2035 PWWF Loadings

MH	Load Definition	Pattern	Base Flow (cfs)
N18	Sanitary Pattern Load	Fixed	0.0123
N30	Sanitary Pattern Load	Fixed	0.0109
N8	Sanitary Pattern Load	Fixed	0.1105
O16	Sanitary Pattern Load	Fixed	0.0208
O16	Sanitary Pattern Load	Fixed	0.0279
O20	Sanitary Pattern Load	Fixed	0.0057
O24	Sanitary Pattern Load	Fixed	0.0300
O27	Sanitary Pattern Load	Fixed	0.0009
O27	Sanitary Pattern Load	Fixed	0.0066
O28	Sanitary Pattern Load	Fixed	0.0065
O3	Sanitary Pattern Load	Fixed	0.0102
O30	Sanitary Pattern Load	Fixed	0.0164
O33	Sanitary Pattern Load	Fixed	0.0164
O36	Sanitary Pattern Load	Fixed	0.0164
O38	Sanitary Pattern Load	Fixed	0.0066
O41	Sanitary Pattern Load	Fixed	0.0066
O44	Sanitary Pattern Load	Fixed	0.0066
O46	Sanitary Pattern Load	Fixed	0.0070
O48	Sanitary Pattern Load	Fixed	0.0070
O50	Sanitary Pattern Load	Fixed	0.0070
O51	Sanitary Pattern Load	Fixed	0.0186
O53	Sanitary Pattern Load	Fixed	0.0100
O56	Sanitary Pattern Load	Fixed	0.0672
O58	Sanitary Pattern Load	Fixed	0.0093
O58	Sanitary Pattern Load	Fixed	0.0394
O60	Sanitary Pattern Load	Fixed	0.3413
O63	Sanitary Pattern Load	Fixed	0.0136
T23	Sanitary Pattern Load	Fixed	0.0107
T25	Sanitary Pattern Load	Fixed	0.0661

Abbreviations
PWWF: Peak Wet Weather Flow
CFS: Cubic Feet per Second

Appendix D: Table 4
Scenario 3: 2035 Enhanced PWWF Model Results

Label	Start Node	Rim (Start) (ft)	Invert (Start) (ft)	Stop Node	Rim (Stop) (ft)	Invert (Stop) (ft)	Length (ft)	Slope (Calculated) (ft/ft)	Diameter (in)	Number of Barrels	Manning's n	Flow (Middle) (cfs)	Velocity (ft/s)	Velocity (Maximum Calculated) (ft/s)	Depth (Middle) (ft)	Flow (Maximum) (cfs)	Capacity (Full Flow) (cfs)	Flow / Capacity (Design) (%)	Depth/Rise (%)	Depth (Maximum) / Rise (%)	Is Ever Surcharged?	Hydraulic Grade (Maximum) (ft)
A1+A2	A1	16.28	2	A2	15.82	1.92	79.9	0.001	12	1	0.013	1.9498	2.48	2.48	1.00	1.9498	1.1275	172.9	100.0	100.0	TRUE	4.15
A2+A5	A2	15.82	1.82	A5	14.53	1.57	244.2	0.001	12	1	0.013	1.9917	2.54	2.54	1.00	1.9917	1.1400	174.7	100.0	100.0	TRUE	4.01
A3+A2	A3	14.86	8.76	A2	15.82	2.12	287.5	0.023	6	1	0.013	0.0340	1.11	1.11	0.09	0.0340	0.8527	4.0	17.5	17.6	TRUE	8.85
A4+A3	A4	14	9.48	A3	14.86	8.86	312	0.002	6	1	0.013	0.0340	0.62	0.89	0.16	0.0378	0.2501	13.6	32.1	26.8	FALSE	9.66
A5+A8	A5	14.53	1.57	A8	13.85	1.53	124.3	0	15	1	0.013	2.0606	1.68	1.68	1.25	2.0606	1.1588	177.8	100.0	100.0	TRUE	3.36
A6+A5	A6	13.72	7.32	A5	14.53	5.81	286.8	0.005	6	1	0.013	0.0340	0.82	0.85	0.13	0.0344	0.4071	8.4	26.3	26.0	FALSE	7.45
A7+A6	A7	14	8.03	A6	13.72	7.42	306	0.002	6	1	0.013	0.0340	0.63	0.87	0.16	0.0377	0.2505	13.6	32.0	27.2	FALSE	8.21
A8+A9	A8	13.85	1.43	A9	12.82	1.16	61.2	0.004	15	1	0.013	2.0962	1.71	1.71	1.25	2.0962	4.2913	48.8	100.0	100.0	TRUE	3.35
A9+A10	A9	12.82	0.62	A10	11.42	0.57	181.2	0	15	1	0.013	2.0962	1.71	1.71	1.25	2.0962	1.0731	195.4	100.0	100.0	TRUE	3.34
A10+A15	A10	11.42	0.47	A15	9.93	0.03	299.3	0.001	15	1	0.013	2.3306	1.90	1.90	1.25	2.3306	2.4766	94.1	100.0	100.0	TRUE	3.26
A11+A10	A11	11.83	2.53	A10	11.42	1.12	417.5	0.003	6	1	0.013	0.2077	1.06	1.56	0.50	0.2078	0.3260	63.7	100.0	64.2	TRUE	3.27
A12+A11	A12	9.52	4.07	A11	11.83	2.63	485.1	0.003	6	1	0.013	0.1846	1.42	1.42	0.31	0.1847	0.3057	60.4	62.7	62.7	TRUE	4.39
A13+A12	A13	7.19	5.15	A12	9.52	4.07	412.1	0.003	6	1	0.013	0.1696	1.32	1.32	0.31	0.1696	0.2872	59.1	62.4	62.4	FALSE	5.46
A14+A13	A14	8.06	5.91	A13	7.19	5.19	288.3	0.002	6	1	0.013	0.1645	1.28	1.35	0.31	0.1714	0.2804	58.7	62.3	61.7	FALSE	6.22
A15+A16	A15	9.93	-0.03	A16	8.08	-0.17	435.1	0	15	1	0.013	2.3408	1.91	1.91	1.25	2.3408	1.1586	202.0	100.0	100.0	TRUE	2.97
A16+A21	A16	8.08	-0.22	A21	7.13	-0.42	296.3	0.001	15	1	0.013	2.5782	2.10	2.10	1.25	2.5782	1.6783	153.6	100.0	100.0	TRUE	2.50
A17+A31	A17	8.77	1.57	A31	8.39	1.1	235.4	0.002	6	1	0.013	0.0308	0.16	0.66	0.50	0.0311	0.2507	12.3	100.0	28.9	TRUE	2.50
A18+A16	A18	7.05	1.45	A16	8.08	0.73	441.8	0.002	6	1	0.013	0.1273	0.65	0.99	0.50	0.1273	0.2265	56.2	100.0	62.5	TRUE	2.81
A19+A18	A19	6.77	2.98	A18	7.05	1.45	213.5	0.007	6	1	0.013	0.0986	0.50	1.64	0.50	0.1065	0.4749	20.8	100.0	36.5	TRUE	3.20
A20+A19	A20	5.62	3.73	A19	6.77	3.05	339.8	0.002	6	1	0.013	0.0719	0.82	0.82	0.23	0.0719	0.2510	28.6	45.5	45.5	FALSE	3.96
A21+A23	A21	7.13	-0.52	A23	7.01	-0.8	155.1	0.002	15	1	0.013	2.6257	2.14	2.14	1.25	2.6257	2.7445	95.7	100.0	100.0	TRUE	2.12
A22+A29	A22	6.99	-0.92	A29	6.36	-1.21	369.1	0.001	18	1	0.013	2.7967	1.58	1.58	1.50	2.7967	2.9441	95.0	100.0	100.0	TRUE	2.06
A23+A22	A23	7.01	-0.8	A22	6.99	-0.92	13.8	0.009	15	1	0.013	2.7967	2.28	2.28	1.25	2.7967	6.0236	46.4	100.0	100.0	TRUE	2.07
A24+A23	A24	7.7	1.62	A23	7.01	0.37	250.6	0.005	6	1	0.013	0.1520	0.77	1.67	0.50	0.1522	0.3962	38.4	100.0	47.1	TRUE	2.07
A25+A24	A25	8.36	2.89	A24	7.7	1.62	253.1	0.005	6	1	0.013	0.1453	1.58	1.58	0.24	0.1453	0.3975	36.5	47.4	47.4	FALSE	3.13
A26+A25	A26	7.42	4.06	A25	8.36	2.89	234.1	0.005	6	1	0.013	0.1224	1.51	1.51	0.22	0.1224	0.3967	30.8	43.1	43.1	FALSE	4.28
A27+A26	A27	6.96	5	A26	7.42	4.06	310.9	0.003	6	1	0.013	0.0929	1.09	1.09	0.22	0.0929	0.3085	30.1	44.9	44.9	FALSE	5.26
A28+A29	A28	6.24	0.21	A29	6.36	-0.25	14.8	0.031	6	1	0.013	0.3347	1.70	3.23	0.50	0.3347	0.9884	33.9	100.0	42.4	TRUE	1.92
A29+T29	A29	6.36	-1.24	T29	4.98	-1.62	345.5	0.001	18	1	0.013	3.1314	1.77	1.77	1.50	3.1314	3.4837	89.9	100.0	100.0	TRUE	1.92
A30+A28	A30	6.07	1.27	A28	6.24	0.32	301	0.003	6	1	0.013	0.2959	1.51	1.51	0.50	0.2959	0.3152	93.9	100.0	100.0	TRUE	1.92
A31+A16	A31	8.39	1.1	A16	8.08	0.73	187.3	0.002	6	1	0.013	0.0523	0.27	0.78	0.50	0.0642	0.2494	21.0	100.0	43.4	TRUE	2.50
A32+A31	A32	8.62	1.83	A31	8.39	1.1	118.6	0.006	6	1	0.01	0.0174	0.09	0.90	0.50	0.0315	0.5722	3.0	100.0	23.4	TRUE	2.50
A33+A32	A33	9.45	2.67	A32	8.62	1.83	149.8	0.006	6	1	0.01	0.0136	0.14	0.98	0.25	0.0537	0.5462	2.5	50.3	8.6	TRUE	2.76
A34+A33	A34	9.45	2.93	A33	9.45	2.67	55.6	0.005	6	1	0.01	0.0021	0.53	0.58	0.00	0.0044	0.4986	0.4	0.9	2.5	FALSE	2.94
A35+A33	A35	10.05	3.68	A33	9.45	2.67	173.6	0.006	6	1	0.01	0.0114	0.83	0.85	0.05	0.0132	0.5563	2.1	10.8	11.3	FALSE	3.74
A36+A47	A36	10.05	4.57	A47	10.36	4.36	40.9	0.005	6	1	0.01	0.0028	0.54	0.54	0.01	0.0028	0.5228	0.5	1.0	1.0	FALSE	4.59
A37+A35	A37	10.51	4.46	A35	10.05	3.68	182.3	0.004	6	1	0.01	0.0086	0.74	0.74	0.04	0.0086	0.4771	1.8	7.9	7.9	FALSE	4.50
A38+A37	A38	11.26	6.07	A37	10.51	5.37	109	0.006	6	1	0.01	0.0018	0.53	0.53	0.00	0.0018	0.5845	0.3	0.9	0.9	FALSE	6.07
A39+A37	A39	10.5	4.77	A37	10.51	4.46	52.7	0.006	6	1	0.01	0.0068	0.67	0.67	0.03	0.0068	0.5594	1.2	5.5	5.5	FALSE	4.80
A40+A39	A40	10.8	5.24	A39	10.5	4.77	80.2	0.006	6	1	0.01	0.0068	0.67	0.67	0.03	0.0068	0.5583	1.2	5.4	5.4	FALSE	5.27
A41+A40	A41	11.38	5.82	A40	10.8	5.24	79.5	0.007	6	1	0.01	0.0036	0.66	0.63	0.03	0.0037	0.6231	0.6	5.8	4.3	FALSE	5.84
A42+A40	A42	11.13	6.17	A40	10.8	5.49	109.2	0.006	6	1	0.01	0.0018	0.53	0.53	0.00	0.0018	0.5757	0.3	0.9	0.9	FALSE	6.18
A43+A44	A43	12.15	6.64	A44	11.23	6.12	85.9	0.006	6	1	0.01	0.0005	0.47	0.47	0.00	0.0005	0.5675	0.1	0.6	0.6	FALSE	6.64
A44+A40	A44	11.23	6.12	A40	10.8	5.24	146.4	0.006	6	1	0.01	0.0014	0.53	0.53	0.00	0.0014	0.5656	0.2	0.8	0.8	FALSE	6.12
A45+A44	A45	11.14	6.83	A44	11.23	6.12	103.1	0.007	6	1	0.01	0.0009	0.52	0.52	0.00	0.0009	0.6052	0.1	0.7	0.7	FALSE	6.83
A46+A32	A46	9.92	3.47	A32	8.62	1.83	256.9	0.006	6	1	0.01	0.0039	0.55	0.55	0.01	0.0041	0.5828	0.7	1.1	1.2	TRUE	3.48
A47+A35	A47	10.36	4.36	A35	10.05	3.68	100	0.007	6	1	0.01	0.0028	0.54	0.54	0.01	0.0028	0.6014	0.5	1.0	1.0	FALSE	4.37
B2+A1	B2	16	2.46	A1	16.28	2.1	180.8	0.002	12	1	0.013	1.9498	2.48	2.48	1.00	1.9498	1.5899	122.6	100.0	100.0	TRUE	4.62
B3+B2	B3	18.59	2.64	B2	16	2.46	239.4	0.001	12	1	0.013	1.9026	2.42	2.42	1.00	1.9026	0.9769	194.8	100.0	100.0	TRUE	5.22
B4+B3	B4	20.32	3.42	B3	18.59	2.74	464.8	0.001	12	1	0.013	1.8536	2.36	2.36	1.00	1.8536	1.3627	136.0	100.0	100.0	TRUE	6.41
B5+B52	B5	18.61	4.51	B52	20.58	4.29	176.2	0.001	12	1	0.013	1.5924	2.03	2.03	1.00	1.5924	1.2589	126.5	100.0	100.0	TRUE	7.33
B6+B5	B6	18.29	5.6	B5	18.61	4.56	158.4	0.007	12	1	0.013	1.5827	2.01	2.01	1.00	1.5827	2.8864	54.8	100.0	100.0	TRUE	7.55
B7+B6	B7	18.66	5.76	B6	18.29	5.6	380.1	0	12	1	0.013	1.3735	1.75	1.75	1.00	1.3735	0.7309	187.9	100.0	100.0	TRUE	8.05
B8+B7	B8	20.55	6.5	B7	18.66	5.81	371	0.002	12	1	0.013	1.3407	1.71	1.71	1.00	1.3407	1.5364	87.3	100.0	100.0	TRUE	8.50
B9+B8	B9	18.41	7.16	B8	20.55	6.55	350.9	0.002	12	1	0.013	1.2880	1.64	1.64	1.00	1.2880	1.4854	86.7	100.0	100.0	TRUE	8.88
B10+B9	B10	16.86	7.61	B9	18.41	7.16	289.7	0.002	12	1	0.013	1.1890	1.51	1.51	1.00	1.1890	1.4040	84.7	100.0	100.0	TRUE	9.12
B11+B10	B11	16.46	8.71	B10	16.86	7.66	201.4	0.005	12	1	0.013	1.0558	1.38	1.38	0.94	1.0558	2.5723	41.0	93.8	93.8	TRUE	9.25
B12+B11	B12	15.83	9.18	B11	16.46	8.76	277	0.002	10	1	0.013	0.9538	1.98	1.98	0.69	0.9538	0.8530	111.8	82.5	82.5	FALSE	9.93
B13+B12	B13	15.33	9.53	B12	15.83	9.18	262.7	0.001	12	1	0.013	0.8518	1.67	1.67	0.62	0.8518	1.3003	65.5	61.8	61.8	FALSE	10.15
B14+B13	B14	15.47	10.07	B13	15.33	9.53	253.1	0.002	12	1	0.013	0.7498	1.97	1.97	0.49	0.7499	1.6455	45.6	48.8	48.8	FALSE	10.56
B15+B49	B15	20.29	12.19	B49	17.11	11.21	330.9	0.003	8	1	0.013	0.7498	2.15	2.15	0.67	0.7502	0.6575	114.0	100.0	100.0	TRUE	13.12

Appendix D: Table 4
Scenario 3: 2035 Enhanced PWWF Model Results

Label	Start Node	Rim (Start) (ft)	Invert (Start) (ft)	Stop Node	Rim (Stop) (ft)	Invert (Stop) (ft)	Length (ft)	Slope (Calculated) (ft/ft)	Diameter (in)	Number of Barrels	Manning's n	Flow (Middle) (cfs)	Velocity (ft/s)	Velocity (Maximum Calculated) (ft/s)	Depth (Middle) (ft)	Flow (Maximum) (cfs)	Capacity (Full Flow) (cfs)	Flow / Capacity (Design) (%)	Depth/Rise (%)	Depth (Maximum) / Rise (%)	Is Ever Surcharged?	Hydraulic Grade (Maximum) (ft)
B16+B15	B16	20.39	13.24	B15	20.29	12.19	327.3	0.003	8	1	0.013	0.7498	2.15	2.15	0.67	0.7500	0.6844	109.6	100.0	100.0	TRUE	14.41
B17+B13	B17	19.31	13.31	B13	15.33	9.73	501.1	0.007	6	1	0.013	0.1020	1.62	1.57	0.18	0.1020	0.4742	21.5	35.7	36.5	FALSE	13.50
B18+B17	B18	22.26	14.3	B17	19.31	13.31	497.2	0.002	6	1	0.013	0.1020	0.97	0.97	0.26	0.1020	0.2504	40.7	52.7	52.7	FALSE	14.56
B19+B12	B19	20.74	14.44	B12	15.83	9.88	499.6	0.009	6	1	0.013	0.1020	1.70	1.70	0.17	0.1020	0.5360	19.0	34.5	34.5	FALSE	14.61
B20+B19	B20	23.22	19.12	B19	20.74	14.44	585	0.008	6	1	0.013	0.1020	1.62	1.62	0.18	0.1021	0.5019	20.3	35.7	35.7	FALSE	19.30
B21+B11	B21	18.68	13.54	B11	16.46	9.36	399.6	0.01	6	1	0.013	0.1020	1.78	1.78	0.17	0.1020	0.5739	17.8	33.2	33.2	FALSE	13.71
B22+B21	B22	24.77	18.67	B21	18.68	13.58	399.5	0.013	6	1	0.013	0.1020	1.80	1.80	0.16	0.1020	0.6333	16.1	31.6	31.6	FALSE	18.83
B23+B22	B23	28	23.55	B22	24.77	18.67	380.2	0.013	6	1	0.013	0.1020	1.80	1.80	0.16	0.1020	0.6356	16.0	31.5	31.5	FALSE	23.71
B24+B10	B24	22.52	15.82	B10	16.86	9.61	492.5	0.013	6	1	0.013	0.1332	2.05	2.05	0.18	0.1338	0.6300	21.1	35.3	35.3	FALSE	16.00
B25+B24	B25	27.09	18.84	B24	22.52	15.82	406.2	0.007	6	1	0.013	0.1332	1.77	1.78	0.20	0.1339	0.4838	27.5	40.7	40.8	FALSE	19.06
B26+B25	B26	27.62	21.62	B25	27.09	18.84	401.5	0.007	6	1	0.013	0.0666	1.24	1.24	0.16	0.0666	0.4669	14.3	31.7	31.7	FALSE	21.79
B27+B25	B27	25.46	19.69	B25	27.09	18.99	318	0.002	6	1	0.013	0.0666	0.82	1.21	0.22	0.0945	0.2633	25.3	43.1	41.8	FALSE	19.92
B28+B27	B28	24.83	20.93	B27	25.46	19.69	202	0.006	6	1	0.013	0.0666	1.20	1.21	0.16	0.0667	0.4397	15.1	32.5	32.5	FALSE	21.10
B29+B9	B29	19.43	13.68	B9	18.41	7.61	211.2	0.029	6	1	0.013	0.0990	1.63	1.62	0.13	0.1022	0.9513	10.4	25.3	24.4	TRUE	13.82
B30+B29	B30	23.55	14.31	B29	19.43	13.83	243.2	0.002	6	1	0.013	0.0330	0.66	1.39	0.15	0.0552	0.2493	13.2	30.3	25.5	FALSE	14.48
B31+B29	B31	21.81	15.76	B29	19.43	13.68	256.8	0.008	6	1	0.013	0.0660	1.31	1.31	0.15	0.0660	0.5049	13.1	30.3	30.3	FALSE	15.92
B32+B31	B32	26.3	16.37	B31	21.81	15.86	253.7	0.002	6	1	0.013	0.0330	0.63	0.88	0.16	0.0397	0.2515	13.1	31.1	28.1	FALSE	16.54
B33+B31	B33	25.73	19.18	B31	21.81	15.76	279.8	0.012	6	1	0.013	0.0330	1.16	1.14	0.10	0.0332	0.6204	5.3	19.9	20.5	FALSE	19.28
B34+B8	B34	24.69	15.24	B8	20.55	7.1	251.1	0.032	6	1	0.013	0.0527	1.27	1.27	0.10	0.0527	1.0103	5.2	20.1	20.1	TRUE	15.34
B35+B34	B35	26.3	20	B34	24.69	15.24	363.8	0.013	6	1	0.013	0.0527	1.37	1.37	0.12	0.0527	0.6418	8.2	24.9	24.9	FALSE	20.13
B36+B35	B36	24.45	20.41	B35	26.3	20	207	0.002	6	1	0.013	0.0527	0.70	0.94	0.20	0.0677	0.2497	21.1	40.9	39.3	FALSE	20.63
B37+B6	B37	14.71	7.31	B6	18.29	6.74	262.3	0.002	6	1	0.013	0.2092	1.07	1.31	0.50	0.2092	0.2615	80.0	100.0	75.6	TRUE	8.00
B38+B50	B38	12.43	7.93	B50	13.27	7.77	38.9	0.004	6	1	0.013	0.1472	1.10	1.43	0.32	0.1472	0.3599	40.9	64.4	51.8	FALSE	8.20
B39+B38	B39	13	8.56	B38	12.43	8.03	265.5	0.002	6	1	0.013	0.1112	1.01	1.01	0.27	0.1112	0.2507	44.4	54.8	54.8	FALSE	8.84
B40+B39	B40	13	9.17	B39	13	8.56	306.1	0.002	6	1	0.013	0.1112	1.01	1.04	0.27	0.1134	0.2505	44.4	54.8	54.2	FALSE	9.45
B41+B38	B41	11.68	8.37	B38	12.43	8.03	170	0.002	8	1	0.013	0.0360	0.61	0.70	0.15	0.0407	0.5404	6.7	22.5	22.3	FALSE	8.54
B42+B41	B42	11.68	8.7	B41	11.68	8.37	166.3	0.002	6	1	0.013	0.0360	0.62	0.62	0.17	0.0360	0.2499	14.4	33.8	33.8	FALSE	8.89
B43+B37	B43	15.97	8.74	B37	14.71	8.01	363.4	0.002	6	1	0.013	0.0360	0.62	0.84	0.17	0.0402	0.2515	14.3	33.6	29.2	FALSE	8.93
B44+B2	B44	15.76	9.16	B2	16	2.46	296.4	0.023	6	1	0.013	0.0343	1.11	1.04	0.09	0.0416	0.8436	4.1	17.7	13.4	TRUE	9.25
B45+B44	B45	14.05	9.86	B44	15.76	9.26	301	0.002	6	1	0.013	0.0343	0.62	0.62	0.16	0.0343	0.2505	13.7	32.3	32.3	FALSE	10.04
B46+B5	B46	19	13.75	B5	18.61	12.56	16.9	0.07	6	1	0.013	0.0097	0.63	0.63	0.02	0.0098	1.4875	0.7	3.1	3.1	FALSE	13.77
B47+B46	B47	20.58	14.06	B46	19	13.75	157.8	0.002	6	1	0.013	0.0097	0.80	0.80	0.05	0.0098	0.2486	3.9	10.0	10.0	FALSE	14.12
B48+B7	B48	22.9	7.11	B7	18.66	6.21	450.2	0.002	6	1	0.013	0.0328	0.17	0.63	0.50	0.0328	0.2509	13.1	100.0	31.0	TRUE	8.06
B49+B14	B49	17.11	11.16	B14	15.47	10.07	327.7	0.003	8	1	0.013	0.7498	2.24	2.24	0.61	0.7499	0.6969	107.6	91.7	91.7	TRUE	11.87
B50+B37	B50	13.27	7.77	B37	14.71	7.31	204.7	0.002	6	1	0.013	0.1732	0.88	1.26	0.50	0.1732	0.2659	65.1	99.3	66.1	TRUE	8.17
B51+B50	B51	14.15	9.95	B50	13.27	7.97	281.7	0.007	6	1	0.013	0.0260	0.91	1.03	0.06	0.0317	0.4704	5.5	11.2	15.0	FALSE	10.04
B52+B4	B52	20.58	4.29	B4	20.32	3.57	359.8	0.002	12	1	0.013	1.5924	2.03	2.03	1.00	1.5924	1.5936	99.9	100.0	100.0	TRUE	7.06
C1+B16	C1	23.15	14.77	B16	20.39	13.24	401.9	0.004	8	1	0.013	0.7498	2.15	2.15	0.67	0.7500	0.7455	100.6	100.0	100.0	TRUE	16.01
C2+C1	C2	21.54	15.19	C1	23.15	14.77	204.3	0.002	8	1	0.013	0.5783	1.66	1.66	0.67	0.5784	0.5479	105.5	100.0	100.0	TRUE	16.45
C3+C2	C3	22.97	17.37	C2	21.54	15.24	397.8	0.005	6	1	0.013	0.5066	2.58	2.58	0.50	0.5066	0.4106	123.4	100.0	100.0	TRUE	20.08
C4+C3	C4	25.03	19.53	C3	22.97	17.42	436	0.005	6	1	0.013	0.4500	2.29	2.29	0.50	0.4500	0.3903	115.3	100.0	100.0	TRUE	23.25
C5+C4	C5	25.49	20.95	C4	25.03	19.53	327.7	0.004	6	1	0.013	0.4500	2.29	2.29	0.50	0.4500	0.3693	121.9	100.0	100.0	TRUE	25.62
C6+C5	C6	25.82	21.42	C5	25.49	20.99	87.5	0.005	6	1	0.013	0.3821	1.95	1.95	0.50	0.3821	0.3934	97.1	100.0	100.0	TRUE	26.02
C7+C6	C7	34.43	23.65	C6	25.82	21.42	447.8	0.005	6	1	0.013	0.3822	1.95	1.95	0.50	0.3821	0.3960	96.5	100.0	100.0	TRUE	28.41
C8+C7	C8	29.93	24.33	C7	34.43	23.65	400.9	0.002	6	1	0.013	0.2797	1.42	1.42	0.50	0.2797	0.2311	121.0	100.0	100.0	TRUE	29.57
C9+C8	C9	30	24.55	C8	29.93	24.38	84.1	0.002	6	1	0.013	0.2665	1.36	1.36	0.50	0.2665	0.2522	105.6	100.0	100.0	TRUE	29.72
C10+C9	C10	31.71	25.71	C9	30	24.55	300.8	0.004	6	1	0.013	0.2665	1.36	1.36	0.50	0.2665	0.3484	76.5	100.0	100.0	TRUE	30.50
C11+C10	C11	41.2	28.9	C10	31.71	25.76	508	0.006	6	1	0.013	0.1754	0.89	1.92	0.50	0.1760	0.4411	39.8	100.0	47.4	TRUE	31.11
C12+C1	C12	23.43	14.9	C1	23.15	14.77	264.8	0	6	1	0.01	0.1715	0.87	0.87	0.50	0.1716	0.1616	106.2	100.0	100.0	TRUE	16.18
C13+C12	C13	23	15.99	C12	23.43	15.03	480.7	0.002	6	1	0.013	0.0472	0.24	0.24	0.50	0.0472	0.2507	18.8	100.0	100.0	TRUE	16.24
C14+C12	C14	24.3	15.8	C12	23.43	14.9	282.1	0.003	6	1	0.01	0.1244	0.63	0.63	0.50	0.1244	0.4120	30.2	100.0	100.0	TRUE	16.21
C15+C14	C15	22.5	18.05	C14	24.3	16.1	565.3	0.003	6	1	0.013	0.0572	0.89	0.89	0.18	0.0572	0.3295	17.4	36.1	36.1	FALSE	18.25
C16+C14	C16	26.5	17.4	C14	24.3	15.8	272.9	0.006	6	1	0.01	0.0672	1.41	1.51	0.11	0.0672	0.5585	12.0	22.8	27.1	FALSE	17.55
C17+C16	C17	27.07	19.62	C16	26.5	17.4	332.8	0.007	6	1	0.013	0.0572	1.13	1.46	0.15	0.0661	0.4582	12.5	30.4	28.0	FALSE	19.78
C18+C17	C18	28	20.36	C17	27.07	19.62	369.6	0.002	6	1	0.013	0.0572	0.73	0.73	0.21	0.0572	0.2510	22.8	41.9	41.9	FALSE	20.58
C19+C2	C19	21.59	15.49	C2	21.54	15.24	264.1	0.001	6	1	0.013	0.0716	0.36	0.39	0.50	0.0769	0.1726	41.5	100.0	100.0	TRUE	16.49
C20+C19	C20	23.19	17.64	C19	21.59	15.54	198.5	0.011	6	1	0.013	0.0330	1.16	1.16	0.10	0.0330	0.5771	5.7	20.2	20.2	TRUE	17.74
C21+C19	C21	23.94	17.74	C19	21.59	15.54	284.2	0.008	6	1	0.013	0.0330	0.52	0.72	0.18	0.0331	0.4937	6.7	35.7	2.2	TRUE	17.90
C22+C21	C22	24.43	18.08	C21	23.94	17.79	91.8	0.003	6	1	0.013	0.0330	0.75	0.75	0.14	0.0330	0.3154	10.5	27.5	27.5	FALSE	18.24
C23+C3	C23	23.27	18.07	C3	22.97	17.42	400.5	0.002	6	1	0.013	0.0566	0.29	0.85	0.50	0.0566	0.2260	25.0	100.0	2.6	TRUE	20.13
C24+C23	C24	25.53	18.72	C23	23.27	18.42	151.2	0.002	6	1	0.013	0.0283	0.14	0.66	0.50	0.0283	0.2500	11.3	100.0	27.1	TRUE	20.13

Appendix D: Table 4
Scenario 3: 2035 Enhanced PWWF Model Results

Label	Start Node	Rim (Start) (ft)	Invert (Start) (ft)	Stop Node	Rim (Stop) (ft)	Invert (Stop) (ft)	Length (ft)	Slope (Calculated) (ft/ft)	Diameter (in)	Number of Barrels	Manning's n	Flow (Middle) (cfs)	Velocity (ft/s)	Velocity (Maximum Calculated) (ft/s)	Depth (Middle) (ft)	Flow (Maximum) (cfs)	Capacity (Full Flow) (cfs)	Flow / Capacity (Design) (%)	Depth/Rise (%)	Depth (Maximum) / Rise (%)	Is Ever Surcharged?	Hydraulic Grade (Maximum) (ft)
C25+C23	C25	25.08	19.73	C23	23.27	18.17	303.1	0.005	6	1	0.013	0.0283	0.14	0.61	0.50	0.0284	0.4025	7.0	100.0	28.5	TRUE	20.13
C26+D9	C26	29.07	24.47	D9	27.55	21.3	435.8	0.007	6	1	0.013	0.2000	2.06	2.21	0.25	0.2111	0.4785	41.8	49.5	49.0	FALSE	24.72
C27+C5	C27	25	21.41	C5	25.49	20.97	221.6	0.002	6	1	0.013	0.0680	0.35	0.81	0.50	0.0706	0.2500	27.2	100.0	45.4	TRUE	25.65
C28+C27	C28	27.89	23.34	C27	25	21.41	43	0.045	6	1	0.013	0.0195	0.10	0.79	0.50	0.0198	1.1891	1.6	100.0	7.7	TRUE	25.65
C29+C28	C29	32.14	23.94	C28	27.89	23.34	298.4	0.002	6	1	0.013	0.0195	0.10	1.03	0.50	0.0250	0.2516	7.8	100.0	16.3	TRUE	25.65
C30+C27	C30	28.53	23.63	C27	25	21.41	162.9	0.014	6	1	0.013	0.0485	0.25	1.34	0.50	0.0486	0.6551	7.4	100.0	24.0	TRUE	25.65
C31+C30	C31	29.09	23.76	C30	28.53	23.63	67.1	0.002	6	1	0.013	0.0195	0.10	0.10	0.50	0.0195	0.2469	7.9	100.0	100.0	TRUE	25.65
C32+C30	C32	30.12	24.36	C30	28.53	23.63	146.7	0.005	6	1	0.013	0.0290	0.15	1.16	0.50	0.0387	0.3958	7.3	100.0	18.7	TRUE	25.65
C33+C32	C33	31.26	24.53	C32	30.12	24.39	70.7	0.002	6	1	0.013	0.0195	0.10	0.82	0.50	0.0195	0.2497	7.8	100.0	17.8	TRUE	25.65
C34+C32	C34	30	24.5	C32	30.12	24.39	56.9	0.002	6	1	0.013	0.0095	0.05	0.81	0.50	0.0100	0.2468	3.8	100.0	10.5	TRUE	25.65
C35+C7	C35	31.98	25.2	C7	34.43	23.65	403.4	0.004	6	1	0.013	0.1025	0.52	1.25	0.50	0.1026	0.3478	29.5	100.0	43.5	TRUE	28.41
C36+C35	C36	32.58	25.7	C35	31.98	25.2	92	0.005	6	1	0.013	0.1025	0.52	0.52	0.50	0.1025	0.4137	24.8	100.0	100.0	TRUE	28.41
C37+C36	C37	34.3	26.67	C36	32.58	25.73	153.2	0.006	6	1	0.013	0.0567	0.29	1.10	0.50	0.0567	0.4394	12.9	100.0	30.9	TRUE	28.41
C39+C37	C39	33.37	27.03	C37	34.3	26.7	164.1	0.002	6	1	0.013	0.0458	0.23	0.65	0.50	0.0458	0.2516	18.2	100.0	39.0	TRUE	28.41
C40+C36	C40	32.93	26.9	C36	32.58	25.83	257.5	0.004	6	1	0.013	0.0458	0.23	0.82	0.50	0.0458	0.3617	12.7	100.0	32.6	TRUE	28.41
C41+C40	C41	33.56	27.26	C40	32.93	26.93	191.4	0.002	6	1	0.013	0.0458	0.23	0.61	0.50	0.0458	0.2330	19.7	100.0	40.7	TRUE	28.41
C42+C41	C42	34.21	27.91	C41	33.56	27.31	300.1	0.002	6	1	0.013	0.0458	0.23	0.65	0.50	0.0458	0.2509	18.3	100.0	39.0	TRUE	28.41
C43+C8	C43	30.16	24.53	C8	29.93	24.33	101	0.002	6	1	0.013	0.0132	0.07	0.83	0.50	0.0133	0.2496	5.3	100.0	13.5	TRUE	29.57
C44+C10	C44	32.45	26.73	C10	31.71	25.76	154.5	0.006	6	1	0.013	0.0911	0.46	1.51	0.50	0.0914	0.4445	20.5	100.0	34.7	TRUE	30.50
C45+C44	C45	33.66	27.91	C44	32.45	26.77	166.1	0.007	6	1	0.013	0.0911	0.46	1.84	0.50	0.1032	0.4648	19.6	100.0	32.8	TRUE	30.50
C46+C45	C46	36.3	29.85	C45	33.66	27.91	255.5	0.008	6	1	0.013	0.0911	0.46	0.46	0.50	0.0911	0.4889	18.6	100.0	100.0	TRUE	30.50
C47+C46	C47	35.05	30.62	C46	36.3	30	309.1	0.002	6	1	0.013	0.0911	0.92	1.00	0.25	0.0924	0.2513	36.3	50.1	47.5	FALSE	30.90
C48+C11	C48	43.08	29.1	C11	41.2	28.98	178.7	0.001	6	1	0.013	0.1754	0.89	1.03	0.50	0.1755	0.1454	120.6	100.0	80.6	TRUE	31.27
C49+C48	C49	41.32	29.82	C48	43.08	29.1	247.7	0.003	6	1	0.013	0.1754	0.89	1.39	0.50	0.1755	0.3025	58.0	100.0	61.4	TRUE	31.52
C50+C49	C50	40.78	30.68	C49	41.32	29.82	361.2	0.002	6	1	0.013	0.1755	0.89	1.28	0.50	0.1755	0.2738	64.1	100.0	65.7	TRUE	31.93
C51+C50	C51	38.55	32.75	C50	40.78	30.68	556.1	0.004	6	1	0.013	0.1755	0.97	1.53	0.44	0.1755	0.3423	51.3	87.2	56.5	TRUE	33.04
D1+E4	D1	17.33	6.83	E4	16.28	6.08	354.5	0.002	12	1	0.013	2.5313	3.22	3.22	1.00	2.5313	1.6388	154.5	100.0	100.0	TRUE	10.81
D2+D1	D2	17.54	6.91	D1	17.33	6.88	53.3	0.001	12	1	0.013	2.4471	3.12	3.12	1.00	2.4471	0.8455	289.4	100.0	100.0	TRUE	10.96
D3+D2	D3	18.91	7.46	D2	17.54	6.99	363.3	0.001	12	1	0.013	2.4471	3.12	3.12	1.00	2.4471	1.2815	191.0	100.0	100.0	TRUE	12.64
D4+D3	D4	19	8.15	D3	18.91	7.56	296.1	0.002	8	1	0.013	0.8711	2.49	2.51	0.67	0.8753	0.5393	161.5	100.0	100.0	TRUE	14.27
D5+D4	D5	19	8.29	D4	19	8.15	69.6	0.002	8	1	0.013	0.8711	2.49	2.51	0.67	0.8776	0.5418	160.8	100.0	100.0	TRUE	14.58
D6+D5	D6	19.87	13.77	D5	19	8.29	246.1	0.022	8	1	0.013	0.5905	1.69	1.69	0.67	0.5905	1.8033	32.7	100.0	100.0	TRUE	14.58
D7+D6	D7	19.85	15.5	D6	19.87	13.82	398	0.004	6	1	0.013	0.5905	3.01	3.01	0.50	0.5905	0.3646	162.0	100.0	100.0	TRUE	19.22
D8+D7	D8	21.51	16.11	D7	19.85	15.5	157.8	0.004	6	1	0.013	0.2105	1.07	1.07	0.50	0.2105	0.3488	60.4	100.0	100.0	TRUE	19.22
D9+D8	D9	27.55	21.3	D8	21.51	16.11	496	0.01	6	1	0.013	0.2000	2.27	2.48	0.23	0.2101	0.5739	34.8	45.9	44.6	TRUE	21.53
D10+D3	D10	21.78	10.58	D3	18.91	7.81	489.1	0.006	10	1	0.013	1.5760	2.89	2.89	0.83	1.5760	1.6487	95.6	100.0	100.0	TRUE	15.19
D16+D20	D16	23	13.91	D20	22	13	453.9	0.002	10	1	0.013	0.3131	0.57	0.57	0.83	0.3131	0.9810	31.9	100.0	100.0	TRUE	15.79
D17+D16	D17	23.1	14.18	D16	23	13.91	136.3	0.002	10	1	0.013	0.3131	0.57	0.57	0.83	0.3131	0.9751	32.1	100.0	100.0	TRUE	15.79
D19+D10	D19	21.54	12.39	D10	21.78	10.63	48.1	0.037	10	1	0.013	1.5760	2.89	2.89	0.83	1.5760	4.1895	37.6	100.0	100.0	TRUE	15.37
D20+D19	D20	22	13	D19	21.54	12.89	52.7	0.002	6	1	0.013	0.4548	2.32	2.32	0.50	0.4548	0.2564	177.4	100.0	100.0	TRUE	15.73
D21+D19	D21	20.93	15.08	D19	21.54	12.84	390.8	0.006	8	1	0.013	1.1212	3.21	3.21	0.67	1.1212	0.9148	122.6	100.0	100.0	TRUE	18.87
D22+D21	D22	22.23	15.84	D21	20.93	15.13	149	0.005	8	1	0.013	1.1212	3.21	3.21	0.67	1.1212	0.8341	134.4	100.0	100.0	TRUE	20.16
D23+D22	D23	22.62	16.12	D22	22.23	15.88	73.3	0.003	8	1	0.013	0.6630	1.90	1.90	0.67	0.6630	0.6914	95.9	100.0	100.0	TRUE	20.31
D24+D23	D24	24.01	17.46	D23	22.62	16.12	349.8	0.004	8	1	0.013	0.6630	1.90	1.90	0.67	0.6630	0.7478	88.7	100.0	100.0	TRUE	21.38
D25+D24	D25	24.45	18.45	D24	24.01	17.56	300.9	0.003	6	1	0.013	0.3230	1.64	1.64	0.50	0.3230	0.3052	105.8	100.0	100.0	TRUE	21.38
D26+D25	D26	24.79	19.26	D25	24.45	18.5	156.7	0.005	6	1	0.013	0.3230	1.64	1.64	0.50	0.3230	0.3907	82.7	100.0	100.0	TRUE	21.38
D27+D26	D27	26.68	20.86	D26	24.79	19.28	392.4	0.004	6	1	0.013	0.1700	0.87	1.56	0.50	0.1701	0.3560	47.7	100.0	54.2	TRUE	21.39
D28+D27	D28	27.45	21.65	D27	26.68	20.9	81.1	0.009	6	1	0.013	0.1700	2.12	2.12	0.21	0.1700	0.5394	31.5	42.7	42.7	FALSE	21.87
D29+C37	D29	34.53	27.53	C37	34.3	26.7	129.5	0.006	6	1	0.013	0.0000	0.00	0.00	0.50	0.0000	0.4492	0.0	100.0	0.0	TRUE	28.41
D29+D28	D29	34.53	27.53	D28	27.45	21.67	465.5	0.013	6	1	0.013	0.0000	0.00	0.00	0.00	0.0000	0.6295	0.0	0.0	0.0	FALSE	27.53
D30+D26	D30	26.26	21.18	D26	24.79	19.29	436.5	0.004	6	1	0.013	0.1530	0.78	1.62	0.50	0.1635	0.3692	41.4	100.0	51.0	TRUE	21.44
D31+D30	D31	26.68	21.76	D30	26.26	21.46	152.5	0.002	6	1	0.013	0.0765	0.85	0.98	0.23	0.0866	0.2488	30.7	46.6	46.1	FALSE	22.02
D32+D30	D32	26.44	21.71	D30	26.26	21.46	126.2	0.002	6	1	0.013	0.0765	0.86	0.94	0.23	0.0840	0.2497	30.6	46.2	46.6	FALSE	21.97
D33+D24	D33	28.14	19.34	D24	24.01	17.51	450.4	0.004	8	1	0.013	0.1686	0.48	0.48	0.67	0.1690	0.7702	21.9	100.0	100.0	TRUE	21.41
D34+D33	D34	34.45	22.3	D33	28.14	19.34	293.3	0.01	8	1	0.013	0.1686	1.15	1.37	0.29	0.1748	1.2139	13.9	43.7	0.0	TRUE	22.53
D35+D34	D35	33.56	22.51	D34	34.45	22.3	177.8	0.001	6	1	0.013	0.1686	1.09	1.09	0.37	0.1686	0.1928	87.4	73.7	73.7	FALSE	22.91
D36+D35	D36	31.3	25.05	D35	33.56	22.56	250.8	0.01	6	1	0.013	0.0200	0.95	0.77	0.07	0.0250	0.5591	3.6	13.9	5.7	FALSE	25.13
D37+D36	D37	31.11	26.01	D36	31.3	25.05	367.8	0.003	6	1	0.013	0.0200	0.81	1.07	0.09	0.0298	0.2866	7.0	18.3	19.9	FALSE	26.17
D38+D37	D38	32	26.64	D37	31.11	26.16	237.7	0.002	6	1	0.013	0.0100	0.76	0.79	0.04	0.0107	0.2521	4.0	8.6	9.5	FALSE	26.76
D39+D38	D39	32.14	26.81	D38	32	26.64	84.1	0.002	6	1	0.013	0.0100	0.80	0.80	0.05	0.0100	0.2522	4.0	10.0	10.1	FALSE	26.87
D40+D37	D40	32	26.6	D37	31.11	26.21	193.6	0.002	6	1	0.013	0.0100	0.79	0.73	0.05	0.0159	0.2518	4.0	9.5	5.9	FALSE	26.66

Appendix D: Table 4
Scenario 3: 2035 Enhanced PWWF Model Results

Label	Start Node	Rim (Start) (ft)	Invert (Start) (ft)	Stop Node	Rim (Stop) (ft)	Invert (Stop) (ft)	Length (ft)	Slope (Calculated) (ft/ft)	Diameter (in)	Number of Barrels	Manning's n	Flow (Middle) (cfs)	Velocity (ft/s)	Velocity (Maximum Calculated) (ft/s)	Depth (Middle) (ft)	Flow (Maximum) (cfs)	Capacity (Full Flow) (cfs)	Flow / Capacity (Design) (%)	Depth/Rise (%)	Depth (Maximum) / Rise (%)	Is Ever Surcharged?	Hydraulic Grade (Maximum) (ft)
D41+D24	D41	31.35	25.75	D24	24.01	17.51	190.6	0.043	6	1	0.013	0.1714	2.07	2.07	0.14	0.1714	1.1666	14.7	28.5	28.5	TRUE	25.90
D42+D41	D42	30	26	D41	31.35	25.8	100.2	0.002	6	1	0.013	0.0214	0.72	0.72	0.10	0.0214	0.2506	8.5	20.8	20.8	FALSE	26.11
D43+D41	D43	32	26.89	D41	31.35	25.85	517.4	0.002	6	1	0.013	0.1500	1.14	1.14	0.32	0.1500	0.2516	59.6	63.7	63.7	FALSE	27.21
D44+D43	D44	32	27.12	D43	32	26.89	113	0.002	6	1	0.013	0.1500	1.21	1.21	0.30	0.1500	0.2531	59.3	60.3	60.2	FALSE	27.44
D47+D22	D47	20.69	17.09	D22	22.23	15.86	299.2	0.004	8	1	0.013	0.3500	1.00	1.00	0.67	0.3500	0.7748	45.2	100.0	100.0	TRUE	20.17
D48+D47	D48	22.05	18.7	D47	20.69	17.09	401	0.004	6	1	0.013	0.3500	1.78	1.86	0.50	0.3500	0.3555	98.4	100.0	91.2	TRUE	20.17
D49+D48	D49	27.59	21.99	D48	22.05	18.7	399.7	0.008	6	1	0.013	0.3500	2.59	2.59	0.33	0.3500	0.5090	68.8	65.0	65.0	TRUE	22.32
D50+D49	D50	31.35	22.83	D49	27.59	21.99	421.6	0.002	6	1	0.013	0.3500	1.78	1.78	0.50	0.3500	0.2504	139.8	100.0	100.0	TRUE	24.38
D51+D7	D51	23.54	18.66	D7	19.85	15.5	457.8	0.007	6	1	0.013	0.3800	1.93	1.93	0.50	0.3800	0.4661	81.5	100.0	100.0	TRUE	21.64
D52+D51	D52	27.31	20.31	D51	23.54	18.69	267	0.006	6	1	0.013	0.2400	1.22	2.05	0.50	0.2410	0.4370	54.9	100.0	57.7	TRUE	22.19
D53+D52	D53	29.62	21.22	D52	27.31	20.31	247.8	0.004	6	1	0.013	0.1200	0.61	1.34	0.50	0.1205	0.3400	35.3	100.0	46.7	TRUE	22.28
D54+D53	D54	29.68	21.68	D53	29.62	21.27	74.9	0.005	6	1	0.013	0.1200	0.61	1.52	0.50	0.1200	0.4152	28.9	100.0	42.3	TRUE	22.28
D55+D54	D55	30.37	22.39	D54	29.68	21.88	252.3	0.002	6	1	0.013	0.1200	1.05	1.05	0.28	0.1202	0.2523	47.6	56.6	56.5	FALSE	22.67
D56+D35	D56	35.05	23.65	D35	33.56	22.51	286.3	0.004	6	1	0.013	0.1486	1.48	1.48	0.25	0.1486	0.3540	42.0	51.0	51.0	FALSE	23.91
D57+D56	D57	37.86	26.21	D56	35.05	23.7	197.1	0.013	6	1	0.013	0.1486	2.16	2.16	0.18	0.1486	0.6331	23.5	36.8	36.8	FALSE	26.40
D58+D57	D58	37.67	27.07	D57	37.86	26.36	158	0.004	6	1	0.013	0.1486	1.55	1.55	0.25	0.1486	0.3761	39.5	49.1	49.1	FALSE	27.32
D59+D58	D59	37.27	28.53	D58	37.67	27.12	151.4	0.009	6	1	0.013	0.1486	2.02	2.02	0.20	0.1486	0.5414	27.4	40.1	40.1	FALSE	28.74
D60+D59	D60	37.44	29.8	D59	37.27	28.57	112.6	0.011	6	1	0.013	0.1336	2.05	2.05	0.18	0.1336	0.5864	22.8	36.7	36.7	FALSE	29.99
D61+D60	D61	37.37	30.05	D60	37.44	29.84	101	0.002	6	1	0.013	0.1336	1.17	1.17	0.28	0.1336	0.2559	52.2	56.4	56.4	FALSE	30.35
D62+D59	D62	32.76	29.07	D59	37.27	28.57	247.7	0.002	6	1	0.013	0.0150	0.80	0.82	0.08	0.0151	0.2521	6.0	15.2	14.9	FALSE	29.16
D63+D5	D63	19.63	8.6	D5	19	8.29	296.6	0.001	8	1	0.013	0.2589	0.74	0.77	0.67	0.2695	0.3906	66.3	100.0	100.0	TRUE	14.65
D64+D63	D64	24.68	17.38	D63	19.63	8.56	470.5	0.019	6	1	0.013	0.1989	1.01	1.16	0.50	0.2147	0.7682	25.9	100.0	89.1	TRUE	17.64
D65+D64	D65	28.98	20.08	D64	24.68	17.38	448	0.006	6	1	0.013	0.1989	1.92	1.92	0.26	0.1989	0.4356	45.7	52.2	52.2	FALSE	20.34
D66+D65	D66	29.37	20.96	D65	28.98	20.13	412.5	0.002	8	1	0.013	0.1989	1.27	1.27	0.31	0.1989	0.5420	36.7	45.9	45.9	FALSE	21.28
D67+D63	D67	18.77	12.39	D63	19.63	8.6	294.1	0.013	6	1	0.013	0.0597	0.30	1.69	0.50	0.1123	0.6369	9.4	100.0	25.3	TRUE	14.65
D68+D67	D68	19	12.7	D67	18.77	12.42	138.9	0.002	6	1	0.013	0.0299	0.15	0.96	0.50	0.0423	0.2519	11.9	100.0	27.6	TRUE	14.65
D69+D67	D69	19	12.94	D67	18.77	12.42	259	0.002	6	1	0.013	0.0299	0.15	0.66	0.50	0.0303	0.2514	11.9	100.0	28.3	TRUE	14.65
D70+D51	D70	24	18.86	D51	23.54	18.72	70.8	0.002	6	1	0.013	0.1400	0.71	0.71	0.50	0.1400	0.2494	56.1	100.0	100.0	TRUE	21.66
D71+D52	D71	28.07	22.62	D52	27.31	21.11	130	0.012	6	1	0.013	0.1200	0.90	1.96	0.32	0.1200	0.6047	19.8	64.2	34.4	TRUE	22.79
D72+D20	D72	22.5	13.56	D20	22	13	279.6	0.002	10	1	0.013	0.1417	0.26	0.26	0.83	0.1417	0.9806	14.5	100.0	100.0	TRUE	15.73
D73+D72	D73	23	14.16	D72	22.5	13.56	297.4	0.002	8	1	0.013	0.1417	0.41	1.40	0.67	0.1689	0.5428	26.1	100.0	37.6	TRUE	15.73
D74+D73	D74	23.2	14.58	D73	23	14.16	210.2	0.002	8	1	0.013	0.1169	0.33	1.03	0.67	0.1172	0.5401	21.6	100.0	36.2	TRUE	15.73
E1+H9	E1	12.09	3.59	H9	11.84	3.09	269.8	0.002	18	1	0.013	3.7805	3.13	3.13	0.97	3.7805	4.5221	83.6	64.7	64.7	FALSE	4.63
E2+E1	E2	13.48	4.23	E1	12.09	3.64	283.2	0.002	12	1	0.013	2.5313	3.22	3.22	1.00	2.5313	1.6261	155.7	100.0	100.0	TRUE	5.99
E3+E2	E3	15.11	4.76	E2	13.48	4.33	279.6	0.002	12	1	0.013	2.5313	3.22	3.22	1.00	2.5313	1.3970	181.2	100.0	100.0	TRUE	7.33
E4+E3	E4	16.28	6.08	E3	15.11	5.01	356.7	0.003	12	1	0.013	2.5313	3.22	3.22	1.00	2.5313	1.9512	129.7	100.0	100.0	TRUE	9.07
E6+E1	E6	11.14	4.84	E1	12.09	4.04	501	0.002	12	1	0.013	1.2486	2.08	2.08	0.71	1.2486	1.4236	87.7	71.4	71.4	FALSE	5.59
E7+E6	E7	11.77	6.02	E6	11.14	4.84	310.5	0.004	12	1	0.013	1.1877	2.78	2.78	0.53	1.1877	2.1961	54.1	53.5	53.5	FALSE	6.57
E8+E7	E8	13.72	6.77	E7	11.77	6.07	354.7	0.002	12	1	0.013	0.9680	2.09	2.09	0.57	0.9680	1.5826	61.2	57.1	57.1	FALSE	7.35
E9+E8	E9	13.77	7.32	E8	13.72	6.82	341.1	0.001	12	1	0.013	0.6445	1.68	1.68	0.49	0.6445	1.3640	47.3	49.2	49.2	FALSE	7.82
E10+E9	E10	14.53	7.78	E9	13.77	7.32	192.1	0.002	12	1	0.013	0.6445	1.99	1.99	0.43	0.6445	1.7432	37.0	43.1	43.1	FALSE	8.22
E11+E10	E11	14.94	8.04	E10	14.53	7.93	194.9	0.001	12	1	0.013	0.4228	1.31	1.31	0.43	0.4228	0.8465	50.0	43.0	43.0	FALSE	8.51
E12+E11	E12	20.13	9.13	E11	14.94	8.14	494.5	0.002	12	1	0.013	0.4228	1.62	1.62	0.37	0.4228	1.5941	26.5	36.7	36.7	FALSE	9.50
E13+E12	E13	18.72	10	E12	20.13	9.18	450.3	0.002	8	1	0.013	0.2802	1.38	1.38	0.38	0.2802	0.5157	54.3	56.4	56.4	FALSE	10.38
E14+E13	E14	17.24	10.39	E13	18.72	10.12	185.5	0.001	8	1	0.013	0.2315	1.25	1.25	0.35	0.2315	0.4609	50.2	52.3	52.3	FALSE	10.76
E15+E14	E15	15.27	10.72	E14	17.24	10.49	246.2	0.001	8	1	0.013	0.2009	1.04	1.04	0.36	0.2011	0.3693	54.4	54.3	54.3	FALSE	11.10
E20+E7	E20	12.61	7.71	E7	11.77	6.12	504.5	0.003	6	1	0.013	0.1106	1.19	1.20	0.24	0.1112	0.3150	35.1	47.7	47.8	FALSE	7.96
E21+E20	E21	14.72	8.53	E20	12.61	7.76	385.6	0.002	6	1	0.013	0.0609	0.76	0.99	0.21	0.0778	0.2507	24.3	42.9	42.0	FALSE	8.76
E22+E8	E22	15.38	8.48	E8	13.72	6.87	449.9	0.004	6	1	0.013	0.1155	1.28	1.43	0.23	0.1201	0.3356	34.4	46.9	44.3	FALSE	8.72
E23+E22	E23	16.82	10.42	E22	15.38	8.48	438.8	0.004	6	1	0.013	0.0609	1.02	1.12	0.17	0.0636	0.3731	16.3	34.4	33.2	FALSE	10.61
E25+E50	E25	16.75	10.9	E50	16.04	9.64	231.9	0.005	6	1	0.013	0.1519	1.70	1.70	0.23	0.1519	0.4136	36.7	46.4	46.4	FALSE	11.14
E26+E25	E26	19.82	13.82	E25	16.75	10.9	488.2	0.006	6	1	0.013	0.0670	1.18	1.21	0.17	0.0682	0.4339	15.4	33.0	33.0	FALSE	14.00
E27+E12	E27	21.28	15.85	E12	20.13	9.53	576.2	0.011	6	1	0.013	0.0427	1.14	1.14	0.12	0.0428	0.5876	7.3	24.5	24.5	FALSE	15.97
E28+E27	E28	22	15.93	E27	21.28	15.81	61.8	0.002	6	1	0.013	0.0427	0.71	0.71	0.17	0.0427	0.2472	17.3	34.4	34.4	FALSE	16.13
E29+E12	E29	23.08	15.79	E12	20.13	9.58	247	0.025	6	1	0.013	0.1000	1.66	1.66	0.13	0.1000	0.8896	11.2	26.3	26.3	FALSE	15.92
E30+E29	E30	27	20.5	E29	23.08	15.83	502.3	0.009	6	1	0.013	0.0737	1.46	1.46	0.15	0.0737	0.5410	13.6	30.4	30.4	FALSE	20.66
E31+E29	E31	27.93	20.63	E29	23.08	15.83	252.3	0.019	6	1	0.013	0.0610	1.40	1.40	0.12	0.0610	0.7739	7.9	23.8	23.8	FALSE	20.75
E32+E31	E32	28	21.21	E31	27.93	20.68	263.2	0.002	6	1	0.013	0.0610	0.76	0.90	0.21	0.0689	0.2518	24.2	42.8	41.2	FALSE	21.44
E33+E13	E33	21.41	15.78	E13	18.72	10.02	228.9	0.025	8	1	0.013	0.0487	1.21	1.21	0.09	0.0487	1.9166	2.5	14.0	14.0	FALSE	15.87
E33+E29	E33	21.41	17.11	E29	23.08	15.86	455.1	0.003	6	1	0.013	0.0000	0.00	0.00	0.00	0.0000	0.2941	0.0	0.0	0.0	FALSE	17.11
E34+E33	E34	24.94	18.94	E33	21.41	15.83	278.9	0.011	6	1	0.013	0.0400	1.12	1.10	0.12	0.0401	0.5925	6.8	23.7	24.0	FALSE	19.06

Appendix D: Table 4
Scenario 3: 2035 Enhanced PWWF Model Results

Label	Start Node	Rim (Start) (ft)	Invert (Start) (ft)	Stop Node	Rim (Stop) (ft)	Invert (Stop) (ft)	Length (ft)	Slope (Calculated) (ft/ft)	Diameter (in)	Number of Barrels	Manning's n	Flow (Middle) (cfs)	Velocity (ft/s)	Velocity (Maximum Calculated) (ft/s)	Depth (Middle) (ft)	Flow (Maximum) (cfs)	Capacity (Full Flow) (cfs)	Flow / Capacity (Design) (%)	Depth/Rise (%)	Depth (Maximum) / Rise (%)	Is Ever Surcharged?	Hydraulic Grade (Maximum) (ft)
E35+E14	E35	19.06	11.41	E14	17.24	10.74	333	0.002	6	1	0.013	0.0305	0.64	1.43	0.15	0.0677	0.2517	12.1	29.1	23.6	FALSE	11.60
E36+E15	E36	17.4	12.35	E15	15.27	10.82	420.2	0.004	6	1	0.013	0.1827	1.54	1.54	0.29	0.1827	0.3385	54.0	58.3	58.3	FALSE	12.65
E37+E36	E37	18	13.11	E36	17.4	12.4	353.2	0.002	6	1	0.013	0.0609	0.76	0.76	0.21	0.0609	0.2515	24.2	42.8	42.8	FALSE	13.34
E38+E36	E38	18.78	13.33	E36	17.4	12.35	233.6	0.004	6	1	0.013	0.1218	1.41	1.41	0.23	0.1218	0.3634	33.5	45.2	45.2	FALSE	13.56
E39+E38	E39	19	14.13	E38	18.78	13.53	300.6	0.002	6	1	0.013	0.0609	0.76	0.89	0.21	0.0662	0.2507	24.3	42.9	40.5	FALSE	14.36
E40+E38	E40	22.91	14.25	E38	18.78	13.33	458.2	0.002	6	1	0.013	0.0609	0.76	0.76	0.21	0.0609	0.2514	24.2	42.8	42.8	FALSE	14.48
E41+E15	E41	16	11.07	E15	15.27	10.87	98.3	0.002	6	1	0.013	0.0183	0.44	0.44	0.13	0.0183	0.2530	7.2	26.5	26.5	FALSE	11.17
E42+E10	E42	14.56	10.06	E10	14.53	7.88	550.5	0.004	6	1	0.013	0.0698	1.04	1.04	0.19	0.0699	0.3531	19.8	37.3	37.3	FALSE	10.25
E44+E8	E44	12.57	8.62	E8	13.72	6.82	630.5	0.003	6	1	0.013	0.2080	1.45	1.45	0.34	0.2080	0.2998	69.4	68.3	68.3	TRUE	8.97
E45+E44	E45	13.15	9.55	E44	12.57	8.57	319.4	0.003	6	1	0.013	0.2080	1.50	1.50	0.33	0.2080	0.3108	66.9	66.5	66.5	FALSE	9.89
E46+E7	E46	11	7.4	E7	11.77	6.02	500.5	0.003	6	1	0.013	0.1092	1.13	1.13	0.25	0.1092	0.2946	37.1	49.4	49.4	TRUE	7.65
E47+E46	E47	11.54	8.31	E46	11	7.4	455.2	0.002	6	1	0.013	0.1092	1.00	1.00	0.27	0.1092	0.2509	43.5	54.3	54.3	FALSE	8.58
E48+E6	E48	11.94	7.54	E6	11.14	5.19	498.5	0.005	6	1	0.013	0.0609	1.04	1.04	0.17	0.0609	0.3852	15.8	33.9	34.0	FALSE	7.71
E49+E48	E49	11.53	8.46	E48	11.94	7.54	457.8	0.002	6	1	0.013	0.0609	0.76	0.76	0.21	0.0609	0.2515	24.2	42.8	42.8	FALSE	8.69
E50+E10	E50	16.04	9.64	E10	14.53	7.88	217.9	0.008	6	1	0.013	0.1519	1.94	1.94	0.21	0.1523	0.5043	30.1	42.1	42.1	FALSE	9.85
F7+T25	F7	4.65	0.3	T25	3.95	-2.2	477	0.005	6	1	0.013	0.4269	2.17	2.17	0.50	0.4269	0.4062	105.1	100.0	100.0	TRUE	1.99
F8+F7	F8	8.3	1.38	F7	4.65	0.3	356.7	0.003	6	1	0.013	0.4115	2.09	2.09	0.50	0.4115	0.3087	133.3	100.0	100.0	TRUE	4.17
F9+F23	F9	8.21	3.11	F23	8.23	2.7	110	0.004	6	1	0.013	0.2123	1.08	1.08	0.50	0.2123	0.3425	62.0	100.0	100.0	TRUE	4.96
F10+F9	F10	11.76	4.96	F9	8.21	3.21	462.6	0.004	6	1	0.013	0.2123	1.08	1.08	0.50	0.2123	0.3451	61.5	100.0	100.0	TRUE	5.76
F11+F10	F11	13	6.84	F10	11.76	5.06	419.8	0.004	6	1	0.013	0.2123	1.72	1.71	0.30	0.2123	0.3653	58.1	60.3	60.3	TRUE	7.15
F12+F11	F12	13	7.65	F11	13	6.94	355.2	0.002	6	1	0.013	0.0970	0.95	0.95	0.26	0.0970	0.2508	38.7	51.5	51.5	FALSE	7.91
F13+F19	F13	15.24	10.24	F19	15.18	10.23	24.2	0	6	1	0.013	0.0260	0.34	0.38	0.21	0.0262	0.1141	22.8	41.1	38.1	FALSE	10.44
F14+F8	F14	9.56	5.64	F8	8.3	1.76	463.1	0.008	6	1	0.013	0.0362	0.37	1.03	0.25	0.0362	0.5136	7.1	50.1	23.4	TRUE	5.76
F15+F11	F15	13.27	7.77	F11	13	7.17	301.1	0.002	6	1	0.013	0.0775	0.86	0.96	0.23	0.0822	0.2505	31.0	47.0	45.1	FALSE	8.01
F16+F15	F16	13.27	8.24	F15	13.27	7.77	238	0.002	6	1	0.013	0.0650	0.78	0.78	0.22	0.0650	0.2494	26.1	43.9	43.9	FALSE	8.48
F17+F22	F17	15.11	8.76	F22	13	8.39	130.3	0.003	6	1	0.013	0.0970	1.09	1.09	0.23	0.0970	0.2990	32.4	46.4	46.4	FALSE	9.00
F18+F17	F18	15.34	9.94	F17	15.11	8.89	197.5	0.005	6	1	0.013	0.0260	1.07	1.07	0.09	0.0260	0.4091	6.4	17.8	17.8	FALSE	10.04
F19+F20	F19	15.18	10.33	F20	15.15	9.7	188.8	0.003	6	1	0.013	0.0260	0.94	1.07	0.10	0.0330	0.3241	8.0	19.8	16.4	FALSE	10.44
F20+F17	F20	15.15	9.7	F17	15.11	8.86	281.2	0.003	6	1	0.013	0.0710	0.95	1.05	0.20	0.0759	0.3067	23.2	40.7	39.6	FALSE	9.91
F21+F20	F21	15.15	10.38	F20	15.15	9.7	136.4	0.005	6	1	0.013	0.0260	0.75	0.82	0.12	0.0270	0.3961	6.6	23.2	22.4	FALSE	10.49
F22+F12	F22	13	8.39	F12	13	7.65	158.8	0.005	6	1	0.013	0.0970	1.31	1.31	0.20	0.0970	0.3830	25.3	40.2	40.2	FALSE	8.60
F23+F8	F23	8.23	2.7	F8	8.3	1.48	327.4	0.004	6	1	0.013	0.2381	1.21	1.21	0.50	0.2381	0.3425	69.5	100.0	100.0	TRUE	4.85
F24+F23	F24	8.23	3.19	F23	8.23	2.7	98	0.005	6	1	0.013	0.0258	0.13	1.00	0.50	0.0270	0.3967	6.5	100.0	19.4	TRUE	4.85
F25+F24	F25	8.73	3.77	F24	8.23	3.19	115	0.005	6	1	0.013	0.0129	0.07	0.33	0.50	0.0130	0.3985	3.2	100.0	25.6	TRUE	4.85
F26+F25	F26	8.73	4.36	F25	8.73	3.77	118	0.005	6	1	0.013	0.0129	0.07	0.75	0.50	0.0129	0.3967	3.3	100.0	7.3	TRUE	4.85
F27+F24	F27	8.73	3.78	F24	8.23	3.19	118	0.005	6	1	0.013	0.0129	0.07	0.19	0.50	0.0129	0.3967	3.3	100.0	37.4	TRUE	4.85
F28+F27	F28	8.73	4.57	F27	8.73	3.78	158	0.005	6	1	0.013	0.0129	0.07	0.79	0.50	0.0129	0.3967	3.3	100.0	8.8	TRUE	4.85
G2+G19	G2	4.2	0.05	G19	2.65	-0.76	154	0.005	6	1	0.013	0.1513	0.77	1.65	0.50	0.1513	0.4069	37.2	100.0	47.3	TRUE	0.80
G3+G14	G3	7	1.85	G14	6.79	1.05	208.1	0.004	6	1	0.013	0.1071	1.27	1.27	0.22	0.1071	0.3479	30.8	44.3	44.3	FALSE	2.08
G4+G3	G4	7.49	2.26	G3	7	1.95	212.7	0.001	6	1	0.013	0.0881	0.82	0.82	0.27	0.0881	0.2142	41.1	53.7	53.7	FALSE	2.53
G6+G4	G6	10.75	5.12	G4	7.49	2.36	387.6	0.007	6	1	0.013	0.0764	1.35	1.35	0.16	0.0765	0.4735	16.1	33.0	33.0	FALSE	5.29
G7+G6	G7	10.12	5.81	G6	10.75	5.22	294.7	0.002	6	1	0.013	0.0383	0.62	1.43	0.18	0.0603	0.2511	15.2	35.4	25.2	FALSE	5.99
G8+G7	G8	10.83	6.45	G7	10.12	5.8	326.8	0.002	6	1	0.013	0.0383	0.61	0.61	0.18	0.0383	0.2502	15.3	35.4	35.4	FALSE	6.64
G9+G6	G9	8.88	5.78	G6	10.75	5.2	290.8	0.002	6	1	0.013	0.0382	0.60	0.61	0.18	0.0383	0.2506	15.2	35.7	35.4	FALSE	5.96
G10+G9	G10	11.09	6.24	G9	8.88	5.78	270.6	0.002	6	1	0.013	0.0382	0.57	1.00	0.19	0.0477	0.2313	16.5	37.3	29.2	FALSE	6.43
G11+G10	G11	11.78	6.87	G10	11.09	6.34	265.7	0.002	6	1	0.013	0.0381	0.61	0.61	0.18	0.0383	0.2506	15.2	35.6	35.4	FALSE	7.06
G12+G4	G12	8.32	3.02	G4	7.49	2.47	277	0.002	6	1	0.013	0.0116	0.83	0.81	0.06	0.0121	0.2500	4.6	12.4	12.9	FALSE	3.10
G13+G3	G13	8.34	2.8	G3	7	1.9	452.5	0.002	6	1	0.013	0.0190	0.73	0.70	0.09	0.0207	0.2502	7.6	19.0	20.8	FALSE	2.90
G14+G17	G14	6.79	1.05	G17	5.65	0.6	151.1	0.003	6	1	0.013	0.1251	1.23	1.23	0.26	0.1251	0.3062	40.9	51.3	51.3	FALSE	1.31
G15+G14	G15	6.2	2.15	G14	6.79	1.05	214.7	0.005	8	1	0.013	0.0097	0.23	0.69	0.12	0.0097	0.8648	1.1	17.9	4.3	FALSE	2.23
G16+G15	G16	6.21	3.21	G15	6.2	2.2	154.5	0.007	8	1	0.013	0.0097	0.72	0.72	0.03	0.0097	0.9771	1.0	5.1	5.1	FALSE	3.24
G17+G2	G17	5.65	0.5	G2	4.2	0.15	143.7	0.002	6	1	0.013	0.1431	0.74	1.22	0.47	0.1431	0.2769	51.7	94.9	57.6	TRUE	0.80
G18+G17	G18	5.86	1.15	G17	5.65	0.57	291.5	0.002	6	1	0.013	0.0097	0.81	0.80	0.05	0.0103	0.2503	3.9	10.4	9.9	FALSE	1.21
G19+T23	G19	2.65	-0.76	T23	6.87	-2.3	290.9	0.005	6	1	0.013	0.1675	0.85	1.88	0.50	0.1683	0.4083	41.0	100.0	46.5	TRUE	0.80
G20+G19	G20	2.66	0.11	G19	2.65	-0.76	173.9	0.005	6	1	0.013	0.0128	0.07	0.34	0.50	0.0129	0.3968	3.2	100.0	24.6	TRUE	0.80
G21+G20	G21	2.67	0.37	G20	2.66	0.11	51.4	0.005	6	1	0.013	0.0059	0.03	0.67	0.50	0.0059	0.3991	1.5	100.0	5.5	TRUE	0.80
G22+G20	G22	2.67	0.25	G20	2.66	0.11	71.7	0.002	6	1	0.013	0.0060	0.03	0.73	0.50	0.0060	0.2479	2.4	100.0	8.0	TRUE	0.80
H2+I11	H2	7.99	0.59	I11	8.07	-0.03	36.6	0.017	24	1	0.01	4.9266	1.57	1.57	2.00	4.9266	38.2777	12.9	100.0	100.0	TRUE	3.14
H3+H2	H3	8.2	0.7	H2	7.99	0.59	30.8	0.004	24	1	0.01	4.9262	1.57	1.57	2.00	4.9262	17.5858	28.0	100.0	100.0	TRUE	3.16
H4+H3	H4	8.13	0.71	H3	8.2	0.7	7.1	0.001	24	1	0.01	3.8592	1.23	1.23	2.00	3.8686	11.0311	35.0	100.0	100.0	TRUE	3.18
H5+H4	H5	8.95	0.95	H4	8.13	0.71	259.3	0.001	24	1	0.01	3.8584	1.23	1.23	2.00	3.8584	8.9462	43.1	100.0	100.0	TRUE	3.20

Appendix D: Table 4
Scenario 3: 2035 Enhanced PWWF Model Results

Label	Start Node	Rim (Start) (ft)	Invert (Start) (ft)	Stop Node	Rim (Stop) (ft)	Invert (Stop) (ft)	Length (ft)	Slope (Calculated) (ft/ft)	Diameter (in)	Number of Barrels	Manning's n	Flow (Middle) (cfs)	Velocity (ft/s)	Velocity (Maximum Calculated) (ft/s)	Depth (Middle) (ft)	Flow (Maximum) (cfs)	Capacity (Full Flow) (cfs)	Flow / Capacity (Design) (%)	Depth/Rise (%)	Depth (Maximum) / Rise (%)	Is Ever Surcharged?	Hydraulic Grade (Maximum) (ft)
H6+H5	H6	8.89	0.99	H5	8.95	0.95	9	0.004	20	1	0.01	3.7905	1.74	1.74	1.67	3.7918	12.0730	31.4	100.0	100.0	TRUE	3.21
H7+H75	H7	10.51	1.76	H75	10.09	1.58	89.8	0.002	20	1	0.013	3.7905	1.78	1.78	1.57	3.7905	6.2294	60.8	94.2	94.2	FALSE	3.25
H8+H7	H8	10.95	2.05	H7	10.51	1.76	233.4	0.001	20	1	0.01	3.7905	2.00	2.00	1.35	3.7905	6.3751	59.5	81.0	81.0	FALSE	3.26
H9+H73	H9	11.84	3.09	H73	11.36	2.56	246.2	0.002	18	1	0.01	3.7905	3.87	3.87	0.81	3.7905	6.3351	59.8	54.2	54.2	FALSE	3.96
H11+H64	H11	9.92	1.44	H64	9.05	0.99	198.2	0.002	14	1	0.01	1.0264	0.96	0.96	1.17	1.0264	3.3286	30.8	100.0	100.0	TRUE	3.18
H12+H11	H12	10.15	2.2	H11	9.92	1.54	333.5	0.002	8	1	0.013	0.9217	2.64	2.64	0.67	0.9217	0.5376	171.5	100.0	100.0	TRUE	4.20
H13+H12	H13	10.85	2.55	H12	10.15	2.3	107.9	0.002	8	1	0.013	0.8159	2.34	2.34	0.67	0.8159	0.5815	140.3	100.0	100.0	TRUE	4.64
H14+H13	H14	11.02	3.54	H13	10.85	2.65	446.5	0.002	8	1	0.013	0.8159	2.34	2.34	0.67	0.8159	0.5395	151.2	100.0	100.0	TRUE	6.77
H15+H62	H15	14.61	5.6	H62	12.95	4.64	201.4	0.005	8	1	0.013	0.7634	2.19	2.19	0.67	0.7634	0.8342	91.5	100.0	100.0	TRUE	8.51
H16+H60	H16	14.43	6.48	H60	14.57	5.9	351.2	0.002	8	1	0.01	0.7184	2.06	2.06	0.67	0.7184	0.6384	112.5	100.0	100.0	TRUE	9.40
H17+H57	H17	12.03	6.83	H57	14.21	6.69	396.8	0	8	1	0.013	0.6778	1.94	1.94	0.67	0.6778	0.2270	298.7	100.0	100.0	TRUE	10.76
H18+H5	H18	8.92	1.27	H5	8.95	1.25	7.9	0.003	6	1	0.013	0.0679	0.35	0.35	0.50	0.0691	0.2825	24.0	100.0	100.0	TRUE	3.20
H19+H18	H19	8.88	2.58	H18	8.92	1.27	386.9	0.003	6	1	0.013	0.0679	0.35	0.97	0.50	0.0679	0.3265	20.8	100.0	38.5	TRUE	3.20
H20+H19	H20	9.1	3.65	H19	8.88	2.63	270.8	0.004	6	1	0.013	0.0679	1.00	1.00	0.19	0.0679	0.3443	19.7	37.7	37.7	TRUE	3.84
H21+H56	H21	9.3	5.04	H56	9.2	4.75	143.8	0.002	6	1	0.013	0.0100	0.81	0.81	0.05	0.0100	0.2520	4.0	10.3	10.3	FALSE	5.09
H22+H21	H22	9.3	5.34	H21	9.3	5.04	151.4	0.002	6	1	0.013	0.0100	0.81	0.59	0.05	0.0100	0.2498	4.0	10.3	1.5	FALSE	5.40
H23+H22	H23	9.4	6.15	H22	9.3	5.34	404.8	0.002	6	1	0.013	0.0100	0.81	0.82	0.05	0.0103	0.2510	4.0	10.4	10.6	FALSE	6.20
H24+H20	H24	10.14	5.82	H20	9.1	3.65	332.8	0.007	6	1	0.013	0.0479	1.01	1.01	0.14	0.0479	0.4530	10.6	29.0	29.0	FALSE	5.97
H25+H11	H25	11.2	3.3	H11	9.92	1.7	378	0.004	6	1	0.013	0.1046	0.53	1.31	0.50	0.1057	0.3650	28.7	100.0	43.0	TRUE	3.52
H26+H25	H26	10.63	4.58	H25	11.2	3.3	412.5	0.003	6	1	0.013	0.1046	1.16	1.17	0.23	0.1062	0.3125	33.5	46.8	47.1	FALSE	4.83
H27+H26	H27	11.38	5.66	H26	10.63	5.43	114.6	0.002	6	1	0.013	0.0372	0.63	0.63	0.17	0.0372	0.2514	14.8	34.2	34.2	FALSE	5.85
H28+H50	H28	10.4	5.41	H50	10.13	5.03	191.6	0.002	6	1	0.013	0.0303	0.66	1.30	0.14	0.0497	0.2499	12.1	28.3	22.2	FALSE	5.57
H29+H12	H29	8.35	5.83	H12	10.15	2.65	550.5	0.006	6	1	0.013	0.1058	1.44	1.46	0.20	0.1059	0.4264	24.8	40.1	39.5	TRUE	6.03
H30+H46	H30	11.57	7.74	H46	11.27	7.47	135.4	0.002	6	1	0.013	0.0529	0.70	0.70	0.20	0.0529	0.2506	21.1	40.7	40.8	FALSE	7.96
H31+H14	H31	13.28	4.5	H14	11.02	3.69	403.7	0.002	6	1	0.013	0.0415	0.21	0.61	0.50	0.0415	0.2513	16.5	100.0	37.8	TRUE	6.79
H32+H17	H32	16.06	10.26	H17	12.03	6.88	549.9	0.006	6	1	0.013	0.1397	0.71	1.67	0.50	0.1397	0.4399	31.8	100.0	44.2	TRUE	10.76
H33+H32	H33	20	11.29	H32	16.06	10.26	515	0.002	8	1	0.013	0.1236	1.05	1.15	0.25	0.1304	0.5404	22.9	37.1	36.1	FALSE	11.55
H34+H17	H34	12.74	7.69	H17	12.03	6.83	268.6	0.003	6	1	0.013	0.5382	2.74	2.74	0.50	0.5382	0.3175	169.5	100.0	100.0	TRUE	13.48
H35+H34	H35	14.34	9.56	H34	12.74	7.69	321.9	0.006	6	1	0.013	0.5382	2.74	2.74	0.50	0.5382	0.4277	125.9	100.0	100.0	TRUE	16.77
H36+H35	H36	15.37	9.87	H35	14.34	9.56	473.9	0.001	6	1	0.013	0.4272	2.17	2.17	0.50	0.4272	0.1435	297.7	100.0	100.0	TRUE	19.96
H37+H36	H37	17.89	12.09	H36	15.37	9.87	370.1	0.006	6	1	0.013	0.2307	1.17	1.17	0.50	0.2307	0.4346	53.1	100.0	100.0	TRUE	20.69
H38+E42	H38	17.69	11.79	E42	14.56	10.11	518.8	0.003	6	1	0.013	0.0698	0.97	0.97	0.20	0.0699	0.3193	21.9	39.4	39.4	FALSE	11.99
H38+H47	H38	17.69	11.79	H47	15.05	10.1	205.2	0.008	6	1	0.013	0.1112	0.57	1.97	0.50	0.1443	0.5092	21.8	100.0	39.9	TRUE	16.84
H39+H38	H39	18	12.1	H38	17.69	11.84	131.9	0.002	6	1	0.013	0.1020	0.52	0.99	0.50	0.1020	0.2491	40.9	100.0	51.8	TRUE	16.84
H40+H36	H40	22.17	15.97	H36	15.37	9.87	496.1	0.012	6	1	0.013	0.0920	0.47	1.74	0.50	0.0938	0.6221	14.8	100.0	30.9	TRUE	19.96
H41+H40	H41	24.38	16.27	H40	22.17	15.97	150.4	0.002	6	1	0.013	0.0920	0.47	0.94	0.50	0.0922	0.2506	36.7	100.0	50.0	TRUE	19.96
H42+H37	H42	21.01	14.76	H37	17.89	12.19	387.7	0.007	6	1	0.013	0.0998	0.51	1.50	0.50	0.1008	0.4568	21.8	100.0	37.5	TRUE	20.70
H43+H42	H43	22.12	16.57	H42	21.01	14.76	346.3	0.005	6	1	0.013	0.0920	0.47	1.30	0.50	0.0920	0.4056	22.7	100.0	38.8	TRUE	20.70
H44+H37	H44	20.24	14.24	H37	17.89	12.14	272.4	0.008	6	1	0.013	0.1046	0.53	1.40	0.50	0.1143	0.4927	21.2	100.0	43.3	TRUE	20.76
H45+H9	H45	12.4	3.93	H9	11.84	3.49	222.4	0.002	6	1	0.013	0.0100	0.10	0.76	0.25	0.0130	0.2496	4.0	49.2	7.9	FALSE	3.99
H46+H52	H46	11.27	7.47	H52	12.58	6.18	360.9	0.004	6	1	0.013	0.0529	0.87	1.22	0.17	0.0554	0.3355	15.8	34.8	28.1	FALSE	7.65
H47+H35	H47	15.05	10.1	H35	14.34	9.62	192.4	0.002	6	1	0.013	0.1111	0.57	1.07	0.50	0.1133	0.2803	39.7	100.0	53.0	TRUE	16.80
H48+H55	H48	9.12	6.64	H55	9.3	4.32	217.4	0.011	6	1	0.013	0.0100	0.72	0.72	0.03	0.0100	0.5797	1.7	6.9	6.9	FALSE	6.72
H49+H48	H49	8.35	6.77	H48	9.12	6.72	32.6	0.002	6	1	0.013	0.0100	0.66	0.59	0.02	0.0100	0.2199	4.5	4.4	1.5	FALSE	6.81
H50+H26	H50	10.13	5.03	H26	10.63	4.58	154.3	0.003	6	1	0.013	0.0676	0.92	1.02	0.20	0.0757	0.3030	22.3	40.0	40.4	FALSE	5.26
H51+H50	H51	10.5	6.35	H50	10.13	5.13	189.2	0.006	6	1	0.013	0.0372	1.02	1.02	0.12	0.0372	0.4505	8.3	24.0	24.0	FALSE	6.48
H52+H29	H52	12.58	6.18	H29	8.35	5.83	94.4	0.004	6	1	0.013	0.1058	1.25	1.25	0.22	0.1060	0.3416	31.0	44.7	44.7	FALSE	6.41
H53+H52	H53	12.4	8.3	H52	12.58	6.23	233.2	0.009	6	1	0.013	0.0529	1.20	1.20	0.14	0.0529	0.5286	10.0	27.6	27.6	FALSE	8.44
H54+H20	H54	9.2	4	H20	9.1	3.7	152.6	0.002	6	1	0.013	0.0200	0.72	0.96	0.10	0.0220	0.2487	8.0	20.0	14.0	FALSE	4.15
H55+H54	H55	9.3	4.32	H54	9.2	4.22	157.2	0.001	6	1	0.013	0.0200	0.81	1.08	0.09	0.0354	0.1415	14.1	18.3	16.3	FALSE	4.45
H56+H55	H56	9.2	4.75	H55	9.3	4.32	215.8	0.002	6	1	0.013	0.0100	0.78	0.72	0.05	0.0279	0.2505	4.0	9.3	3.2	FALSE	4.81
H57+H16	H57	14.21	6.69	H16	14.43	6.48	40.5	0.005	8	1	0.013	0.7184	2.06	2.06	0.67	0.7184	0.8706	82.5	100.0	100.0	TRUE	9.47
H58+H57	H58	15.13	7.62	H57	14.21	6.69	184.6	0.005	6	1	0.013	0.0406	0.21	0.75	0.50	0.0409	0.3982	10.2	100.0	32.3	TRUE	9.47
H59+H58	H59	16.1	8.59	H58	15.13	7.62	194.6	0.005	6	1	0.013	0.0000	0.00	0.00	0.50	0.0000	0.3962	0.0	100.0	0.0	TRUE	9.47
H59+H61	H59	16.1	8.59	H61	15.42	6.28	194.6	0.012	6	1	0.013	0.0044	0.02	0.17	0.50	0.0307	0.6114	0.7	100.0	87.2	TRUE	8.68
H60+H15	H60	14.57	5.9	H15	14.61	5.6	98.7	0.003	8	1	0.01	0.7634	2.19	2.19	0.67	0.7634	0.8661	88.2	100.0	100.0	TRUE	8.68
H61+H60	H61	15.42	6.28	H60	14.57	5.9	189.5	0.002	6	1	0.013	0.0450	0.23	0.37	0.50	0.0735	0.2513	17.9	100.0	100.0	TRUE	8.68
H62+H14	H62	12.95	4.64	H14	11.02	3.54	232.8	0.005	8	1	0.013	0.7744	2.22	2.22	0.67	0.7744	0.8305	93.2	100.0	100.0	TRUE	7.73
H63+H62	H63	13.79	5.49	H62	12.95	4.64	169.8	0.005	6	1	0.013	0.0110	0.06	0.83	0.50	0.0181	0.3970	2.8	100.0	9.6	TRUE	7.73
H64+H71	H64	9.05	0.99	H71	8.35	0.77	160.6	0.001	14	1	0.01	1.0582	0.99	0.99	1.17	1.0582	2.5853	40.9	100.0	100.0	TRUE	3.17
H65+H64	H65	9.89	1.83	H64	9.05	0.99	168.3	0.005	6	1	0.013	0.0290	0.15	0.15	0.50	0.0294	0.3963	7.3	100.0	100.0	TRUE	3.17

Appendix D: Table 4
Scenario 3: 2035 Enhanced PWWF Model Results

Label	Start Node	Rim (Start) (ft)	Invert (Start) (ft)	Stop Node	Rim (Stop) (ft)	Invert (Stop) (ft)	Length (ft)	Slope (Calculated) (ft/ft)	Diameter (in)	Number of Barrels	Manning's n	Flow (Middle) (cfs)	Velocity (ft/s)	Velocity (Maximum Calculated) (ft/s)	Depth (Middle) (ft)	Flow (Maximum) (cfs)	Capacity (Full Flow) (cfs)	Flow / Capacity (Design) (%)	Depth/Rise (%)	Depth (Maximum) / Rise (%)	Is Ever Surcharged?	Hydraulic Grade (Maximum) (ft)
H66+H65	H66	9.89	2.09	H65	9.89	1.83	51.4	0.005	6	1	0.013	0.0290	0.15	0.90	0.50	0.0294	0.3989	7.3	100.0	22.2	TRUE	3.17
H67+H66	H67	9.89	2.32	H66	9.89	2.09	46	0.005	6	1	0.013	0.0100	0.05	0.77	0.50	0.0100	0.3968	2.5	100.0	8.7	TRUE	3.17
H68+H66	H68	9.89	2.42	H66	9.89	2.09	67	0.005	6	1	0.013	0.0190	0.10	1.13	0.50	0.0345	0.3937	4.8	100.0	18.1	TRUE	3.17
H69+H68	H69	9.89	2.64	H68	9.89	2.42	45.6	0.005	6	1	0.013	0.0100	0.05	0.76	0.50	0.0110	0.3898	2.6	100.0	8.2	TRUE	3.17
H70+H68	H70	9.89	2.67	H68	9.89	2.42	51.2	0.005	6	1	0.013	0.0090	0.05	0.74	0.50	0.0179	0.3921	2.3	100.0	6.2	TRUE	3.17
H71+H3	H71	8.35	0.77	H3	8.2	0.7	35	0.002	14	1	0.01	1.0673	1.00	1.00	1.17	1.0672	3.1237	34.2	100.0	100.0	TRUE	3.17
H72+H71	H72	9.26	1.54	H71	8.35	0.77	182.4	0.004	6	1	0.013	0.0090	0.05	0.58	0.50	0.0095	0.3646	2.5	100.0	1.5	TRUE	3.17
H73+H74	H73	11.36	2.56	H74	11.16	2.34	101	0.002	20	1	0.01	3.7905	3.46	3.46	0.84	3.7905	8.4400	44.9	50.1	50.1	FALSE	3.33
H74+H8	H74	11.16	2.34	H8	10.95	2.05	112.9	0.003	20	1	0.01	3.7905	2.55	2.55	1.08	3.7905	9.1668	41.4	64.5	64.5	FALSE	3.28
H75+H6	H75	10.09	1.58	H6	8.89	0.99	259.7	0.002	20	1	0.01	3.7905	1.74	1.74	1.67	3.7905	8.6193	44.0	100.0	100.0	TRUE	3.23
I3+I35	I3	1.69	-3.99	I35	1.2	-4.42	133	0.003	30	1	0.01	5.9131	1.20	1.20	2.50	5.9131	30.3207	19.5	100.0	100.0	TRUE	0.55
I4+I3	I4	1.84	-3.31	I3	1.69	-3.56	242.6	0.001	18	1	0.013	5.9131	3.35	3.35	1.50	5.9131	3.3716	175.4	100.0	100.0	TRUE	0.57
I5+I31	I5	3.41	-3.19	I31	2.94	-3.23	135	0	18	1	0.013	5.9028	3.34	3.34	1.50	5.9028	1.8081	326.5	100.0	100.0	TRUE	1.66
I6+I5	I6	4.62	-3.08	I5	3.41	-3.19	410.7	0	18	1	0.013	5.9025	3.34	3.34	1.50	5.9025	1.7191	343.4	100.0	100.0	TRUE	2.86
I7+I37	I7	5.18	-2.32	I37	4.72	-2.94	210.5	0.003	30	1	0.01	4.9593	1.01	1.01	2.50	4.9593	28.9378	17.1	100.0	100.0	TRUE	3.03
I8+I7	I8	6.15	-1.45	I7	5.18	-2.32	238.1	0.004	30	1	0.01	4.9522	1.01	1.01	2.50	4.9522	32.2300	15.4	100.0	100.0	TRUE	3.05
I9+I8	I9	5.69	-1.31	I8	6.15	-1.45	154.7	0.001	30	1	0.01	4.9392	1.01	1.01	2.50	4.9392	16.0402	30.8	100.0	100.0	TRUE	3.07
I10+I9	I10	7.26	-0.74	I9	5.69	-1.31	221.1	0.003	24	1	0.01	4.9268	1.57	1.57	2.00	4.9268	14.9310	33.0	100.0	100.0	TRUE	3.09
I11+I10	I11	8.07	-0.03	I10	7.26	-0.74	379.8	0.002	24	1	0.01	4.9266	1.57	1.57	2.00	4.9266	12.7144	38.7	100.0	100.0	TRUE	3.12
I12+I6	I12	4.46	-2.19	I6	4.62	-2.83	338.5	0.002	12	1	0.013	0.9212	1.17	1.41	1.00	1.1089	1.5492	59.5	100.0	100.0	TRUE	3.04
I13+I12	I13	5.54	-1.56	I12	4.46	-2.14	319.8	0.002	12	1	0.013	0.9209	1.17	1.42	1.00	1.1138	1.5173	60.7	100.0	100.0	TRUE	3.16
I14+I13	I14	4.22	-0.83	I13	5.54	-1.51	443.5	0.002	12	1	0.013	0.6449	0.82	1.11	1.00	0.8729	1.3950	46.2	100.0	100.0	TRUE	3.22
I15+I14	I15	5.32	-0.53	I14	4.22	-0.78	386	0.001	12	1	0.013	0.6448	0.82	1.12	1.00	0.8781	0.9066	71.1	100.0	100.0	TRUE	3.25
I16+I6	I16	4.85	0.96	I6	4.62	-2.38	492.8	0.007	8	1	0.013	0.0097	0.03	0.03	0.67	0.0097	0.9948	1.0	100.0	100.0	TRUE	2.86
I17+I7	I17	5.54	1.51	I7	5.18	-1.27	525.8	0.005	6	1	0.013	0.0050	0.03	0.56	0.50	0.0054	0.4080	1.2	100.0	1.3	TRUE	3.03
I18+I8	I18	5.2	1.01	I8	6.15	-0.65	236.8	0.007	6	1	0.013	0.0088	0.05	0.12	0.50	0.0147	0.4697	1.9	100.0	60.2	TRUE	3.05
I19+I18	I19	6.48	1.59	I18	5.2	1.11	238.8	0.002	6	1	0.013	0.0050	0.03	0.61	0.50	0.0052	0.2516	2.0	100.0	3.5	TRUE	3.05
I20+I9	I20	5.86	1.26	I9	5.69	-0.81	278.4	0.007	6	1	0.013	0.0050	0.03	0.57	0.50	0.0075	0.4838	1.0	100.0	1.4	TRUE	3.07
I21+I24	I21	7.17	1.52	I24	7	-0.08	364.1	0.004	6	1	0.013	0.1970	1.00	1.01	0.50	0.1985	0.3719	53.0	100.0	100.0	TRUE	4.37
I22+I23	I22	8.69	3.44	I23	8.52	3.17	44.5	0.006	6	1	0.013	0.0590	0.30	0.30	0.50	0.0593	0.4372	13.5	100.0	100.0	TRUE	4.81
I23+I27	I23	8.52	3.12	I27	8.3	2.86	80.1	0.003	6	1	0.013	0.1280	0.65	0.65	0.50	0.1286	0.3197	40.0	100.0	100.0	TRUE	4.81
I24+I13	I24	7	-0.08	I13	5.54	-0.56	236.9	0.002	6	1	0.013	0.2759	1.40	1.42	0.50	0.2791	0.2526	109.3	100.0	100.0	TRUE	3.85
I25+I24	I25	7	0.22	I24	7	-0.08	153.5	0.002	6	1	0.013	0.0789	0.40	0.45	0.50	0.0816	0.2480	31.8	100.0	87.6	TRUE	3.86
I26+I23	I26	9.29	4.04	I23	8.52	3.27	153.5	0.005	6	1	0.013	0.0690	0.35	1.19	0.50	0.0692	0.3974	17.4	100.0	33.7	TRUE	4.81
I27+I28	I27	8.3	2.86	I28	8.04	2.57	89.9	0.003	6	1	0.013	0.1280	0.65	1.30	0.50	0.1290	0.3188	40.2	100.0	50.3	TRUE	4.81
I28+I21	I28	8.04	2.57	I21	7.17	1.57	311.5	0.003	6	1	0.013	0.1970	1.00	1.01	0.50	0.1982	0.3179	62.0	100.0	100.0	TRUE	4.81
I29+I28	I29	8.81	3.34	I28	8.04	2.57	153.5	0.005	6	1	0.013	0.0690	0.35	1.12	0.50	0.0704	0.3974	17.4	100.0	35.7	TRUE	4.81
I31+I4	I31	2.94	-3.23	I4	1.84	-3.31	321.1	0	18	1	0.013	5.9130	3.35	3.35	1.50	5.9130	1.6581	356.6	100.0	100.0	TRUE	1.38
I32+I31	I32	3.97	-2.18	I31	2.94	-3.23	207.6	0.005	6	1	0.013	0.0100	0.05	0.60	0.50	0.0114	0.3990	2.5	100.0	1.6	TRUE	1.38
I33+I32	I33	4.43	-1.73	I32	3.97	-2.18	90.2	0.005	6	1	0.013	0.0050	0.03	0.60	0.50	0.0050	0.3963	1.3	100.0	3.1	TRUE	1.38
I34+I32	I34	4.56	-1.6	I32	3.97	-2.18	117.2	0.005	6	1	0.013	0.0050	0.03	0.62	0.50	0.0051	0.3947	1.3	100.0	3.6	TRUE	1.38
I35+I36	I35	1.2	-4.42	I36	1.7	-4.47	11.4	0.004	24	1	0.01	2.8014	0.89	0.89	2.00	2.8014	19.4782	14.4	100.0	100.0	TRUE	0.49
I35+T19	I35	1.2	-4.42	T19	2.23	-4.72	55.4	0.005	24	1	0.01	3.1121	0.99	0.99	2.00	3.1121	21.6427	14.4	100.0	100.0	TRUE	0.53
I36+T36	I36	1.7	-4.47	T36	2.125	-4.74	47.3	0.006	24	1	0.01	2.8014	0.89	0.89	2.00	2.8014	22.2278	12.6	100.0	100.0	TRUE	0.49
I37+I6	I37	4.72	-2.94	I6	4.62	-3.08	48.5	0.003	15	1	0.013	4.9596	4.04	4.04	1.25	4.9596	3.4711	142.9	100.0	100.0	TRUE	3.01
J5+J16	J5	4.44	-1.06	J16	3.8	-2.17	275.2	0.004	8	1	0.01	0.0772	0.22	0.22	0.67	0.0772	0.9977	7.7	100.0	100.0	TRUE	0.60
J6+J5	J6	5.85	0.6	J5	4.44	-0.96	558.5	0.003	6	1	0.013	0.0772	0.39	0.97	0.50	0.0772	0.2965	26.0	100.0	42.6	TRUE	0.82
J7+J6	J7	5.96	1.9	J6	5.85	1.02	441.1	0.002	6	1	0.013	0.0227	0.70	0.70	0.11	0.0230	0.2506	9.1	22.3	22.5	FALSE	2.02
J8+J6	J8	7.5	2.81	J6	5.85	0.7	442.1	0.005	6	1	0.013	0.0545	0.99	0.99	0.16	0.0545	0.3876	14.1	32.4	32.4	FALSE	2.97
J9+J8	J9	8.19	3.23	J8	7.5	2.81	400.5	0.001	6	1	0.013	0.0545	0.56	0.71	0.25	0.0562	0.1817	30.0	49.3	42.4	FALSE	3.48
J10+J9	J10	9.91	4.26	J9	8.19	3.34	299.8	0.003	6	1	0.013	0.0545	0.83	0.94	0.18	0.0594	0.3108	17.5	36.9	35.7	FALSE	4.46
J11+J15	J11	1.31	-2.3	J15	2.31	-3.24	199.7	0.005	8	1	0.013	0.0292	0.08	0.08	0.67	0.0292	0.8290	3.5	100.0	100.0	TRUE	0.54
J12+J11	J12	1.94	-1.61	J11	1.31	-2.2	299.4	0.002	8	1	0.013	0.0290	0.08	0.63	0.67	0.0291	0.5364	5.4	100.0	19.1	TRUE	0.54
J13+J12	J13	2.73	-0.51	J12	1.94	-1.51	298.6	0.003	8	1	0.013	0.0291	0.08	0.08	0.67	0.0291	0.6993	4.2	100.0	100.0	TRUE	0.54
J14+J13	J14	3.27	-0.03	J13	2.73	-0.41	190	0.002	8	1	0.013	0.0290	0.08	0.08	0.67	0.0290	0.5404	5.4	100.0	100.0	TRUE	0.54
J15+T20	J15	2.31	-3.49	T20	2.72	-4.06	82.7	0.007	7.6	1	0.01	0.0296	0.10	0.10	0.63	0.0296	1.1178	2.6	100.0	100.0	TRUE	0.54
J16+J17	J16	3.8	-2.17	J17	3.3	-3.02	210.2	0.004	7.6	1	0.01	0.0772	0.25	0.25	0.63	0.0772	0.8560	9.0	100.0	100.0	TRUE	0.60
J17+J18	J17	3.3	-3.02	J18	2.4	-3.24	45	0.005	8	1	0.01	0.0772	0.22	0.22	0.67	0.0772	1.0983	7.0	100.0	100.0	TRUE	0.60
J18+T21	J18	2.4	-3.24	T21	3.07	-3.99	63	0.012	8	1	0.01	0.0772	0.22	0.22	0.67	0.0772	1.7140	4.5	100.0	100.0	TRUE	0.60
K1+T16	K1	2.25	-6.28	T16	2.25	-6.5	30.8	0.007	18	1	0.01	2.5500	1.44	1.66	1.50	2.9331	11.5437	22.1	100.0	100.0	TRUE	0.21
K2+K38	K2	3.35	-5.2	K38	2.67	-5.61	193.7	0.002	18	1	0.01	2.5498	1.44	1.66	1.50	2.9334	6.2817	40.6	100.0	100.0	TRUE	0.26

Appendix D: Table 4
Scenario 3: 2035 Enhanced PWWF Model Results

Label	Start Node	Rim (Start) (ft)	Invert (Start) (ft)	Stop Node	Rim (Stop) (ft)	Invert (Stop) (ft)	Length (ft)	Slope (Calculated) (ft/ft)	Diameter (in)	Number of Barrels	Manning's n	Flow (Middle) (cfs)	Velocity (ft/s)	Velocity (Maximum Calculated) (ft/s)	Depth (Middle) (ft)	Flow (Maximum) (cfs)	Capacity (Full Flow) (cfs)	Flow / Capacity (Design) (%)	Depth/Rise (%)	Depth (Maximum) / Rise (%)	Is Ever Surcharged?	Hydraulic Grade (Maximum) (ft)
K3+K2	K3	4.05	-4.8	K2	3.35	-5.2	189.7	0.002	18	1	0.01	2.5498	1.44	1.66	1.50	2.9338	6.2704	40.7	100.0	100.0	TRUE	0.27
K4+K43	K4	3.55	-4.28	K43	3.81	-4.75	204.6	0.002	18	1	0.01	2.5398	1.44	1.65	1.50	2.9242	6.5448	38.8	100.0	100.0	TRUE	0.29
K5+K4	K5	3.31	-3.71	K4	3.55	-4.28	248.1	0.002	18	1	0.01	1.4440	0.82	1.04	1.50	1.8303	6.5445	22.1	100.0	100.0	TRUE	0.30
K6+K5	K6	4.44	-2.86	K5	3.31	-3.71	251.1	0.003	18	1	0.01	1.4053	0.80	1.02	1.50	1.7965	7.9454	17.7	100.0	100.0	TRUE	0.31
K7+K6	K7	3.35	-1.85	K6	4.44	-2.66	362.1	0.002	8	1	0.013	0.0200	0.06	0.06	0.67	0.0201	0.5715	3.5	100.0	100.0	TRUE	0.31
K8+K7	K8	2.87	-1.18	K7	3.35	-1.85	355.5	0.002	8	1	0.013	0.0200	0.06	0.66	0.67	0.0202	0.5246	3.8	100.0	14.2	TRUE	0.31
K9+K8	K9	3.87	-0.58	K8	2.87	-1.18	355.9	0.002	8	1	0.013	0.0200	0.09	0.71	0.40	0.0222	0.4961	4.0	59.6	14.4	TRUE	0.31
K10+K9	K10	4.11	0.11	K9	3.87	-0.48	155.5	0.004	6	1	0.013	0.0100	0.73	0.73	0.04	0.0100	0.3456	2.9	7.3	7.4	TRUE	0.31
K11+K5	K11	3.67	-2.23	K5	3.31	-2.99	369.8	0.002	6	1	0.013	0.0205	0.10	0.72	0.50	0.0217	0.2544	8.1	100.0	21.1	TRUE	0.30
K12+K11	K12	3.54	-0.86	K11	3.67	-2.08	353.5	0.003	6	1	0.013	0.0205	0.10	0.92	0.50	0.0255	0.3296	6.2	100.0	11.7	TRUE	0.30
K13+K12	K13	2.97	0.27	K12	3.54	-0.86	362	0.003	6	1	0.013	0.0205	0.87	0.90	0.09	0.0214	0.3135	6.5	17.7	17.8	TRUE	0.37
K14+K13	K14	3.19	0.45	K13	2.97	0.27	90.4	0.002	6	1	0.013	0.0205	0.75	0.77	0.10	0.0216	0.2503	8.2	19.7	19.9	FALSE	0.58
K15+K9	K15	3.43	-0.33	K9	3.87	-0.48	73.9	0.002	6	1	0.013	0.0100	0.79	0.79	0.05	0.0100	0.2528	4.0	9.7	9.7	TRUE	0.31
K16+K4	K16	3.55	-2.65	K4	3.55	-3.45	273.7	0.003	6	1	0.013	0.0205	0.10	1.06	0.50	0.0456	0.3033	6.8	100.0	13.3	TRUE	0.29
K17+K16	K17	2.92	-1.88	K16	3.55	-2.6	267.2	0.003	6	1	0.013	0.0205	0.10	0.65	0.50	0.0205	0.2912	7.0	100.0	1.9	TRUE	0.29
K18+K17	K18	3.64	-1.31	K17	2.92	-1.88	268.7	0.002	6	1	0.013	0.0205	0.10	1.03	0.50	0.0341	0.2584	7.9	100.0	14.4	TRUE	0.29
K19+K18	K19	3.25	-0.65	K18	3.64	-1.31	272	0.002	6	1	0.013	0.0205	0.11	0.73	0.46	0.0205	0.2764	7.4	92.0	20.0	TRUE	0.29
K20+K19	K20	2.67	-0.53	K19	3.25	-0.6	134.6	0.001	6	1	0.013	0.0205	0.63	0.94	0.11	0.0205	0.1279	16.0	22.3	13.5	TRUE	0.29
K21+K3	K21	3.15	-2.1	K3	4.05	-4.25	246.4	0.009	6	1	0.013	0.0100	0.05	0.65	0.50	0.0207	0.5241	1.9	100.0	1.9	TRUE	0.27
K22+K21	K22	3.29	-1.16	K21	3.15	-2.05	256.2	0.003	6	1	0.013	0.0050	0.03	0.69	0.50	0.0050	0.3307	1.5	100.0	6.7	TRUE	0.27
K23+K22	K23	3.52	-0.91	K22	3.29	-1.11	99.5	0.002	6	1	0.013	0.0050	0.03	0.66	0.50	0.0050	0.2515	2.0	100.0	5.4	TRUE	0.27
K24+K21	K24	3.55	-1.7	K21	3.15	-2	148.6	0.002	6	1	0.013	0.0050	0.03	0.65	0.50	0.0050	0.2521	2.0	100.0	5.1	TRUE	0.27
K25+K44	K25	3.6	-1.7	K44	3.23	-2.92	346.2	0.004	6	1	0.01	0.0160	0.08	0.93	0.50	0.0186	0.4330	3.7	100.0	13.5	TRUE	0.30
K26+K6	K26	4.36	-1.29	K6	4.44	-2.76	293.6	0.005	6	1	0.013	0.0000	0.00	0.44	0.50	0.0172	0.3970	0.0	100.0	25.4	TRUE	0.31
K27+K26	K27	3.95	-0.6	K26	4.36	-1.29	199.5	0.003	6	1	0.013	0.0000	0.00	0.53	0.50	0.0246	0.3300	0.0	100.0	28.6	TRUE	0.31
K28+K4	K28	3.27	-4	K4	3.55	-4.1	242	0	10	1	0.013	1.0751	1.97	1.97	0.83	1.0756	0.4454	241.4	100.0	100.0	TRUE	0.30
K30+K31	K30	3.78	-3.21	K31	3.08	-3.43	108.2	0.002	8	1	0.013	0.1208	0.35	0.35	0.67	0.1210	0.5449	22.2	100.0	100.0	TRUE	0.30
K31+L1	K31	3.08	-3.43	L1	2.82	-3.73	147.8	0.002	8	1	0.013	0.1208	0.35	0.35	0.67	0.1210	0.5443	22.2	100.0	100.0	TRUE	0.30
K32+K30	K32	3.16	-2.76	K30	3.78	-3.21	226.9	0.002	8	1	0.013	0.1190	0.34	0.34	0.67	0.1191	0.5381	22.1	100.0	100.0	TRUE	0.31
K33+K32	K33	2.74	-2.37	K32	3.16	-2.76	130.8	0.003	6	1	0.013	0.0595	0.30	0.87	0.50	0.0595	0.3064	19.4	100.0	38.1	TRUE	0.31
K34+K33	K34	3.08	-1.54	K33	2.74	-2.37	278.4	0.003	6	1	0.013	0.0595	0.30	0.86	0.50	0.0596	0.3064	19.4	100.0	38.3	TRUE	0.31
K35+K34	K35	2.78	-0.7	K34	3.08	-1.54	279.8	0.003	6	1	0.013	0.0595	0.30	1.34	0.50	0.0859	0.3074	19.4	100.0	36.2	TRUE	0.31
K36+K35	K36	2.75	0.15	K35	2.78	-0.7	281.5	0.003	6	1	0.013	0.0595	0.86	0.86	0.19	0.0598	0.3083	19.3	38.2	38.2	TRUE	0.36
K37+K32	K37	2.51	-1.01	K32	3.16	-2.76	350.2	0.005	6	1	0.013	0.0595	0.30	1.03	0.50	0.0595	0.3966	15.0	100.0	33.6	TRUE	0.31
K38+K39	K38	2.67	-5.61	K39	2.49	-5.63	7.8	0.003	18	1	0.01	2.5499	1.44	1.66	1.50	2.9333	6.9194	36.9	100.0	100.0	TRUE	0.25
K39+K40	K39	2.49	-5.63	K40	2.25	-6.24	249.4	0.002	18	1	0.01	2.5499	1.44	1.66	1.50	2.9332	6.7531	37.8	100.0	100.0	TRUE	0.23
K40+K1	K40	2.25	-6.24	K1	2.25	-6.28	5.6	0.007	18	1	0.01	2.5499	1.44	1.66	1.50	2.9330	11.4992	22.2	100.0	100.0	TRUE	0.22
K41+K42	K41	5.23	-2.2	K42	7.35	-2.73	191.9	0.003	18	1	0.01	1.3857	0.78	1.00	1.50	1.7739	7.1761	19.3	100.0	100.0	TRUE	0.32
K42+K6	K42	7.35	-2.73	K6	4.44	-2.86	36.7	0.004	12	2	0.01	1.3840	0.88	1.13	1.00	1.7761	5.5095	25.1	100.0	100.0	TRUE	0.31
K43+K3	K43	3.81	-4.75	K3	4.05	-4.8	23.5	0.002	18	1	0.01	2.5398	1.44	1.65	1.50	2.9240	6.2985	40.3	100.0	100.0	TRUE	0.28
K44+K5	K44	3.23	-2.92	K5	3.31	-3.09	30	0.006	6	1	0.013	0.0160	0.08	1.00	0.50	0.0376	0.4224	3.8	100.0	24.7	TRUE	0.30
L1+L21	L1	2.82	-3.73	L21	2.74	-3.95	223.2	0.001	10	1	0.013	1.0751	1.97	1.97	0.83	1.0757	0.6879	156.3	100.0	100.0	TRUE	0.30
L2+L1	L2	2.72	-3.28	L1	2.82	-3.73	178.7	0.003	10	1	0.013	0.9543	1.75	1.75	0.83	0.9547	1.0993	86.8	100.0	100.0	TRUE	0.31
L3+L2	L3	2.93	-3.17	L2	2.72	-3.28	83.4	0.001	10	1	0.013	0.9543	1.75	1.75	0.83	0.9547	0.7957	119.9	100.0	100.0	TRUE	0.31
L4+L3	L4	3.39	-2.3	L3	2.93	-3.12	247.6	0.003	10	1	0.013	0.5072	0.93	0.93	0.83	0.5074	1.2607	40.2	100.0	100.0	TRUE	0.31
L5+L47	L5	4.17	-1.38	L47	3.21	-2.04	276.3	0.002	6	1	0.013	0.0680	0.35	0.86	0.50	0.0680	0.2742	24.8	100.0	42.5	TRUE	0.32
L6+L5	L6	4.69	-0.51	L5	4.17	-1.38	214.9	0.004	6	1	0.013	0.0340	0.17	0.95	0.50	0.0340	0.3570	9.5	100.0	23.7	TRUE	0.32
L7+L6	L7	5.31	-0.39	L6	4.69	-0.51	260.6	0	6	1	0.013	0.0340	0.47	0.47	0.20	0.0340	0.1204	28.2	39.5	39.5	TRUE	0.32
L8+L7	L8	5.39	-0.24	L7	5.31	-0.39	72.8	0.002	6	1	0.013	0.0340	0.64	0.64	0.16	0.0340	0.2547	13.4	31.5	31.5	TRUE	0.32
L9+L4	L9	3.42	-1.78	L4	3.39	-2.05	162.3	0.002	6	1	0.013	0.2352	1.20	1.20	0.50	0.2353	0.2288	102.8	100.0	100.0	TRUE	0.31
L10+K27	L10	3.59	0.24	K27	3.95	-0.55	197.2	0.004	6	1	0.013	0.0000	0.00	0.49	0.00	0.0250	0.3551	0.0	0.0	30.7	TRUE	0.31
L10+L9	L10	3.59	-0.76	L9	3.42	-1.78	274.7	0.004	6	1	0.013	0.0694	0.35	1.03	0.50	0.0696	0.3419	20.3	100.0	37.6	TRUE	0.32
L11+L10	L11	4.97	0.57	L10	3.59	-0.56	359.8	0.003	6	1	0.013	0.0696	0.96	0.96	0.20	0.0696	0.3144	22.1	39.7	39.7	TRUE	0.77
L12+L11	L12	4.97	0.62	L11	4.97	0.57	81.8	0.001	6	1	0.013	0.0536	0.88	0.88	0.17	0.0536	0.1387	38.7	34.9	34.9	FALSE	0.88
L13+L9	L13	4.47	-0.58	L9	3.42	-1.73	310.9	0.004	6	1	0.013	0.1658	0.84	0.84	0.50	0.1658	0.3412	48.6	100.0	100.0	TRUE	0.32
L14+L13	L14	5.25	0.6	L13	4.47	-0.58	301.6	0.004	6	1	0.013	0.1658	1.52	1.52	0.27	0.1658	0.3509	47.2	54.2	54.2	TRUE	0.87
L15+L14	L15	6.17	1.92	L14	5.25	0.6	310.2	0.004	6	1	0.013	0.1658	1.57	1.57	0.26	0.1658	0.3660	45.3	52.9	52.9	FALSE	2.19
L16+L15	L16	7.37	2.67	L15	6.17	1.92	311.1	0.002	6	1	0.013	0.1658	1.26	1.26	0.32	0.1658	0.2755	60.2	63.3	63.3	FALSE	2.99
L17+L16	L17	7.38	3.53	L16	7.37	2.67	236.3	0.004	6	1	0.013	0.1600	1.48	1.48	0.27	0.1600	0.3385	47.3	54.1	54.1	FALSE	3.80
L18+L17	L18	8.22	4.37	L17	7.38	3.53	330.9	0.003	6	1	0.013	0.1600	1.27	1.27	0.31	0.1600	0.2827	56.6	61.0	61.0	FALSE	4.68
L19+L18	L19	9.56	5.51	L18	8.22	4.37	332.7	0.003	6	1	0.013	0.1600	1.43	1.45	0.28	0.1610	0.3284	48.7	55.5	55.3	FALSE	5.80

Appendix D: Table 4
Scenario 3: 2035 Enhanced PWWF Model Results

Label	Start Node	Rim (Start) (ft)	Invert (Start) (ft)	Stop Node	Rim (Stop) (ft)	Invert (Stop) (ft)	Length (ft)	Slope (Calculated) (ft/ft)	Diameter (in)	Number of Barrels	Manning's n	Flow (Middle) (cfs)	Velocity (ft/s)	Velocity (Maximum Calculated) (ft/s)	Depth (Middle) (ft)	Flow (Maximum) (cfs)	Capacity (Full Flow) (cfs)	Flow / Capacity (Design) (%)	Depth/Rise (%)	Depth (Maximum) / Rise (%)	Is Ever Surcharged?	Hydraulic Grade (Maximum) (ft)
L20+L16	L20	8.52	2.97	L16	7.37	2.77	101.4	0.002	6	1	0.013	0.0058	0.15	0.69	0.12	0.0058	0.2492	2.3	24.5	6.3	FALSE	3.01
L21+K28	L21	2.74	-3.95	K28	3.27	-4	68.3	0.001	10	1	0.013	1.0751	1.97	1.97	0.83	1.0757	0.5929	181.3	100.0	100.0	TRUE	0.30
L22+L3	L22	3.32	-0.13	L3	2.93	-2.72	365.6	0.007	6	1	0.013	0.0255	0.13	0.54	0.50	0.0256	0.4722	5.4	100.0	29.1	TRUE	0.31
L23+L3	L23	3.05	-2.75	L3	2.93	-3.17	351.1	0.001	8	1	0.01	0.4198	1.20	1.20	0.67	0.4199	0.5433	77.3	100.0	100.0	TRUE	0.31
L24+L23	L24	2.38	-2.17	L23	3.05	-2.75	386.3	0.002	8	1	0.01	0.4198	1.20	1.20	0.67	0.4199	0.6087	69.0	100.0	100.0	TRUE	0.32
L25+L24	L25	3.54	-1.91	L24	2.38	-2.17	342	0.001	8	1	0.01	0.4198	1.20	1.20	0.67	0.4198	0.4331	96.9	100.0	100.0	TRUE	0.32
L26+L25	L26	3.77	-1.38	L25	3.54	-1.91	215.6	0.002	8	1	0.013	0.2820	0.81	0.81	0.67	0.2820	0.5991	47.1	100.0	100.0	TRUE	0.32
L27+L26	L27	3.7	-0.86	L26	3.77	-1.38	260.1	0.002	8	1	0.013	0.1580	0.46	0.46	0.64	0.1580	0.5403	29.2	96.4	96.4	TRUE	0.32
L28+L27	L28	3.81	0.26	L27	3.7	-0.86	362.9	0.003	6	1	0.013	0.0790	1.01	1.01	0.21	0.0790	0.3117	25.3	41.8	41.8	TRUE	0.47
L29+L28	L29	4.59	1.14	L28	3.81	0.26	366	0.002	6	1	0.013	0.0790	0.92	0.92	0.22	0.0790	0.2751	28.7	44.8	44.8	FALSE	1.39
L30+L27	L30	3.71	-0.19	L27	3.7	-0.86	236	0.003	6	1	0.013	0.0790	0.98	0.99	0.21	0.0798	0.2989	26.4	42.9	43.0	TRUE	0.32
L31+L30	L31	4.39	0.64	L30	3.71	-0.19	178.8	0.005	6	1	0.013	0.0790	1.20	1.41	0.18	0.0902	0.3823	20.7	36.9	36.1	TRUE	0.84
L32+L31	L32	5.42	1.62	L31	4.39	0.64	293.5	0.003	6	1	0.013	0.0790	1.04	1.04	0.21	0.0790	0.3242	24.4	41.2	41.2	FALSE	1.83
L33+L32	L33	5.85	1.8	L32	5.42	1.62	90.7	0.002	6	1	0.013	0.0790	0.90	0.90	0.23	0.0790	0.2500	31.6	45.8	45.8	FALSE	2.06
L34+L26	L34	4.66	-0.24	L26	3.77	-1.28	287.3	0.004	6	1	0.013	0.1240	1.32	1.32	0.24	0.1240	0.3376	36.7	48.4	48.4	TRUE	0.32
L35+L34	L35	5.3	0.7	L34	4.66	-0.24	253.5	0.004	6	1	0.013	0.1100	1.26	1.26	0.23	0.1100	0.3417	32.2	45.6	45.6	TRUE	0.93
L36+L35	L36	5.75	1.65	L35	5.3	0.7	277.7	0.003	6	1	0.013	0.1100	1.22	1.27	0.23	0.1126	0.3282	33.5	46.6	46.1	FALSE	1.89
L37+L36	L37	6.21	2.76	L36	5.75	1.65	322.8	0.003	6	1	0.013	0.0000	0.00	0.00	0.00	0.0000	0.3290	0.0	0.0	0.0	FALSE	2.76
L37+L38	L37	6.21	2.76	L38	5.64	2.24	210.4	0.002	6	1	0.013	0.0000	0.00	0.00	0.00	0.0000	0.2789	0.0	0.0	0.0	FALSE	2.76
L38+L39	L38	5.64	2.24	L39	4.89	1.54	215.2	0.003	6	1	0.013	0.1200	1.26	1.42	0.24	0.1326	0.3200	37.5	48.8	48.2	FALSE	2.49
L39+L40	L39	4.89	1.54	L40	4.16	0.81	345.7	0.002	6	1	0.013	0.1200	1.06	1.06	0.28	0.1200	0.2578	46.6	55.9	55.9	FALSE	1.82
L40+L42	L40	4.16	0.61	L42	3.25	0.2	345.8	0.001	8	1	0.013	0.1250	0.88	0.88	0.29	0.1250	0.4161	30.0	42.8	42.8	FALSE	0.90
L41+L40	L41	6.09	0.95	L40	4.16	0.81	70.6	0.002	6	1	0.013	0.0050	0.64	0.64	0.02	0.0050	0.2499	2.0	4.7	4.7	FALSE	0.98
L42+L43	L42	3.25	0.2	L43	2.56	-0.34	330.1	0.002	8	1	0.013	0.1250	0.98	0.98	0.26	0.1250	0.4887	25.6	39.3	39.3	FALSE	0.46
L43+L44	L43	2.56	-0.34	L44	3.5	-0.85	334.4	0.002	8	1	0.013	0.1250	0.96	0.96	0.27	0.1250	0.4719	26.5	40.1	40.1	TRUE	0.32
L44+L45	L44	3.5	-0.85	L45	2.57	-1.33	238.4	0.002	8	1	0.013	0.1250	0.36	1.06	0.66	0.1250	0.5422	23.1	99.6	37.2	TRUE	0.32
L45+L25	L45	2.57	-1.38	L25	3.54	-1.76	201.8	0.002	8	1	0.013	0.1378	0.39	0.39	0.67	0.1378	0.5244	26.3	100.0	100.0	TRUE	0.32
L46+L45	L46	2.92	-0.93	L45	2.57	-1.23	136	0.002	6	1	0.013	0.0128	0.07	0.95	0.50	0.0221	0.2635	4.9	100.0	13.5	TRUE	0.32
L47+L4	L47	3.21	-2.04	L4	3.39	-2.3	88	0.003	8	1	0.013	0.2720	0.78	0.78	0.67	0.2720	0.6568	41.4	100.0	100.0	TRUE	0.31
L48+L47	L48	3.22	-1.35	L47	3.21	-2.04	228.9	0.003	8	1	0.013	0.2040	0.58	1.50	0.67	0.2040	0.6635	30.7	100.0	41.4	TRUE	0.32
L49+L48	L49	4.08	-1.2	L48	3.22	-1.35	233.3	0.001	8	1	0.013	0.2040	0.58	0.99	0.67	0.2040	0.3064	66.6	100.0	56.9	TRUE	0.32
L50+L49	L50	4.26	-0.68	L49	4.08	-1.2	223.6	0.002	8	1	0.013	0.2040	0.71	1.35	0.51	0.2040	0.5827	35.0	76.6	44.6	TRUE	0.32
L51+L50	L51	3.85	-0.28	L50	4.26	-0.68	79.7	0.005	6	1	0.013	0.0077	0.27	0.69	0.10	0.0085	0.3975	1.9	20.3	5.7	TRUE	0.32
L52+L50	L52	4.54	-0.36	L50	4.26	-0.68	223.9	0.001	6	1	0.013	0.1963	1.17	1.17	0.40	0.1963	0.2121	92.5	79.9	79.9	TRUE	0.32
L53+L52	L53	5.4	0.6	L52	4.54	-0.36	218.4	0.004	6	1	0.013	0.1963	1.69	1.69	0.29	0.1963	0.3720	52.8	57.2	57.2	TRUE	0.89
L54+L53	L54	6.47	2.07	L53	5.4	0.6	369.4	0.004	6	1	0.013	0.0935	1.21	1.21	0.21	0.0935	0.3539	26.4	41.6	41.6	FALSE	2.28
L55+L54	L55	6.53	2.37	L54	6.47	2.07	148.7	0.002	6	1	0.013	0.0425	0.62	0.62	0.19	0.0425	0.2520	16.9	38.0	38.0	FALSE	2.57
L56+L54	L56	7.59	3.34	L54	6.47	2.17	326.7	0.004	6	1	0.013	0.0510	0.84	0.84	0.17	0.0510	0.3357	15.2	34.8	34.8	FALSE	3.52
L57+L53	L57	5.49	1.29	L53	5.4	0.65	202.8	0.003	6	1	0.013	0.1028	1.16	1.16	0.23	0.1028	0.3152	32.6	46.0	46.0	FALSE	1.52
L58+L57	L58	6.75	2.35	L57	5.49	1.29	295.3	0.004	6	1	0.013	0.1028	1.21	1.34	0.22	0.1060	0.3361	30.6	44.8	42.2	FALSE	2.57
L59+L58	L59	7.91	3.31	L58	6.75	2.35	250	0.004	6	1	0.013	0.1028	1.24	1.24	0.22	0.1028	0.3477	29.6	43.9	43.9	FALSE	3.53
L60+L59	L60	8.08	3.53	L59	7.91	3.31	108.8	0.002	6	1	0.013	0.1028	1.02	1.02	0.26	0.1028	0.2523	40.7	51.1	51.1	FALSE	3.79
L61+L5	L61	4.57	-0.73	L5	4.17	-1.13	152.5	0.003	6	1	0.013	0.0340	0.17	0.71	0.50	0.0340	0.2874	11.8	99.8	29.3	TRUE	0.32
L62+L34	L62	4.95	0.45	L34	4.66	-0.19	146.7	0.004	6	1	0.013	0.0140	0.66	0.75	0.08	0.0157	0.3705	3.8	16.4	16.2	TRUE	0.52
M2+M44	M2	5.62	0.3	M44	5.62	0.22	42.2	0.002	8	1	0.013	0.6448	1.85	2.84	0.67	0.9005	0.5262	122.5	100.0	85.1	TRUE	3.26
M2+N1	M2	5.62	2.62	N1	5.32	2.32	82	0.004	12	1	0.013	0.2028	0.63	1.65	0.43	0.5982	2.1554	9.4	43.1	46.9	FALSE	3.26
M3+M2	M3	6.98	1.33	M2	5.62	0.3	379.8	0.003	8	1	0.013	0.8823	2.53	2.62	0.67	0.9165	0.6293	140.2	100.0	100.0	TRUE	5.31
M4+M31	M4	9.9	3	M31	7	2.52	142.5	0.003	8	1	0.013	0.6022	1.72	1.98	0.67	0.6931	0.7012	85.9	100.0	100.0	TRUE	7.59
M5+M4	M5	11.95	3.9	M4	9.9	3.05	372.5	0.002	8	1	0.013	0.6022	1.72	2.00	0.67	0.6993	0.5772	104.3	100.0	100.0	TRUE	8.52
M6+M46	M6	12.3	6.22	M46	12.8	6.1	50.4	0.002	16	1	0.01	0.1903	1.54	1.54	0.19	0.1906	4.8649	3.9	14.4	14.4	FALSE	6.42
M7+M36	M7	12.4	6.45	M36	7.3	3.24	79.9	0.04	10	1	0.01	0.3680	3.08	3.08	0.15	0.3681	5.7102	6.4	17.8	17.8	FALSE	6.60
M7+M45	M7	12.4	6.45	M45	12.36	6.35	46.6	0.002	12	2	0.01	0.1903	1.25	1.25	0.15	0.1905	4.2891	4.4	15.3	15.3	FALSE	6.61
M8+M7	M8	14.41	7.71	M7	12.4	6.45	192.5	0.007	16	1	0.01	0.5583	3.19	3.19	0.24	0.5584	8.0706	6.9	18.3	18.3	FALSE	7.96
M12+M40	M12	14.95	7.4	M40	13.27	5.72	338.1	0.005	8	1	0.013	0.8295	2.38	2.38	0.67	0.8295	0.8518	97.4	100.0	100.0	TRUE	8.62
M13+M12	M13	16.33	8.78	M12	14.95	7.4	276	0.005	8	1	0.013	0.8295	2.38	2.38	0.67	0.8295	0.8544	97.1	100.0	100.0	TRUE	9.94
M14+M5	M14	10.14	5.82	M5	11.95	3.95	327.8	0.006	10	1	0.013	0.0200	0.04	0.88	0.83	0.0263	1.6547	1.2	100.0	10.3	TRUE	8.52
M16+M8	M16	14.85	8.05	M8	14.41	7.81	19.7	0.012	6	1	0.013	0.0100	0.34	0.80	0.10	0.0100	0.6193	1.6	20.5	9.8	FALSE	8.09
M18+M5	M18	12	4.51	M5	11.95	4.2	153.9	0.002	10	1	0.013	-0.2472	-0.45	0.00	0.83	0.0000	0.9833	-25.1	100.0	0.0	TRUE	8.52
M19+M18	M19	12.1	4.7	M18	12	4.51	94.8	0.002	10	1	0.013	-0.2472	-0.45	0.09	0.83	0.0116	0.9807	-25.2	100.0	28.2	TRUE	8.52
M20+M19	M20	12.2	4.86	M19	12.1	4.7	78	0.002	10	1	0.013	-0.2472	-0.45	0.07	0.83	0.0125	0.9925	-24.9	100.0	37.0	TRUE	8.52
M21+M20	M21	12.3	5.45	M20	12.2	4.86	296.6	0.002	10	1	0.013	-0.2472	-0.45	0.06	0.83	0.0180	0.9772	-25.3	100.0	52.9	TRUE	8.52

Appendix D: Table 4
Scenario 3: 2035 Enhanced PWWF Model Results

Label	Start Node	Rim (Start) (ft)	Invert (Start) (ft)	Stop Node	Rim (Stop) (ft)	Invert (Stop) (ft)	Length (ft)	Slope (Calculated) (ft/ft)	Diameter (in)	Number of Barrels	Manning's n	Flow (Middle) (cfs)	Velocity (ft/s)	Velocity (Maximum Calculated) (ft/s)	Depth (Middle) (ft)	Flow (Maximum) (cfs)	Capacity (Full Flow) (cfs)	Flow / Capacity (Design) (%)	Depth/Rise (%)	Depth (Maximum) / Rise (%)	Is Ever Surcharged?	Hydraulic Grade (Maximum) (ft)
M22+M21	M22	12.3	5.54	M21	12.3	5.45	43.3	0.002	10	1	0.013	-0.2472	-0.45	0.06	0.83	0.0188	0.9992	-24.7	100.0	53.2	TRUE	8.52
M23+M24	M23	7.5	4.92	M24	7.4	4.53	195	0.002	8	1	0.013	0.2800	0.80	0.80	0.67	0.2802	0.5404	51.8	100.0	100.0	TRUE	7.46
M24+M25	M24	7.4	4.56	M25	7.3	4.04	260	0.002	8	1	0.013	0.2800	0.80	0.80	0.67	0.2805	0.5404	51.8	100.0	100.0	TRUE	7.43
M25+M26	M25	7.3	4.04	M26	7.3	3.5	270	0.002	8	1	0.013	0.2800	0.80	0.80	0.67	0.2807	0.5404	51.8	100.0	100.0	TRUE	7.37
M26+M27	M26	7.3	3.5	M27	7.2	3.25	124.9	0.002	8	1	0.013	0.2800	0.80	0.80	0.67	0.2811	0.5406	51.8	100.0	100.0	TRUE	7.37
M27+M29	M27	7.2	3.25	M29	7.1	3.18	35.2	0.002	8	1	0.013	0.2800	0.80	0.81	0.67	0.2815	0.5385	52.0	100.0	100.0	TRUE	7.37
M28+N11	M28	7.3	0.37	N11	7.2	-0.1	236.4	0.002	8	1	0.013	0.0109	0.78	0.78	0.04	0.0111	0.5388	2.0	6.7	6.8	FALSE	0.44
M29+M31	M29	7.1	3.18	M31	7	2.52	328.8	0.002	8	1	0.01	0.2800	0.80	0.81	0.67	0.2834	0.7038	39.8	100.0	100.0	TRUE	7.37
M30+N29	M30	7.3	0.64	N29	7.2	0.13	255.2	0.002	8	1	0.013	0.0109	0.74	0.84	0.06	0.0127	0.5402	2.0	8.7	8.4	FALSE	0.71
M31+M3	M31	7	2.52	M3	6.98	1.33	357.1	0.003	8	1	0.013	0.8822	2.53	2.64	0.67	0.9223	0.6975	126.5	100.0	100.0	TRUE	7.29
M32+M33	M32	7.3	2.88	M33	7.3	2.49	195	0.002	8	1	0.013	0.5263	1.80	1.80	0.52	0.5263	0.5403	97.4	78.2	78.2	FALSE	3.43
M33+M34	M33	7.3	2.49	M34	7.2	1.91	257.5	0.002	8	1	0.013	0.5263	1.77	1.77	0.53	0.5263	0.5735	91.8	79.3	79.3	FALSE	3.03
M34+N22	M34	7.2	1.91	N22	7.1	1.4	283.5	0.002	8	1	0.013	0.5386	1.68	1.68	0.58	0.5386	0.5125	105.1	86.6	86.6	FALSE	2.53
M35+M34	M35	7.2	2.16	M34	7.2	1.91	124.1	0.002	8	1	0.013	0.0123	0.04	0.74	0.49	0.0123	0.5423	2.3	73.6	9.4	FALSE	2.53
M36+M37	M36	7.3	3.24	M37	7.4	2.73	256.7	0.002	8	1	0.013	0.3967	1.60	1.60	0.44	0.3967	0.5386	73.7	66.7	66.7	FALSE	3.69
M37+N24	M37	7.4	2.73	N24	7.3	2.21	259.3	0.002	8	1	0.013	0.3967	1.61	1.61	0.44	0.3967	0.5411	73.3	66.5	66.5	FALSE	3.18
M38+M39	M38	19.58	12.03	M39	18.79	11.24	157.5	0.005	8	1	0.013	0.8295	2.38	2.42	0.67	0.8404	0.8558	96.9	100.0	97.6	TRUE	12.75
M39+M43	M39	18.79	11.24	M43	17.59	10.04	240.5	0.005	8	1	0.013	0.8295	2.38	2.44	0.67	0.8432	0.8535	97.2	100.0	97.1	TRUE	12.05
M40+M5	M40	13.27	5.72	M5	11.95	4.4	263	0.005	8	1	0.013	0.8295	2.38	2.38	0.67	0.8295	0.8561	96.9	100.0	100.0	TRUE	8.52
M41+M13	M41	16.89	9.34	M13	16.33	8.78	111	0.005	8	1	0.013	0.8295	2.38	2.38	0.67	0.8295	0.8583	96.6	100.0	100.0	TRUE	10.41
M42+M41	M42	17.07	9.82	M41	16.89	9.34	37.3	0.013	8	1	0.013	0.8295	2.38	3.86	0.67	0.8317	1.3699	60.6	100.0	59.2	TRUE	10.50
M43+M42	M43	17.59	10.04	M42	17.07	9.82	103.8	0.002	8	1	0.013	0.8295	2.38	2.45	0.67	0.8335	0.5563	149.1	100.0	94.0	TRUE	10.92
M44+I15	M44	5.62	0.12	I15	5.32	-0.53	61.7	0.011	12	1	0.013	0.6448	0.82	1.12	1.00	0.8829	3.6568	17.6	100.0	100.0	TRUE	3.26
M45+M6	M45	12.36	6.35	M6	12.3	6.22	63.5	0.002	16	1	0.01	0.1903	1.47	1.47	0.20	0.1905	4.5115	4.2	14.9	14.9	FALSE	6.55
M46+M22	M46	12.8	6.12	M22	12.3	5.54	290.6	0.002	10	1	0.013	-0.2472	-0.45	0.04	0.83	0.0191	0.9788	-25.3	100.0	75.2	TRUE	8.52
M46+M32	M46	12.8	6.1	M32	7.3	2.88	76	0.042	10	1	0.01	0.4375	3.48	3.48	0.16	0.4375	5.8625	7.5	19.0	19.0	FALSE	6.27
METERING STATION+T2	METERING STATION	0	-14.66	T2	3.04	-14.76	444.9	0	24	1	0.013	12.3724	3.94	4.02	2.00	12.6396	3.3913	364.8	100.0	100.0	TRUE	-11.28
N1+K41	N1	5.32	-2.08	K41	5.23	-2.2	30.8	0.004	18	1	0.01	1.3856	0.78	1.01	1.50	1.7778	8.5232	16.3	100.0	100.0	TRUE	0.32
N2+N1	N2	5.71	-1.39	N1	5.32	-2.08	295.7	0.002	16	1	0.01	1.1831	0.87	0.87	1.24	1.1831	4.8180	24.6	93.4	93.4	TRUE	0.33
N3+N21	N3	6	-0.64	N21	6	-0.82	88.8	0.002	16	1	0.01	1.1258	2.78	2.78	0.44	1.1258	4.4899	25.1	33.2	33.2	FALSE	0.34
N4+N3	N4	6.14	0.24	N3	6	-0.64	334.7	0.003	16	1	0.01	1.1258	2.87	2.87	0.43	1.1258	5.1141	22.0	32.4	32.4	FALSE	0.68
N5+N4	N5	7.28	1.13	N4	6.14	0.29	332.5	0.003	10	1	0.013	0.1905	1.34	1.34	0.26	0.1905	1.1012	17.3	30.7	30.7	FALSE	1.39
N6+N5	N6	8.64	1.99	N5	7.28	1.13	332.5	0.003	10	1	0.013	0.1905	1.35	1.35	0.25	0.1905	1.1142	17.1	30.5	30.5	FALSE	2.25
N7+N6	N7	9.69	2.84	N6	8.64	1.99	332.7	0.003	10	1	0.013	0.1905	1.35	1.35	0.26	0.1905	1.1074	17.2	30.6	30.6	FALSE	3.10
N8+N9	N8	13.8	4.05	N9	11.48	3.68	118.7	0.003	10	1	0.013	0.1905	1.45	1.45	0.24	0.1905	1.2230	15.6	29.1	29.1	FALSE	4.29
N9+N7	N9	11.48	3.68	N7	9.69	2.84	284	0.003	10	1	0.013	0.1905	1.42	1.42	0.25	0.1905	1.1916	16.0	29.5	29.5	FALSE	3.93
N10+N13	N10	7.1	-0.52	N13	7	-0.88	176	0.002	8	1	0.013	0.0109	0.08	0.78	0.29	0.0109	0.5465	2.0	43.0	8.4	TRUE	0.33
N11+N12	N11	7.2	-0.1	N12	7.1	-0.56	227.2	0.002	8	1	0.013	0.0218	0.77	1.14	0.09	0.0391	0.5437	4.0	13.6	13.3	TRUE	0.33
N12+N13	N12	7.1	-0.56	N13	7	-0.88	157.9	0.002	8	1	0.013	0.0218	0.14	0.70	0.31	0.0231	0.5440	4.0	46.0	15.1	TRUE	0.33
N13+N14	N13	7	-0.88	N14	6	-1.21	167	0.002	8	1	0.013	0.0327	0.10	0.22	0.63	0.0329	0.5371	6.1	94.6	44.8	TRUE	0.33
N14+N2	N14	6	-1.21	N2	5.71	-1.39	88.4	0.002	16	1	0.01	1.1831	1.20	1.20	0.88	1.1831	4.5003	26.3	66.3	66.3	TRUE	0.33
N15+N16	N15	7.3	0.75	N16	7.2	0.25	251.8	0.002	8	1	0.013	0.0123	0.72	0.96	0.06	0.0360	0.5384	2.3	9.5	8.3	FALSE	0.83
N16+N17	N16	7.2	0.25	N17	7.1	-0.21	228.2	0.002	8	1	0.013	0.0123	0.81	0.63	0.05	0.0174	0.5426	2.3	7.6	1.3	FALSE	0.36
N17+N20	N17	7.1	-0.27	N20	7	-0.67	197	0.002	8	1	0.013	0.0123	0.25	0.82	0.13	0.0178	0.5445	2.3	19.7	11.3	TRUE	0.34
N18+N19	N18	7.2	0.29	N19	7.1	-0.22	255.9	0.002	8	1	0.013	0.0123	0.72	0.87	0.06	0.0235	0.5394	2.3	9.5	7.7	FALSE	0.36
N19+N20	N19	7.1	-0.22	N20	7	-0.67	224.1	0.002	8	1	0.013	0.0123	0.34	0.82	0.11	0.0136	0.5415	2.3	15.9	7.7	TRUE	0.34
N20+N21	N20	7	-0.67	N21	6	-0.82	72	0.002	8	1	0.013	0.0246	0.11	0.73	0.41	0.0326	0.5516	4.5	60.9	18.5	TRUE	0.34
N21+N14	N21	6	-0.82	N14	6	-1.21	195.8	0.002	16	1	0.01	1.1504	1.87	1.87	0.60	1.1504	4.4512	25.8	45.2	45.2	TRUE	0.34
N22+N23	N22	7.1	1.4	N23	7.1	0.98	212	0.002	8	1	0.013	0.5386	1.78	1.78	0.54	0.5386	0.5378	100.1	80.7	80.7	FALSE	1.97
N23+N28	N23	7.1	0.98	N28	7	0.59	193.2	0.002	8	1	0.013	0.5386	1.86	1.86	0.52	0.5386	0.5430	99.2	77.5	77.5	FALSE	1.54
N24+N25	N24	7.3	2.21	N25	7.3	1.98	116.3	0.002	8	1	0.013	0.3967	1.71	1.71	0.42	0.3967	0.5374	73.8	62.9	62.9	FALSE	2.65
N25+N26	N25	7.3	1.98	N26	7.2	1.46	262.5	0.002	8	1	0.013	0.3967	1.60	1.60	0.45	0.3967	0.5379	73.8	66.8	66.8	FALSE	2.43
N26+N27	N26	7.2	1.46	N27	7.1	0.96	247.5	0.002	8	1	0.013	0.3967	1.61	1.61	0.44	0.3967	0.5431	73.1	66.3	66.3	FALSE	1.91
N27+N28	N27	7.1	0.96	N28	7	0.59	183	0.002	8	1	0.013	0.3967	1.63	1.63	0.44	0.3967	0.5433	73.0	65.8	65.7	FALSE	1.41
N28+N31	N28	7	0.59	N31	6.87	0.54	21.4	0.002	6	2	0.01	0.9353	2.56	2.56	0.44	0.9353	0.7050	132.7	87.6	87.6	FALSE	1.03
N29+N10	N29	7.2	0.13	N10	7.1	-0.52	325.6	0.002	8	1	0.013	0.0109	0.72	0.72	0.06	0.0109	0.5399	2.0	8.8	8.8	TRUE	0.33
N30+N11	N30	7.3	0.17	N11	7.2	-0.1	134	0.002	8	1	0.013	0.0109	0.79	0.82	0.06	0.0113	0.5424	2.0	8.3	7.9	FALSE	0.33
N31+N4	N31	6.87	0.54	N4	6.14	0.24	128.8	0.002	12	1	0.01	0.9353	2.74	2.74	0.45	0.9353	2.2348	41.9	44.8	44.8	FALSE	1.00
O3+N8	O3	17.6	8.2	N8	13.8	4.1	205.1	0.02	8	1	0.013	0.0799	1.48	1.48	0.12	0.0799	1.7083	4.7	17.3	17.3	FALSE	8.32
O4+O3	O4	15.39	9.13	O3	17.6	8.3	277.4	0.003	8	1	0.013	0.0338	1.13	0.72	0.09	0.0338	0.6609	5.1	13.8	1.7	FALSE	9.22
O5+O4	O5	14.73	10.25	O4	15.39	9.13	398.6	0.003	8	1	0.013	0.0338	1.09	0.72	0.08	0.0338	0.6405	5.3	12.6	1.7	FALSE	10.34

Appendix D: Table 4
Scenario 3: 2035 Enhanced PWWF Model Results

Label	Start Node	Rim (Start) (ft)	Invert (Start) (ft)	Stop Node	Rim (Stop) (ft)	Invert (Stop) (ft)	Length (ft)	Slope (Calculated) (ft/ft)	Diameter (in)	Number of Barrels	Manning's n	Flow (Middle) (cfs)	Velocity (ft/s)	Velocity (Maximum Calculated) (ft/s)	Depth (Middle) (ft)	Flow (Maximum) (cfs)	Capacity (Full Flow) (cfs)	Flow / Capacity (Design) (%)	Depth/Rise (%)	Depth (Maximum) / Rise (%)	Is Ever Surcharged?	Hydraulic Grade (Maximum) (ft)
O6+O5	O6	13.82	11.05	O5	14.73	10.25	399.4	0.002	8	1	0.013	0.0338	1.13	0.72	0.09	0.0338	0.5408	6.2	14.1	1.7	FALSE	11.15
O7+O6	O7	15.16	11.56	O6	13.82	11.05	426.9	0.001	8	1	0.013	0.0338	0.94	0.72	0.11	0.0338	0.4177	8.1	15.9	1.7	FALSE	11.67
O8+O59	O8	16.28	12.23	O59	16.36	11.92	102.7	0.003	8	1	0.013	0.2285	1.58	1.58	0.29	0.2285	0.6639	34.4	43.3	43.3	FALSE	12.53
O9+O8	O9	17.01	12.76	O8	16.28	12.23	139.7	0.004	8	1	0.013	0.2075	1.63	1.63	0.26	0.2075	0.7443	27.9	39.3	39.3	FALSE	13.02
O10+O9	O10	17.95	13.1	O9	17.01	12.76	156.6	0.002	8	1	0.013	0.2075	1.35	1.35	0.30	0.2075	0.5631	36.9	45.4	45.4	FALSE	13.41
O11+O10	O11	19.41	14.01	O10	17.95	13.15	259.2	0.003	8	1	0.013	0.1932	1.51	1.51	0.26	0.1932	0.6960	27.8	39.4	39.4	FALSE	14.27
O12+O11	O12	19.9	14.5	O11	19.41	14.01	394.2	0.001	8	1	0.013	0.1932	1.06	1.06	0.35	0.1932	0.4260	45.4	51.8	51.8	FALSE	14.85
O13+O12	O13	22.22	16.47	O12	19.9	14.5	414.6	0.005	8	1	0.013	0.1932	1.72	1.72	0.24	0.1932	0.8329	23.2	35.8	35.8	FALSE	16.71
O14+O13	O14	21.75	17.35	O13	22.22	16.87	129.7	0.004	8	1	0.013	0.0487	0.82	0.82	0.15	0.0487	0.7351	6.6	22.6	22.6	FALSE	17.50
O15+O14	O15	24.85	19.05	O14	21.75	17.35	307.9	0.006	8	1	0.013	0.0487	0.93	0.93	0.14	0.0487	0.8978	5.4	20.8	20.8	FALSE	19.19
O16+O15	O16	28.01	22.56	O15	24.85	19.2	234.7	0.014	6	1	0.013	0.0487	1.34	0.93	0.12	0.0487	0.6714	7.3	23.8	7.5	FALSE	22.68
O17+O3	O17	10.93	8.62	O3	17.6	8.3	161.2	0.002	8	1	0.013	0.0493	0.66	0.66	0.18	0.0498	0.5383	9.2	26.7	26.8	FALSE	8.80
O18+O17	O18	15.83	11.93	O17	10.93	8.62	264	0.013	8	1	0.013	0.0136	0.74	0.74	0.04	0.0136	1.3530	1.0	5.3	5.3	FALSE	11.97
O19+O17	O19	17.6	10.75	O17	10.93	8.62	85.9	0.025	6	1	0.013	0.0357	1.09	1.11	0.08	0.0363	0.8837	4.0	16.6	17.0	FALSE	10.84
O20+O19	O20	17	10.98	O19	17.6	10.75	115.6	0.002	6	1	0.013	0.0057	0.68	0.56	0.03	0.0057	0.2503	2.3	6.2	1.3	FALSE	11.02
O21+O19	O21	20.09	12.64	O19	17.6	10.75	393.6	0.005	6	1	0.013	0.0300	0.92	0.92	0.11	0.0307	0.3888	7.7	22.2	22.5	FALSE	12.76
O22+O21	O22	20	13.27	O21	20.09	12.64	318.2	0.002	6	1	0.013	0.0300	0.64	0.64	0.14	0.0315	0.2497	12.0	28.8	29.9	FALSE	13.42
O23+O22	O23	21.65	15.65	O22	20	13.27	469.8	0.005	6	1	0.013	0.0301	0.89	0.78	0.11	0.0319	0.3993	7.5	22.8	26.2	FALSE	15.78
O24+O23	O24	21.18	15.84	O23	21.65	15.65	96.7	0.002	6	1	0.013	0.0300	0.67	0.70	0.14	0.0334	0.2488	12.1	27.8	29.1	FALSE	16.00
O25+O7	O25	16.12	12.07	O7	15.16	11.61	177.4	0.003	6	1	0.013	0.0338	0.72	1.20	0.14	0.0529	0.2857	11.8	28.8	17.3	FALSE	12.22
O26+O25	O26	18.86	13.26	O25	16.12	12.12	332.8	0.003	6	1	0.013	0.0140	0.79	0.73	0.07	0.0142	0.3284	4.3	14.6	6.5	FALSE	13.32
O27+O26	O27	19.94	13.44	O26	18.86	13.31	65.4	0.002	6	1	0.013	0.0075	0.71	0.71	0.03	0.0075	0.2501	3.0	6.8	6.9	FALSE	13.49
O28+O26	O28	19	14.28	O26	18.86	13.41	434.3	0.002	6	1	0.013	0.0065	0.70	0.70	0.03	0.0065	0.2511	2.6	6.8	6.8	FALSE	14.32
O29+O28	O29	23	19.53	O28	19	14.28	174	0.03	6	1	0.013	0.0000	0.00	0.00	0.00	0.0000	0.9746	0.0	0.0	0.0	FALSE	19.53
O29+O30	O29	23	19.53	O30	22.78	19.08	226	0.002	6	1	0.013	0.0000	0.00	0.00	0.04	0.0000	0.2504	0.0	7.4	0.0	FALSE	19.59
O30+O35	O30	22.78	17.63	O35	21.74	16.44	175.9	0.007	6	1	0.013	0.0492	0.99	1.01	0.05	0.0492	0.4615	10.7	9.8	10.7	FALSE	17.74
O31+O30	O31	23	18.76	O30	22.78	18.58	89.5	0.002	6	1	0.013	0.0164	0.80	0.79	0.08	0.0190	0.2516	6.5	16.1	18.0	FALSE	18.91
O32+O31	O32	24	19.18	O31	23	18.76	210.5	0.002	6	1	0.013	0.0164	0.83	0.67	0.08	0.0181	0.2506	6.5	15.6	3.3	FALSE	19.33
O33+O32	O33	25	19.71	O32	24	19.18	262.5	0.002	6	1	0.013	0.0164	0.76	0.92	0.08	0.0170	0.2521	6.5	16.7	15.0	FALSE	19.80
O34+O10	O34	23.33	14.69	O10	17.95	13.35	267.7	0.005	6	1	0.013	0.0492	1.09	0.81	0.07	0.0492	0.3970	12.4	13.9	2.5	FALSE	14.80
O35+O34	O35	21.74	16.44	O34	23.33	14.69	316.4	0.006	6	1	0.013	0.0492	1.08	0.81	0.07	0.0492	0.4173	11.8	13.5	2.5	FALSE	16.53
O36+O30	O36	24.12	18.01	O30	22.78	17.68	164.4	0.002	6	1	0.013	0.0164	0.78	0.78	0.08	0.0164	0.2514	6.5	16.3	16.3	FALSE	18.10
O37+O25	O37	16.63	12.23	O25	16.12	12.07	80.9	0.002	6	1	0.013	0.0198	0.71	0.96	0.10	0.0216	0.2495	7.9	19.9	17.2	FALSE	12.33
O38+O37	O38	17.23	12.46	O37	16.63	12.23	117.5	0.002	6	1	0.013	0.0066	0.71	0.71	0.04	0.0067	0.2482	2.7	7.1	7.0	FALSE	12.50
O39+O37	O39	16.48	12.31	O37	16.63	12.23	40.8	0.002	6	1	0.013	0.0132	0.89	0.89	0.06	0.0132	0.2486	5.3	12.8	12.8	FALSE	12.38
O40+O39	O40	16.65	12.38	O39	16.48	12.31	37.3	0.002	6	1	0.013	0.0066	0.28	0.28	0.09	0.0066	0.2431	2.7	17.7	17.7	FALSE	12.43
O41+O40	O41	16.5	12.47	O40	16.65	12.38	44.5	0.002	6	1	0.013	0.0066	0.64	0.64	0.02	0.0066	0.2523	2.6	4.2	4.2	FALSE	12.51
O42+O39	O42	16.78	12.41	O39	16.48	12.31	47.6	0.002	6	1	0.013	0.0066	0.65	0.65	0.02	0.0066	0.2572	2.6	4.8	4.8	FALSE	12.45
O43+O42	O43	17.92	13.6	O42	16.78	12.41	181.9	0.007	6	1	0.013	0.0066	0.65	0.65	0.02	0.0067	0.4538	1.5	4.5	4.8	FALSE	13.63
O44+O43	O44	18.13	13.78	O43	17.92	13.64	69.2	0.002	6	1	0.013	0.0066	0.69	0.69	0.03	0.0066	0.2524	2.6	6.3	6.3	FALSE	13.82
O45+O8	O45	17.06	12.55	O8	16.28	12.23	65.8	0.005	6	1	0.013	0.0210	0.47	1.01	0.14	0.0210	0.3912	5.4	27.7	16.3	FALSE	12.64
O46+O45	O46	18	13.61	O45	17.06	12.55	212.5	0.005	6	1	0.013	0.0070	0.75	0.75	0.04	0.0070	0.3963	1.8	8.5	8.5	FALSE	13.65
O47+O45	O47	16.84	12.91	O45	17.06	12.55	71.5	0.005	6	1	0.013	0.0140	0.85	0.85	0.06	0.0140	0.3981	3.5	11.3	11.3	FALSE	12.97
O48+O47	O48	17.43	13.52	O47	16.84	12.91	122	0.005	6	1	0.013	0.0070	0.69	0.69	0.03	0.0070	0.3968	1.8	6.3	6.3	FALSE	13.55
O49+O47	O49	17.41	13.27	O47	16.84	12.91	72.6	0.005	6	1	0.013	0.0070	0.68	0.68	0.03	0.0070	0.3952	1.8	5.9	5.9	FALSE	13.30
O50+O49	O50	17.95	14.13	O49	17.41	13.27	172.1	0.005	6	1	0.013	0.0070	0.63	0.63	0.02	0.0070	0.3967	1.8	3.9	3.9	FALSE	14.16
O51+O13	O51	24.5	18.4	O13	22.22	16.57	467.6	0.004	6	1	0.013	0.1445	1.45	1.45	0.25	0.1445	0.3510	41.2	50.7	50.7	FALSE	18.66
O52+O51	O52	26.81	19.11	O51	24.5	18.4	213.3	0.003	6	1	0.013	0.0772	1.03	1.03	0.20	0.0772	0.3237	23.8	40.7	40.7	FALSE	19.32
O53+O52	O53	27	19.48	O52	26.81	19.11	188.5	0.002	6	1	0.013	0.0100	0.81	0.84	0.05	0.0116	0.2486	4.0	10.5	11.4	FALSE	19.54
O54+O52	O54	31.19	20.39	O52	26.81	19.11	380.1	0.003	6	1	0.013	0.0672	0.97	0.97	0.19	0.0672	0.3256	20.6	38.4	38.4	FALSE	20.58
O55+O54	O55	28.75	20.95	O54	31.19	20.44	399.4	0.001	6	1	0.013	0.0672	0.68	0.68	0.25	0.0672	0.2005	33.5	50.4	50.4	FALSE	21.21
O56+O55	O56	27.04	22.24	O55	28.75	20.95	376.5	0.003	6	1	0.013	0.0672	0.97	0.97	0.19	0.0672	0.3284	20.5	38.2	38.2	FALSE	22.45
O57+O51	O57	25.61	19.76	O51	24.5	18.4	365.2	0.004	6	1	0.013	0.0487	0.84	0.84	0.17	0.0487	0.3424	14.2	33.6	33.6	FALSE	19.93
O58+O57	O58	26.81	20.57	O57	25.61	19.76	403.4	0.002	6	1	0.013	0.0487	0.67	0.67	0.20	0.0489	0.2514	19.4	39.7	39.7	FALSE	20.78
O59+O60	O59	16.36	11.92	O60	15.68	9.18	24.1	0.114	12	1	0.013	0.2070	2.05	2.05	0.10	0.2070	12.0125	1.7	10.3	10.3	FALSE	12.02
O59+O7	O59	16.36	11.92	O7	15.16	11.56	182.3	0.002	8	1	0.013	0.0000	0.00	0.00	0.14	0.0000	0.5370	0.0	20.6	0.0	FALSE	12.02
O60+O61	O60	15.68	9.18	O61	14.55	7.85	199	0.007	14	1	0.013	0.5483	2.68	2.68	0.29	0.5487	4.3937	12.5	24.6	24.6	FALSE	9.49
O61+M8	O61	14.55	7.85	M8	14.41	7.81	11.8	0.003	16	1	0.01	0.5483	2.42	2.42	0.29	0.5483	5.8139	9.4	21.9	21.9	FALSE	8.14
O62+O18	O62	17.08	13.18	O18	15.83	11.93	249	0.005	6	1	0.013	0.0136	0.89	0.89	0.07	0.0136	0.3975	3.4	13.1	13.1	FALSE	13.25
O63+O62	O63	17.27	13.37	O62	17.08	13.18	38	0.005	6	1	0.013	0.0136	0.85	0.82	0.06	0.0136	0.3968	3.4	11.4	9.9	FALSE	13.43
T1+T0	T1	4.57	-15.43	T0	#N/A	-17.68	329.2	0.007	24	1	0.013	12.3724	6.32	6.35	1.19	12.6349	18.7022	66.2	59.7	60.5	FALSE	-14.21

Appendix D: Table 4
Scenario 3: 2035 Enhanced PWWF Model Results

Label	Start Node	Rim (Start) (ft)	Invert (Start) (ft)	Stop Node	Rim (Stop) (ft)	Invert (Stop) (ft)	Length (ft)	Slope (Calculated) (ft/ft)	Diameter (in)	Number of Barrels	Manning's n	Flow (Middle) (cfs)	Velocity (ft/s)	Velocity (Maximum Calculated) (ft/s)	Depth (Middle) (ft)	Flow (Maximum) (cfs)	Capacity (Full Flow) (cfs)	Flow / Capacity (Design) (%)	Depth/Rise (%)	Depth (Maximum) / Rise (%)	Is Ever Surcharged?	Hydraulic Grade (Maximum) (ft)
T2+T1	T2	3.04	-14.76	T1	4.57	-15.43	505.8	0.001	24	1	0.013	12.3724	4.12	4.16	1.82	12.6396	8.2329	150.3	91.2	92.6	TRUE	-12.46
T3+METERING STATION	T3	2.52	-14.63	METERING STATION	0	-14.66	55	0.001	24	1	0.013	12.3724	3.94	4.02	2.00	12.6398	5.2820	234.2	100.0	100.0	TRUE	-11.23
T4+T3	T4	1.41	-12.09	T3	2.52	-14.63	474.9	0.005	24	1	0.013	12.3724	3.94	4.02	2.00	12.6400	16.5440	74.8	100.0	100.0	TRUE	-10.05
T5+T4	T5	0.16	-11.76	T4	1.41	-11.99	352.3	0.001	24	1	0.013	12.3724	3.96	4.02	1.97	12.6405	5.7802	214.0	98.5	100.0	TRUE	-9.19
T6+T5	T6	0.17	-11.38	T5	0.16	-11.66	359.1	0.001	24	1	0.013	12.3724	3.94	4.02	2.00	12.6410	6.3165	195.9	100.0	100.0	TRUE	-8.28
T7+T6	T7	-0.07	-10.42	T6	0.17	-11.38	503.8	0.002	24	1	0.013	12.3724	3.94	4.02	2.00	12.6421	9.8749	125.3	100.0	100.0	TRUE	-6.91
T8+T7	T8	0.14	-10.08	T7	-0.07	-10.32	501.9	0	24	1	0.013	12.3724	3.94	4.02	2.00	12.6434	4.9469	250.1	100.0	100.0	TRUE	-5.55
T9+T8	T9	0.14	-9.67	T8	0.14	-9.98	497.7	0.001	24	1	0.013	12.3724	3.94	4.02	2.00	12.6450	5.6455	219.2	100.0	100.0	TRUE	-4.20
T10+T9	T10	0.07	-9.12	T9	0.14	-9.57	446.9	0.001	24	1	0.013	12.3724	3.94	4.03	2.00	12.6468	7.1784	172.4	100.0	100.0	TRUE	-3.01
T11+T10	T11	-0.24	-8.44	T10	0.07	-9.02	325.8	0.002	24	1	0.013	12.3724	3.94	4.03	2.00	12.6488	9.5439	129.6	100.0	100.0	TRUE	-2.20
T12+T11	T12	0.55	-8.25	T11	-0.24	-8.49	482.2	0	24	1	0.013	12.3724	3.94	4.03	2.00	12.6510	5.0468	245.2	100.0	100.0	TRUE	-0.89
T16+T33	T16	2.25	-6.5	T33	2.25	-6.55	66.2	0.001	17.8	1	0.01	2.5500	1.48	1.70	1.48	2.9330	3.6203	70.4	100.0	100.0	TRUE	0.20
T17+T34	T17	0.96	-5.84	T34	1.75	-6.3	407.1	0.001	21	1	0.013	9.8224	4.08	4.08	1.75	9.8224	5.3261	184.4	100.0	100.0	TRUE	0.30
T18+T17	T18	1.12	-5.23	T17	0.96	-5.79	540.4	0.001	21	1	0.013	9.8224	4.08	4.08	1.75	9.8224	5.1005	192.6	100.0	100.0	TRUE	0.40
T19+T36	T19	2.23	-4.72	T36	2.125	-4.74	6.3	0.003	21	1	0.013	7.0214	2.92	2.92	1.75	7.0214	8.9021	78.9	100.0	100.0	TRUE	0.51
T20+T19	T20	2.72	-4.06	T19	2.23	-4.62	331.9	0.002	18	1	0.013	3.9085	2.21	2.21	1.50	3.9085	4.3143	90.6	100.0	100.0	TRUE	0.54
T21+T20	T21	3.07	-3.99	T20	2.72	-4.06	338.4	0	21	1	0.013	3.8800	1.61	1.61	1.75	3.8800	2.2788	170.3	100.0	100.0	TRUE	0.60
T22+T37	T22	2.81	-3.24	T37	3	-3.63	191.4	0.002	21	1	0.01	3.8027	1.58	1.58	1.75	3.8027	9.2972	40.9	100.0	100.0	TRUE	0.63
T23+T22	T23	6.87	-3.03	T22	2.81	-3.24	373	0.001	18	1	0.013	3.8027	2.15	2.15	1.50	3.8027	2.4921	152.6	100.0	100.0	TRUE	0.80
T24+T23	T24	3.66	-2.69	T23	6.87	-2.93	316.7	0.001	18	1	0.013	3.6244	2.05	2.05	1.50	3.6244	2.8914	125.4	100.0	100.0	TRUE	1.05
T25+T24	T25	3.95	-2.59	T24	3.66	-2.62	282.2	0	18	1	0.013	3.6244	2.05	2.05	1.50	3.6244	1.0830	334.7	100.0	100.0	TRUE	1.27
T26+T25	T26	7.03	-2.32	T25	3.95	-2.52	305.6	0.001	18	1	0.013	3.1314	1.77	1.77	1.50	3.1314	2.6873	116.5	100.0	100.0	TRUE	1.42
T27+T26	T27	7.85	-2.05	T26	7.03	-2.22	355.8	0	18	1	0.013	3.1314	1.77	1.77	1.50	3.1314	2.2958	136.4	100.0	100.0	TRUE	1.62
T28+T27	T28	8.67	-1.93	T27	7.85	-1.95	162.1	0	18	1	0.013	3.1314	1.77	1.77	1.50	3.1314	1.1667	268.4	100.0	100.0	TRUE	1.64
T29+T28	T29	4.98	-1.62	T28	8.67	-1.93	233.8	0.001	18	1	0.013	3.1314	1.77	1.77	1.50	3.1314	3.8245	81.9	100.0	100.0	TRUE	1.72
T30+T12	T30	0.25	-7.24	T12	0.55	-8.25	285.1	0.004	24	1	0.01	12.3724	3.94	4.03	2.00	12.6533	17.5030	70.7	100.0	100.0	TRUE	-0.56
T31+T30	T31	2.05	-7.15	T30	0.25	-7.24	350.8	0	24.2	1	0.01	12.3724	3.87	3.96	2.02	12.6608	4.8253	256.4	100.0	100.0	TRUE	-0.15
T32+T31	T32	1.25	-7.11	T31	2.05	-7.15	125.2	0	24.2	1	0.01	12.3724	3.87	5.06	2.02	13.8287	5.3740	230.2	100.0	79.8	TRUE	-0.09
T33+Transition 1	T33	2.25	-6.55	Transition 1	#N/A	-24.75	157	0.116	17.8	2	0.01	12.3724	3.60	3.68	1.48	12.6763	89.7137	13.8	100.0	100.0	TRUE	0.18
T34+T33	T34	1.75	-6.3	T33	2.25	-6.55	76.4	0.003	17.8	1	0.01	9.8224	5.71	5.71	1.48	9.8224	7.5365	130.3	100.0	100.0	TRUE	0.22
T36+T18	T36	2.125	-4.74	T18	1.12	-5.23	493.7	0.001	21	1	0.013	9.8224	4.08	4.08	1.75	9.8224	4.9915	196.8	100.0	100.0	TRUE	0.49
T37+T21	T37	3	-3.63	T21	3.07	-3.99	83.4	0.004	21	1	0.01	3.8028	1.58	1.58	1.75	3.8028	13.5420	28.1	100.0	100.0	TRUE	0.61
Transition 1+Transition 2	Transition 1	#N/A	-24.75	Transition 2	#N/A	-24.75	143	0	17.8	2	0.01	12.3724	3.60	5.07	1.48	17.4335	0.2635	4695.5	100.0	100.0	TRUE	0.13
Transition 2+Transition 3	Transition 2	#N/A	-24.75	Transition 3	#N/A	-15.75	99	-0.091	17.8	2	0.01	12.3724	3.60	5.00	1.48	17.1900	79.4468	15.6	100.0	100.0	TRUE	0.01
Transition 3+T32	Transition 3	#N/A	-15.75	T32	1.25	-7.11	117.6	-0.073	17.8	2	0.01	12.3724	3.60	4.70	1.48	16.1870	71.4274	17.3	100.0	100.0	TRUE	-0.02

Abbreviations
PWWF: Peak Wet Weather Flow
CFS: Cubic Feet per Second
ft: Feet
s: Seconds
in: Inches

Appendix D: Table 5
Scenario 3: 2035 Enhanced PWWF Loadings

MH	Load Definition	Pattern	Base Flow (cfs)
A10	Sanitary Pattern Load	Fixed	0.0267
A11	Sanitary Pattern Load	Fixed	0.0230
A12	Sanitary Pattern Load	Fixed	0.0151
A13	Sanitary Pattern Load	Fixed	0.0051
A14	Sanitary Pattern Load	Fixed	0.1000
A14	Sanitary Pattern Load	Fixed	0.0645
A15	Sanitary Pattern Load	Fixed	0.0102
A16	Sanitary Pattern Load	Fixed	0.0577
A17	Sanitary Pattern Load	Fixed	0.0048
A17	Sanitary Pattern Load	Fixed	0.0260
A18	Sanitary Pattern Load	Fixed	0.0286
A19	Sanitary Pattern Load	Fixed	0.0268
A2	Sanitary Pattern Load	Fixed	0.0079
A20	Sanitary Pattern Load	Fixed	0.0271
A20	Sanitary Pattern Load	Fixed	0.0448
A21	Sanitary Pattern Load	Fixed	0.0475
A23	Sanitary Pattern Load	Fixed	0.0190
A24	Sanitary Pattern Load	Fixed	0.0068
A25	Sanitary Pattern Load	Fixed	0.0229
A26	Sanitary Pattern Load	Fixed	0.0295
A27	Sanitary Pattern Load	Fixed	0.0530
A27	Sanitary Pattern Load	Fixed	0.0399
A28	Sanitary Pattern Load	Fixed	0.0388
A30	Sanitary Pattern Load	Fixed	0.2830
A30	Sanitary Pattern Load	Fixed	0.0129
A31	Sanitary Pattern Load	Fixed	0.0041
A34	Sanitary Pattern Load	Fixed	0.0021
A36	Sanitary Pattern Load	Fixed	0.0028
A38	Sanitary Pattern Load	Fixed	0.0018
A4	Sanitary Pattern Load	Fixed	0.0340
A41	Sanitary Pattern Load	Fixed	0.0036
A42	Sanitary Pattern Load	Fixed	0.0018
A43	Sanitary Pattern Load	Fixed	0.0005
A45	Sanitary Pattern Load	Fixed	0.0009
A46	Sanitary Pattern Load	Fixed	0.0039
A5	Sanitary Pattern Load	Fixed	0.0349
A7	Sanitary Pattern Load	Fixed	0.0340
A8	Sanitary Pattern Load	Fixed	0.0356
B18	Sanitary Pattern Load	Fixed	0.1020

Appendix D: Table 5
Scenario 3: 2035 Enhanced PWWF Loadings

MH	Load Definition	Pattern	Base Flow (cfs)
B2	Sanitary Pattern Load	Fixed	0.0129
B20	Sanitary Pattern Load	Fixed	0.1020
B23	Sanitary Pattern Load	Fixed	0.1020
B26	Sanitary Pattern Load	Fixed	0.0666
B28	Sanitary Pattern Load	Fixed	0.0666
B3	Sanitary Pattern Load	Fixed	0.0490
B30	Sanitary Pattern Load	Fixed	0.0330
B32	Sanitary Pattern Load	Fixed	0.0330
B33	Sanitary Pattern Load	Fixed	0.0330
B36	Sanitary Pattern Load	Fixed	0.0527
B4	Sanitary Pattern Load	Fixed	0.2612
B40	Sanitary Pattern Load	Fixed	0.0752
B40	Sanitary Pattern Load	Fixed	0.0360
B42	Sanitary Pattern Load	Fixed	0.0360
B43	Sanitary Pattern Load	Fixed	0.0360
B45	Sanitary Pattern Load	Fixed	0.0343
B47	Sanitary Pattern Load	Fixed	0.0097
B48	Sanitary Pattern Load	Fixed	0.0328
B51	Sanitary Pattern Load	Fixed	0.0260
C13	Sanitary Pattern Load	Fixed	0.0472
C15	Sanitary Pattern Load	Fixed	0.0572
C16	Sanitary Pattern Load	Fixed	0.0100
C18	Sanitary Pattern Load	Fixed	0.0572
C20	Sanitary Pattern Load	Fixed	0.0330
C22	Sanitary Pattern Load	Fixed	0.0330
C24	Sanitary Pattern Load	Fixed	0.0283
C25	Sanitary Pattern Load	Fixed	0.0283
C26	Sanitary Pattern Load	Fixed	0.2000
C29	Sanitary Pattern Load	Fixed	0.0195
C31	Sanitary Pattern Load	Fixed	0.0195
C33	Sanitary Pattern Load	Fixed	0.0195
C34	Sanitary Pattern Load	Fixed	0.0095
C37	Sanitary Pattern Load	Fixed	0.0458
C39	Sanitary Pattern Load	Fixed	0.0458
C42	Sanitary Pattern Load	Fixed	0.0458
C43	Sanitary Pattern Load	Fixed	0.0132
C47	Sanitary Pattern Load	Fixed	0.0911
C51	Sanitary Pattern Load	Fixed	0.1755
D1	Sanitary Pattern Load	Fixed	0.0842

Appendix D: Table 5
Scenario 3: 2035 Enhanced PWWF Loadings

MH	Load Definition	Pattern	Base Flow (cfs)
D17	Sanitary Pattern Load	Fixed	0.1131
D17	Sanitary Pattern Load	Fixed	0.2000
D22	Sanitary Pattern Load	Fixed	0.3119
D28	Sanitary Pattern Load	Fixed	0.1700
D31	Sanitary Pattern Load	Fixed	0.0765
D32	Sanitary Pattern Load	Fixed	0.0765
D39	Sanitary Pattern Load	Fixed	0.0100
D40	Sanitary Pattern Load	Fixed	0.0100
D42	Sanitary Pattern Load	Fixed	0.0214
D44	Sanitary Pattern Load	Fixed	0.1500
D5	Sanitary Pattern Load	Fixed	0.0216
D50	Sanitary Pattern Load	Fixed	0.3500
D55	Sanitary Pattern Load	Fixed	0.1200
D61	Sanitary Pattern Load	Fixed	0.1336
D62	Sanitary Pattern Load	Fixed	0.0150
D66	Sanitary Pattern Load	Fixed	0.1989
D68	Sanitary Pattern Load	Fixed	0.0300
D69	Sanitary Pattern Load	Fixed	0.0300
D70	Sanitary Pattern Load	Fixed	0.1400
D71	Sanitary Pattern Load	Fixed	0.1200
D73	Sanitary Pattern Load	Fixed	0.0249
D74	Sanitary Pattern Load	Fixed	0.0399
D74	Sanitary Pattern Load	Fixed	0.0770
D8	Sanitary Pattern Load	Fixed	0.0105
E1	Sanitary Pattern Load	Fixed	0.0006
E20	Sanitary Pattern Load	Fixed	0.0497
E21	Sanitary Pattern Load	Fixed	0.0609
E22	Sanitary Pattern Load	Fixed	0.0546
E23	Sanitary Pattern Load	Fixed	0.0609
E25	Sanitary Pattern Load	Fixed	0.2397
E26	Sanitary Pattern Load	Fixed	0.0670
E28	Sanitary Pattern Load	Fixed	0.0427
E30	Sanitary Pattern Load	Fixed	0.0067
E30	Sanitary Pattern Load	Fixed	0.0670
E32	Sanitary Pattern Load	Fixed	0.0610
E33	Sanitary Pattern Load	Fixed	0.0088
E34	Sanitary Pattern Load	Fixed	0.0400
E35	Sanitary Pattern Load	Fixed	0.0305
E37	Sanitary Pattern Load	Fixed	0.0609

Appendix D: Table 5
Scenario 3: 2035 Enhanced PWWF Loadings

MH	Load Definition	Pattern	Base Flow (cfs)
E39	Sanitary Pattern Load	Fixed	0.0609
E40	Sanitary Pattern Load	Fixed	0.0609
E41	Sanitary Pattern Load	Fixed	0.0183
E45	Sanitary Pattern Load	Fixed	0.1471
E45	Sanitary Pattern Load	Fixed	0.0609
E47	Sanitary Pattern Load	Fixed	0.0483
E47	Sanitary Pattern Load	Fixed	0.0609
E49	Sanitary Pattern Load	Fixed	0.0609
F11	Sanitary Pattern Load	Fixed	0.0377
F13	Sanitary Pattern Load	Fixed	0.0260
F14	Sanitary Pattern Load	Fixed	0.0172
F14	Sanitary Pattern Load	Fixed	0.0190
F15	Sanitary Pattern Load	Fixed	0.0127
F16	Sanitary Pattern Load	Fixed	0.0648
F18	Sanitary Pattern Load	Fixed	0.0260
F20	Sanitary Pattern Load	Fixed	0.0214
F21	Sanitary Pattern Load	Fixed	0.0260
F26	Sanitary Pattern Load	Fixed	0.0129
F28	Sanitary Pattern Load	Fixed	0.0129
F7	Sanitary Pattern Load	Fixed	0.0153
F8	Sanitary Pattern Load	Fixed	0.1373
G11	Sanitary Pattern Load	Fixed	0.0382
G12	Sanitary Pattern Load	Fixed	0.0116
G13	Sanitary Pattern Load	Fixed	0.0190
G14	Sanitary Pattern Load	Fixed	0.0083
G16	Sanitary Pattern Load	Fixed	0.0097
G17	Sanitary Pattern Load	Fixed	0.0083
G18	Sanitary Pattern Load	Fixed	0.0097
G19	Sanitary Pattern Load	Fixed	0.0034
G2	Sanitary Pattern Load	Fixed	0.0081
G20	Sanitary Pattern Load	Fixed	0.0010
G21	Sanitary Pattern Load	Fixed	0.0009
G21	Sanitary Pattern Load	Fixed	0.0050
G22	Sanitary Pattern Load	Fixed	0.0010
G22	Sanitary Pattern Load	Fixed	0.0050
G8	Sanitary Pattern Load	Fixed	0.0382
H23	Sanitary Pattern Load	Fixed	0.0100
H24	Sanitary Pattern Load	Fixed	0.0479
H27	Sanitary Pattern Load	Fixed	0.0372

Appendix D: Table 5
Scenario 3: 2035 Enhanced PWWF Loadings

MH	Load Definition	Pattern	Base Flow (cfs)
H28	Sanitary Pattern Load	Fixed	0.0302
H30	Sanitary Pattern Load	Fixed	0.0529
H31	Sanitary Pattern Load	Fixed	0.0415
H32	Sanitary Pattern Load	Fixed	0.0161
H33	Sanitary Pattern Load	Fixed	0.0117
H33	Sanitary Pattern Load	Fixed	0.1119
H36	Sanitary Pattern Load	Fixed	0.1046
H37	Sanitary Pattern Load	Fixed	0.0264
H38	Sanitary Pattern Load	Fixed	0.0792
H39	Sanitary Pattern Load	Fixed	0.1020
H41	Sanitary Pattern Load	Fixed	0.0920
H42	Sanitary Pattern Load	Fixed	0.0078
H43	Sanitary Pattern Load	Fixed	0.0920
H44	Sanitary Pattern Load	Fixed	0.0027
H44	Sanitary Pattern Load	Fixed	0.1020
H45	Sanitary Pattern Load	Fixed	0.0100
H49	Sanitary Pattern Load	Fixed	0.0100
H51	Sanitary Pattern Load	Fixed	0.0372
H53	Sanitary Pattern Load	Fixed	0.0529
H58	Sanitary Pattern Load	Fixed	0.0406
H61	Sanitary Pattern Load	Fixed	0.0406
H63	Sanitary Pattern Load	Fixed	0.0110
H67	Sanitary Pattern Load	Fixed	0.0100
H69	Sanitary Pattern Load	Fixed	0.0100
H70	Sanitary Pattern Load	Fixed	0.0090
H72	Sanitary Pattern Load	Fixed	0.0090
I16	Sanitary Pattern Load	Fixed	0.0050
I17	Sanitary Pattern Load	Fixed	0.0050
I19	Sanitary Pattern Load	Fixed	0.0050
I20	Sanitary Pattern Load	Fixed	0.0050
I22	Sanitary Pattern Load	Fixed	0.0590
I25	Sanitary Pattern Load	Fixed	0.0789
I26	Sanitary Pattern Load	Fixed	0.0690
I29	Sanitary Pattern Load	Fixed	0.0690
I33	Sanitary Pattern Load	Fixed	0.0050
I34	Sanitary Pattern Load	Fixed	0.0050
J10	Sanitary Pattern Load	Fixed	0.0545
J14	Sanitary Pattern Load	Fixed	0.0290
J7	Sanitary Pattern Load	Fixed	0.0227

Appendix D: Table 5
Scenario 3: 2035 Enhanced PWWF Loadings

MH	Load Definition	Pattern	Base Flow (cfs)
K10	Sanitary Pattern Load	Fixed	0.0100
K14	Sanitary Pattern Load	Fixed	0.0205
K15	Sanitary Pattern Load	Fixed	0.0100
K20	Sanitary Pattern Load	Fixed	0.0205
K23	Sanitary Pattern Load	Fixed	0.0050
K24	Sanitary Pattern Load	Fixed	0.0050
K25	Sanitary Pattern Load	Fixed	0.0160
K36	Sanitary Pattern Load	Fixed	0.0595
K37	Sanitary Pattern Load	Fixed	0.0595
L11	Sanitary Pattern Load	Fixed	0.0160
L12	Sanitary Pattern Load	Fixed	0.0536
L19	Sanitary Pattern Load	Fixed	0.1600
L20	Sanitary Pattern Load	Fixed	0.0058
L22	Sanitary Pattern Load	Fixed	0.0255
L29	Sanitary Pattern Load	Fixed	0.0790
L33	Sanitary Pattern Load	Fixed	0.0790
L36	Sanitary Pattern Load	Fixed	0.1100
L38	Sanitary Pattern Load	Fixed	0.1200
L41	Sanitary Pattern Load	Fixed	0.0050
L46	Sanitary Pattern Load	Fixed	0.0128
L51	Sanitary Pattern Load	Fixed	0.0077
L55	Sanitary Pattern Load	Fixed	0.0425
L56	Sanitary Pattern Load	Fixed	0.0510
L60	Sanitary Pattern Load	Fixed	0.1028
L61	Sanitary Pattern Load	Fixed	0.0340
L62	Sanitary Pattern Load	Fixed	0.0140
L8	Sanitary Pattern Load	Fixed	0.0340
M14	Sanitary Pattern Load	Fixed	0.0200
M16	Sanitary Pattern Load	Fixed	0.0100
M23	Sanitary Pattern Load	Fixed	0.2800
M28	Sanitary Pattern Load	Fixed	0.0109
M30	Sanitary Pattern Load	Fixed	0.0109
M32	Sanitary Pattern Load	Fixed	0.0765
M32	Sanitary Pattern Load	Fixed	0.0123
M35	Sanitary Pattern Load	Fixed	0.0123
M36	Sanitary Pattern Load	Fixed	0.0287
M38	Sanitary Pattern Load	Fixed	0.5832
M38	Sanitary Pattern Load	Fixed	0.2463
N15	Sanitary Pattern Load	Fixed	0.0123

Appendix D: Table 5
Scenario 3: 2035 Enhanced PWWF Loadings

MH	Load Definition	Pattern	Base Flow (cfs)
N18	Sanitary Pattern Load	Fixed	0.0123
N30	Sanitary Pattern Load	Fixed	0.0109
N8	Sanitary Pattern Load	Fixed	0.1105
O16	Sanitary Pattern Load	Fixed	0.0208
O16	Sanitary Pattern Load	Fixed	0.0279
O20	Sanitary Pattern Load	Fixed	0.0057
O24	Sanitary Pattern Load	Fixed	0.0300
O27	Sanitary Pattern Load	Fixed	0.0009
O27	Sanitary Pattern Load	Fixed	0.0066
O28	Sanitary Pattern Load	Fixed	0.0065
O3	Sanitary Pattern Load	Fixed	0.0102
O30	Sanitary Pattern Load	Fixed	0.0164
O33	Sanitary Pattern Load	Fixed	0.0164
O36	Sanitary Pattern Load	Fixed	0.0164
O38	Sanitary Pattern Load	Fixed	0.0066
O41	Sanitary Pattern Load	Fixed	0.0066
O44	Sanitary Pattern Load	Fixed	0.0066
O46	Sanitary Pattern Load	Fixed	0.0070
O48	Sanitary Pattern Load	Fixed	0.0070
O50	Sanitary Pattern Load	Fixed	0.0070
O51	Sanitary Pattern Load	Fixed	0.0186
O53	Sanitary Pattern Load	Fixed	0.0100
O56	Sanitary Pattern Load	Fixed	0.0672
O58	Sanitary Pattern Load	Fixed	0.0093
O58	Sanitary Pattern Load	Fixed	0.0394
O60	Sanitary Pattern Load	Fixed	0.3413
O63	Sanitary Pattern Load	Fixed	0.0136
T23	Sanitary Pattern Load	Fixed	0.0107
T25	Sanitary Pattern Load	Fixed	0.0661

Abbreviations
PWWF: Peak Wet Weather Flow
CFS: Cubic Feet per Second

Appendix D: Table 6
Scenario 3: 2035 Enhanced PWWF Model Results

Label	Start Node	Rim (Start) (ft)	Invert (Start) (ft)	Stop Node	Rim (Stop) (ft)	Invert (Stop) (ft)	Length (ft)	Slope (Calculated) (ft/ft)	Diameter (in)	Number of Barrels	Manning's n	Flow (Middle) (cfs)	Velocity (ft/s)	Velocity (Maximum Calculated) (ft/s)	Depth (Middle) (ft)	Flow (Maximum) (cfs)	Capacity (Full Flow) (cfs)	Flow / Capacity (Design) (%)	Depth/Rise (%)	Depth (Maximum) / Rise (%)	Is Ever Surcharged?	Hydraulic Grade (Maximum) (ft)
A1+A2	A1	16.28	2	A2	15.82	1.92	79.9	0.001	12	1	0.013	1.9510	2.48	2.48	1.00	1.9510	1.1275	173.0	100.0	100.0	TRUE	4.37
A2+A5	A2	15.82	1.82	A5	14.53	1.57	244.2	0.001	12	1	0.013	1.9929	2.54	2.54	1.00	1.9929	1.1400	174.8	100.0	100.0	TRUE	4.23
A3+A2	A3	14.86	8.76	A2	15.82	2.12	287.5	0.023	6	1	0.013	0.0340	1.11	1.11	0.09	0.0340	0.8527	4.0	17.5	17.5	TRUE	8.85
A4+A3	A4	14	9.48	A3	14.86	8.86	312	0.002	6	1	0.013	0.0340	0.62	0.62	0.16	0.0340	0.2501	13.6	32.1	32.1	FALSE	9.66
A5+A8	A5	14.53	1.57	A8	13.85	1.53	124.3	0	15	1	0.013	2.0618	1.68	1.68	1.25	2.0618	1.1588	177.9	100.0	100.0	TRUE	3.58
A6+A5	A6	13.72	7.32	A5	14.53	5.81	286.8	0.005	6	1	0.013	0.0340	0.82	0.82	0.13	0.0340	0.4071	8.4	26.3	26.3	FALSE	7.45
A7+A6	A7	14	8.03	A6	13.72	7.42	306	0.002	6	1	0.013	0.0340	0.63	0.67	0.16	0.0342	0.2505	13.6	32.0	30.7	FALSE	8.21
A8+A9	A8	13.85	1.43	A9	12.82	1.16	61.2	0.004	15	1	0.013	2.0974	1.71	1.71	1.25	2.0974	4.2913	48.9	100.0	100.0	TRUE	3.57
A9+A10	A9	12.82	0.62	A10	11.42	0.57	181.2	0	15	1	0.013	2.0974	1.71	1.71	1.25	2.0974	1.0731	195.5	100.0	100.0	TRUE	3.56
A10+A15	A10	11.42	0.47	A15	9.93	0.03	299.3	0.001	15	1	0.013	2.3317	1.90	1.90	1.25	2.3318	2.4766	94.2	100.0	100.0	TRUE	3.48
A11+A10	A11	11.83	2.53	A10	11.42	1.12	417.5	0.003	6	1	0.013	0.2077	1.06	1.56	0.50	0.2077	0.3260	63.7	100.0	64.3	TRUE	3.48
A12+A11	A12	9.52	4.07	A11	11.83	2.63	485.1	0.003	6	1	0.013	0.1846	1.42	1.42	0.31	0.1847	0.3057	60.4	62.7	62.7	TRUE	4.39
A13+A12	A13	7.19	5.15	A12	9.52	4.07	412.1	0.003	6	1	0.013	0.1696	1.32	1.32	0.31	0.1697	0.2872	59.1	62.4	62.2	FALSE	5.46
A14+A13	A14	8.06	5.91	A13	7.19	5.19	288.3	0.002	6	1	0.013	0.1645	1.28	1.29	0.31	0.1647	0.2804	58.7	62.3	62.1	FALSE	6.22
A15+A16	A15	9.93	-0.03	A16	8.08	-0.17	435.1	0	15	1	0.013	2.3420	1.91	1.91	1.25	2.3420	1.1586	202.1	100.0	100.0	TRUE	3.19
A16+A21	A16	8.08	-0.22	A21	7.13	-0.42	296.3	0.001	15	1	0.013	2.5793	2.10	2.10	1.25	2.5793	1.6783	153.7	100.0	100.0	TRUE	2.72
A17+A31	A17	8.77	1.57	A31	8.39	1.1	235.4	0.002	6	1	0.013	0.0308	0.16	1.07	0.50	0.0371	0.2507	12.3	100.0	23.3	TRUE	2.72
A18+A16	A18	7.05	1.45	A16	8.08	0.73	441.8	0.002	6	1	0.013	0.1273	0.65	0.99	0.50	0.1273	0.2265	56.2	100.0	62.5	TRUE	3.03
A19+A18	A19	6.77	2.98	A18	7.05	1.45	213.5	0.007	6	1	0.013	0.0986	0.50	1.52	0.50	0.0993	0.4749	20.8	100.0	36.7	TRUE	3.20
A20+A19	A20	5.62	3.73	A19	6.77	3.05	339.8	0.002	6	1	0.013	0.0719	0.82	0.84	0.23	0.0727	0.2510	28.6	45.5	45.2	FALSE	3.96
A21+A23	A21	7.13	-0.52	A23	7.01	-0.8	155.1	0.002	15	1	0.013	2.6268	2.14	2.14	1.25	2.6268	2.7445	95.7	100.0	100.0	TRUE	2.34
A22+A29	A22	6.99	-0.92	A29	6.36	-1.21	369.1	0.001	18	1	0.013	2.7979	1.58	1.58	1.50	2.7979	2.9441	95.0	100.0	100.0	TRUE	2.28
A23+A22	A23	7.01	-0.8	A22	6.99	-0.92	13.8	0.009	15	1	0.013	2.7979	2.28	2.28	1.25	2.7979	6.0236	46.4	100.0	100.0	TRUE	2.29
A24+A23	A24	7.7	1.62	A23	7.01	0.37	250.6	0.005	6	1	0.013	0.1520	0.77	1.62	0.50	0.1523	0.3962	38.4	100.0	48.3	TRUE	2.29
A25+A24	A25	8.36	2.89	A24	7.7	1.62	253.1	0.005	6	1	0.013	0.1453	1.58	1.58	0.24	0.1453	0.3975	36.5	47.4	47.4	TRUE	3.13
A26+A25	A26	7.42	4.06	A25	8.36	2.89	234.1	0.005	6	1	0.013	0.1224	1.51	1.51	0.22	0.1224	0.3967	30.8	43.1	43.1	FALSE	4.28
A27+A26	A27	6.96	5	A26	7.42	4.06	310.9	0.003	6	1	0.013	0.0929	1.09	1.09	0.22	0.0932	0.3085	30.1	44.9	44.8	FALSE	5.26
A28+A29	A28	6.24	0.21	A29	6.36	-0.25	14.8	0.031	6	1	0.013	0.3347	1.70	3.23	0.50	0.3347	0.9884	33.9	100.0	42.4	TRUE	2.13
A29+T29	A29	6.36	-1.24	T29	4.98	-1.62	345.5	0.001	18	1	0.013	3.1325	1.77	1.77	1.50	3.1325	3.4837	89.9	100.0	100.0	TRUE	2.13
A30+A28	A30	6.07	1.27	A28	6.24	0.32	301	0.003	6	1	0.013	0.2959	1.51	1.66	0.50	0.2959	0.3152	93.9	100.0	85.3	TRUE	2.14
A31+A16	A31	8.39	1.1	A16	8.08	0.73	187.3	0.002	6	1	0.013	0.0523	0.27	0.69	0.50	0.0524	0.2494	21.0	100.0	40.9	TRUE	2.72
A32+A31	A32	8.62	1.83	A31	8.39	1.1	118.6	0.006	6	1	0.01	0.0174	0.09	0.86	0.50	0.0182	0.5722	3.0	100.0	10.9	TRUE	2.72
A33+A32	A33	9.45	2.67	A32	8.62	1.83	149.8	0.006	6	1	0.01	0.0136	0.07	0.08	0.47	0.0136	0.5462	2.5	93.6	79.2	TRUE	2.73
A34+A33	A34	9.45	2.93	A33	9.45	2.67	55.6	0.005	6	1	0.01	0.0021	0.53	0.53	0.00	0.0021	0.4986	0.4	0.9	0.9	FALSE	2.94
A35+A33	A35	10.05	3.68	A33	9.45	2.67	173.6	0.006	6	1	0.01	0.0114	0.83	0.84	0.05	0.0121	0.5563	2.1	10.8	11.2	FALSE	3.74
A36+A47	A36	10.05	4.57	A47	10.36	4.36	40.9	0.005	6	1	0.01	0.0028	0.54	0.58	0.01	0.0030	0.5228	0.5	1.0	2.7	FALSE	4.58
A37+A35	A37	10.51	4.46	A35	10.05	3.68	182.3	0.004	6	1	0.01	0.0086	0.74	0.74	0.04	0.0086	0.4771	1.8	7.9	7.9	FALSE	4.50
A38+A37	A38	11.26	6.07	A37	10.51	5.37	109	0.006	6	1	0.01	0.0018	0.53	0.53	0.00	0.0018	0.5845	0.3	0.9	0.9	FALSE	6.07
A39+A37	A39	10.5	4.77	A37	10.51	4.46	52.7	0.006	6	1	0.01	0.0068	0.67	0.67	0.03	0.0068	0.5594	1.2	5.5	5.5	FALSE	4.80
A40+A39	A40	10.8	5.24	A39	10.5	4.77	80.2	0.006	6	1	0.01	0.0068	0.67	0.67	0.03	0.0068	0.5583	1.2	5.4	5.4	FALSE	5.27
A41+A40	A41	11.38	5.82	A40	10.8	5.24	79.5	0.007	6	1	0.01	0.0036	0.66	0.63	0.03	0.0037	0.6231	0.6	5.8	4.3	FALSE	5.84
A42+A40	A42	11.13	6.17	A40	10.8	5.49	109.2	0.006	6	1	0.01	0.0018	0.53	0.53	0.00	0.0018	0.5757	0.3	0.9	0.9	FALSE	6.18
A43+A44	A43	12.15	6.64	A44	11.23	6.12	85.9	0.006	6	1	0.01	0.0005	0.47	0.47	0.00	0.0005	0.5675	0.1	0.6	0.6	FALSE	6.64
A44+A40	A44	11.23	6.12	A40	10.8	5.24	146.4	0.006	6	1	0.01	0.0014	0.53	0.53	0.00	0.0014	0.5656	0.2	0.8	0.8	FALSE	6.12
A45+A44	A45	11.14	6.83	A44	11.23	6.12	103.1	0.007	6	1	0.01	0.0009	0.52	0.52	0.00	0.0009	0.6052	0.1	0.7	0.7	FALSE	6.83
A46+A32	A46	9.92	3.47	A32	8.62	1.83	256.9	0.006	6	1	0.01	0.0039	0.55	0.55	0.01	0.0041	0.5828	0.7	1.1	1.2	TRUE	3.48
A47+A35	A47	10.36	4.36	A35	10.05	3.68	100	0.007	6	1	0.01	0.0028	0.54	0.58	0.01	0.0038	0.6014	0.5	1.0	2.3	FALSE	4.38
B2+A1	B2	16	2.46	A1	16.28	2.1	180.8	0.002	12	1	0.013	1.9510	2.48	2.48	1.00	1.9510	1.5899	122.7	100.0	100.0	TRUE	4.84
B3+B2	B3	18.59	2.64	B2	16	2.46	239.4	0.001	12	1	0.013	1.9037	2.42	2.42	1.00	1.9038	0.9769	194.9	100.0	100.0	TRUE	5.44
B4+B3	B4	20.32	3.42	B3	18.59	2.74	464.8	0.001	12	1	0.013	1.8548	2.36	2.36	1.00	1.8548	1.3627	136.1	100.0	100.0	TRUE	6.64
B5+B52	B5	18.61	4.51	B52	20.58	4.29	176.2	0.001	12	1	0.013	1.5936	2.03	2.03	1.00	1.5936	1.2589	126.6	100.0	100.0	TRUE	7.55
B6+B5	B6	18.29	5.6	B5	18.61	4.56	158.4	0.007	12	1	0.013	1.5839	2.02	2.02	1.00	1.5839	2.8864	54.9	100.0	100.0	TRUE	7.78
B7+B6	B7	18.66	5.76	B6	18.29	5.6	380.1	0	12	1	0.013	1.3735	1.75	1.75	1.00	1.3735	0.7309	187.9	100.0	100.0	TRUE	8.27
B8+B7	B8	20.55	6.5	B7	18.66	5.81	371	0.002	12	1	0.013	1.3407	1.71	1.71	1.00	1.3407	1.5364	87.3	100.0	100.0	TRUE	8.73
B9+B8	B9	18.41	7.16	B8	20.55	6.55	350.9	0.002	12	1	0.013	1.2880	1.64	1.64	1.00	1.2880	1.4854	86.7	100.0	100.0	TRUE	9.11
B10+B9	B10	16.86	7.61	B9	18.41	7.16	289.7	0.002	12	1	0.013	1.1890	1.51	1.51	1.00	1.1890	1.4040	84.7	100.0	100.0	TRUE	9.35
B11+B10	B11	16.46	8.71	B10	16.86	7.66	201.4	0.005	12	1	0.013	1.0558	1.34	1.34	1.00	1.0558	2.5723	41.0	100.0	100.0	TRUE	9.42
B12+B11	B12	15.83	9.18	B11	16.46	8.76	277	0.002	10	1	0.013	0.9538	1.94	1.94	0.71	0.9538	0.8530	111.8	84.7	84.6	FALSE	9.94
B13+B12	B13	15.33	9.53	B12	15.83	9.18	262.7	0.001	12	1	0.013	0.8518	1.66	1.66	0.62	0.8518	1.3003	65.5	62.2	62.2	FALSE	10.15
B14+B13	B14	15.47	10.07	B13	15.33	9.53	253.1	0.002	12	1	0.013	0.7498	1.97	1.97	0.49	0.7499	1.6455	45.6	48.8	48.8	FALSE	10.56
B15+B49	B15	20.29	12.19	B49	17.11	11.21	330.9	0.003	8	1	0.013	0.7498	2.15	2.15	0.67	0.7502	0.6575	114.0	100.0	100.0	TRUE	13.12

Appendix D: Table 6
Scenario 3: 2035 Enhanced PWWF Model Results

Label	Start Node	Rim (Start) (ft)	Invert (Start) (ft)	Stop Node	Rim (Stop) (ft)	Invert (Stop) (ft)	Length (ft)	Slope (Calculated) (ft/ft)	Diameter (in)	Number of Barrels	Manning's n	Flow (Middle) (cfs)	Velocity (ft/s)	Velocity (Maximum Calculated) (ft/s)	Depth (Middle) (ft)	Flow (Maximum) (cfs)	Capacity (Full Flow) (cfs)	Flow / Capacity (Design) (%)	Depth/Rise (%)	Depth (Maximum) / Rise (%)	Is Ever Surcharged?	Hydraulic Grade (Maximum) (ft)
B16+B15	B16	20.39	13.24	B15	20.29	12.19	327.3	0.003	8	1	0.013	0.7498	2.15	2.15	0.67	0.7500	0.6844	109.6	100.0	100.0	TRUE	14.41
B17+B13	B17	19.31	13.31	B13	15.33	9.73	501.1	0.007	6	1	0.013	0.1020	1.62	1.57	0.18	0.1020	0.4742	21.5	35.7	36.6	FALSE	13.50
B18+B17	B18	22.26	14.3	B17	19.31	13.31	497.2	0.002	6	1	0.013	0.1020	0.97	0.97	0.26	0.1020	0.2504	40.7	52.7	52.7	FALSE	14.56
B19+B12	B19	20.74	14.44	B12	15.83	9.88	499.6	0.009	6	1	0.013	0.1020	1.70	1.69	0.17	0.1021	0.5360	19.0	34.5	34.6	FALSE	14.61
B20+B19	B20	23.22	19.12	B19	20.74	14.44	585	0.008	6	1	0.013	0.1020	1.62	1.62	0.18	0.1020	0.5019	20.3	35.7	35.7	FALSE	19.30
B21+B11	B21	18.68	13.54	B11	16.46	9.36	399.6	0.01	6	1	0.013	0.1020	1.78	1.80	0.17	0.1021	0.5739	17.8	33.2	33.0	FALSE	13.71
B22+B21	B22	24.77	18.67	B21	18.68	13.58	399.5	0.013	6	1	0.013	0.1020	1.80	1.80	0.16	0.1020	0.6333	16.1	31.6	31.6	FALSE	18.83
B23+B22	B23	28	23.55	B22	24.77	18.67	380.2	0.013	6	1	0.013	0.1020	1.80	1.80	0.16	0.1020	0.6356	16.0	31.5	31.5	FALSE	23.71
B24+B10	B24	22.52	15.82	B10	16.86	9.61	492.5	0.013	6	1	0.013	0.1332	2.05	2.05	0.18	0.1332	0.6300	21.1	35.3	35.3	FALSE	16.00
B25+B24	B25	27.09	18.84	B24	22.52	15.82	406.2	0.007	6	1	0.013	0.1332	1.77	1.77	0.20	0.1332	0.4838	27.5	40.7	40.7	FALSE	19.05
B26+B25	B26	27.62	21.62	B25	27.09	18.84	401.5	0.007	6	1	0.013	0.0666	1.24	1.24	0.16	0.0666	0.4669	14.3	31.7	31.7	FALSE	21.79
B27+B25	B27	25.46	19.69	B25	27.09	18.99	318	0.002	6	1	0.013	0.0666	0.82	0.84	0.22	0.0673	0.2633	25.3	43.1	42.8	FALSE	19.91
B28+B27	B28	24.83	20.93	B27	25.46	19.69	202	0.006	6	1	0.013	0.0666	1.20	1.27	0.16	0.0681	0.4397	15.1	32.5	31.8	FALSE	21.09
B29+B9	B29	19.43	13.68	B9	18.41	7.61	211.2	0.029	6	1	0.013	0.0990	1.63	1.63	0.13	0.0996	0.9513	10.4	25.3	25.3	TRUE	13.81
B30+B29	B30	23.55	14.31	B29	19.43	13.83	243.2	0.002	6	1	0.013	0.0330	0.66	0.67	0.15	0.0344	0.2493	13.2	30.3	30.6	FALSE	14.49
B31+B29	B31	21.81	15.76	B29	19.43	13.68	256.8	0.008	6	1	0.013	0.0660	1.31	1.31	0.15	0.0662	0.5049	13.1	30.3	30.3	FALSE	15.92
B32+B31	B32	26.3	16.37	B31	21.81	15.86	253.7	0.002	6	1	0.013	0.0330	0.63	0.65	0.16	0.0338	0.2515	13.1	31.1	31.1	FALSE	16.54
B33+B31	B33	25.73	19.18	B31	21.81	15.76	279.8	0.012	6	1	0.013	0.0330	1.16	1.13	0.10	0.0332	0.6204	5.3	19.9	20.6	FALSE	19.28
B34+B8	B34	24.69	15.24	B8	20.55	7.1	251.1	0.032	6	1	0.013	0.0527	1.27	1.27	0.10	0.0535	1.0103	5.2	20.1	20.2	TRUE	15.35
B35+B34	B35	26.3	20	B34	24.69	15.24	363.8	0.013	6	1	0.013	0.0527	1.37	1.38	0.12	0.0530	0.6418	8.2	24.9	24.6	FALSE	20.13
B36+B35	B36	24.45	20.41	B35	26.3	20	207	0.002	6	1	0.013	0.0527	0.70	0.73	0.20	0.0548	0.2497	21.1	40.9	40.9	FALSE	20.63
B37+B6	B37	14.71	7.31	B6	18.29	6.74	262.3	0.002	6	1	0.013	0.2104	1.07	1.10	0.50	0.2154	0.2615	80.4	100.0	100.0	TRUE	8.23
B38+B50	B38	12.43	7.93	B50	13.27	7.77	38.9	0.004	6	1	0.013	0.1472	0.75	1.43	0.50	0.1472	0.3599	40.9	100.0	51.8	TRUE	8.42
B39+B38	B39	13	8.56	B38	12.43	8.03	265.5	0.002	6	1	0.013	0.1112	1.01	1.01	0.27	0.1112	0.2507	44.4	54.8	54.8	FALSE	8.84
B40+B39	B40	13	9.17	B39	13	8.56	306.1	0.002	6	1	0.013	0.1112	1.01	1.01	0.27	0.1114	0.2505	44.4	54.8	54.9	FALSE	9.44
B41+B38	B41	11.68	8.37	B38	12.43	8.03	170	0.002	8	1	0.013	0.0360	0.36	0.63	0.22	0.0366	0.5404	6.7	32.8	22.4	FALSE	8.52
B42+B41	B42	11.68	8.7	B41	11.68	8.37	166.3	0.002	6	1	0.013	0.0360	0.62	0.62	0.17	0.0360	0.2499	14.4	33.8	33.8	FALSE	8.89
B43+B37	B43	15.97	8.74	B37	14.71	8.01	363.4	0.002	6	1	0.013	0.0360	0.62	0.62	0.17	0.0360	0.2515	14.3	33.6	33.6	FALSE	8.93
B44+B2	B44	15.76	9.16	B2	16	2.46	296.4	0.023	6	1	0.013	0.0343	1.11	1.11	0.09	0.0343	0.8436	4.1	17.7	17.7	TRUE	9.25
B45+B44	B45	14.05	9.86	B44	15.76	9.26	301	0.002	6	1	0.013	0.0343	0.62	0.85	0.16	0.0369	0.2505	13.7	32.3	27.3	FALSE	10.04
B46+B5	B46	19	13.75	B5	18.61	12.56	16.9	0.07	6	1	0.013	0.0097	0.63	0.63	0.02	0.0104	1.4875	0.7	3.1	3.3	FALSE	13.78
B47+B46	B47	20.58	14.06	B46	19	13.75	157.8	0.002	6	1	0.013	0.0097	0.80	0.79	0.05	0.0112	0.2486	3.9	10.0	9.2	FALSE	14.12
B48+B7	B48	22.9	7.11	B7	18.66	6.21	450.2	0.002	6	1	0.013	0.0328	0.17	0.63	0.50	0.0328	0.2509	13.1	100.0	30.9	TRUE	8.28
B49+B14	B49	17.11	11.16	B14	15.47	10.07	327.7	0.003	8	1	0.013	0.7498	2.24	2.24	0.61	0.7499	0.6969	107.6	91.7	91.7	TRUE	11.87
B50+B37	B50	13.27	7.77	B37	14.71	7.31	204.7	0.002	6	1	0.013	0.1744	0.89	0.92	0.50	0.1798	0.2659	65.6	100.0	100.0	TRUE	8.42
B51+B50	B51	14.15	9.95	B50	13.27	7.97	281.7	0.007	6	1	0.013	0.0260	0.68	0.68	0.01	0.0261	0.4704	5.5	2.0	2.0	FALSE	10.05
B52+B4	B52	20.58	4.29	B4	20.32	3.57	359.8	0.002	12	1	0.013	1.5936	2.03	2.03	1.00	1.5936	1.5936	100.0	100.0	100.0	TRUE	7.28
C1+B16	C1	23.15	14.77	B16	20.39	13.24	401.9	0.004	8	1	0.013	0.7498	2.15	2.15	0.67	0.7500	0.7455	100.6	100.0	100.0	TRUE	16.01
C2+C1	C2	21.54	15.19	C1	23.15	14.77	204.3	0.002	8	1	0.013	0.5783	1.66	1.66	0.67	0.5784	0.5479	105.5	100.0	100.0	TRUE	16.45
C3+C2	C3	22.97	17.37	C2	21.54	15.24	397.8	0.005	6	1	0.013	0.5066	2.58	2.58	0.50	0.5066	0.4106	123.4	100.0	100.0	TRUE	20.08
C4+C3	C4	25.03	19.53	C3	22.97	17.42	436	0.005	6	1	0.013	0.4501	2.29	2.29	0.50	0.4500	0.3903	115.3	100.0	100.0	TRUE	23.25
C5+C4	C5	25.49	20.95	C4	25.03	19.53	327.7	0.004	6	1	0.013	0.4501	2.29	2.29	0.50	0.4501	0.3693	121.9	100.0	100.0	TRUE	25.62
C6+C5	C6	25.82	21.42	C5	25.49	20.99	87.5	0.005	6	1	0.013	0.3821	1.95	1.95	0.50	0.3821	0.3934	97.1	100.0	100.0	TRUE	26.02
C7+C6	C7	34.43	23.65	C6	25.82	21.42	447.8	0.005	6	1	0.013	0.3822	1.95	1.95	0.50	0.3822	0.3960	96.5	100.0	100.0	TRUE	28.41
C8+C7	C8	29.93	24.33	C7	34.43	23.65	400.9	0.002	6	1	0.013	0.2797	1.42	1.42	0.50	0.2797	0.2311	121.0	100.0	100.0	TRUE	29.57
C9+C8	C9	30	24.55	C8	29.93	24.38	84.1	0.002	6	1	0.013	0.2665	1.36	1.36	0.50	0.2665	0.2522	105.6	100.0	100.0	TRUE	29.72
C10+C9	C10	31.71	25.71	C9	30	24.55	300.8	0.004	6	1	0.013	0.2665	1.36	1.36	0.50	0.2665	0.3484	76.5	100.0	100.0	TRUE	30.50
C11+C10	C11	41.2	28.9	C10	31.71	25.76	508	0.006	6	1	0.013	0.1754	0.89	1.91	0.50	0.1760	0.4411	39.8	100.0	47.5	TRUE	31.11
C12+C1	C12	23.43	14.9	C1	23.15	14.77	264.8	0	6	1	0.01	0.1716	0.87	0.87	0.50	0.1716	0.1616	106.2	100.0	100.0	TRUE	16.18
C13+C12	C13	23	15.99	C12	23.43	15.03	480.7	0.002	6	1	0.013	0.0472	0.24	0.24	0.50	0.0472	0.2507	18.8	100.0	100.0	TRUE	16.24
C14+C12	C14	24.3	15.8	C12	23.43	14.9	282.1	0.003	6	1	0.01	0.1244	0.63	0.63	0.50	0.1244	0.4120	30.2	100.0	100.0	TRUE	16.21
C15+C14	C15	22.5	18.05	C14	24.3	16.1	565.3	0.003	6	1	0.013	0.0572	0.89	0.89	0.18	0.0572	0.3295	17.4	36.1	36.1	FALSE	18.25
C16+C14	C16	26.5	17.4	C14	24.3	15.8	272.9	0.006	6	1	0.01	0.0672	1.41	1.42	0.11	0.0675	0.5585	12.0	22.9	29.0	FALSE	17.55
C17+C16	C17	27.07	19.62	C16	26.5	17.4	332.8	0.007	6	1	0.013	0.0572	1.13	1.13	0.15	0.0572	0.4582	12.5	30.4	30.4	FALSE	19.77
C18+C17	C18	28	20.36	C17	27.07	19.62	369.6	0.002	6	1	0.013	0.0572	0.73	0.74	0.21	0.0575	0.2510	22.8	41.9	41.8	FALSE	20.58
C19+C2	C19	21.59	15.49	C2	21.54	15.24	264.1	0.001	6	1	0.013	0.0716	0.36	0.39	0.50	0.0769	0.1726	41.5	100.0	100.0	TRUE	16.49
C20+C19	C20	23.19	17.64	C19	21.59	15.54	198.5	0.011	6	1	0.013	0.0330	1.16	1.16	0.10	0.0330	0.5771	5.7	20.2	20.2	TRUE	17.74
C21+C19	C21	23.94	17.74	C19	21.59	15.54	284.2	0.008	6	1	0.013	0.0330	0.52	1.03	0.18	0.0332	0.4937	6.7	35.7	22.1	TRUE	17.90
C22+C21	C22	24.43	18.08	C21	23.94	17.79	91.8	0.003	6	1	0.013	0.0330	0.75	0.75	0.14	0.0330	0.3154	10.5	27.5	27.5	FALSE	18.24
C23+C3	C23	23.27	18.07	C3	22.97	17.42	400.5	0.002	6	1	0.013	0.0566	0.29	0.68	0.50	0.0568	0.2260	25.0	100.0	44.1	TRUE	20.13
C24+C23	C24	25.53	18.72	C23	23.27	18.42	151.2	0.002	6	1	0.013	0.0283	0.14	0.65	0.50	0.0283	0.2500	11.3	100.0	27.2	TRUE	20.13

Appendix D: Table 6
Scenario 3: 2035 Enhanced PWWF Model Results

Label	Start Node	Rim (Start) (ft)	Invert (Start) (ft)	Stop Node	Rim (Stop) (ft)	Invert (Stop) (ft)	Length (ft)	Slope (Calculated) (ft/ft)	Diameter (in)	Number of Barrels	Manning's n	Flow (Middle) (cfs)	Velocity (ft/s)	Velocity (Maximum Calculated) (ft/s)	Depth (Middle) (ft)	Flow (Maximum) (cfs)	Capacity (Full Flow) (cfs)	Flow / Capacity (Design) (%)	Depth/Rise (%)	Depth (Maximum) / Rise (%)	Is Ever Surcharged?	Hydraulic Grade (Maximum) (ft)
C25+C23	C25	25.08	19.73	C23	23.27	18.17	303.1	0.005	6	1	0.013	0.0283	0.14	0.61	0.50	0.0284	0.4025	7.0	100.0	28.6	TRUE	20.13
C26+D9	C26	29.07	24.47	D9	27.55	21.3	435.8	0.007	6	1	0.013	0.2000	2.06	2.06	0.25	0.2000	0.4785	41.8	49.5	49.5	FALSE	24.72
C27+C5	C27	25	21.41	C5	25.49	20.97	221.6	0.002	6	1	0.013	0.0680	0.35	0.83	0.50	0.0691	0.2500	27.2	100.0	44.0	TRUE	25.65
C28+C27	C28	27.89	23.34	C27	25	21.41	43	0.045	6	1	0.013	0.0195	0.10	0.64	0.50	0.0195	1.1891	1.6	100.0	1.9	TRUE	25.65
C29+C28	C29	32.14	23.94	C28	27.89	23.34	298.4	0.002	6	1	0.013	0.0195	0.10	0.76	0.50	0.0195	0.2516	7.8	100.0	18.8	TRUE	25.65
C30+C27	C30	28.53	23.63	C27	25	21.41	162.9	0.014	6	1	0.013	0.0485	0.25	1.33	0.50	0.0485	0.6551	7.4	100.0	24.1	TRUE	25.65
C31+C30	C31	29.09	23.76	C30	28.53	23.63	67.1	0.002	6	1	0.013	0.0195	0.10	0.84	0.50	0.0195	0.2469	7.9	100.0	17.5	TRUE	25.65
C32+C30	C32	30.12	24.36	C30	28.53	23.63	146.7	0.005	6	1	0.013	0.0290	0.15	1.12	0.50	0.0313	0.3958	7.3	100.0	18.4	TRUE	25.65
C33+C32	C33	31.26	24.53	C32	30.12	24.39	70.7	0.002	6	1	0.013	0.0195	0.10	0.87	0.50	0.0200	0.2497	7.8	100.0	17.4	TRUE	25.65
C34+C32	C34	30	24.5	C32	30.12	24.39	56.9	0.002	6	1	0.013	0.0095	0.05	0.82	0.50	0.0095	0.2468	3.8	100.0	10.9	TRUE	25.65
C35+C7	C35	31.98	25.2	C7	34.43	23.65	403.4	0.004	6	1	0.013	0.1025	0.52	1.25	0.50	0.1027	0.3478	29.5	100.0	43.5	TRUE	28.41
C36+C35	C36	32.58	25.7	C35	31.98	25.2	92	0.005	6	1	0.013	0.1025	0.52	1.41	0.50	0.1025	0.4137	24.8	100.0	39.7	TRUE	28.41
C37+C36	C37	34.3	26.67	C36	32.58	25.73	153.2	0.006	6	1	0.013	0.0567	0.29	1.10	0.50	0.0567	0.4394	12.9	100.0	30.9	TRUE	28.41
C39+C37	C39	33.37	27.03	C37	34.3	26.7	164.1	0.002	6	1	0.013	0.0458	0.23	0.69	0.50	0.0478	0.2516	18.2	100.0	38.1	TRUE	28.41
C40+C36	C40	32.93	26.9	C36	32.58	25.83	257.5	0.004	6	1	0.013	0.0459	0.23	0.23	0.50	0.0459	0.3617	12.7	100.0	100.0	TRUE	28.41
C41+C40	C41	33.56	27.26	C40	32.93	26.93	191.4	0.002	6	1	0.013	0.0459	0.23	0.23	0.50	0.0459	0.2330	19.7	100.0	100.0	TRUE	28.41
C42+C41	C42	34.21	27.91	C41	33.56	27.31	300.1	0.002	6	1	0.013	0.0458	0.23	0.65	0.50	0.0458	0.2509	18.3	100.0	39.0	TRUE	28.41
C43+C8	C43	30.16	24.53	C8	29.93	24.33	101	0.002	6	1	0.013	0.0132	0.07	0.82	0.50	0.0132	0.2496	5.3	100.0	13.6	TRUE	29.57
C44+C10	C44	32.45	26.73	C10	31.71	25.76	154.5	0.006	6	1	0.013	0.0911	0.46	1.50	0.50	0.0914	0.4445	20.5	100.0	34.8	TRUE	30.50
C45+C44	C45	33.66	27.91	C44	32.45	26.77	166.1	0.007	6	1	0.013	0.0911	0.46	1.46	0.50	0.0911	0.4648	19.6	100.0	35.5	TRUE	30.50
C46+C45	C46	36.3	29.85	C45	33.66	27.91	255.5	0.008	6	1	0.013	0.0911	0.46	0.46	0.50	0.0911	0.4889	18.6	100.0	100.0	TRUE	30.50
C47+C46	C47	35.05	30.62	C46	36.3	30	309.1	0.002	6	1	0.013	0.0911	0.92	0.92	0.25	0.0911	0.2513	36.3	50.1	50.1	FALSE	30.90
C48+C11	C48	43.08	29.1	C11	41.2	28.98	178.7	0.001	6	1	0.013	0.1754	0.89	1.03	0.50	0.1755	0.1454	120.6	100.0	80.6	TRUE	31.27
C49+C48	C49	41.32	29.82	C48	43.08	29.1	247.7	0.003	6	1	0.013	0.1754	0.89	1.39	0.50	0.1755	0.3025	58.0	100.0	61.4	TRUE	31.52
C50+C49	C50	40.78	30.68	C49	41.32	29.82	361.2	0.002	6	1	0.013	0.1755	0.89	1.28	0.50	0.1755	0.2738	64.1	100.0	65.7	TRUE	31.93
C51+C50	C51	38.55	32.75	C50	40.78	30.68	556.1	0.004	6	1	0.013	0.1755	0.96	1.53	0.44	0.1755	0.3423	51.3	87.3	56.5	TRUE	33.04
D1+E4	D1	17.33	6.83	E4	16.28	6.08	354.5	0.002	12	1	0.013	2.7416	3.49	3.49	1.00	2.7416	1.6388	167.3	100.0	100.0	TRUE	11.99
D2+D1	D2	17.54	6.91	D1	17.33	6.88	53.3	0.001	12	1	0.013	2.6574	3.38	3.38	1.00	2.6574	0.8455	314.3	100.0	100.0	TRUE	12.19
D3+D2	D3	18.91	7.46	D2	17.54	6.99	363.3	0.001	12	1	0.013	2.6573	3.38	3.38	1.00	2.6573	1.2815	207.4	100.0	100.0	TRUE	14.19
D4+D3	D4	19	8.15	D3	18.91	7.56	296.1	0.002	8	1	0.013	0.8778	2.51	2.52	0.67	0.8797	0.5393	162.8	100.0	100.0	TRUE	15.84
D5+D4	D5	19	8.29	D4	19	8.15	69.6	0.002	8	1	0.013	0.8780	2.51	2.52	0.67	0.8800	0.5418	162.1	100.0	100.0	TRUE	16.15
D6+D5	D6	19.87	13.77	D5	19	8.29	246.1	0.022	8	1	0.013	0.5905	1.69	1.69	0.67	0.5905	1.8033	32.7	100.0	100.0	TRUE	16.16
D7+D6	D7	19.85	15.5	D6	19.87	13.82	398	0.004	6	1	0.013	0.5905	3.01	3.01	0.50	0.5905	0.3646	162.0	100.0	100.0	TRUE	19.22
D8+D7	D8	21.51	16.11	D7	19.85	15.5	157.8	0.004	6	1	0.013	0.2105	1.07	1.07	0.50	0.2105	0.3488	60.4	100.0	100.0	TRUE	19.22
D9+D8	D9	27.55	21.3	D8	21.51	16.11	496	0.01	6	1	0.013	0.2000	2.27	2.51	0.23	0.2003	0.5739	34.8	45.9	42.6	TRUE	21.52
D10+D3	D10	21.78	10.58	D3	18.91	7.81	489.1	0.006	10	1	0.013	1.7797	3.26	3.26	0.83	1.7797	1.6487	107.9	100.0	100.0	TRUE	17.45
D16+D20	D16	23	13.91	D20	22	13	453.9	0.002	10	1	0.013	0.3131	0.57	0.57	0.83	0.3131	0.9810	31.9	100.0	100.0	TRUE	18.13
D17+D16	D17	23.1	14.18	D16	23	13.91	136.3	0.002	10	1	0.013	0.3131	0.57	0.57	0.83	0.3131	0.9751	32.1	100.0	100.0	TRUE	18.13
D19+D10	D19	21.54	12.39	D10	21.78	10.63	48.1	0.037	10	1	0.013	1.7797	3.26	3.26	0.83	1.7797	4.1895	42.5	100.0	100.0	TRUE	17.71
D20+D19	D20	22	13	D19	21.54	12.89	52.7	0.002	6	1	0.013	0.4548	2.32	2.32	0.50	0.4548	0.2564	177.4	100.0	100.0	TRUE	18.06
D21+D19	D21	20.93	15.08	D19	21.54	12.84	390.8	0.006	8	1	0.013	1.3249	3.79	3.79	0.67	1.3249	0.9148	144.8	100.0	100.0	TRUE	22.59
D22+D21	D22	22.23	15.84	D21	20.93	15.13	149	0.005	8	1	0.013	1.3249	3.79	3.79	0.67	1.3249	0.8341	158.8	100.0	100.0	TRUE	24.42
D23+D22	D23	22.62	16.12	D22	22.23	15.88	73.3	0.003	8	1	0.013	0.6630	1.90	1.90	0.67	0.6630	0.6914	95.9	100.0	100.0	TRUE	24.57
D24+D23	D24	24.01	17.46	D23	22.62	16.12	349.8	0.004	8	1	0.013	0.6630	1.90	1.90	0.67	0.6630	0.7478	88.7	100.0	100.0	TRUE	25.64
D25+D24	D25	24.45	18.45	D24	24.01	17.56	300.9	0.003	6	1	0.013	0.3230	1.64	1.64	0.50	0.3230	0.3052	105.8	100.0	100.0	TRUE	25.64
D26+D25	D26	24.79	19.26	D25	24.45	18.5	156.7	0.005	6	1	0.013	0.3230	1.64	1.64	0.50	0.3230	0.3907	82.7	100.0	100.0	TRUE	25.64
D27+D26	D27	26.68	20.86	D26	24.79	19.28	392.4	0.004	6	1	0.013	0.1700	0.87	1.56	0.50	0.1701	0.3560	47.7	100.0	54.2	TRUE	25.64
D28+D27	D28	27.45	21.65	D27	26.68	20.9	81.1	0.009	6	1	0.013	0.1700	0.87	2.12	0.50	0.1700	0.5394	31.5	100.0	42.7	TRUE	25.64
D29+C37	D29	34.53	27.53	C37	34.3	26.7	129.5	0.006	6	1	0.013	0.0000	0.00	0.00	0.50	0.0000	0.4492	0.0	100.0	0.0	TRUE	28.41
D29+D28	D29	34.53	27.53	D28	27.45	21.67	465.5	0.013	6	1	0.013	0.0000	0.00	0.00	0.50	0.0000	0.6295	0.0	100.0	0.0	TRUE	27.53
D30+D26	D30	26.26	21.18	D26	24.79	19.29	436.5	0.004	6	1	0.013	0.1530	0.78	1.54	0.50	0.1533	0.3692	41.4	100.0	50.6	TRUE	25.64
D31+D30	D31	26.68	21.76	D30	26.26	21.46	152.5	0.002	6	1	0.013	0.0765	0.39	0.85	0.50	0.0765	0.2488	30.7	100.0	46.6	TRUE	25.64
D32+D30	D32	26.44	21.71	D30	26.26	21.46	126.2	0.002	6	1	0.013	0.0765	0.39	0.92	0.50	0.0790	0.2497	30.6	100.0	45.2	TRUE	25.64
D33+D24	D33	28.14	19.34	D24	24.01	17.51	450.4	0.004	8	1	0.013	0.1686	0.48	1.68	0.67	0.1703	0.7702	21.9	100.0	33.2	TRUE	25.66
D34+D33	D34	34.45	22.3	D33	28.14	19.34	293.3	0.01	8	1	0.013	0.1686	0.48	1.40	0.67	0.1803	1.2139	13.9	100.0	0.0	TRUE	25.66
D35+D34	D35	33.56	22.51	D34	34.45	22.3	177.8	0.001	6	1	0.013	0.1686	0.86	1.09	0.50	0.1686	0.1928	87.4	100.0	73.7	TRUE	25.78
D36+D35	D36	31.3	25.05	D35	33.56	22.56	250.8	0.01	6	1	0.013	0.0200	0.10	0.10	0.50	0.0200	0.5591	3.6	100.0	100.0	TRUE	25.78
D37+D36	D37	31.11	26.01	D36	31.3	25.05	367.8	0.003	6	1	0.013	0.0200	0.31	0.83	0.18	0.0202	0.2866	7.0	36.5	18.1	TRUE	26.13
D38+D37	D38	32	26.64	D37	31.11	26.16	237.7	0.002	6	1	0.013	0.0100	0.76	0.63	0.04	0.0164	0.2521	4.0	8.6	1.9	FALSE	26.70
D39+D38	D39	32.14	26.81	D38	32	26.64	84.1	0.002	6	1	0.013	0.0100	0.80	0.80	0.05	0.0100	0.2522	4.0	10.0	10.1	FALSE	26.87
D40+D37	D40	32	26.6	D37	31.11	26.21	193.6	0.002	6	1	0.013	0.0100	0.79	0.79	0.05	0.0101	0.2518	4.0	9.5	9.7	FALSE	26.66

Appendix D: Table 6
Scenario 3: 2035 Enhanced PWWF Model Results

Label	Start Node	Rim (Start) (ft)	Invert (Start) (ft)	Stop Node	Rim (Stop) (ft)	Invert (Stop) (ft)	Length (ft)	Slope (Calculated) (ft/ft)	Diameter (in)	Number of Barrels	Manning's n	Flow (Middle) (cfs)	Velocity (ft/s)	Velocity (Maximum Calculated) (ft/s)	Depth (Middle) (ft)	Flow (Maximum) (cfs)	Capacity (Full Flow) (cfs)	Flow / Capacity (Design) (%)	Depth/Rise (%)	Depth (Maximum) / Rise (%)	Is Ever Surcharged?	Hydraulic Grade (Maximum) (ft)
D41+D24	D41	31.35	25.75	D24	24.01	17.51	190.6	0.043	6	1	0.013	0.1714	0.87	0.87	0.50	0.1714	1.1666	14.7	100.0	100.0	TRUE	25.90
D42+D41	D42	30	26	D41	31.35	25.8	100.2	0.002	6	1	0.013	0.0214	0.72	0.72	0.10	0.0214	0.2506	8.5	20.8	20.8	FALSE	26.11
D43+D41	D43	32	26.89	D41	31.35	25.85	517.4	0.002	6	1	0.013	0.1500	1.14	1.14	0.32	0.1500	0.2516	59.6	63.7	63.7	FALSE	27.21
D44+D43	D44	32	27.12	D43	32	26.89	113	0.002	6	1	0.013	0.1500	1.21	1.21	0.30	0.1500	0.2531	59.3	60.3	60.3	FALSE	27.44
D47+D22	D47	20.69	17.09	D22	22.23	15.86	299.2	0.004	8	1	0.013	0.3500	1.00	1.00	0.67	0.3500	0.7748	45.2	100.0	100.0	TRUE	24.42
D48+D47	D48	22.05	18.7	D47	20.69	17.09	401	0.004	6	1	0.013	0.3500	1.78	1.78	0.50	0.3500	0.3555	98.4	100.0	100.0	TRUE	24.42
D49+D48	D49	27.59	21.99	D48	22.05	18.7	399.7	0.008	6	1	0.013	0.3500	1.78	2.59	0.50	0.3500	0.5090	68.8	100.0	65.0	TRUE	24.43
D50+D49	D50	31.35	22.83	D49	27.59	21.99	421.6	0.002	6	1	0.013	0.3500	1.78	1.78	0.50	0.3500	0.2504	139.8	100.0	100.0	TRUE	24.43
D51+D7	D51	23.54	18.66	D7	19.85	15.5	457.8	0.007	6	1	0.013	0.3800	1.93	1.93	0.50	0.3800	0.4661	81.5	100.0	100.0	TRUE	21.64
D52+D51	D52	27.31	20.31	D51	23.54	18.69	267	0.006	6	1	0.013	0.2400	1.22	2.18	0.50	0.2408	0.4370	54.9	100.0	55.0	TRUE	22.19
D53+D52	D53	29.62	21.22	D52	27.31	20.31	247.8	0.004	6	1	0.013	0.1200	0.61	1.32	0.50	0.1203	0.3400	35.3	100.0	47.1	TRUE	22.28
D54+D53	D54	29.68	21.68	D53	29.62	21.27	74.9	0.005	6	1	0.013	0.1200	0.61	1.52	0.50	0.1202	0.4152	28.9	100.0	42.3	TRUE	22.28
D55+D54	D55	30.37	22.39	D54	29.68	21.88	252.3	0.002	6	1	0.013	0.1200	1.05	1.05	0.28	0.1207	0.2523	47.6	56.6	56.6	FALSE	22.67
D56+D35	D56	35.05	23.65	D35	33.56	22.51	286.3	0.004	6	1	0.013	0.1486	0.76	1.51	0.50	0.1490	0.3540	42.0	100.0	50.2	TRUE	25.99
D57+D56	D57	37.86	26.21	D56	35.05	23.7	197.1	0.013	6	1	0.013	0.1486	0.76	1.34	0.50	0.1493	0.6331	23.5	100.0	3.5	TRUE	26.48
D58+D57	D58	37.67	27.07	D57	37.86	26.36	158	0.004	6	1	0.013	0.1486	1.55	1.55	0.25	0.1486	0.3761	39.5	49.1	49.1	FALSE	27.32
D59+D58	D59	37.27	28.53	D58	37.67	27.12	151.4	0.009	6	1	0.013	0.1486	2.02	2.02	0.20	0.1486	0.5414	27.4	40.1	40.1	FALSE	28.74
D60+D59	D60	37.44	29.8	D59	37.27	28.57	112.6	0.011	6	1	0.013	0.1336	2.05	2.05	0.18	0.1336	0.5864	22.8	36.7	36.7	FALSE	29.99
D61+D60	D61	37.37	30.05	D60	37.44	29.84	101	0.002	6	1	0.013	0.1336	1.17	1.17	0.28	0.1336	0.2559	52.2	56.4	56.4	FALSE	30.35
D62+D59	D62	32.76	29.07	D59	37.27	28.57	247.7	0.002	6	1	0.013	0.0150	0.80	0.81	0.08	0.0151	0.2521	6.0	15.2	15.0	FALSE	29.16
D63+D5	D63	19.63	8.6	D5	19	8.29	296.6	0.001	8	1	0.013	0.2661	0.76	0.77	0.67	0.2687	0.3906	68.1	100.0	100.0	TRUE	16.24
D64+D63	D64	24.68	17.38	D63	19.63	8.56	470.5	0.019	6	1	0.013	0.2068	1.05	1.11	0.50	0.2108	0.7682	26.9	100.0	92.8	TRUE	17.68
D65+D64	D65	28.98	20.08	D64	24.68	17.38	448	0.006	6	1	0.013	0.1989	1.92	1.92	0.26	0.1989	0.4356	45.7	52.2	52.2	FALSE	20.34
D66+D65	D66	29.37	20.96	D65	28.98	20.13	412.5	0.002	8	1	0.013	0.1989	1.27	1.27	0.31	0.1989	0.5420	36.7	45.9	45.9	FALSE	21.28
D67+D63	D67	18.77	12.39	D63	19.63	8.6	294.1	0.013	6	1	0.013	0.0603	0.31	0.31	0.50	0.0603	0.6369	9.5	100.0	100.0	TRUE	16.24
D68+D67	D68	19	12.7	D67	18.77	12.42	138.9	0.002	6	1	0.013	0.0301	0.15	0.70	0.50	0.0310	0.2519	11.9	100.0	27.6	TRUE	16.24
D69+D67	D69	19	12.94	D67	18.77	12.42	259	0.002	6	1	0.013	0.0301	0.15	0.15	0.50	0.0301	0.2514	12.0	100.0	100.0	TRUE	16.24
D70+D51	D70	24	18.86	D51	23.54	18.72	70.8	0.002	6	1	0.013	0.1400	0.71	1.27	0.50	0.1412	0.2494	56.1	100.0	55.3	TRUE	21.66
D71+D52	D71	28.07	22.62	D52	27.31	21.11	130	0.012	6	1	0.013	0.1200	0.90	1.96	0.32	0.1200	0.6047	19.8	64.2	34.4	TRUE	22.79
D72+D20	D72	22.5	13.56	D20	22	13	279.6	0.002	10	1	0.013	0.1418	0.26	1.09	0.83	0.1420	0.9806	14.5	100.0	28.8	TRUE	18.06
D73+D72	D73	23	14.16	D72	22.5	13.56	297.4	0.002	8	1	0.013	0.1417	0.41	1.12	0.67	0.1419	0.5428	26.1	100.0	39.2	TRUE	18.07
D74+D73	D74	23.2	14.58	D73	23	14.16	210.2	0.002	8	1	0.013	0.1169	0.33	0.74	0.67	0.1171	0.5401	21.6	100.0	46.3	TRUE	18.07
E1+H9	E1	12.09	3.59	H9	11.84	3.09	269.8	0.002	18	1	0.013	4.1456	3.23	3.23	1.02	4.1456	4.5221	91.7	68.3	68.3	FALSE	4.69
E2+E1	E2	13.48	4.23	E1	12.09	3.64	283.2	0.002	12	1	0.013	2.7416	3.49	3.49	1.00	2.7416	1.6261	168.6	100.0	100.0	TRUE	6.29
E3+E2	E3	15.11	4.76	E2	13.48	4.33	279.6	0.002	12	1	0.013	2.7416	3.49	3.49	1.00	2.7416	1.3970	196.2	100.0	100.0	TRUE	7.88
E4+E3	E4	16.28	6.08	E3	15.11	5.01	356.7	0.003	12	1	0.013	2.7416	3.49	3.49	1.00	2.7416	1.9512	140.5	100.0	100.0	TRUE	9.94
E6+E1	E6	11.14	4.84	E1	12.09	4.04	501	0.002	12	1	0.013	1.4034	2.14	2.14	0.78	1.4034	1.4236	98.6	77.7	77.7	FALSE	5.67
E7+E6	E7	11.77	6.02	E6	11.14	4.84	310.5	0.004	12	1	0.013	1.3418	2.85	2.85	0.58	1.3430	2.1961	61.1	57.9	57.9	FALSE	6.61
E8+E7	E8	13.72	6.77	E7	11.77	6.07	354.7	0.002	12	1	0.013	1.1228	2.18	2.18	0.62	1.1228	1.5826	70.9	62.3	62.3	FALSE	7.41
E9+E8	E9	13.77	7.32	E8	13.72	6.82	341.1	0.001	12	1	0.013	0.7993	1.79	1.79	0.55	0.7993	1.3640	58.6	55.3	55.3	FALSE	7.89
E10+E9	E10	14.53	7.78	E9	13.77	7.32	192.1	0.002	12	1	0.013	0.7993	2.12	2.12	0.48	0.7993	1.7432	45.9	48.4	48.4	FALSE	8.27
E11+E10	E11	14.94	8.04	E10	14.53	7.93	194.9	0.001	12	1	0.013	0.4228	1.31	1.31	0.43	0.4228	0.8465	50.0	43.0	43.0	FALSE	8.51
E12+E11	E12	20.13	9.13	E11	14.94	8.14	494.5	0.002	12	1	0.013	0.4228	1.62	1.62	0.37	0.4228	1.5941	26.5	36.7	36.7	FALSE	9.50
E13+E12	E13	18.72	10	E12	20.13	9.18	450.3	0.002	8	1	0.013	0.2802	1.38	1.38	0.38	0.2802	0.5157	54.3	56.4	56.4	FALSE	10.38
E14+E13	E14	17.24	10.39	E13	18.72	10.12	185.5	0.001	8	1	0.013	0.2317	1.25	1.25	0.35	0.2317	0.4609	50.3	52.3	52.3	FALSE	10.76
E15+E14	E15	15.27	10.72	E14	17.24	10.49	246.2	0.001	8	1	0.013	0.2011	1.04	1.04	0.36	0.2011	0.3693	54.5	54.3	54.3	FALSE	11.10
E20+E7	E20	12.61	7.71	E7	11.77	6.12	504.5	0.003	6	1	0.013	0.1106	1.19	1.19	0.24	0.1106	0.3150	35.1	47.7	47.7	FALSE	7.95
E21+E20	E21	14.72	8.53	E20	12.61	7.76	385.6	0.002	6	1	0.013	0.0609	0.76	0.76	0.21	0.0609	0.2507	24.3	42.9	42.9	FALSE	8.76
E22+E8	E22	15.38	8.48	E8	13.72	6.87	449.9	0.004	6	1	0.013	0.1155	1.28	1.28	0.23	0.1155	0.3356	34.4	46.9	46.9	TRUE	8.72
E23+E22	E23	16.82	10.42	E22	15.38	8.48	438.8	0.004	6	1	0.013	0.0609	1.02	1.02	0.17	0.0610	0.3731	16.3	34.4	34.4	FALSE	10.61
E25+E50	E25	16.75	10.9	E50	16.04	9.64	231.9	0.005	6	1	0.013	0.3067	2.12	2.12	0.35	0.3067	0.4136	74.1	69.0	69.0	FALSE	11.25
E26+E25	E26	19.82	13.82	E25	16.75	10.9	488.2	0.006	6	1	0.013	0.0670	1.23	1.24	0.16	0.0670	0.4339	15.4	32.0	32.0	FALSE	13.98
E27+E12	E27	21.28	15.85	E12	20.13	9.53	576.2	0.011	6	1	0.013	0.0427	1.14	1.14	0.12	0.0427	0.5876	7.3	24.5	24.5	FALSE	15.97
E28+E27	E28	22	15.93	E27	21.28	15.81	61.8	0.002	6	1	0.013	0.0427	0.71	0.71	0.17	0.0427	0.2472	17.3	34.4	34.4	FALSE	16.13
E29+E12	E29	23.08	15.79	E12	20.13	9.58	247	0.025	6	1	0.013	0.1000	1.66	1.63	0.13	0.1008	0.8896	11.2	26.3	25.2	FALSE	15.92
E30+E29	E30	27	20.5	E29	23.08	15.83	502.3	0.009	6	1	0.013	0.0737	1.46	1.46	0.15	0.0738	0.5410	13.6	30.4	30.4	FALSE	20.66
E31+E29	E31	27.93	20.63	E29	23.08	15.83	252.3	0.019	6	1	0.013	0.0610	1.40	1.40	0.12	0.0610	0.7739	7.9	23.8	23.8	FALSE	20.75
E32+E31	E32	28	21.21	E31	27.93	20.68	263.2	0.002	6	1	0.013	0.0610	0.76	0.77	0.21	0.0617	0.2518	24.2	42.8	42.7	FALSE	21.44
E33+E13	E33	21.41	15.78	E13	18.72	10.02	228.9	0.025	8	1	0.013	0.0487	1.21	1.21	0.09	0.0487	1.9166	2.5	14.0	14.0	FALSE	15.87
E33+E29	E33	21.41	17.11	E29	23.08	15.86	455.1	0.003	6	1	0.013	0.0000	0.00	0.00	0.00	0.0000	0.2941	0.0	0.0	0.0	FALSE	17.11
E34+E33	E34	24.94	18.94	E33	21.41	15.83	278.9	0.011	6	1	0.013	0.0400	1.12	1.10	0.12	0.0401	0.5925	6.8	23.7	24.1	FALSE	19.06

Appendix D: Table 6
Scenario 3: 2035 Enhanced PWWF Model Results

Label	Start Node	Rim (Start) (ft)	Invert (Start) (ft)	Stop Node	Rim (Stop) (ft)	Invert (Stop) (ft)	Length (ft)	Slope (Calculated) (ft/ft)	Diameter (in)	Number of Barrels	Manning's n	Flow (Middle) (cfs)	Velocity (ft/s)	Velocity (Maximum Calculated) (ft/s)	Depth (Middle) (ft)	Flow (Maximum) (cfs)	Capacity (Full Flow) (cfs)	Flow / Capacity (Design) (%)	Depth/Rise (%)	Depth (Maximum) / Rise (%)	Is Ever Surcharged?	Hydraulic Grade (Maximum) (ft)
E35+E14	E35	19.06	11.41	E14	17.24	10.74	333	0.002	6	1	0.013	0.0306	0.65	0.82	0.14	0.0327	0.2517	12.2	29.0	25.6	FALSE	11.57
E36+E15	E36	17.4	12.35	E15	15.27	10.82	420.2	0.004	6	1	0.013	0.1827	1.54	1.54	0.29	0.1827	0.3385	54.0	58.3	58.3	FALSE	12.65
E37+E36	E37	18	13.11	E36	17.4	12.4	353.2	0.002	6	1	0.013	0.0609	0.76	0.82	0.21	0.0619	0.2515	24.2	42.8	40.9	FALSE	13.34
E38+E36	E38	18.78	13.33	E36	17.4	12.35	233.6	0.004	6	1	0.013	0.1218	1.41	1.41	0.23	0.1218	0.3634	33.5	45.2	45.2	FALSE	13.56
E39+E38	E39	19	14.13	E38	18.78	13.53	300.6	0.002	6	1	0.013	0.0609	0.76	0.77	0.21	0.0610	0.2507	24.3	42.9	42.4	FALSE	14.36
E40+E38	E40	22.91	14.25	E38	18.78	13.33	458.2	0.002	6	1	0.013	0.0609	0.76	0.76	0.21	0.0612	0.2514	24.2	42.8	42.8	FALSE	14.48
E41+E15	E41	16	11.07	E15	15.27	10.87	98.3	0.002	6	1	0.013	0.0183	0.43	0.44	0.13	0.0183	0.2530	7.2	26.7	26.5	FALSE	11.17
E42+E10	E42	14.56	10.06	E10	14.53	7.88	550.5	0.004	6	1	0.013	0.0698	1.04	1.04	0.19	0.0698	0.3531	19.8	37.3	37.3	FALSE	10.25
E44+E8	E44	12.57	8.62	E8	13.72	6.82	630.5	0.003	6	1	0.013	0.2080	1.45	1.45	0.34	0.2080	0.2998	69.4	68.3	68.3	TRUE	8.97
E45+E44	E45	13.15	9.55	E44	12.57	8.57	319.4	0.003	6	1	0.013	0.2080	1.50	1.50	0.33	0.2080	0.3108	66.9	66.5	66.5	FALSE	9.89
E46+E7	E46	11	7.4	E7	11.77	6.02	500.5	0.003	6	1	0.013	0.1092	1.13	1.13	0.25	0.1092	0.2946	37.1	49.3	49.3	TRUE	7.65
E47+E46	E47	11.54	8.31	E46	11	7.4	455.2	0.002	6	1	0.013	0.1092	1.00	1.00	0.27	0.1092	0.2509	43.5	54.3	54.3	FALSE	8.58
E48+E6	E48	11.94	7.54	E6	11.14	5.19	498.5	0.005	6	1	0.013	0.0609	1.02	1.04	0.17	0.0609	0.3852	15.8	34.3	33.9	FALSE	7.71
E49+E48	E49	11.53	8.46	E48	11.94	7.54	457.8	0.002	6	1	0.013	0.0609	0.76	0.76	0.21	0.0612	0.2515	24.2	42.8	42.7	FALSE	8.69
E50+E10	E50	16.04	9.64	E10	14.53	7.88	217.9	0.008	6	1	0.013	0.3067	2.41	2.41	0.31	0.3067	0.5043	60.8	61.6	61.6	FALSE	9.95
F7+T25	F7	4.65	0.3	T25	3.95	-2.2	477	0.005	6	1	0.013	0.4292	2.19	2.19	0.50	0.4292	0.4062	105.7	100.0	100.0	TRUE	2.02
F8+F7	F8	8.3	1.38	F7	4.65	0.3	356.7	0.003	6	1	0.013	0.4139	2.11	2.11	0.50	0.4139	0.3087	134.1	100.0	100.0	TRUE	4.22
F9+F23	F9	8.21	3.11	F23	8.23	2.7	110	0.004	6	1	0.013	0.2146	1.09	1.09	0.50	0.2146	0.3425	62.7	100.0	100.0	TRUE	5.04
F10+F9	F10	11.76	4.96	F9	8.21	3.21	462.6	0.004	6	1	0.013	0.2146	1.09	1.65	0.50	0.2147	0.3451	62.2	100.0	62.9	TRUE	5.86
F11+F10	F11	13	6.84	F10	11.76	5.06	419.8	0.004	6	1	0.013	0.2146	1.73	1.72	0.30	0.2147	0.3653	58.8	60.5	60.6	TRUE	7.15
F12+F11	F12	13	7.65	F11	13	6.94	355.2	0.002	6	1	0.013	0.0994	0.96	0.96	0.26	0.0994	0.2508	39.6	52.1	52.1	FALSE	7.91
F13+F19	F13	15.24	10.24	F19	15.18	10.23	24.2	0	6	1	0.013	0.0260	0.34	0.35	0.21	0.0261	0.1141	22.8	41.1	40.8	FALSE	10.46
F14+F8	F14	9.56	5.64	F8	8.3	1.76	463.1	0.008	6	1	0.013	0.0362	0.28	1.03	0.31	0.0363	0.5136	7.1	61.8	23.5	TRUE	5.76
F15+F11	F15	13.27	7.77	F11	13	7.17	301.1	0.002	6	1	0.013	0.0775	0.85	0.85	0.23	0.0775	0.2505	30.9	47.0	47.0	FALSE	8.01
F16+F15	F16	13.27	8.24	F15	13.27	7.77	238	0.002	6	1	0.013	0.0648	0.78	0.78	0.22	0.0648	0.2494	26.0	44.0	44.0	FALSE	8.48
F17+F22	F17	15.11	8.76	F22	13	8.39	130.3	0.003	6	1	0.013	0.0994	1.10	1.10	0.23	0.1002	0.2990	33.2	46.9	47.1	FALSE	9.00
F18+F17	F18	15.34	9.94	F17	15.11	8.89	197.5	0.005	6	1	0.013	0.0260	1.07	1.07	0.09	0.0260	0.4091	6.4	17.8	17.8	FALSE	10.04
F19+F20	F19	15.18	10.33	F20	15.15	9.7	188.8	0.003	6	1	0.013	0.0260	0.94	0.99	0.10	0.0271	0.3241	8.0	19.8	19.7	FALSE	10.46
F20+F17	F20	15.15	9.7	F17	15.11	8.86	281.2	0.003	6	1	0.013	0.0734	0.96	1.01	0.21	0.0778	0.3067	23.9	41.2	41.3	FALSE	9.91
F21+F20	F21	15.15	10.38	F20	15.15	9.7	136.4	0.005	6	1	0.013	0.0260	0.75	0.76	0.12	0.0263	0.3961	6.6	23.3	23.1	FALSE	10.49
F22+F12	F22	13	8.39	F12	13	7.65	158.8	0.005	6	1	0.013	0.0994	1.33	1.33	0.20	0.0998	0.3830	26.0	40.6	40.6	FALSE	8.60
F23+F8	F23	8.23	2.7	F8	8.3	1.48	327.4	0.004	6	1	0.013	0.2404	1.22	1.22	0.50	0.2404	0.3425	70.2	100.0	100.0	TRUE	4.92
F24+F23	F24	8.23	3.19	F23	8.23	2.7	98	0.005	6	1	0.013	0.0258	0.13	1.02	0.50	0.0259	0.3967	6.5	100.0	18.7	TRUE	4.92
F25+F24	F25	8.73	3.77	F24	8.23	3.19	115	0.005	6	1	0.013	0.0129	0.07	0.53	0.50	0.0130	0.3985	3.2	100.0	18.3	TRUE	4.92
F26+F25	F26	8.73	4.36	F25	8.73	3.77	118	0.005	6	1	0.013	0.0129	0.07	0.80	0.50	0.0129	0.3967	3.3	100.0	9.6	TRUE	4.92
F27+F24	F27	8.73	3.78	F24	8.23	3.19	118	0.005	6	1	0.013	0.0129	0.07	0.76	0.50	0.0135	0.3967	3.3	100.0	7.8	TRUE	4.92
F28+F27	F28	8.73	4.57	F27	8.73	3.78	158	0.005	6	1	0.013	0.0129	0.07	0.79	0.50	0.0129	0.3967	3.3	100.0	8.8	TRUE	4.92
G2+G19	G2	4.2	0.05	G19	2.65	-0.76	154	0.005	6	1	0.013	0.1513	0.77	1.65	0.50	0.1513	0.4069	37.2	100.0	47.3	TRUE	1.01
G3+G14	G3	7	1.85	G14	6.79	1.05	208.1	0.004	6	1	0.013	0.1071	1.27	1.27	0.22	0.1071	0.3479	30.8	44.3	44.3	FALSE	2.08
G4+G3	G4	7.49	2.26	G3	7	1.95	212.7	0.001	6	1	0.013	0.0881	0.82	0.82	0.27	0.0881	0.2142	41.1	53.7	53.7	FALSE	2.53
G6+G4	G6	10.75	5.12	G4	7.49	2.36	387.6	0.007	6	1	0.013	0.0765	1.35	1.35	0.17	0.0765	0.4735	16.2	33.0	33.0	FALSE	5.29
G7+G6	G7	10.12	5.81	G6	10.75	5.22	294.7	0.002	6	1	0.013	0.0382	0.61	0.62	0.18	0.0383	0.2511	15.2	35.7	35.4	FALSE	5.99
G8+G7	G8	10.83	6.45	G7	10.12	5.8	326.8	0.002	6	1	0.013	0.0381	0.61	0.80	0.18	0.0404	0.2502	15.2	35.7	30.3	FALSE	6.64
G9+G6	G9	8.88	5.78	G6	10.75	5.2	290.8	0.002	6	1	0.013	0.0384	0.61	0.61	0.18	0.0384	0.2506	15.3	35.4	35.4	FALSE	5.96
G10+G9	G10	11.09	6.24	G9	8.88	5.78	270.6	0.002	6	1	0.013	0.0381	0.57	0.58	0.19	0.0391	0.2313	16.5	37.2	37.4	FALSE	6.43
G11+G10	G11	11.78	6.87	G10	11.09	6.34	265.7	0.002	6	1	0.013	0.0383	0.61	0.61	0.18	0.0383	0.2506	15.3	35.4	35.4	FALSE	7.06
G12+G4	G12	8.32	3.02	G4	7.49	2.47	277	0.002	6	1	0.013	0.0116	0.83	0.86	0.06	0.0118	0.2500	4.6	12.4	12.1	FALSE	3.09
G13+G3	G13	8.34	2.8	G3	7	1.9	452.5	0.002	6	1	0.013	0.0190	0.73	0.73	0.09	0.0190	0.2502	7.6	19.0	18.9	FALSE	2.90
G14+G17	G14	6.79	1.05	G17	5.65	0.6	151.1	0.003	6	1	0.013	0.1251	1.23	1.23	0.26	0.1251	0.3062	40.9	51.3	51.3	FALSE	1.31
G15+G14	G15	6.2	2.15	G14	6.79	1.05	214.7	0.005	8	1	0.013	0.0097	0.23	0.63	0.12	0.0122	0.8648	1.1	17.9	2.1	FALSE	2.23
G16+G15	G16	6.21	3.21	G15	6.2	2.2	154.5	0.007	8	1	0.013	0.0097	0.72	0.72	0.03	0.0097	0.9771	1.0	5.1	5.1	FALSE	3.24
G17+G2	G17	5.65	0.5	G2	4.2	0.15	143.7	0.002	6	1	0.013	0.1431	0.73	1.22	0.50	0.1431	0.2769	51.7	100.0	57.6	TRUE	1.01
G18+G17	G18	5.86	1.15	G17	5.65	0.57	291.5	0.002	6	1	0.013	0.0097	0.37	0.81	0.09	0.0099	0.2503	3.9	18.9	10.3	FALSE	1.21
G19+T23	G19	2.65	-0.76	T23	6.87	-2.3	290.9	0.005	6	1	0.013	0.1675	0.85	1.85	0.50	0.1682	0.4083	41.0	100.0	47.0	TRUE	1.01
G20+G19	G20	2.66	0.11	G19	2.65	-0.76	173.9	0.005	6	1	0.013	0.0128	0.07	0.85	0.50	0.0129	0.3968	3.2	100.0	11.5	TRUE	1.01
G21+G20	G21	2.67	0.37	G20	2.66	0.11	51.4	0.005	6	1	0.013	0.0059	0.03	0.67	0.50	0.0059	0.3991	1.5	100.0	5.5	TRUE	1.01
G22+G20	G22	2.67	0.25	G20	2.66	0.11	71.7	0.002	6	1	0.013	0.0060	0.03	0.72	0.50	0.0060	0.2479	2.4	100.0	7.6	TRUE	1.01
H2+I11	H2	7.99	0.59	I11	8.07	-0.03	36.6	0.017	24	1	0.01	5.2878	1.68	1.68	2.00	5.2878	38.2777	13.8	100.0	100.0	TRUE	3.61
H3+H2	H3	8.2	0.7	H2	7.99	0.59	30.8	0.004	24	1	0.01	5.2878	1.68	1.68	2.00	5.2877	17.5858	30.1	100.0	100.0	TRUE	3.63
H4+H3	H4	8.13	0.71	H3	8.2	0.7	7.1	0.001	24	1	0.01	4.2289	1.35	1.35	2.00	4.2289	11.0311	38.3	100.0	100.0	TRUE	3.65
H5+H4	H5	8.95	0.95	H4	8.13	0.71	259.3	0.001	24	1	0.01	4.2237	1.34	1.34	2.00	4.2237	8.9462	47.2	100.0	100.0	TRUE	3.67

Appendix D: Table 6
Scenario 3: 2035 Enhanced PWWF Model Results

Label	Start Node	Rim (Start) (ft)	Invert (Start) (ft)	Stop Node	Rim (Stop) (ft)	Invert (Stop) (ft)	Length (ft)	Slope (Calculated) (ft/ft)	Diameter (in)	Number of Barrels	Manning's n	Flow (Middle) (cfs)	Velocity (ft/s)	Velocity (Maximum Calculated) (ft/s)	Depth (Middle) (ft)	Flow (Maximum) (cfs)	Capacity (Full Flow) (cfs)	Flow / Capacity (Design) (%)	Depth/Rise (%)	Depth (Maximum) / Rise (%)	Is Ever Surcharged?	Hydraulic Grade (Maximum) (ft)
H6+H5	H6	8.89	0.99	H5	8.95	0.95	9	0.004	20	1	0.01	4.1556	1.90	1.90	1.67	4.1556	12.0730	34.4	100.0	100.0	TRUE	3.69
H7+H75	H7	10.51	1.76	H75	10.09	1.58	89.8	0.002	20	1	0.013	4.1556	1.90	1.90	1.67	4.1556	6.2294	66.7	100.0	100.0	TRUE	3.72
H8+H7	H8	10.95	2.05	H7	10.51	1.76	233.4	0.001	20	1	0.01	4.1556	1.90	1.90	1.67	4.1556	6.3751	65.2	100.0	100.0	TRUE	3.74
H9+H73	H9	11.84	3.09	H73	11.36	2.56	246.2	0.002	18	1	0.01	4.1556	3.50	3.50	0.96	4.1556	6.3351	65.6	63.7	63.7	FALSE	4.01
H11+H64	H11	9.92	1.44	H64	9.05	0.99	198.2	0.002	14	1	0.01	1.0211	0.96	0.96	1.17	1.0211	3.3286	30.7	100.0	100.0	TRUE	3.64
H12+H11	H12	10.15	2.2	H11	9.92	1.54	333.5	0.002	8	1	0.013	0.9164	2.62	2.62	0.67	0.9164	0.5376	170.5	100.0	100.0	TRUE	4.50
H13+H12	H13	10.85	2.55	H12	10.15	2.3	107.9	0.002	8	1	0.013	0.8106	2.32	2.32	0.67	0.8106	0.5815	139.4	100.0	100.0	TRUE	4.94
H14+H13	H14	11.02	3.54	H13	10.85	2.65	446.5	0.002	8	1	0.013	0.8106	2.32	2.32	0.67	0.8106	0.5395	150.3	100.0	100.0	TRUE	7.04
H15+H62	H15	14.61	5.6	H62	12.95	4.64	201.4	0.005	8	1	0.013	0.7581	2.17	2.17	0.67	0.7581	0.8342	90.9	100.0	100.0	TRUE	8.76
H16+H60	H16	14.43	6.48	H60	14.57	5.9	351.2	0.002	8	1	0.01	0.7177	2.06	2.06	0.67	0.7177	0.6384	112.4	100.0	100.0	TRUE	9.64
H17+H57	H17	12.03	6.83	H57	14.21	6.69	396.8	0	8	1	0.013	0.6771	1.94	1.94	0.67	0.6771	0.2270	298.3	100.0	100.0	TRUE	11.00
H18+H5	H18	8.92	1.27	H5	8.95	1.25	7.9	0.003	6	1	0.013	0.0679	0.35	0.35	0.50	0.0686	0.2825	24.0	100.0	100.0	TRUE	3.67
H19+H18	H19	8.88	2.58	H18	8.92	1.27	386.9	0.003	6	1	0.013	0.0679	0.35	0.35	0.50	0.0680	0.3265	20.8	100.0	100.0	TRUE	3.67
H20+H19	H20	9.1	3.65	H19	8.88	2.63	270.8	0.004	6	1	0.013	0.0679	0.38	1.00	0.43	0.0679	0.3443	19.7	85.6	37.7	TRUE	3.84
H21+H56	H21	9.3	5.04	H56	9.2	4.75	143.8	0.002	6	1	0.013	0.0100	0.81	0.83	0.05	0.0103	0.2520	4.0	10.3	11.3	FALSE	5.10
H22+H21	H22	9.3	5.34	H21	9.3	5.04	151.4	0.002	6	1	0.013	0.0100	0.81	0.82	0.05	0.0113	0.2498	4.0	10.3	10.4	FALSE	5.40
H23+H22	H23	9.4	6.15	H22	9.3	5.34	404.8	0.002	6	1	0.013	0.0100	0.81	0.81	0.05	0.0105	0.2510	4.0	10.4	10.2	FALSE	6.21
H24+H20	H24	10.14	5.82	H20	9.1	3.65	332.8	0.007	6	1	0.013	0.0479	1.01	1.15	0.14	0.0515	0.4530	10.6	29.0	27.9	FALSE	5.97
H25+H11	H25	11.2	3.3	H11	9.92	1.7	378	0.004	6	1	0.013	0.1046	0.53	1.30	0.50	0.1046	0.3650	28.7	100.0	42.9	TRUE	3.64
H26+H25	H26	10.63	4.58	H25	11.2	3.3	412.5	0.003	6	1	0.013	0.1046	1.16	1.16	0.23	0.1046	0.3125	33.5	46.8	46.8	FALSE	4.82
H27+H26	H27	11.38	5.66	H26	10.63	5.43	114.6	0.002	6	1	0.013	0.0372	0.63	0.63	0.17	0.0372	0.2514	14.8	34.2	34.2	FALSE	5.85
H28+H50	H28	10.4	5.41	H50	10.13	5.03	191.6	0.002	6	1	0.013	0.0303	0.66	0.78	0.14	0.0332	0.2499	12.1	28.3	26.8	FALSE	5.57
H29+H12	H29	8.35	5.83	H12	10.15	2.65	550.5	0.006	6	1	0.013	0.1058	1.44	1.46	0.20	0.1058	0.4264	24.8	40.1	39.5	TRUE	6.03
H30+H46	H30	11.57	7.74	H46	11.27	7.47	135.4	0.002	6	1	0.013	0.0529	0.70	0.76	0.20	0.0554	0.2506	21.1	40.7	39.8	FALSE	7.96
H31+H14	H31	13.28	4.5	H14	11.02	3.69	403.7	0.002	6	1	0.013	0.0415	0.21	0.63	0.50	0.0416	0.2513	16.5	100.0	36.8	TRUE	7.06
H32+H17	H32	16.06	10.26	H17	12.03	6.88	549.9	0.006	6	1	0.013	0.1397	0.71	0.71	0.50	0.1397	0.4399	31.8	100.0	100.0	TRUE	11.00
H33+H32	H33	20	11.29	H32	16.06	10.26	515	0.002	8	1	0.013	0.1236	1.05	1.05	0.25	0.1236	0.5404	22.9	37.1	37.1	TRUE	11.55
H34+H17	H34	12.74	7.69	H17	12.03	6.83	268.6	0.003	6	1	0.013	0.5375	2.74	2.74	0.50	0.5374	0.3175	169.3	100.0	100.0	TRUE	13.72
H35+H34	H35	14.34	9.56	H34	12.74	7.69	321.9	0.006	6	1	0.013	0.5376	2.74	2.74	0.50	0.5376	0.4277	125.7	100.0	100.0	TRUE	17.00
H36+H35	H36	15.37	9.87	H35	14.34	9.56	473.9	0.001	6	1	0.013	0.4269	2.17	2.17	0.50	0.4269	0.1435	297.5	100.0	100.0	TRUE	20.18
H37+H36	H37	17.89	12.09	H36	15.37	9.87	370.1	0.006	6	1	0.013	0.2305	1.17	1.17	0.50	0.2305	0.4346	53.0	100.0	100.0	TRUE	20.91
H38+E42	H38	17.69	11.79	E42	14.56	10.11	518.8	0.003	6	1	0.013	0.0698	0.97	0.97	0.20	0.0698	0.3193	21.9	39.4	39.4	FALSE	11.99
H38+H47	H38	17.69	11.79	H47	15.05	10.1	205.2	0.008	6	1	0.013	0.1111	0.57	1.91	0.50	0.1390	0.5092	21.8	100.0	39.8	TRUE	17.07
H39+H38	H39	18	12.1	H38	17.69	11.84	131.9	0.002	6	1	0.013	0.1020	0.52	0.99	0.50	0.1020	0.2491	40.9	100.0	51.8	TRUE	17.07
H40+H36	H40	22.17	15.97	H36	15.37	9.87	496.1	0.012	6	1	0.013	0.0920	0.47	0.47	0.50	0.0920	0.6221	14.8	100.0	100.0	TRUE	20.18
H41+H40	H41	24.38	16.27	H40	22.17	15.97	150.4	0.002	6	1	0.013	0.0920	0.47	0.94	0.50	0.0920	0.2506	36.7	100.0	49.9	TRUE	20.18
H42+H37	H42	21.01	14.76	H37	17.89	12.19	387.7	0.007	6	1	0.013	0.0998	0.51	1.64	0.50	0.0999	0.4568	21.8	100.0	34.9	TRUE	20.91
H43+H42	H43	22.12	16.57	H42	21.01	14.76	346.3	0.005	6	1	0.013	0.0920	0.47	1.46	0.50	0.1001	0.4056	22.7	100.0	37.9	TRUE	20.91
H44+H37	H44	20.24	14.24	H37	17.89	12.14	272.4	0.008	6	1	0.013	0.1045	0.53	1.81	0.50	0.1116	0.4927	21.2	100.0	30.2	TRUE	20.98
H45+H9	H45	12.4	3.93	H9	11.84	3.49	222.4	0.002	6	1	0.013	0.0100	0.08	0.77	0.30	0.0137	0.2496	4.0	59.2	7.9	TRUE	4.01
H46+H52	H46	11.27	7.47	H52	12.58	6.18	360.9	0.004	6	1	0.013	0.0529	0.87	0.88	0.17	0.0531	0.3355	15.8	34.8	34.7	FALSE	7.65
H47+H35	H47	15.05	10.1	H35	14.34	9.62	192.4	0.002	6	1	0.013	0.1109	0.56	1.10	0.50	0.1157	0.2803	39.6	100.0	52.7	TRUE	17.03
H48+H55	H48	9.12	6.64	H55	9.3	4.32	217.4	0.011	6	1	0.013	0.0100	0.72	0.62	0.03	0.0158	0.5797	1.7	6.9	1.7	FALSE	6.68
H49+H48	H49	8.35	6.77	H48	9.12	6.72	32.6	0.002	6	1	0.013	0.0100	0.66	0.59	0.02	0.0101	0.2199	4.5	4.4	1.8	FALSE	6.81
H50+H26	H50	10.13	5.03	H26	10.63	4.58	154.3	0.003	6	1	0.013	0.0676	0.92	0.92	0.20	0.0676	0.3030	22.3	40.0	40.0	FALSE	5.23
H51+H50	H51	10.5	6.35	H50	10.13	5.13	189.2	0.006	6	1	0.013	0.0372	1.02	1.02	0.12	0.0372	0.4505	8.3	24.0	24.0	FALSE	6.48
H52+H29	H52	12.58	6.18	H29	8.35	5.83	94.4	0.004	6	1	0.013	0.1058	1.25	1.25	0.22	0.1058	0.3416	31.0	44.7	44.7	FALSE	6.41
H53+H52	H53	12.4	8.3	H52	12.58	6.23	233.2	0.009	6	1	0.013	0.0529	1.20	1.20	0.14	0.0529	0.5286	10.0	27.6	27.6	FALSE	8.44
H54+H20	H54	9.2	4	H20	9.1	3.7	152.6	0.002	6	1	0.013	0.0200	0.72	0.72	0.10	0.0200	0.2487	8.0	20.0	20.0	FALSE	4.12
H55+H54	H55	9.3	4.32	H54	9.2	4.22	157.2	0.001	6	1	0.013	0.0200	0.81	0.81	0.09	0.0200	0.1415	14.1	18.3	18.3	FALSE	4.45
H56+H55	H56	9.2	4.75	H55	9.3	4.32	215.8	0.002	6	1	0.013	0.0100	0.78	0.78	0.05	0.0100	0.2505	4.0	9.3	9.3	FALSE	4.80
H57+H16	H57	14.21	6.69	H16	14.43	6.48	40.5	0.005	8	1	0.013	0.7177	2.06	2.06	0.67	0.7177	0.8706	82.4	100.0	100.0	TRUE	9.71
H58+H57	H58	15.13	7.62	H57	14.21	6.69	184.6	0.005	6	1	0.013	0.0406	0.21	1.05	0.50	0.0424	0.3982	10.2	100.0	25.8	TRUE	9.71
H59+H58	H59	16.1	8.59	H58	15.13	7.62	194.6	0.005	6	1	0.013	0.0000	0.00	0.00	0.50	0.0000	0.3962	0.0	100.0	0.0	TRUE	9.71
H59+H61	H59	16.1	8.59	H61	15.42	6.28	194.6	0.012	6	1	0.013	0.0000	0.00	0.17	0.50	0.0308	0.6114	0.0	100.0	85.0	TRUE	8.93
H60+H15	H60	14.57	5.9	H15	14.61	5.6	98.7	0.003	8	1	0.01	0.7581	2.17	2.17	0.67	0.7581	0.8661	87.5	100.0	100.0	TRUE	8.93
H61+H60	H61	15.42	6.28	H60	14.57	5.9	189.5	0.002	6	1	0.013	0.0406	0.21	0.38	0.50	0.0741	0.2513	16.1	100.0	100.0	TRUE	8.93
H62+H14	H62	12.95	4.64	H14	11.02	3.54	232.8	0.005	8	1	0.013	0.7691	2.20	2.20	0.67	0.7691	0.8305	92.6	100.0	100.0	TRUE	7.99
H63+H62	H63	13.79	5.49	H62	12.95	4.64	169.8	0.005	6	1	0.013	0.0110	0.06	0.74	0.50	0.0122	0.3970	2.8	100.0	7.2	TRUE	7.99
H64+H71	H64	9.05	0.99	H71	8.35	0.77	160.6	0.001	14	1	0.01	1.0501	0.98	0.98	1.17	1.0501	2.5853	40.6	100.0	100.0	TRUE	3.64
H65+H64	H65	9.89	1.83	H64	9.05	0.99	168.3	0.005	6	1	0.013	0.0290	0.15	1.10	0.50	0.0292	0.3963	7.3	100.0	18.2	TRUE	3.64

Appendix D: Table 6
Scenario 3: 2035 Enhanced PWWF Model Results

Label	Start Node	Rim (Start) (ft)	Invert (Start) (ft)	Stop Node	Rim (Stop) (ft)	Invert (Stop) (ft)	Length (ft)	Slope (Calculated) (ft/ft)	Diameter (in)	Number of Barrels	Manning's n	Flow (Middle) (cfs)	Velocity (ft/s)	Velocity (Maximum Calculated) (ft/s)	Depth (Middle) (ft)	Flow (Maximum) (cfs)	Capacity (Full Flow) (cfs)	Flow / Capacity (Design) (%)	Depth/Rise (%)	Depth (Maximum) / Rise (%)	Is Ever Surcharged?	Hydraulic Grade (Maximum) (ft)
H66+H65	H66	9.89	2.09	H65	9.89	1.83	51.4	0.005	6	1	0.013	0.0290	0.15	0.90	0.50	0.0293	0.3989	7.3	100.0	22.1	TRUE	3.64
H67+H66	H67	9.89	2.32	H66	9.89	2.09	46	0.005	6	1	0.013	0.0100	0.05	0.77	0.50	0.0100	0.3968	2.5	100.0	8.7	TRUE	3.64
H68+H66	H68	9.89	2.42	H66	9.89	2.09	67	0.005	6	1	0.013	0.0190	0.10	0.98	0.50	0.0194	0.3937	4.8	100.0	15.5	TRUE	3.64
H69+H68	H69	9.89	2.64	H68	9.89	2.42	45.6	0.005	6	1	0.013	0.0100	0.05	0.77	0.50	0.0100	0.3898	2.6	100.0	8.8	TRUE	3.64
H70+H68	H70	9.89	2.67	H68	9.89	2.42	51.2	0.005	6	1	0.013	0.0090	0.05	0.74	0.50	0.0093	0.3921	2.3	100.0	7.6	TRUE	3.64
H71+H3	H71	8.35	0.77	H3	8.2	0.7	35	0.002	14	1	0.01	1.0591	0.99	0.99	1.17	1.0591	3.1237	33.9	100.0	100.0	TRUE	3.64
H72+H71	H72	9.26	1.54	H71	8.35	0.77	182.4	0.004	6	1	0.013	0.0090	0.05	0.66	0.50	0.0108	0.3646	2.5	100.0	4.1	TRUE	3.64
H73+H74	H73	11.36	2.56	H74	11.16	2.34	101	0.002	20	1	0.01	4.1556	2.25	2.25	1.31	4.1556	8.4400	49.2	78.8	78.8	FALSE	3.77
H74+H8	H74	11.16	2.34	H8	10.95	2.05	112.9	0.003	20	1	0.01	4.1556	1.96	1.96	1.55	4.1556	9.1668	45.3	93.1	93.1	TRUE	3.76
H75+H6	H75	10.09	1.58	H6	8.89	0.99	259.7	0.002	20	1	0.01	4.1556	1.90	1.90	1.67	4.1556	8.6193	48.2	100.0	100.0	TRUE	3.71
I3+I35	I3	1.69	-3.99	I35	1.2	-4.42	133	0.003	30	1	0.01	6.0820	1.24	1.24	2.50	6.0820	30.3207	20.1	100.0	100.0	TRUE	0.81
I4+I3	I4	1.84	-3.31	I3	1.69	-3.56	242.6	0.001	18	1	0.013	6.0819	3.44	3.44	1.50	6.0819	3.3716	180.4	100.0	100.0	TRUE	0.84
I5+I31	I5	3.41	-3.19	I31	2.94	-3.23	135	0	18	1	0.013	6.0716	3.44	3.44	1.50	6.0716	1.8081	335.8	100.0	100.0	TRUE	2.00
I6+I5	I6	4.62	-3.08	I5	3.41	-3.19	410.7	0	18	1	0.013	6.0713	3.44	3.44	1.50	6.0713	1.7191	353.2	100.0	100.0	TRUE	3.28
I7+I37	I7	5.18	-2.32	I37	4.72	-2.94	210.5	0.003	30	1	0.01	5.3206	1.08	1.08	2.50	5.3205	28.9378	18.4	100.0	100.0	TRUE	3.49
I8+I7	I8	6.15	-1.45	I7	5.18	-2.32	238.1	0.004	30	1	0.01	5.3135	1.08	1.08	2.50	5.3134	32.2300	16.5	100.0	100.0	TRUE	3.51
I9+I8	I9	5.69	-1.31	I8	6.15	-1.45	154.7	0.001	30	1	0.01	5.3005	1.08	1.08	2.50	5.3005	16.0402	33.0	100.0	100.0	TRUE	3.53
I10+I9	I10	7.26	-0.74	I9	5.69	-1.31	221.1	0.003	24	1	0.01	5.2881	1.68	1.68	2.00	5.2880	14.9310	35.4	100.0	100.0	TRUE	3.55
I11+I10	I11	8.07	-0.03	I10	7.26	-0.74	379.8	0.002	24	1	0.01	5.2879	1.68	1.68	2.00	5.2879	12.7144	41.6	100.0	100.0	TRUE	3.59
I12+I6	I12	4.46	-2.19	I6	4.62	-2.83	338.5	0.002	12	1	0.013	0.7288	0.93	1.38	1.00	1.0826	1.5492	47.0	100.0	100.0	TRUE	3.36
I13+I12	I13	5.54	-1.56	I12	4.46	-2.14	319.8	0.002	12	1	0.013	0.7285	0.93	1.38	1.00	1.0878	1.5173	48.0	100.0	100.0	TRUE	3.40
I14+I13	I14	4.22	-0.83	I13	5.54	-1.51	443.5	0.002	12	1	0.013	0.4525	0.58	1.09	1.00	0.8524	1.3950	32.4	100.0	100.0	TRUE	3.41
I15+I14	I15	5.32	-0.53	I14	4.22	-0.78	386	0.001	12	1	0.013	0.4524	0.58	1.09	1.00	0.8587	0.9066	49.9	100.0	100.0	TRUE	3.41
I16+I6	I16	4.85	0.96	I6	4.62	-2.38	492.8	0.007	8	1	0.013	0.0097	0.03	0.03	0.67	0.0097	0.9948	1.0	100.0	100.0	TRUE	3.28
I17+I7	I17	5.54	1.51	I7	5.18	-1.27	525.8	0.005	6	1	0.013	0.0050	0.03	0.56	0.50	0.0052	0.4080	1.2	100.0	1.2	TRUE	3.49
I18+I8	I18	5.2	1.01	I8	6.15	-0.65	236.8	0.007	6	1	0.013	0.0088	0.05	0.11	0.50	0.0146	0.4697	1.9	100.0	62.0	TRUE	3.51
I19+I18	I19	6.48	1.59	I18	5.2	1.11	238.8	0.002	6	1	0.013	0.0050	0.03	0.62	0.50	0.0062	0.2516	2.0	100.0	3.4	TRUE	3.51
I20+I9	I20	5.86	1.26	I9	5.69	-0.81	278.4	0.007	6	1	0.013	0.0050	0.03	0.57	0.50	0.0068	0.4838	1.0	100.0	1.4	TRUE	3.53
I21+I24	I21	7.17	1.52	I24	7	-0.08	364.1	0.004	6	1	0.013	0.1970	1.00	1.73	0.50	0.1975	0.3719	53.0	100.0	56.3	TRUE	4.61
I22+I23	I22	8.69	3.44	I23	8.52	3.17	44.5	0.006	6	1	0.013	0.0590	0.30	1.16	0.50	0.0603	0.4372	13.5	100.0	31.1	TRUE	5.05
I23+I27	I23	8.52	3.12	I27	8.3	2.86	80.1	0.003	6	1	0.013	0.1280	0.65	1.31	0.50	0.1280	0.3197	40.0	100.0	49.8	TRUE	5.05
I24+I13	I24	7	-0.08	I13	5.54	-0.56	236.9	0.002	6	1	0.013	0.2759	1.40	1.40	0.50	0.2759	0.2526	109.3	100.0	100.0	TRUE	4.09
I25+I24	I25	7	0.22	I24	7	-0.08	153.5	0.002	6	1	0.013	0.0789	0.40	0.45	0.50	0.0816	0.2480	31.8	100.0	87.9	TRUE	4.10
I26+I23	I26	9.29	4.04	I23	8.52	3.27	153.5	0.005	6	1	0.013	0.0690	0.35	1.16	0.50	0.0692	0.3974	17.4	100.0	34.3	TRUE	5.05
I27+I28	I27	8.3	2.86	I28	8.04	2.57	89.9	0.003	6	1	0.013	0.1280	0.65	0.65	0.50	0.1280	0.3188	40.2	100.0	100.0	TRUE	5.05
I28+I21	I28	8.04	2.57	I21	7.17	1.57	311.5	0.003	6	1	0.013	0.1970	1.00	1.50	0.50	0.1970	0.3179	62.0	100.0	63.4	TRUE	5.05
I29+I28	I29	8.81	3.34	I28	8.04	2.57	153.5	0.005	6	1	0.013	0.0690	0.35	1.26	0.50	0.0694	0.3974	17.4	100.0	32.3	TRUE	5.05
I31+I4	I31	2.94	-3.23	I4	1.84	-3.31	321.1	0	18	1	0.013	6.0818	3.44	3.44	1.50	6.0818	1.6581	366.8	100.0	100.0	TRUE	1.69
I32+I31	I32	3.97	-2.18	I31	2.94	-3.23	207.6	0.005	6	1	0.013	0.0100	0.05	0.28	0.50	0.0119	0.3990	2.5	100.0	26.8	TRUE	1.69
I33+I32	I33	4.43	-1.73	I32	3.97	-2.18	90.2	0.005	6	1	0.013	0.0050	0.03	0.60	0.50	0.0050	0.3963	1.3	100.0	3.1	TRUE	1.69
I34+I32	I34	4.56	-1.6	I32	3.97	-2.18	117.2	0.005	6	1	0.013	0.0050	0.03	0.62	0.50	0.0051	0.3947	1.3	100.0	3.8	TRUE	1.69
I35+I36	I35	1.2	-4.42	I36	1.7	-4.47	11.4	0.004	24	1	0.01	2.8814	0.92	0.92	2.00	2.8814	19.4782	14.8	100.0	100.0	TRUE	0.75
I35+T19	I35	1.2	-4.42	T19	2.23	-4.72	55.4	0.005	24	1	0.01	3.2017	1.02	1.02	2.00	3.2017	21.6427	14.8	100.0	100.0	TRUE	0.79
I36+T36	I36	1.7	-4.47	T36	2.125	-4.74	47.3	0.006	24	1	0.01	2.8814	0.92	0.92	2.00	2.8814	22.2278	13.0	100.0	100.0	TRUE	0.75
I37+I6	I37	4.72	-2.94	I6	4.62	-3.08	48.5	0.003	15	1	0.013	5.3209	4.34	4.34	1.25	5.3209	3.4711	153.3	100.0	100.0	TRUE	3.47
J5+J16	J5	4.44	-1.06	J16	3.8	-2.17	275.2	0.004	8	1	0.01	0.0772	0.22	1.30	0.67	0.0772	0.9977	7.7	100.0	22.6	TRUE	0.82
J6+J5	J6	5.85	0.6	J5	4.44	-0.96	558.5	0.003	6	1	0.013	0.0772	0.39	0.48	0.50	0.0772	0.2965	26.0	100.0	75.9	TRUE	0.82
J7+J6	J7	5.96	1.9	J6	5.85	1.02	441.1	0.002	6	1	0.013	0.0227	0.70	0.70	0.11	0.0227	0.2506	9.1	22.2	22.2	FALSE	2.02
J8+J6	J8	7.5	2.81	J6	5.85	0.7	442.1	0.005	6	1	0.013	0.0545	0.99	0.99	0.16	0.0545	0.3876	14.1	32.4	32.4	FALSE	2.97
J9+J8	J9	8.19	3.23	J8	7.5	2.81	400.5	0.001	6	1	0.013	0.0545	0.56	0.56	0.25	0.0545	0.1817	30.0	49.3	49.3	FALSE	3.48
J10+J9	J10	9.91	4.26	J9	8.19	3.34	299.8	0.003	6	1	0.013	0.0545	0.83	0.84	0.18	0.0549	0.3108	17.5	36.9	36.7	FALSE	4.46
J11+J15	J11	1.31	-2.3	J15	2.31	-3.24	199.7	0.005	8	1	0.013	0.0290	0.08	1.07	0.67	0.0291	0.8290	3.5	100.0	12.9	TRUE	0.80
J12+J11	J12	1.94	-1.61	J11	1.31	-2.2	299.4	0.002	8	1	0.013	0.0290	0.08	0.64	0.67	0.0291	0.5364	5.4	100.0	18.7	TRUE	0.80
J13+J12	J13	2.73	-0.51	J12	1.94	-1.51	298.6	0.003	8	1	0.013	0.0290	0.08	0.71	0.67	0.0291	0.6993	4.1	100.0	17.5	TRUE	0.80
J14+J13	J14	3.27	-0.03	J13	2.73	-0.41	190	0.002	8	1	0.013	0.0291	0.08	0.76	0.67	0.0315	0.5404	5.4	100.0	17.6	TRUE	0.80
J15+T20	J15	2.31	-3.49	T20	2.72	-4.06	82.7	0.007	7.6	1	0.01	0.0290	0.09	0.95	0.63	0.0296	1.1178	2.6	100.0	9.7	TRUE	0.80
J16+J17	J16	3.8	-2.17	J17	3.3	-3.02	210.2	0.004	7.6	1	0.01	0.0772	0.25	0.25	0.63	0.0772	0.8560	9.0	100.0	100.0	TRUE	0.82
J17+J18	J17	3.3	-3.02	J18	2.4	-3.24	45	0.005	8	1	0.01	0.0772	0.22	0.22	0.67	0.0772	1.0983	7.0	100.0	100.0	TRUE	0.82
J18+T21	J18	2.4	-3.24	T21	3.07	-3.99	63	0.012	8	1	0.01	0.0772	0.22	0.22	0.67	0.0772	1.7140	4.5	100.0	100.0	TRUE	0.82
K1+T16	K1	2.25	-6.28	T16	2.25	-6.5	30.8	0.007	18	1	0.01	2.7405	1.55	1.59	1.50	2.8163	11.5437	23.7	100.0	100.0	TRUE	0.46
K2+K38	K2	3.35	-5.2	K38	2.67	-5.61	193.7	0.002	18	1	0.01	2.7404	1.55	1.61	1.50	2.8520	6.2817	43.6	100.0	100.0	TRUE	0.51

Appendix D: Table 6
Scenario 3: 2035 Enhanced PWWF Model Results

Label	Start Node	Rim (Start) (ft)	Invert (Start) (ft)	Stop Node	Rim (Stop) (ft)	Invert (Stop) (ft)	Length (ft)	Slope (Calculated) (ft/ft)	Diameter (in)	Number of Barrels	Manning's n	Flow (Middle) (cfs)	Velocity (ft/s)	Velocity (Maximum Calculated) (ft/s)	Depth (Middle) (ft)	Flow (Maximum) (cfs)	Capacity (Full Flow) (cfs)	Flow / Capacity (Design) (%)	Depth/Rise (%)	Depth (Maximum) / Rise (%)	Is Ever Surcharged?	Hydraulic Grade (Maximum) (ft)
K3+K2	K3	4.05	-4.8	K2	3.35	-5.2	189.7	0.002	18	1	0.01	2.7406	1.55	1.62	1.50	2.8592	6.2704	43.7	100.0	100.0	TRUE	0.52
K4+K43	K4	3.55	-4.28	K43	3.81	-4.75	204.6	0.002	18	1	0.01	2.7317	1.55	1.62	1.50	2.8547	6.5448	41.7	100.0	100.0	TRUE	0.54
K5+K4	K5	3.31	-3.71	K4	3.55	-4.28	248.1	0.002	18	1	0.01	1.6344	0.92	1.00	1.50	1.7688	6.5445	25.0	100.0	100.0	TRUE	0.55
K6+K5	K6	4.44	-2.86	K5	3.31	-3.71	251.1	0.003	18	1	0.01	1.5954	0.90	0.99	1.50	1.7580	7.9454	20.1	100.0	100.0	TRUE	0.55
K7+K6	K7	3.35	-1.85	K6	4.44	-2.66	362.1	0.002	8	1	0.013	0.0200	0.06	0.06	0.67	0.0201	0.5715	3.5	100.0	100.0	TRUE	0.56
K8+K7	K8	2.87	-1.18	K7	3.35	-1.85	355.5	0.002	8	1	0.013	0.0200	0.06	0.67	0.67	0.0200	0.5246	3.8	100.0	14.0	TRUE	0.56
K9+K8	K9	3.87	-0.58	K8	2.87	-1.18	355.9	0.002	8	1	0.013	0.0200	0.06	0.64	0.67	0.0200	0.4961	4.0	100.0	14.4	TRUE	0.56
K10+K9	K10	4.11	0.11	K9	3.87	-0.48	155.5	0.004	6	1	0.013	0.0100	0.05	0.70	0.50	0.0115	0.3456	2.9	100.0	5.8	TRUE	0.56
K11+K5	K11	3.67	-2.23	K5	3.31	-2.99	369.8	0.002	6	1	0.013	0.0205	0.10	0.72	0.50	0.0205	0.2544	8.1	100.0	20.1	TRUE	0.55
K12+K11	K12	3.54	-0.86	K11	3.67	-2.08	353.5	0.003	6	1	0.013	0.0205	0.10	0.91	0.50	0.0205	0.3296	6.2	100.0	17.1	TRUE	0.55
K13+K12	K13	2.97	0.27	K12	3.54	-0.86	362	0.003	6	1	0.013	0.0205	0.10	0.87	0.50	0.0209	0.3135	6.5	100.0	18.0	TRUE	0.55
K14+K13	K14	3.19	0.45	K13	2.97	0.27	90.4	0.002	6	1	0.013	0.0205	0.30	0.80	0.19	0.0212	0.2503	8.2	37.7	19.2	FALSE	0.58
K15+K9	K15	3.43	-0.33	K9	3.87	-0.48	73.9	0.002	6	1	0.013	0.0100	0.05	0.79	0.50	0.0100	0.2528	4.0	100.0	9.7	TRUE	0.56
K16+K4	K16	3.55	-2.65	K4	3.55	-3.45	273.7	0.003	6	1	0.013	0.0205	0.10	0.75	0.50	0.0205	0.3033	6.8	100.0	19.7	TRUE	0.54
K17+K16	K17	2.92	-1.88	K16	3.55	-2.6	267.2	0.003	6	1	0.013	0.0205	0.10	0.65	0.50	0.0205	0.2912	7.0	100.0	1.9	TRUE	0.54
K18+K17	K18	3.64	-1.31	K17	2.92	-1.88	268.7	0.002	6	1	0.013	0.0205	0.10	0.77	0.50	0.0219	0.2584	7.9	100.0	6.2	TRUE	0.54
K19+K18	K19	3.25	-0.65	K18	3.64	-1.31	272	0.002	6	1	0.013	0.0205	0.10	0.73	0.50	0.0205	0.2764	7.4	100.0	20.0	TRUE	0.54
K20+K19	K20	2.67	-0.53	K19	3.25	-0.6	134.6	0.001	6	1	0.013	0.0205	0.10	0.94	0.50	0.0205	0.1279	16.0	100.0	13.5	TRUE	0.54
K21+K3	K21	3.15	-2.1	K3	4.05	-4.25	246.4	0.009	6	1	0.013	0.0100	0.05	0.65	0.50	0.0201	0.5241	1.9	100.0	1.9	TRUE	0.52
K22+K21	K22	3.29	-1.16	K21	3.15	-2.05	256.2	0.003	6	1	0.013	0.0050	0.03	0.69	0.50	0.0050	0.3307	1.5	100.0	6.7	TRUE	0.52
K23+K22	K23	3.52	-0.91	K22	3.29	-1.11	99.5	0.002	6	1	0.013	0.0050	0.03	0.66	0.50	0.0050	0.2515	2.0	100.0	5.4	TRUE	0.52
K24+K21	K24	3.55	-1.7	K21	3.15	-2	148.6	0.002	6	1	0.013	0.0050	0.03	0.65	0.50	0.0050	0.2521	2.0	100.0	5.1	TRUE	0.52
K25+K44	K25	3.6	-1.7	K44	3.23	-2.92	346.2	0.004	6	1	0.01	0.0160	0.08	0.86	0.50	0.0237	0.4330	3.7	100.0	9.8	TRUE	0.55
K26+K6	K26	4.36	-1.29	K6	4.44	-2.76	293.6	0.005	6	1	0.013	0.0000	0.00	0.44	0.50	0.0176	0.3970	0.0	100.0	25.8	TRUE	0.55
K27+K26	K27	3.95	-0.6	K26	4.36	-1.29	199.5	0.003	6	1	0.013	0.0000	0.00	0.40	0.50	0.0184	0.3300	0.0	100.0	28.5	TRUE	0.55
K28+K4	K28	3.27	-4	K4	3.55	-4.1	242	0	10	1	0.013	1.0751	1.97	1.97	0.83	1.0751	0.4454	241.4	100.0	100.0	TRUE	0.54
K30+K31	K30	3.78	-3.21	K31	3.08	-3.43	108.2	0.002	8	1	0.013	0.1208	0.35	0.35	0.67	0.1208	0.5449	22.2	100.0	100.0	TRUE	0.55
K31+L1	K31	3.08	-3.43	L1	2.82	-3.73	147.8	0.002	8	1	0.013	0.1208	0.35	0.35	0.67	0.1208	0.5443	22.2	100.0	100.0	TRUE	0.55
K32+K30	K32	3.16	-2.76	K30	3.78	-3.21	226.9	0.002	8	1	0.013	0.1190	0.34	0.74	0.67	0.1190	0.5381	22.1	100.0	47.1	TRUE	0.55
K33+K32	K33	2.74	-2.37	K32	3.16	-2.76	130.8	0.003	6	1	0.013	0.0595	0.30	0.87	0.50	0.0595	0.3064	19.4	100.0	38.1	TRUE	0.55
K34+K33	K34	3.08	-1.54	K33	2.74	-2.37	278.4	0.003	6	1	0.013	0.0595	0.30	0.87	0.50	0.0597	0.3064	19.4	100.0	38.0	TRUE	0.55
K35+K34	K35	2.78	-0.7	K34	3.08	-1.54	279.8	0.003	6	1	0.013	0.0595	0.30	0.86	0.50	0.0595	0.3074	19.4	100.0	38.2	TRUE	0.55
K36+K35	K36	2.75	0.15	K35	2.78	-0.7	281.5	0.003	6	1	0.013	0.0595	0.30	0.89	0.50	0.0606	0.3083	19.3	100.0	37.8	TRUE	0.55
K37+K32	K37	2.51	-1.01	K32	3.16	-2.76	350.2	0.005	6	1	0.013	0.0595	0.30	1.07	0.50	0.0597	0.3966	15.0	100.0	32.6	TRUE	0.55
K38+K39	K38	2.67	-5.61	K39	2.49	-5.63	7.8	0.003	18	1	0.01	2.7404	1.55	1.61	1.50	2.8463	6.9194	39.6	100.0	100.0	TRUE	0.49
K39+K40	K39	2.49	-5.63	K40	2.25	-6.24	249.4	0.002	18	1	0.01	2.7404	1.55	1.60	1.50	2.8343	6.7531	40.6	100.0	100.0	TRUE	0.48
K40+K1	K40	2.25	-6.24	K1	2.25	-6.28	5.6	0.007	18	1	0.01	2.7404	1.55	1.59	1.50	2.8183	11.4992	23.8	100.0	100.0	TRUE	0.47
K41+K42	K41	5.23	-2.2	K42	7.35	-2.73	191.9	0.003	18	1	0.01	1.5756	0.89	0.99	1.50	1.7511	7.1761	22.0	100.0	100.0	TRUE	0.57
K42+K6	K42	7.35	-2.73	K6	4.44	-2.86	36.7	0.004	12	2	0.01	1.5752	1.00	1.12	1.00	1.7538	5.5095	28.6	100.0	100.0	TRUE	0.56
K43+K3	K43	3.81	-4.75	K3	4.05	-4.8	23.5	0.002	18	1	0.01	2.7310	1.55	1.61	1.50	2.8492	6.2985	43.4	100.0	100.0	TRUE	0.53
K44+K5	K44	3.23	-2.92	K5	3.31	-3.09	30	0.006	6	1	0.013	0.0160	0.08	0.94	0.50	0.0179	0.4224	3.8	100.0	14.0	TRUE	0.55
L1+L21	L1	2.82	-3.73	L21	2.74	-3.95	223.2	0.001	10	1	0.013	1.0751	1.97	1.97	0.83	1.0751	0.6879	156.3	100.0	100.0	TRUE	0.55
L2+L1	L2	2.72	-3.28	L1	2.82	-3.73	178.7	0.003	10	1	0.013	0.9544	1.75	1.75	0.83	0.9544	1.0993	86.8	100.0	100.0	TRUE	0.56
L3+L2	L3	2.93	-3.17	L2	2.72	-3.28	83.4	0.001	10	1	0.013	0.9544	1.75	1.75	0.83	0.9544	0.7957	119.9	100.0	100.0	TRUE	0.56
L4+L3	L4	3.39	-2.3	L3	2.93	-3.12	247.6	0.003	10	1	0.013	0.5073	0.93	0.93	0.83	0.5073	1.2607	40.2	100.0	100.0	TRUE	0.56
L5+L47	L5	4.17	-1.38	L47	3.21	-2.04	276.3	0.002	6	1	0.013	0.0680	0.35	0.86	0.50	0.0680	0.2742	24.8	100.0	42.5	TRUE	0.56
L6+L5	L6	4.69	-0.51	L5	4.17	-1.38	214.9	0.004	6	1	0.013	0.0340	0.17	0.24	0.50	0.0340	0.3570	9.5	100.0	66.5	TRUE	0.56
L7+L6	L7	5.31	-0.39	L6	4.69	-0.51	260.6	0	6	1	0.013	0.0340	0.17	0.47	0.50	0.0340	0.1204	28.2	100.0	39.5	TRUE	0.56
L8+L7	L8	5.39	-0.24	L7	5.31	-0.39	72.8	0.002	6	1	0.013	0.0340	0.17	0.64	0.50	0.0340	0.2547	13.4	100.0	31.5	TRUE	0.56
L9+L4	L9	3.42	-1.78	L4	3.39	-2.05	162.3	0.002	6	1	0.013	0.2353	1.20	1.20	0.50	0.2353	0.2288	102.8	100.0	100.0	TRUE	0.56
L10+K27	L10	3.59	0.24	K27	3.95	-0.55	197.2	0.004	6	1	0.013	0.0000	0.00	0.49	0.50	0.0250	0.3551	0.0	100.0	30.7	TRUE	0.55
L10+L9	L10	3.59	-0.76	L9	3.42	-1.78	274.7	0.004	6	1	0.013	0.0695	0.35	1.03	0.50	0.0697	0.3419	20.3	100.0	37.6	TRUE	0.56
L11+L10	L11	4.97	0.57	L10	3.59	-0.56	359.8	0.003	6	1	0.013	0.0696	0.36	0.36	0.48	0.0696	0.3144	22.1	95.4	94.3	TRUE	0.77
L12+L11	L12	4.97	0.62	L11	4.97	0.57	81.8	0.001	6	1	0.013	0.0536	0.88	0.94	0.17	0.0542	0.1387	38.7	34.9	33.4	FALSE	0.88
L13+L9	L13	4.47	-0.58	L9	3.42	-1.73	310.9	0.004	6	1	0.013	0.1658	0.84	0.84	0.50	0.1658	0.3412	48.6	100.0	100.0	TRUE	0.56
L14+L13	L14	5.25	0.6	L13	4.47	-0.58	301.6	0.004	6	1	0.013	0.1658	0.84	1.52	0.50	0.1658	0.3509	47.2	100.0	54.2	TRUE	0.87
L15+L14	L15	6.17	1.92	L14	5.25	0.6	310.2	0.004	6	1	0.013	0.1658	1.57	1.57	0.26	0.1658	0.3660	45.3	52.9	52.9	FALSE	2.19
L16+L15	L16	7.37	2.67	L15	6.17	1.92	311.1	0.002	6	1	0.013	0.1658	1.26	1.26	0.32	0.1658	0.2755	60.2	63.3	63.3	FALSE	2.99
L17+L16	L17	7.38	3.53	L16	7.37	2.67	236.3	0.004	6	1	0.013	0.1600	1.48	1.48	0.27	0.1601	0.3385	47.3	54.1	54.1	FALSE	3.81
L18+L17	L18	8.22	4.37	L17	7.38	3.53	330.9	0.003	6	1	0.013	0.1600	1.27	1.27	0.31	0.1600	0.2827	56.6	61.0	61.0	FALSE	4.68
L19+L18	L19	9.56	5.51	L18	8.22	4.37	332.7	0.003	6	1	0.013	0.1600	1.43	1.52	0.28	0.1607	0.3284	48.7	55.5	53.1	FALSE	5.80

Appendix D: Table 6
Scenario 3: 2035 Enhanced PWWF Model Results

Label	Start Node	Rim (Start) (ft)	Invert (Start) (ft)	Stop Node	Rim (Stop) (ft)	Invert (Stop) (ft)	Length (ft)	Slope (Calculated) (ft/ft)	Diameter (in)	Number of Barrels	Manning's n	Flow (Middle) (cfs)	Velocity (ft/s)	Velocity (Maximum Calculated) (ft/s)	Depth (Middle) (ft)	Flow (Maximum) (cfs)	Capacity (Full Flow) (cfs)	Flow / Capacity (Design) (%)	Depth/Rise (%)	Depth (Maximum) / Rise (%)	Is Ever Surcharged?	Hydraulic Grade (Maximum) (ft)
L20+L16	L20	8.52	2.97	L16	7.37	2.77	101.4	0.002	6	1	0.013	0.0058	0.15	0.27	0.12	0.0059	0.2492	2.3	24.5	16.8	FALSE	3.01
L21+K28	L21	2.74	-3.95	K28	3.27	-4	68.3	0.001	10	1	0.013	1.0751	1.97	1.97	0.83	1.0751	0.5929	181.3	100.0	100.0	TRUE	0.55
L22+L3	L22	3.32	-0.13	L3	2.93	-2.72	365.6	0.007	6	1	0.013	0.0255	0.13	0.54	0.50	0.0256	0.4722	5.4	100.0	29.1	TRUE	0.56
L23+L3	L23	3.05	-2.75	L3	2.93	-3.17	351.1	0.001	8	1	0.01	0.4198	1.20	1.20	0.67	0.4198	0.5433	77.3	100.0	100.0	TRUE	0.56
L24+L23	L24	2.38	-2.17	L23	3.05	-2.75	386.3	0.002	8	1	0.01	0.4198	1.20	1.20	0.67	0.4198	0.6087	69.0	100.0	100.0	TRUE	0.56
L25+L24	L25	3.54	-1.91	L24	2.38	-2.17	342	0.001	8	1	0.01	0.4198	1.20	1.20	0.67	0.4198	0.4331	96.9	100.0	100.0	TRUE	0.57
L26+L25	L26	3.77	-1.38	L25	3.54	-1.91	215.6	0.002	8	1	0.013	0.2820	0.81	0.81	0.67	0.2820	0.5991	47.1	100.0	100.0	TRUE	0.57
L27+L26	L27	3.7	-0.86	L26	3.77	-1.38	260.1	0.002	8	1	0.013	0.1580	0.45	1.16	0.67	0.1580	0.5403	29.2	100.0	41.3	TRUE	0.57
L28+L27	L28	3.81	0.26	L27	3.7	-0.86	362.9	0.003	6	1	0.013	0.0790	0.40	1.01	0.50	0.0790	0.3117	25.3	100.0	41.8	TRUE	0.57
L29+L28	L29	4.59	1.14	L28	3.81	0.26	366	0.002	6	1	0.013	0.0790	0.92	0.93	0.22	0.0793	0.2751	28.7	44.8	44.7	FALSE	1.39
L30+L27	L30	3.71	-0.19	L27	3.7	-0.86	236	0.003	6	1	0.013	0.0790	0.40	0.98	0.50	0.0790	0.2989	26.4	100.0	42.9	TRUE	0.57
L31+L30	L31	4.39	0.64	L30	3.71	-0.19	178.8	0.005	6	1	0.013	0.0790	0.55	1.20	0.34	0.0790	0.3823	20.7	68.9	36.9	TRUE	0.83
L32+L31	L32	5.42	1.62	L31	4.39	0.64	293.5	0.003	6	1	0.013	0.0790	1.04	1.04	0.21	0.0790	0.3242	24.4	41.2	41.2	FALSE	1.83
L33+L32	L33	5.85	1.8	L32	5.42	1.62	90.7	0.002	6	1	0.013	0.0790	0.90	0.90	0.23	0.0790	0.2500	31.6	45.8	45.8	FALSE	2.06
L34+L26	L34	4.66	-0.24	L26	3.77	-1.28	287.3	0.004	6	1	0.013	0.1240	0.63	1.32	0.50	0.1241	0.3376	36.7	100.0	48.2	TRUE	0.57
L35+L34	L35	5.3	0.7	L34	4.66	-0.24	253.5	0.004	6	1	0.013	0.1100	1.15	1.26	0.24	0.1100	0.3417	32.2	49.0	45.6	TRUE	0.93
L36+L35	L36	5.75	1.65	L35	5.3	0.7	277.7	0.003	6	1	0.013	0.1100	1.22	1.22	0.23	0.1100	0.3282	33.5	46.6	46.6	FALSE	1.89
L37+L36	L37	6.21	2.76	L36	5.75	1.65	322.8	0.003	6	1	0.013	0.0000	0.00	0.00	0.00	0.0000	0.3290	0.0	0.0	0.0	FALSE	2.76
L37+L38	L37	6.21	2.76	L38	5.64	2.24	210.4	0.002	6	1	0.013	0.0000	0.00	0.00	0.00	0.0000	0.2789	0.0	0.0	0.0	FALSE	2.76
L38+L39	L38	5.64	2.24	L39	4.89	1.54	215.2	0.003	6	1	0.013	0.1200	1.26	1.26	0.24	0.1200	0.3200	37.5	48.8	48.8	FALSE	2.49
L39+L40	L39	4.89	1.54	L40	4.16	0.81	345.7	0.002	6	1	0.013	0.1200	1.06	1.06	0.28	0.1200	0.2578	46.5	55.9	55.9	FALSE	1.82
L40+L42	L40	4.16	0.61	L42	3.25	0.2	345.8	0.001	8	1	0.013	0.1250	0.88	0.88	0.29	0.1250	0.4161	30.0	42.8	42.8	FALSE	0.90
L41+L40	L41	6.09	0.95	L40	4.16	0.81	70.6	0.002	6	1	0.013	0.0050	0.64	0.64	0.02	0.0050	0.2499	2.0	4.7	4.7	FALSE	0.98
L42+L43	L42	3.25	0.2	L43	2.56	-0.34	330.1	0.002	8	1	0.013	0.1250	0.36	0.37	0.64	0.1250	0.4887	25.6	95.8	91.8	TRUE	0.57
L43+L44	L43	2.56	-0.34	L44	3.5	-0.85	334.4	0.002	8	1	0.013	0.1250	0.36	0.96	0.67	0.1250	0.4719	26.5	100.0	40.1	TRUE	0.57
L44+L45	L44	3.5	-0.85	L45	2.57	-1.33	238.4	0.002	8	1	0.013	0.1250	0.36	0.36	0.67	0.1250	0.5422	23.1	100.0	100.0	TRUE	0.57
L45+L25	L45	2.57	-1.38	L25	3.54	-1.76	201.8	0.002	8	1	0.013	0.1378	0.39	0.39	0.67	0.1378	0.5244	26.3	100.0	100.0	TRUE	0.57
L46+L45	L46	2.92	-0.93	L45	2.57	-1.23	136	0.002	6	1	0.013	0.0128	0.07	0.86	0.50	0.0153	0.2635	4.9	100.0	11.5	TRUE	0.57
L47+L4	L47	3.21	-2.04	L4	3.39	-2.3	88	0.003	8	1	0.013	0.2720	0.78	0.78	0.67	0.2720	0.6568	41.4	100.0	100.0	TRUE	0.56
L48+L47	L48	3.22	-1.35	L47	3.21	-2.04	228.9	0.003	8	1	0.013	0.2040	0.58	0.58	0.67	0.2040	0.6635	30.7	100.0	100.0	TRUE	0.56
L49+L48	L49	4.08	-1.2	L48	3.22	-1.35	233.3	0.001	8	1	0.013	0.2040	0.58	0.58	0.67	0.2040	0.3064	66.6	100.0	100.0	TRUE	0.56
L50+L49	L50	4.26	-0.68	L49	4.08	-1.2	223.6	0.002	8	1	0.013	0.2040	0.58	0.58	0.67	0.2040	0.5827	35.0	100.0	100.0	TRUE	0.56
L51+L50	L51	3.85	-0.28	L50	4.26	-0.68	79.7	0.005	6	1	0.013	0.0077	0.04	0.69	0.50	0.0080	0.3975	1.9	100.0	6.0	TRUE	0.57
L52+L50	L52	4.54	-0.36	L50	4.26	-0.68	223.9	0.001	6	1	0.013	0.1963	1.00	1.00	0.50	0.1963	0.2121	92.5	100.0	100.0	TRUE	0.57
L53+L52	L53	5.4	0.6	L52	4.54	-0.36	218.4	0.004	6	1	0.013	0.1963	1.06	1.69	0.45	0.1963	0.3720	52.8	89.1	57.2	TRUE	0.89
L54+L53	L54	6.47	2.07	L53	5.4	0.6	369.4	0.004	6	1	0.013	0.0935	1.21	1.21	0.21	0.0935	0.3539	26.4	41.6	41.6	FALSE	2.28
L55+L54	L55	6.53	2.37	L54	6.47	2.07	148.7	0.002	6	1	0.013	0.0425	0.62	0.64	0.19	0.0428	0.2520	16.9	38.0	37.3	FALSE	2.57
L56+L54	L56	7.59	3.34	L54	6.47	2.17	326.7	0.004	6	1	0.013	0.0510	0.84	0.90	0.17	0.0532	0.3357	15.2	34.8	34.1	FALSE	3.52
L57+L53	L57	5.49	1.29	L53	5.4	0.65	202.8	0.003	6	1	0.013	0.1028	1.16	1.16	0.23	0.1028	0.3152	32.6	46.0	46.0	FALSE	1.52
L58+L57	L58	6.75	2.35	L57	5.49	1.29	295.3	0.004	6	1	0.013	0.1028	1.21	1.22	0.22	0.1033	0.3361	30.6	44.8	44.6	FALSE	2.57
L59+L58	L59	7.91	3.31	L58	6.75	2.35	250	0.004	6	1	0.013	0.1028	1.24	1.25	0.22	0.1030	0.3477	29.6	43.9	43.7	FALSE	3.53
L60+L59	L60	8.08	3.53	L59	7.91	3.31	108.8	0.002	6	1	0.013	0.1028	1.02	1.02	0.26	0.1028	0.2523	40.7	51.1	51.1	FALSE	3.79
L61+L5	L61	4.57	-0.73	L5	4.17	-1.13	152.5	0.003	6	1	0.013	0.0340	0.17	0.71	0.50	0.0340	0.2874	11.8	100.0	29.3	TRUE	0.56
L62+L34	L62	4.95	0.45	L34	4.66	-0.19	146.7	0.004	6	1	0.013	0.0140	0.08	0.67	0.44	0.0140	0.3705	3.8	87.7	16.4	TRUE	0.57
M2+M44	M2	5.62	0.3	M44	5.62	0.22	42.2	0.002	8	1	0.013	0.4523	1.30	2.83	0.67	0.8873	0.5262	85.9	100.0	84.2	TRUE	3.41
M2+N1	M2	5.62	2.62	N1	5.32	2.32	82	0.004	12	1	0.013	0.3943	0.90	1.57	0.55	0.6067	2.1554	18.3	54.7	49.3	FALSE	3.41
M3+M2	M3	6.98	1.33	M2	5.62	0.3	379.8	0.003	8	1	0.013	0.8806	2.52	2.58	0.67	0.9007	0.6293	139.9	100.0	100.0	TRUE	5.34
M4+M31	M4	9.9	3	M31	7	2.52	142.5	0.003	8	1	0.013	0.6006	1.72	1.96	0.67	0.6851	0.7012	85.6	100.0	100.0	TRUE	7.60
M5+M4	M5	11.95	3.9	M4	9.9	3.05	372.5	0.002	8	1	0.013	0.6006	1.72	1.98	0.67	0.6913	0.5772	104.1	100.0	100.0	TRUE	8.53
M6+M46	M6	12.3	6.22	M46	12.8	6.1	50.4	0.002	16	1	0.01	0.1903	1.54	1.54	0.19	0.1907	4.8649	3.9	14.4	14.4	FALSE	6.42
M7+M36	M7	12.4	6.45	M36	7.3	3.24	79.9	0.04	10	1	0.01	0.3680	3.08	3.08	0.15	0.3687	5.7102	6.4	17.8	17.8	FALSE	6.60
M7+M45	M7	12.4	6.45	M45	12.36	6.35	46.6	0.002	12	2	0.01	0.1903	1.25	1.25	0.15	0.1909	4.2891	4.4	15.3	15.3	FALSE	6.61
M8+M7	M8	14.41	7.71	M7	12.4	6.45	192.5	0.007	16	1	0.01	0.5583	3.19	3.19	0.24	0.5596	8.0706	6.9	18.3	18.3	FALSE	7.96
M12+M40	M12	14.95	7.4	M40	13.27	5.72	338.1	0.005	8	1	0.013	0.8295	2.38	2.38	0.67	0.8295	0.8518	97.4	100.0	100.0	TRUE	8.62
M13+M12	M13	16.33	8.78	M12	14.95	7.4	276	0.005	8	1	0.013	0.8295	2.38	2.38	0.67	0.8295	0.8544	97.1	100.0	100.0	TRUE	9.94
M14+M5	M14	10.14	5.82	M5	11.95	3.95	327.8	0.006	10	1	0.013	0.0200	0.04	0.15	0.83	0.0275	1.6547	1.2	100.0	36.8	TRUE	8.53
M16+M8	M16	14.85	8.05	M8	14.41	7.81	19.7	0.012	6	1	0.013	0.0100	0.34	0.78	0.10	0.0100	0.6193	1.6	20.5	9.4	FALSE	8.09
M18+M5	M18	12	4.51	M5	11.95	4.2	153.9	0.002	10	1	0.013	-0.2489	-0.46	0.00	0.83	0.0000	0.9833	-25.3	100.0	0.0	TRUE	8.53
M19+M18	M19	12.1	4.7	M18	12	4.51	94.8	0.002	10	1	0.013	-0.2489	-0.46	0.09	0.83	0.0114	0.9807	-25.4	100.0	27.2	TRUE	8.53
M20+M19	M20	12.2	4.86	M19	12.1	4.7	78	0.002	10	1	0.013	-0.2489	-0.46	0.07	0.83	0.0123	0.9925	-25.1	100.0	34.9	TRUE	8.53
M21+M20	M21	12.3	5.45	M20	12.2	4.86	296.6	0.002	10	1	0.013	-0.2489	-0.46	0.06	0.83	0.0183	0.9772	-25.5	100.0	51.9	TRUE	8.53

Appendix D: Table 6
Scenario 3: 2035 Enhanced PWWF Model Results

Label	Start Node	Rim (Start) (ft)	Invert (Start) (ft)	Stop Node	Rim (Stop) (ft)	Invert (Stop) (ft)	Length (ft)	Slope (Calculated) (ft/ft)	Diameter (in)	Number of Barrels	Manning's n	Flow (Middle) (cfs)	Velocity (ft/s)	Velocity (Maximum Calculated) (ft/s)	Depth (Middle) (ft)	Flow (Maximum) (cfs)	Capacity (Full Flow) (cfs)	Flow / Capacity (Design) (%)	Depth/Rise (%)	Depth (Maximum) / Rise (%)	Is Ever Surcharged?	Hydraulic Grade (Maximum) (ft)
M22+M21	M22	12.3	5.54	M21	12.3	5.45	43.3	0.002	10	1	0.013	-0.2489	-0.46	0.05	0.83	0.0188	0.9992	-24.9	100.0	62.2	TRUE	8.53
M23+M24	M23	7.5	4.92	M24	7.4	4.53	195	0.002	8	1	0.013	0.2800	0.80	0.80	0.67	0.2800	0.5404	51.8	100.0	100.0	TRUE	7.48
M24+M25	M24	7.4	4.56	M25	7.3	4.04	260	0.002	8	1	0.013	0.2800	0.80	0.80	0.67	0.2800	0.5404	51.8	100.0	100.0	TRUE	7.45
M25+M26	M25	7.3	4.04	M26	7.3	3.5	270	0.002	8	1	0.013	0.2800	0.80	0.80	0.67	0.2801	0.5404	51.8	100.0	100.0	TRUE	7.39
M26+M27	M26	7.3	3.5	M27	7.2	3.25	124.9	0.002	8	1	0.013	0.2800	0.80	0.80	0.67	0.2801	0.5406	51.8	100.0	100.0	TRUE	7.39
M27+M29	M27	7.2	3.25	M29	7.1	3.18	35.2	0.002	8	1	0.013	0.2800	0.80	0.80	0.67	0.2802	0.5385	52.0	100.0	100.0	TRUE	7.39
M28+N11	M28	7.3	0.37	N11	7.2	-0.1	236.4	0.002	8	1	0.013	0.0109	0.04	0.72	0.45	0.0154	0.5388	2.0	67.5	4.3	TRUE	0.59
M29+M31	M29	7.1	3.18	M31	7	2.52	328.8	0.002	8	1	0.01	0.2800	0.80	0.80	0.67	0.2802	0.7038	39.8	100.0	100.0	TRUE	7.39
M30+N29	M30	7.3	0.64	N29	7.2	0.13	255.2	0.002	8	1	0.013	0.0109	0.19	0.74	0.15	0.0110	0.5402	2.0	22.4	8.7	FALSE	0.71
M31+M3	M31	7	2.52	M3	6.98	1.33	357.1	0.003	8	1	0.013	0.8806	2.52	2.60	0.67	0.9066	0.6975	126.2	100.0	100.0	TRUE	7.30
M32+M33	M32	7.3	2.88	M33	7.3	2.49	195	0.002	8	1	0.013	0.5280	1.80	1.80	0.52	0.5280	0.5403	97.7	78.4	78.4	FALSE	3.43
M33+M34	M33	7.3	2.49	M34	7.2	1.91	257.5	0.002	8	1	0.013	0.5280	1.77	1.77	0.53	0.5280	0.5735	92.1	79.6	79.6	FALSE	3.03
M34+N22	M34	7.2	1.91	N22	7.1	1.4	283.5	0.002	8	1	0.013	0.5403	1.68	1.68	0.58	0.5403	0.5125	105.4	86.8	86.8	FALSE	2.53
M35+M34	M35	7.2	2.16	M34	7.2	1.91	124.1	0.002	8	1	0.013	0.0123	0.04	0.74	0.49	0.0123	0.5423	2.3	74.0	9.4	FALSE	2.53
M36+M37	M36	7.3	3.24	M37	7.4	2.73	256.7	0.002	8	1	0.013	0.3967	1.60	1.60	0.44	0.3973	0.5386	73.7	66.7	66.8	FALSE	3.69
M37+N24	M37	7.4	2.73	N24	7.3	2.21	259.3	0.002	8	1	0.013	0.3967	1.61	1.61	0.44	0.3971	0.5411	73.3	66.5	66.6	FALSE	3.18
M38+M39	M38	19.58	12.03	M39	18.79	11.24	157.5	0.005	8	1	0.013	0.8295	2.38	2.40	0.67	0.8390	0.8558	96.9	100.0	100.0	TRUE	12.75
M39+M43	M39	18.79	11.24	M43	17.59	10.04	240.5	0.005	8	1	0.013	0.8295	2.38	2.44	0.67	0.8461	0.8535	97.2	100.0	97.6	TRUE	12.05
M40+M5	M40	13.27	5.72	M5	11.95	4.4	263	0.005	8	1	0.013	0.8295	2.38	2.38	0.67	0.8295	0.8561	96.9	100.0	100.0	TRUE	8.53
M41+M13	M41	16.89	9.34	M13	16.33	8.78	111	0.005	8	1	0.013	0.8295	2.38	2.38	0.67	0.8295	0.8583	96.6	100.0	100.0	TRUE	10.41
M42+M41	M42	17.07	9.82	M41	16.89	9.34	37.3	0.013	8	1	0.013	0.8295	2.38	3.86	0.67	0.8318	1.3699	60.6	100.0	59.2	TRUE	10.50
M43+M42	M43	17.59	10.04	M42	17.07	9.82	103.8	0.002	8	1	0.013	0.8295	2.38	2.45	0.67	0.8345	0.5563	149.1	100.0	94.1	TRUE	10.92
M44+I15	M44	5.62	0.12	I15	5.32	-0.53	61.7	0.011	12	1	0.013	0.4523	0.58	1.10	1.00	0.8649	3.6568	12.4	100.0	100.0	TRUE	3.41
M45+M6	M45	12.36	6.35	M6	12.3	6.22	63.5	0.002	16	1	0.01	0.1903	1.47	1.47	0.20	0.1908	4.5115	4.2	14.9	14.9	FALSE	6.55
M46+M22	M46	12.8	6.12	M22	12.3	5.54	290.6	0.002	10	1	0.013	-0.2489	-0.46	0.05	0.83	0.0196	0.9788	-25.4	100.0	74.1	TRUE	8.53
M46+M32	M46	12.8	6.1	M32	7.3	2.88	76	0.042	10	1	0.01	0.4392	3.49	3.49	0.16	0.4392	5.8625	7.5	19.0	19.0	FALSE	6.27
METERING STATION+T2	METERING STATION	0	-14.66	T2	3.04	-14.76	444.9	0	24	1	0.013	12.7352	4.05	4.05	2.00	12.7352	3.3913	375.5	100.0	100.0	TRUE	-11.24
N1+K41	N1	5.32	-2.08	K41	5.23	-2.2	30.8	0.004	18	1	0.01	1.5715	0.89	1.00	1.50	1.7592	8.5232	18.4	100.0	100.0	TRUE	0.57
N2+N1	N2	5.71	-1.39	N1	5.32	-2.08	295.7	0.002	16	1	0.01	1.1834	0.85	0.85	1.33	1.1862	4.8180	24.6	100.0	100.0	TRUE	0.58
N3+N21	N3	6	-0.64	N21	6	-0.82	88.8	0.002	16	1	0.01	1.1318	0.81	0.81	1.32	1.1318	4.4899	25.2	99.0	98.6	TRUE	0.59
N4+N3	N4	6.14	0.24	N3	6	-0.64	334.7	0.003	16	1	0.01	1.1275	1.30	1.51	0.80	1.1275	5.1141	22.0	59.7	52.6	FALSE	0.68
N5+N4	N5	7.28	1.13	N4	6.14	0.29	332.5	0.003	10	1	0.013	0.1905	1.34	1.34	0.26	0.1905	1.1012	17.3	30.7	30.7	FALSE	1.39
N6+N5	N6	8.64	1.99	N5	7.28	1.13	332.5	0.003	10	1	0.013	0.1905	1.35	1.35	0.25	0.1905	1.1142	17.1	30.5	30.5	FALSE	2.25
N7+N6	N7	9.69	2.84	N6	8.64	1.99	332.7	0.003	10	1	0.013	0.1905	1.35	1.35	0.26	0.1905	1.1074	17.2	30.6	30.6	FALSE	3.10
N8+N9	N8	13.8	4.05	N9	11.48	3.68	118.7	0.003	10	1	0.013	0.1905	1.45	1.45	0.24	0.1905	1.2230	15.6	29.1	29.1	FALSE	4.29
N9+N7	N9	11.48	3.68	N7	9.69	2.84	284	0.003	10	1	0.013	0.1905	1.42	1.42	0.25	0.1905	1.1916	16.0	29.5	29.5	FALSE	3.93
N10+N13	N10	7.1	-0.52	N13	7	-0.88	176	0.002	8	1	0.013	0.0109	0.03	0.78	0.67	0.0109	0.5465	2.0	100.0	8.3	TRUE	0.58
N11+N12	N11	7.2	-0.1	N12	7.1	-0.56	227.2	0.002	8	1	0.013	0.0218	0.06	0.87	0.67	0.0237	0.5437	4.0	100.0	7.4	TRUE	0.59
N12+N13	N12	7.1	-0.56	N13	7	-0.88	157.9	0.002	8	1	0.013	0.0218	0.06	0.69	0.67	0.0218	0.5440	4.0	100.0	14.6	TRUE	0.58
N13+N14	N13	7	-0.88	N14	6	-1.21	167	0.002	8	1	0.013	0.0327	0.09	0.76	0.67	0.0333	0.5371	6.1	100.0	18.3	TRUE	0.58
N14+N2	N14	6	-1.21	N2	5.71	-1.39	88.4	0.002	16	1	0.01	1.1848	0.85	0.85	1.33	1.1850	4.5003	26.3	100.0	100.0	TRUE	0.58
N15+N16	N15	7.3	0.75	N16	7.2	0.25	251.8	0.002	8	1	0.013	0.0123	0.72	0.87	0.06	0.0138	0.5384	2.3	9.5	9.1	FALSE	0.82
N16+N17	N16	7.2	0.25	N17	7.1	-0.21	228.2	0.002	8	1	0.013	0.0123	0.04	0.81	0.57	0.0138	0.5426	2.3	85.4	7.3	TRUE	0.59
N17+N20	N17	7.1	-0.27	N20	7	-0.67	197	0.002	8	1	0.013	0.0123	0.04	0.81	0.67	0.0132	0.5445	2.3	100.0	9.2	TRUE	0.59
N18+N19	N18	7.2	0.29	N19	7.1	-0.22	255.9	0.002	8	1	0.013	0.0123	0.04	0.77	0.50	0.0130	0.5394	2.3	75.5	9.5	TRUE	0.59
N19+N20	N19	7.1	-0.22	N20	7	-0.67	224.1	0.002	8	1	0.013	0.0123	0.04	0.70	0.67	0.0166	0.5415	2.3	100.0	3.5	TRUE	0.59
N20+N21	N20	7	-0.67	N21	6	-0.82	72	0.002	8	1	0.013	0.0250	0.07	0.70	0.67	0.0250	0.5516	4.5	100.0	15.9	TRUE	0.59
N21+N14	N21	6	-0.82	N14	6	-1.21	195.8	0.002	16	1	0.01	1.1544	0.83	0.83	1.33	1.1544	4.4512	25.9	100.0	100.0	TRUE	0.59
N22+N23	N22	7.1	1.4	N23	7.1	0.98	212	0.002	8	1	0.013	0.5403	1.79	1.79	0.54	0.5403	0.5378	100.5	80.9	80.9	FALSE	1.97
N23+N28	N23	7.1	0.98	N28	7	0.59	193.2	0.002	8	1	0.013	0.5403	1.86	1.86	0.52	0.5403	0.5430	99.5	77.6	77.6	FALSE	1.54
N24+N25	N24	7.3	2.21	N25	7.3	1.98	116.3	0.002	8	1	0.013	0.3967	1.71	1.71	0.42	0.3971	0.5374	73.8	62.9	63.0	FALSE	2.65
N25+N26	N25	7.3	1.98	N26	7.2	1.46	262.5	0.002	8	1	0.013	0.3967	1.60	1.60	0.45	0.3970	0.5379	73.8	66.8	66.9	FALSE	2.43
N26+N27	N26	7.2	1.46	N27	7.1	0.96	247.5	0.002	8	1	0.013	0.3967	1.61	1.61	0.44	0.3970	0.5431	73.1	66.3	66.3	FALSE	1.91
N27+N28	N27	7.1	0.96	N28	7	0.59	183	0.002	8	1	0.013	0.3967	1.63	1.64	0.44	0.3969	0.5433	73.0	65.8	65.6	FALSE	1.41
N28+N31	N28	7	0.59	N31	6.87	0.54	21.4	0.002	6	2	0.01	0.9370	2.57	2.57	0.44	0.9370	0.7050	132.9	87.7	87.7	FALSE	1.03
N29+N10	N29	7.2	0.13	N10	7.1	-0.52	325.6	0.002	8	1	0.013	0.0109	0.03	0.74	0.67	0.0109	0.5399	2.0	100.0	8.7	TRUE	0.59
N30+N11	N30	7.3	0.17	N11	7.2	-0.1	134	0.002	8	1	0.013	0.0109	0.04	0.82	0.55	0.0120	0.5424	2.0	82.5	7.7	TRUE	0.59
N31+N4	N31	6.87	0.54	N4	6.14	0.24	128.8	0.002	12	1	0.01	0.9370	2.75	2.75	0.45	0.9370	2.2348	41.9	44.8	44.8	FALSE	1.00
O3+N8	O3	17.6	8.2	N8	13.8	4.1	205.1	0.02	8	1	0.013	0.0800	1.48	1.48	0.12	0.0800	1.7083	4.7	17.3	17.3	FALSE	8.32
O4+O3	O4	15.39	9.13	O3	17.6	8.3	277.4	0.003	8	1	0.013	0.0338	1.13	0.72	0.09	0.0338	0.6609	5.1	13.8	1.7	FALSE	9.22
O5+O4	O5	14.73	10.25	O4	15.39	9.13	398.6	0.003	8	1	0.013	0.0338	1.09	0.72	0.08	0.0338	0.6405	5.3	12.6	1.7	FALSE	10.34

Appendix D: Table 6
Scenario 3: 2035 Enhanced PWWF Model Results

Label	Start Node	Rim (Start) (ft)	Invert (Start) (ft)	Stop Node	Rim (Stop) (ft)	Invert (Stop) (ft)	Length (ft)	Slope (Calculated) (ft/ft)	Diameter (in)	Number of Barrels	Manning's n	Flow (Middle) (cfs)	Velocity (ft/s)	Velocity (Maximum Calculated) (ft/s)	Depth (Middle) (ft)	Flow (Maximum) (cfs)	Capacity (Full Flow) (cfs)	Flow / Capacity (Design) (%)	Depth/Rise (%)	Depth (Maximum) / Rise (%)	Is Ever Surcharged?	Hydraulic Grade (Maximum) (ft)
O6+O5	O6	13.82	11.05	O5	14.73	10.25	399.4	0.002	8	1	0.013	0.0338	1.13	0.72	0.09	0.0338	0.5408	6.2	14.1	1.7	FALSE	11.15
O7+O6	O7	15.16	11.56	O6	13.82	11.05	426.9	0.001	8	1	0.013	0.0338	0.94	0.72	0.11	0.0338	0.4177	8.1	15.9	1.7	FALSE	11.67
O8+O59	O8	16.28	12.23	O59	16.36	11.92	102.7	0.003	8	1	0.013	0.2285	1.58	1.58	0.29	0.2285	0.6639	34.4	43.3	43.3	FALSE	12.53
O9+O8	O9	17.01	12.76	O8	16.28	12.23	139.7	0.004	8	1	0.013	0.2075	1.63	1.63	0.26	0.2075	0.7443	27.9	39.3	39.3	FALSE	13.02
O10+O9	O10	17.95	13.1	O9	17.01	12.76	156.6	0.002	8	1	0.013	0.2075	1.35	1.35	0.30	0.2075	0.5631	36.9	45.4	45.4	FALSE	13.41
O11+O10	O11	19.41	14.01	O10	17.95	13.15	259.2	0.003	8	1	0.013	0.1932	1.51	1.51	0.26	0.1932	0.6960	27.8	39.4	39.4	FALSE	14.27
O12+O11	O12	19.9	14.5	O11	19.41	14.01	394.2	0.001	8	1	0.013	0.1932	1.06	1.06	0.35	0.1932	0.4260	45.4	51.8	51.8	FALSE	14.85
O13+O12	O13	22.22	16.47	O12	19.9	14.5	414.6	0.005	8	1	0.013	0.1932	1.72	1.72	0.24	0.1932	0.8329	23.2	35.8	35.8	FALSE	16.71
O14+O13	O14	21.75	17.35	O13	22.22	16.87	129.7	0.004	8	1	0.013	0.0487	0.82	0.82	0.15	0.0488	0.7351	6.6	22.6	22.6	FALSE	17.50
O15+O14	O15	24.85	19.05	O14	21.75	17.35	307.9	0.006	8	1	0.013	0.0487	0.93	0.93	0.14	0.0487	0.8978	5.4	20.8	20.8	FALSE	19.19
O16+O15	O16	28.01	22.56	O15	24.85	19.2	234.7	0.014	6	1	0.013	0.0487	1.34	1.34	0.12	0.0487	0.6714	7.3	23.8	23.8	FALSE	22.68
O17+O3	O17	10.93	8.62	O3	17.6	8.3	161.2	0.002	8	1	0.013	0.0494	0.66	0.66	0.18	0.0494	0.5383	9.2	26.8	26.8	FALSE	8.80
O18+O17	O18	15.83	11.93	O17	10.93	8.62	264	0.013	8	1	0.013	0.0136	0.74	0.74	0.04	0.0136	1.3530	1.0	5.3	5.3	FALSE	11.97
O19+O17	O19	17.6	10.75	O17	10.93	8.62	85.9	0.025	6	1	0.013	0.0354	1.09	1.10	0.08	0.0361	0.8837	4.0	16.6	16.7	FALSE	10.84
O20+O19	O20	17	10.98	O19	17.6	10.75	115.6	0.002	6	1	0.013	0.0057	0.68	0.56	0.03	0.0057	0.2503	2.3	6.2	1.3	FALSE	11.02
O21+O19	O21	20.09	12.64	O19	17.6	10.75	393.6	0.005	6	1	0.013	0.0302	0.97	0.97	0.11	0.0302	0.3888	7.8	21.5	21.5	FALSE	12.76
O22+O21	O22	20	13.27	O21	20.09	12.64	318.2	0.002	6	1	0.013	0.0300	0.64	0.64	0.14	0.0302	0.2497	12.0	28.9	28.8	FALSE	13.42
O23+O22	O23	21.65	15.65	O22	20	13.27	469.8	0.005	6	1	0.013	0.0299	0.86	0.89	0.12	0.0302	0.3993	7.5	23.3	22.8	FALSE	15.77
O24+O23	O24	21.18	15.84	O23	21.65	15.65	96.7	0.002	6	1	0.013	0.0300	0.67	0.71	0.14	0.0306	0.2488	12.1	27.8	27.1	FALSE	16.00
O25+O7	O25	16.12	12.07	O7	15.16	11.61	177.4	0.003	6	1	0.013	0.0338	0.72	0.72	0.14	0.0338	0.2857	11.8	28.8	2.2	FALSE	12.22
O26+O25	O26	18.86	13.26	O25	16.12	12.12	332.8	0.003	6	1	0.013	0.0140	0.79	0.79	0.07	0.0140	0.3284	4.3	14.6	14.6	FALSE	13.32
O27+O26	O27	19.94	13.44	O26	18.86	13.31	65.4	0.002	6	1	0.013	0.0075	0.71	0.71	0.03	0.0077	0.2501	3.0	6.8	6.7	FALSE	13.49
O28+O26	O28	19	14.28	O26	18.86	13.41	434.3	0.002	6	1	0.013	0.0065	0.70	0.70	0.03	0.0065	0.2511	2.6	6.8	6.8	FALSE	14.32
O29+O28	O29	23	19.53	O28	19	14.28	174	0.03	6	1	0.013	0.0000	0.00	0.00	0.00	0.0000	0.9746	0.0	0.0	0.0	FALSE	19.53
O29+O30	O29	23	19.53	O30	22.78	19.08	226	0.002	6	1	0.013	0.0000	0.00	0.00	0.04	0.0000	0.2504	0.0	7.4	0.0	FALSE	19.59
O30+O35	O30	22.78	17.63	O35	21.74	16.44	175.9	0.007	6	1	0.013	0.0492	0.99	1.01	0.05	0.0492	0.4615	10.7	9.8	10.7	FALSE	17.72
O31+O30	O31	23	18.76	O30	22.78	18.58	89.5	0.002	6	1	0.013	0.0164	0.80	0.81	0.08	0.0180	0.2516	6.5	16.1	17.0	FALSE	18.86
O32+O31	O32	24	19.18	O31	23	18.76	210.5	0.002	6	1	0.013	0.0164	0.83	0.96	0.08	0.0203	0.2506	6.5	15.6	14.3	FALSE	19.27
O33+O32	O33	25	19.71	O32	24	19.18	262.5	0.002	6	1	0.013	0.0164	0.76	0.97	0.08	0.0260	0.2521	6.5	16.7	13.5	FALSE	19.80
O34+O10	O34	23.33	14.69	O10	17.95	13.35	267.7	0.005	6	1	0.013	0.0492	1.09	0.81	0.07	0.0492	0.3970	12.4	13.9	2.5	FALSE	14.76
O35+O34	O35	21.74	16.44	O34	23.33	14.69	316.4	0.006	6	1	0.013	0.0492	1.08	0.81	0.07	0.0492	0.4173	11.8	13.5	2.5	FALSE	16.52
O36+O30	O36	24.12	18.01	O30	22.78	17.68	164.4	0.002	6	1	0.013	0.0164	0.78	0.94	0.08	0.0177	0.2514	6.5	16.3	15.1	FALSE	18.10
O37+O25	O37	16.63	12.23	O25	16.12	12.07	80.9	0.002	6	1	0.013	0.0198	0.71	0.74	0.10	0.0198	0.2495	7.9	19.9	19.4	FALSE	12.33
O38+O37	O38	17.23	12.46	O37	16.63	12.23	117.5	0.002	6	1	0.013	0.0066	0.71	0.71	0.04	0.0066	0.2482	2.7	7.1	7.1	FALSE	12.50
O39+O37	O39	16.48	12.31	O37	16.63	12.23	40.8	0.002	6	1	0.013	0.0132	0.89	0.89	0.06	0.0132	0.2486	5.3	12.8	12.8	FALSE	12.38
O40+O39	O40	16.65	12.38	O39	16.48	12.31	37.3	0.002	6	1	0.013	0.0066	0.28	0.31	0.09	0.0066	0.2431	2.7	17.7	16.7	FALSE	12.43
O41+O40	O41	16.5	12.47	O40	16.65	12.38	44.5	0.002	6	1	0.013	0.0066	0.64	0.64	0.02	0.0066	0.2523	2.6	4.2	4.2	FALSE	12.51
O42+O39	O42	16.78	12.41	O39	16.48	12.31	47.6	0.002	6	1	0.013	0.0066	0.65	0.65	0.02	0.0066	0.2572	2.6	4.8	4.8	FALSE	12.45
O43+O42	O43	17.92	13.6	O42	16.78	12.41	181.9	0.007	6	1	0.013	0.0066	0.65	0.65	0.02	0.0067	0.4538	1.5	4.5	4.9	FALSE	13.63
O44+O43	O44	18.13	13.78	O43	17.92	13.64	69.2	0.002	6	1	0.013	0.0066	0.69	0.69	0.03	0.0066	0.2524	2.6	6.3	6.3	FALSE	13.82
O45+O8	O45	17.06	12.55	O8	16.28	12.23	65.8	0.005	6	1	0.013	0.0210	0.47	0.99	0.14	0.0210	0.3912	5.4	27.7	16.5	FALSE	12.64
O46+O45	O46	18	13.61	O45	17.06	12.55	212.5	0.005	6	1	0.013	0.0070	0.75	0.75	0.04	0.0070	0.3963	1.8	8.5	8.5	FALSE	13.65
O47+O45	O47	16.84	12.91	O45	17.06	12.55	71.5	0.005	6	1	0.013	0.0140	0.85	0.85	0.06	0.0140	0.3981	3.5	11.3	11.3	FALSE	12.97
O48+O47	O48	17.43	13.52	O47	16.84	12.91	122	0.005	6	1	0.013	0.0070	0.69	0.69	0.03	0.0070	0.3968	1.8	6.3	6.3	FALSE	13.55
O49+O47	O49	17.41	13.27	O47	16.84	12.91	72.6	0.005	6	1	0.013	0.0070	0.68	0.68	0.03	0.0070	0.3952	1.8	5.9	5.9	FALSE	13.30
O50+O49	O50	17.95	14.13	O49	17.41	13.27	172.1	0.005	6	1	0.013	0.0070	0.63	0.63	0.02	0.0070	0.3967	1.8	3.9	3.9	FALSE	14.16
O51+O13	O51	24.5	18.4	O13	22.22	16.57	467.6	0.004	6	1	0.013	0.1445	1.45	1.45	0.25	0.1445	0.3510	41.2	50.7	50.7	FALSE	18.66
O52+O51	O52	26.81	19.11	O51	24.5	18.4	213.3	0.003	6	1	0.013	0.0772	1.03	1.03	0.20	0.0772	0.3237	23.8	40.7	40.7	FALSE	19.32
O53+O52	O53	27	19.48	O52	26.81	19.11	188.5	0.002	6	1	0.013	0.0100	0.81	0.82	0.05	0.0101	0.2486	4.0	10.5	10.7	FALSE	19.54
O54+O52	O54	31.19	20.39	O52	26.81	19.11	380.1	0.003	6	1	0.013	0.0672	0.97	0.97	0.19	0.0672	0.3256	20.6	38.4	38.4	FALSE	20.58
O55+O54	O55	28.75	20.95	O54	31.19	20.44	399.4	0.001	6	1	0.013	0.0672	0.68	0.68	0.25	0.0672	0.2005	33.5	50.4	50.4	FALSE	21.20
O56+O55	O56	27.04	22.24	O55	28.75	20.95	376.5	0.003	6	1	0.013	0.0672	0.97	0.97	0.19	0.0672	0.3284	20.5	38.2	38.2	FALSE	22.45
O57+O51	O57	25.61	19.76	O51	24.5	18.4	365.2	0.004	6	1	0.013	0.0487	0.84	0.84	0.17	0.0487	0.3424	14.2	33.6	33.6	FALSE	19.93
O58+O57	O58	26.81	20.57	O57	25.61	19.76	403.4	0.002	6	1	0.013	0.0487	0.67	0.67	0.20	0.0487	0.2514	19.4	39.7	39.7	FALSE	20.78
O59+O60	O59	16.36	11.92	O60	15.68	9.18	24.1	0.114	12	1	0.013	0.2070	2.05	2.03	0.10	0.2072	12.0125	1.7	10.3	9.8	FALSE	12.02
O59+O7	O59	16.36	11.92	O7	15.16	11.56	182.3	0.002	8	1	0.013	0.0000	0.00	0.00	0.14	0.0000	0.5370	0.0	20.6	0.0	FALSE	12.02
O60+O61	O60	15.68	9.18	O61	14.55	7.85	199	0.007	14	1	0.013	0.5483	2.68	2.69	0.29	0.5496	4.3937	12.5	24.6	24.6	FALSE	9.49
O61+M8	O61	14.55	7.85	M8	14.41	7.81	11.8	0.003	16	1	0.01	0.5483	2.42	2.43	0.29	0.5498	5.8139	9.4	21.9	21.9	FALSE	8.14
O62+O18	O62	17.08	13.18	O18	15.83	11.93	249	0.005	6	1	0.013	0.0136	0.89	0.61	0.07	0.0136	0.3975	3.4	13.1	1.7	FALSE	13.24
O63+O62	O63	17.27	13.37	O62	17.08	13.18	38	0.005	6	1	0.013	0.0136	0.85	0.82	0.06	0.0136	0.3968	3.4	11.4	9.9	FALSE	13.43
T1+T0	T1	4.57	-15.43	T0	#N/A	-17.68	329.2	0.007	24	1	0.013	12.7352	6.36	6.36	1.22	12.7352	18.7022	68.1	60.8	60.8	FALSE	-14.20

Appendix D: Table 6
Scenario 3: 2035 Enhanced PWWF Model Results

Label	Start Node	Rim (Start) (ft)	Invert (Start) (ft)	Stop Node	Rim (Stop) (ft)	Invert (Stop) (ft)	Length (ft)	Slope (Calculated) (ft/ft)	Diameter (in)	Number of Barrels	Manning's n	Flow (Middle) (cfs)	Velocity (ft/s)	Velocity (Maximum Calculated) (ft/s)	Depth (Middle) (ft)	Flow (Maximum) (cfs)	Capacity (Full Flow) (cfs)	Flow / Capacity (Design) (%)	Depth/Rise (%)	Depth (Maximum) / Rise (%)	Is Ever Surcharged?	Hydraulic Grade (Maximum) (ft)
T2+T1	T2	3.04	-14.76	T1	4.57	-15.43	505.8	0.001	24	1	0.013	12.7352	4.18	4.18	1.86	12.7352	8.2329	154.7	93.2	93.2	TRUE	-12.44
T3+METERING STATION	T3	2.52	-14.63	METERING STATION	0	-14.66	55	0.001	24	1	0.013	12.7352	4.05	4.05	2.00	12.7352	5.2820	241.1	100.0	100.0	TRUE	-11.19
T4+T3	T4	1.41	-12.09	T3	2.52	-14.63	474.9	0.005	24	1	0.013	12.7352	4.05	4.05	2.00	12.7352	16.5440	77.0	100.0	100.0	TRUE	-9.99
T5+T4	T5	0.16	-11.76	T4	1.41	-11.99	352.3	0.001	24	1	0.013	12.7352	4.05	4.05	2.00	12.7352	5.7802	220.3	100.0	100.0	TRUE	-9.10
T6+T5	T6	0.17	-11.38	T5	0.16	-11.66	359.1	0.001	24	1	0.013	12.7352	4.05	4.05	2.00	12.7352	6.3165	201.6	100.0	100.0	TRUE	-8.17
T7+T6	T7	-0.07	-10.42	T6	0.17	-11.38	503.8	0.002	24	1	0.013	12.7352	4.05	4.05	2.00	12.7352	9.8749	129.0	100.0	100.0	TRUE	-6.78
T8+T7	T8	0.14	-10.08	T7	-0.07	-10.32	501.9	0	24	1	0.013	12.7352	4.05	4.05	2.00	12.7352	4.9469	257.4	100.0	100.0	TRUE	-5.40
T9+T8	T9	0.14	-9.67	T8	0.14	-9.98	497.7	0.001	24	1	0.013	12.7352	4.05	4.05	2.00	12.7352	5.6455	225.6	100.0	100.0	TRUE	-4.02
T10+T9	T10	0.07	-9.12	T9	0.14	-9.57	446.9	0.001	24	1	0.013	12.7352	4.05	4.05	2.00	12.7352	7.1784	177.4	100.0	100.0	TRUE	-2.81
T11+T10	T11	-0.24	-8.44	T10	0.07	-9.02	325.8	0.002	24	1	0.013	12.7352	4.05	4.05	2.00	12.7352	9.5439	133.4	100.0	100.0	TRUE	-1.99
T12+T11	T12	0.55	-8.25	T11	-0.24	-8.49	482.2	0	24	1	0.013	12.7352	4.05	4.05	2.00	12.7352	5.0468	252.3	100.0	100.0	TRUE	-0.66
T16+T33	T16	2.25	-6.5	T33	2.25	-6.55	66.2	0.001	17.8	1	0.01	2.7405	1.59	1.64	1.48	2.8154	3.6203	75.7	100.0	100.0	TRUE	0.45
T17+T34	T17	0.96	-5.84	T34	1.75	-6.3	407.1	0.001	21	1	0.013	9.9947	4.16	4.16	1.75	9.9947	5.3261	187.7	100.0	100.0	TRUE	0.56
T18+T17	T18	1.12	-5.23	T17	0.96	-5.79	540.4	0.001	21	1	0.013	9.9947	4.16	4.16	1.75	9.9947	5.1005	196.0	100.0	100.0	TRUE	0.66
T19+T36	T19	2.23	-4.72	T36	2.125	-4.74	6.3	0.003	21	1	0.013	7.1135	2.96	2.96	1.75	7.1135	8.9021	79.9	100.0	100.0	TRUE	0.78
T20+T19	T20	2.72	-4.06	T19	2.23	-4.62	331.9	0.002	18	1	0.013	3.9128	2.21	2.21	1.50	3.9128	4.3143	90.7	100.0	100.0	TRUE	0.80
T21+T20	T21	3.07	-3.99	T20	2.72	-4.06	338.4	0	21	1	0.013	3.8832	1.61	1.61	1.75	3.8832	2.2788	170.4	100.0	100.0	TRUE	0.82
T22+T37	T22	2.81	-3.24	T37	3	-3.63	191.4	0.002	21	1	0.01	3.8060	1.58	1.58	1.75	3.8061	9.2972	40.9	100.0	100.0	TRUE	0.85
T23+T22	T23	6.87	-3.03	T22	2.81	-3.24	373	0.001	18	1	0.013	3.8061	2.15	2.15	1.50	3.8061	2.4921	152.7	100.0	100.0	TRUE	1.01
T24+T23	T24	3.66	-2.69	T23	6.87	-2.93	316.7	0.001	18	1	0.013	3.6278	2.05	2.05	1.50	3.6278	2.8914	125.5	100.0	100.0	TRUE	1.26
T25+T24	T25	3.95	-2.59	T24	3.66	-2.62	282.2	0	18	1	0.013	3.6278	2.05	2.05	1.50	3.6279	1.0830	335.0	100.0	100.0	TRUE	1.49
T26+T25	T26	7.03	-2.32	T25	3.95	-2.52	305.6	0.001	18	1	0.013	3.1325	1.77	1.77	1.50	3.1325	2.6873	116.6	100.0	100.0	TRUE	1.64
T27+T26	T27	7.85	-2.05	T26	7.03	-2.22	355.8	0	18	1	0.013	3.1325	1.77	1.77	1.50	3.1325	2.2958	136.4	100.0	100.0	TRUE	1.83
T28+T27	T28	8.67	-1.93	T27	7.85	-1.95	162.1	0	18	1	0.013	3.1325	1.77	1.77	1.50	3.1325	1.1667	268.5	100.0	100.0	TRUE	1.85
T29+T28	T29	4.98	-1.62	T28	8.67	-1.93	233.8	0.001	18	1	0.013	3.1325	1.77	1.77	1.50	3.1325	3.8245	81.9	100.0	100.0	TRUE	1.94
T30+T12	T30	0.25	-7.24	T12	0.55	-8.25	285.1	0.004	24	1	0.01	12.7352	4.05	4.05	2.00	12.7352	17.5030	72.8	100.0	100.0	TRUE	-0.32
T31+T30	T31	2.05	-7.15	T30	0.25	-7.24	350.8	0	24.2	1	0.01	12.7352	3.98	3.98	2.02	12.7352	4.8253	263.9	100.0	100.0	TRUE	0.10
T32+T31	T32	1.25	-7.11	T31	2.05	-7.15	125.2	0	24.2	1	0.01	12.7352	3.99	3.99	2.02	12.7352	5.3740	237.0	100.0	100.0	TRUE	0.16
T33+Transition 1	T33	2.25	-6.55	Transition 1	#N/A	-24.75	157	0.116	17.8	2	0.01	12.7353	3.70	3.70	1.48	12.7352	89.7137	14.2	100.0	100.0	TRUE	0.44
T34+T33	T34	1.75	-6.3	T33	2.25	-6.55	76.4	0.003	17.8	1	0.01	9.9948	5.81	5.81	1.48	9.9948	7.5365	132.6	100.0	100.0	TRUE	0.48
T36+T18	T36	2.125	-4.74	T18	1.12	-5.23	493.7	0.001	21	1	0.013	9.9947	4.16	4.16	1.75	9.9947	4.9915	200.2	100.0	100.0	TRUE	0.75
T37+T21	T37	3	-3.63	T21	3.07	-3.99	83.4	0.004	21	1	0.01	3.8060	1.58	1.58	1.75	3.8060	13.5420	28.1	100.0	100.0	TRUE	0.84
Transition 1+Transition 2	Transition 1	#N/A	-24.75	Transition 2	#N/A	-24.75	143	0	17.8	2	0.01	12.7353	3.70	3.70	1.48	12.7352	0.2635	4833.2	100.0	100.0	TRUE	0.39
Transition 2+Transition 3	Transition 2	#N/A	-24.75	Transition 3	#N/A	-15.75	99	-0.091	17.8	2	0.01	12.7352	3.70	3.70	1.48	12.7352	79.4468	16.0	100.0	100.0	TRUE	0.26
Transition 3+T32	Transition 3	#N/A	-15.75	T32	1.25	-7.11	117.6	-0.073	17.8	2	0.01	12.7352	3.70	3.70	1.48	12.7352	71.4274	17.8	100.0	100.0	TRUE	0.23

Abbreviations
PWWF: Peak Wet Weather Flow
CFS: Cubic Feet per Second
ft: Feet
s: Seconds
in: Inches

APPENDIX E

CIP PROJECT SUMMARY SHEETS

Appendix E
Capital Improvement Project 1.1
Conceptual OPPC
2025 Sewer System Master Plan
East Palo Alto, California

Project Description: Pipeline Replacement on Menalto Avenue, Poplar Avenue, Bay Road, and Elliot Drive.

Item No.	Description	Units	Quantity	Unit Price	Budget
Conceptual Opinion of Probable Construction Cost					
1	Mobilization	%	5%	$ 2,488,000	$ 124,400
2	Traffic Control	%	15%	$ 2,488,000	$ 373,200
3	Sheeting, Shoring, and Bracing	%	5%	$ 2,488,000	$ 124,400
4	8-inch DR 17 HDPE Pipe	lf	950	$ 400	$ 380,000
5	10-inch DR 17 HDPE Pipe	lf	2,218	$ 500	$ 1,109,000
6	12-inch DR 17 HDPE Pipe	lf	1,665	$ 600	$ 999,000
7	Manholes	ea	19	$ 11,000	$ 209,000
8	30% Contingency	%	30%	$ 3,319,000	$ 995,700
Subtotal - Conceptual Opinion of Probable Construction Cost (3)					**$ 4,315,000**
Engineering and Administration Cost					
9	Design	%	10%	$ 4,315,000	$ 432,000
10	Environmental/Permitting	%	10%	$ 4,315,000	$ 432,000
11	Construction Management/Inspection	%	15%	$ 4,315,000	$ 647,000
12	District Administration	%	5%	$ 4,315,000	$ 216,000
Subtotal - Engineering and Administration Cost (3)					**$ 1,727,000**
Total Conceptual Opinion of Probable Project Cost (3)					**$ 6,042,000**

Notes
(1) Projects will need Encroachment Permit with City of Menlo Park. Project will involve crossing Bayshore Freeway.
(2) See Figure A for limits of improvement
(3) Costs rounded to nearest $1,000.

Abbreviations
DR: dimension ration
HDPE: high density polyethylene
OPPC: opinion of probable project cost

Appendix E
Capital Improvement Project 1.2
Conceptual OPPC
2025 Sewer System Master Plan
East Palo Alto, California

Project Description: Pipeline Replacement on Trunk Line in Creek, Beech Street, Larkspur, and Gardenia Ave.

Item No.	Description	Units	Quantity	Unit Price	Budget
Conceptual Opinion of Probable Construction Cost					
1	Mobilization	%	5%	$ 4,294,200	$ 214,710
2	Traffic Control	%	15%	$ 4,294,200	$ 644,130
3	Sheeting, Shoring, and Bracing	%	5%	$ 4,294,200	$ 214,710
4	8-inch DR 17 HDPE Pipe	lf	272	$ 400	$ 108,801
5	12-inch DR 17 HDPE Pipe	lf	179	$ 600	$ 107,241
6	16-inch DR 17 HDPE Pipe	lf	533	$ 900	$ 480,091
7	30-inch DR 17 HDPE Pipe	lf	1,684	$ 2,550	$ 4,294,200
8	Manholes	ea	14	$ 11,000	$ 154,000
9	30% Contingency	%	30%	$ 6,217,882	$ 1,865,365
Subtotal - Conceptual Opinion of Probable Construction Cost (3)					**$ 8,083,000**
Engineering and Administration Cost					
10	Design	%	10%	$ 8,083,000	$ 808,000
11	Environmental/Permitting	%	10%	$ 8,083,000	$ 808,000
12	Construction Management/Inspection	%	15%	$ 8,083,000	$ 1,212,000
13	District Administration	%	5%	$ 8,083,000	$ 404,000
Subtotal - Engineering and Administration Cost (3)					**$ 3,232,000**
Total Conceptual Opinion of Probable Project Cost (3)					**$ 11,315,000**

Notes
(1) Environmental Permits will be required. Trunk Line improvements are located on Creek. Coordination will be required for PG&E gas line.
(2) See Figure A for limits of improvement
(3) Costs rounded to nearest $1,000.

Abbreviations
DR: dimension ration
HDPE: high density polyethylene
OPPC: opinion of probable project cost

Appendix E
Capital Improvement Project 2.1
Conceptual OPPC
2025 Sewer System Master Plan
East Palo Alto, California

Project Description: Pipeline Replacement on Bayshore Road, Donohoe Street, Cooley Ave, and O'Connor Street.

Item No.	Description	Units	Quantity	Unit Price	Budget
Conceptual Opinion of Probable Construction Cost					
1	Mobilization	%	5%	$ 3,158,400	$ 157,920
2	Traffic Control	%	15%	$ 3,158,400	$ 473,760
3	Sheeting, Shoring, and Bracing	%	5%	$ 3,158,400	$ 157,920
4	8-inch DR 17 HDPE Pipe	lf	759	$ 400	$ 303,600
5	10-inch DR 17 HDPE Pipe	lf	398	$ 500	$ 199,000
6	12-inch DR 17 HDPE Pipe	lf	1,029	$ 600	$ 617,400
7	24-inch DR 17 HDPE Pipe	lf	1,274	$ 1,600	$ 2,038,400
8	Manholes	ea	14	$ 11,000	$ 154,000
9	30% Contingency	%	30%	$ 4,102,000	$ 1,230,600
Subtotal - Conceptual Opinion of Probable Construction Cost (3)					**$ 5,333,000**
Engineering and Administration Cost					
10	Design	%	10%	$ 5,333,000	$ 533,000
11	Environmental/Permitting	%	10%	$ 5,333,000	$ 533,000
12	Construction Management/Inspection	%	15%	$ 5,333,000	$ 800,000
13	District Administration	%	5%	$ 5,333,000	$ 267,000
Subtotal - Engineering and Administration Cost (3)					**$ 2,133,000**
Total Conceptual Opinion of Probable Project Cost (3)					**$ 7,466,000**

Notes
(1) Project will involve crossing Bayshore Freeway. Project should be continued to be re-evaluated as structural deficiencies may be moved to a higher priority project if proposed development projects are not constructed soon.
(2) See Figure A for limits of improvement
(3) Costs rounded to nearest $1,000.

Abbreviations
DR: dimension ration
HDPE: high density polyethylene
OPPC: opinion of probable project cost

Appendix E
Capital Improvement Project 2.2
Conceptual OPPC
2025 Sewer System Master Plan
East Palo Alto, California

Project Description: Pipeline Replacement on University Avenue, Runnymede Street, Clarke Avenue, and Beech Street.

Item No.	Description	Units	Quantity	Unit Price	Budget
Conceptual Opinion of Probable Construction Cost					
1	Mobilization	%	5%	$ 4,190,650	$ 209,533
2	Traffic Control	%	15%	$ 4,190,650	$ 628,598
3	Sheeting, Shoring, and Bracing	%	5%	$ 4,190,650	$ 209,533
4	10-inch DR 17 HDPE Pipe	lf	1,064	$ 500	$ 532,000
5	12-inch DR 17 HDPE Pipe	lf	2,209	$ 600	$ 1,325,400
6	30-inch DR 17 HDPE Pipe	lf	915	$ 2,550	$ 2,333,250
7	Manholes	ea	13	$ 11,000	$ 143,000
8	30% Contingency	%	30%	$ 5,381,313	$ 1,614,394
Subtotal - Conceptual Opinion of Probable Construction Cost (3)					**$ 6,996,000**
Engineering and Administration Cost					
9	Design	%	10%	$ 6,996,000	$ 700,000
10	Environmental/Permitting	%	10%	$ 6,996,000	$ 700,000
11	Construction Management/Inspection	%	15%	$ 6,996,000	$ 1,049,000
12	District Administration	%	5%	$ 6,996,000	$ 350,000
Subtotal - Engineering and Administration Cost (3)					**$ 2,799,000**
Total Conceptual Opinion of Probable Project Cost (3)					**$ 9,795,000**

Notes
(1) Project will include coordination with PG&E on gas line on Beech Street.
(2) See Figure A for limits of improvement
(3) Costs rounded to nearest $1,000.

Abbreviations
DR: dimension ration
HDPE: high density polyethylene
OPPC: opinion of probable project cost

Appendix E
Capital Improvement Project 2.3
Conceptual OPPC
2025 Sewer System Master Plan
East Palo Alto, California

Project Description: Pipeline Replacement on Trunk Line in Creek.

Item No.	Description	Units	Quantity	Unit Price	Budget
Conceptual Opinion of Probable Construction Cost					
1	Mobilization	%	5%	$ 7,601,550	$ 380,078
2	Traffic Control	%	15%	$ 7,601,550	$ 1,140,233
3	Sheeting, Shoring, and Bracing	%	5%	$ 7,601,550	$ 380,078
4	30-inch DR 17 HDPE Pipe	lf	2,981	$ 2,550	$ 7,601,550
5	Manholes	ea	17	$ 11,000	$ 187,000
6	30% Contingency	%	30%	$ 9,688,938	$ 2,906,681
Subtotal - Conceptual Opinion of Probable Construction Cost (3)					**$ 12,596,000**
Engineering and Administration Cost					
7	Design	%	10%	$ 12,596,000	$ 1,260,000
8	Environmental/Permitting	%	10%	$ 12,596,000	$ 1,260,000
9	Construction Management/Inspection	%	15%	$ 12,596,000	$ 1,889,000
10	District Administration	%	5%	$ 12,596,000	$ 630,000
Subtotal - Engineering and Administration Cost (3)					**$ 5,039,000**
Total Conceptual Opinion of Probable Project Cost (3)					**$ 17,635,000**

Notes
(1) Environmental Permits will be required. Trunk Line improvements are located on Creek.
(2) See Figure A for limits of improvement
(3) Costs rounded to nearest $1,000.

Abbreviations
DR: dimension ration
HDPE: high density polyethylene
OPPC: opinion of probable project cost

Appendix E
Capital Improvement Project 2.4
Conceptual OPPC
2025 Sewer System Master Plan
East Palo Alto, California

Project Description: Pipeline Replacement on Bay Road and Pulgas Avenue.

Item No.	Description	Units	Quantity	Unit Price	Budget
Conceptual Opinion of Probable Construction Cost					
1	Mobilization	%	5%	$ 3,987,550	$ 199,378
2	Traffic Control	%	15%	$ 3,987,550	$ 598,133
3	Sheeting, Shoring, and Bracing	%	5%	$ 3,987,550	$ 199,378
4	8-inch DR 17 HDPE Pipe	lf	442	$ 400	$ 176,800
5	10-inch DR 17 HDPE Pipe	lf	262	$ 500	$ 131,000
6	24-inch DR 17 HDPE Pipe	lf	1,750	$ 1,600	$ 2,800,000
7	30-inch DR 17 HDPE Pipe	lf	345	$ 2,550	$ 879,750
8	Manholes	ea	11	$ 11,000	$ 121,000
9	30% Contingency	%	30%	$ 5,105,438	$ 1,531,631
Subtotal - Conceptual Opinion of Probable Construction Cost (3)					**$ 6,637,000**
Engineering and Administration Cost					
10	Design	%	10%	$ 6,637,000	$ 664,000
11	Environmental/Permitting	%	10%	$ 6,637,000	$ 664,000
12	Construction Management/Inspection	%	15%	$ 6,637,000	$ 996,000
13	District Administration	%	5%	$ 6,637,000	$ 332,000
Subtotal - Engineering and Administration Cost (3)					**$ 2,656,000**
Total Conceptual Opinion of Probable Project Cost (3)					**$ 9,293,000**

Notes
(1) Project should be continued to be re-evaluated as structural deficiencies may be moved to a higher priority project if proposed development projects are not constructed soon.
(2) See Figure A for limits of improvement
(3) Costs rounded to nearest $1,000.

Abbreviations
DR: dimension ration
HDPE: high density polyethylene
OPPC: opinion of probable project cost

Appendix E
Capital Improvement Project 2.5
Conceptual OPPC
2025 Sewer System Master Plan
East Palo Alto, California

Project Description: Pipeline Replacement on Maple Lane.

Item No.	Description	Units	Quantity	Unit Price	Budget
Conceptual Opinion of Probable Construction Cost					
1	Mobilization	%	5%	$ 580,500	$ 29,025
2	Traffic Control	%	15%	$ 580,500	$ 87,075
3	Sheeting, Shoring, and Bracing	%	5%	$ 580,500	$ 29,025
4	10-inch DR 17 HDPE Pipe	lf	1,161	$ 500	$ 580,500
5	Manholes	ea	4	$ 11,000	$ 44,000
6	30% Contingency	%	30%	$ 769,625	$ 230,888
Subtotal - Conceptual Opinion of Probable Construction Cost (2)					**$ 1,001,000**
Engineering and Administration Cost					
7	Design	%	10%	$ 1,001,000	$ 100,000
8	Environmental/Permitting	%	10%	$ 1,001,000	$ 100,000
9	Construction Management/Inspection	%	15%	$ 1,001,000	$ 150,000
10	District Administration	%	5%	$ 1,001,000	$ 50,000
Subtotal - Engineering and Administration Cost (2)					**$ 400,000**
Total Conceptual Opinion of Probable Project Cost (2)					**$ 1,401,000**

Notes
(1) See Table 1 and Figure 1 for limits of improvements.
(2) Costs rounded to nearest $1,000.

Abbreviations
DR: dimension ration
HDPE: high density polyethylene
OPPC: opinion of probable project cost

Appendix E
Capital Improvement Project 2.6
Conceptual OPPC
2025 Sewer System Master Plan
East Palo Alto, California

Project Description: Pipeline Replacement on O'Connor Street. Project will also include 11 Smart Cover Meters to be installed similar to the subbasin locations notated in V&A Flow Monitoring Study.

Item No.	Description	Units	Quantity	Unit Price	Budget
Conceptual Opinion of Probable Construction Cost					
1	Mobilization	%	5%	$ 504,600	$ 25,230
2	Traffic Control	%	15%	$ 504,600	$ 75,690
3	Sheeting, Shoring, and Bracing	%	5%	$ 504,600	$ 25,230
4	12-inch DR 17 HDPE Pipe	lf	841	$ 600	$ 504,600
5	SmartCovers	ea	11	$ 6,500	$ 71,500
6	Manholes	ea	5	$ 11,000	$ 55,000
7	30% Contingency	%	30%	$ 757,250	$ 227,175
Subtotal - Conceptual Opinion of Probable Construction Cost (3)					**$ 984,000**
Engineering and Administration Cost					
8	Design	%	10%	$ 984,000	$ 98,000
9	Environmental/Permitting	%	10%	$ 984,000	$ 98,000
10	Construction Management/Inspection	%	15%	$ 984,000	$ 148,000
11	District Administration	%	5%	$ 984,000	$ 49,000
Subtotal - Engineering and Administration Cost (3)					**$ 393,000**
Total Conceptual Opinion of Probable Project Cost (3)					**$ 1,377,000**

Notes
(1) Project will require coordination for two 24-inch PG&E Gas Main Transmissions. Project will also reinstate City's Flow Monitoring Program.
(2) See Figure A for limits of improvement
(3) Costs rounded to nearest $1,000.

Abbreviations
DR: dimension ration
HDPE: high density polyethylene
OPPC: opinion of probable project cost

Appendix E
Capital Improvement Project 2.7
Conceptual OPPC
2025 Sewer System Master Plan
East Palo Alto, California

Project Description: New Parallel Trunk Line within San Francisquito Creek on Palo Alto Golf Course.

Item No.	Description	Units	Quantity	Unit Price	Budget
Conceptual Opinion of Probable Construction Cost					
1	Mobilization	%	5%	$ 2,510,400	$ 125,520
2	Traffic Control	%	15%	$ 2,510,400	$ 376,560
3	Sheeting, Shoring, and Bracing	%	5%	$ 2,510,400	$ 125,520
4	24-inch DR 17 HDPE Pipe	lf	1,569	$ 1,600	$ 2,510,400
5	Manholes	ea	6	$ 11,000	$ 66,000
6	30% Contingency	%	30%	$ 3,204,000	$ 961,200
Subtotal - Conceptual Opinion of Probable Construction Cost (3)					**$ 4,165,000**
Engineering and Administration Cost					
7	Design	%	10%	$ 4,165,000	$ 417,000
8	Environmental/Permitting	%	10%	$ 4,165,000	$ 417,000
9	Construction Management/Inspection	%	15%	$ 4,165,000	$ 625,000
10	District Administration	%	5%	$ 4,165,000	$ 208,000
Subtotal - Engineering and Administration Cost (3)					**$ 1,667,000**
Total Conceptual Opinion of Probable Project Cost (3)					**$ 5,832,000**

Notes
(1) Project should be re-evaluated on a yearly basis. As project scope on developments may be reduced/removed.
(2) See Figure A for limits of improvement
(3) Costs rounded to nearest $1,000.

Abbreviations
DR: dimension ration
HDPE: high density polyethylene
OPPC: opinion of probable project cost

Appendix E
Capital Improvement Project 3.1
Conceptual OPPC
2025 Sewer System Master Plan
East Palo Alto, California

Project Description: Pipeline Replacements on Dumbarton Avenue, Palo Verde Way, and Lilac Lane.

Item No.	Description	Units	Quantity	Unit Price	Budget
Conceptual Opinion of Probable Construction Cost					
1	Mobilization	%	5%	$ 714,349	$ 35,717
2	Traffic Control	%	15%	$ 714,349	$ 107,152
3	Sheeting, Shoring, and Bracing	%	5%	$ 714,349	$ 35,717
4	8-inch DR 17 HDPE Pipe	lf	1,786	$ 400	$ 714,349
5	Manholes	ea	8	$ 11,000	$ 88,000
6	30% Contingency	%	30%	$ 980,937	$ 294,281
Subtotal - Conceptual Opinion of Probable Construction Cost (2)					**$ 1,275,000**
Engineering and Administration Cost					
7	Design	%	10%	$ 1,275,000	$ 128,000
8	Environmental/Permitting	%	10%	$ 1,275,000	$ 128,000
9	Construction Management/Inspection	%	15%	$ 1,275,000	$ 191,000
10	District Administration	%	5%	$ 1,275,000	$ 64,000
Subtotal - Engineering and Administration Cost (2)					**$ 511,000**
Total Conceptual Opinion of Probable Project Cost (2)					**$ 1,786,000**

Notes
(1) See Figure A for limits of improvement
(2) Costs rounded to nearest $1,000.

Abbreviations
DR: dimension ration
HDPE: high density polyethylene
OPPC: opinion of probable project cost

Appendix E
Capital Improvement Project 3.2
Conceptual OPPC
2025 Sewer System Master Plan
East Palo Alto, California

Project Description: Pipe Replacements on Garden Street, Clarke Avenue, Pulgas Avenue, Woodland Avenue, and Bayshore Road.

Item No.	Description	Units	Quantity	Unit Price	Budget
Conceptual Opinion of Probable Construction Cost					
1	Mobilization	%	5%	$ 648,673	$ 32,434
2	Traffic Control	%	15%	$ 648,673	$ 97,301
3	Sheeting, Shoring, and Bracing	%	5%	$ 648,673	$ 32,434
4	8-inch DR 17 HDPE Pipe	lf	1,622	$ 400	$ 648,673
5	10-inch DR 17 HDPE Pipe	lf	277	$ 500	$ 138,706
6	Manholes	ea	11	$ 11,000	$ 121,000
7	30% Contingency	%	30%	$ 1,070,547	$ 321,164
Subtotal - Conceptual Opinion of Probable Construction Cost (2)					**$ 1,392,000**
Engineering and Administration Cost					
8	Design	%	10%	$ 1,392,000	$ 139,000
9	Environmental/Permitting	%	10%	$ 1,392,000	$ 139,000
10	Construction Management/Inspection	%	15%	$ 1,392,000	$ 209,000
11	District Administration	%	5%	$ 1,392,000	$ 70,000
Subtotal - Engineering and Administration Cost (2)					**$ 557,000**
Total Conceptual Opinion of Probable Project Cost (2)					**$ 1,949,000**

Notes
(1) See Figure A for limits of improvement
(2) Costs rounded to nearest $1,000.

Abbreviations
DR: dimension ration
HDPE: high density polyethylene
OPPC: opinion of probable project cost

Appendix E
Capital Improvement Project 3.3
Conceptual OPPC
2025 Sewer System Master Plan
East Palo Alto, California

Project Description: Pipe Replacements on Glen Way and Capitol Avenue.

Item No.	Description	Units	Quantity	Unit Price	Budget
Conceptual Opinion of Probable Construction Cost					
1	Mobilization	%	5%	$ 570,088	$ 28,504
2	Traffic Control	%	15%	$ 570,088	$ 85,513
3	Sheeting, Shoring, and Bracing	%	5%	$ 570,088	$ 28,504
4	8-inch DR 17 HDPE Pipe	lf	1,425	$ 400	$ 570,088
5	Manholes	ea	5	$ 11,000	$ 55,000
6	30% Contingency	%	30%	$ 767,610	$ 230,283
Subtotal - Conceptual Opinion of Probable Construction Cost (2)					**$ 998,000**
Engineering and Administration Cost					
7	Design	%	10%	$ 998,000	$ 100,000
8	Environmental/Permitting	%	10%	$ 998,000	$ 100,000
9	Construction Management/Inspection	%	15%	$ 998,000	$ 150,000
10	District Administration	%	5%	$ 998,000	$ 50,000
Subtotal - Engineering and Administration Cost (2)					**$ 400,000**
Total Conceptual Opinion of Probable Project Cost (2)					**$ 1,398,000**

Notes
(1) See Figure A for limits of improvement
(2) Costs rounded to nearest $1,000.

Abbreviations
DR: dimension ration
HDPE: high density polyethylene
OPPC: opinion of probable project cost

Appendix E
Capital Improvement Project 3.4
Conceptual OPPC
2025 Sewer System Master Plan
East Palo Alto, California

Project Description: Pipe Replacements on Bay Road and Weeks Street.

Item No.	Description	Units	Quantity	Unit Price	Budget
Conceptual Opinion of Probable Construction Cost					
1	Mobilization	%	5%	$ 859,162	$ 42,958
2	Traffic Control	%	15%	$ 859,162	$ 128,874
3	Sheeting, Shoring, and Bracing	%	5%	$ 859,162	$ 42,958
4	8-inch DR 17 HDPE Pipe	lf	355	$ 400	$ 142,082
5	16-inch DR 17 HDPE Pipe	lf	659	$ 900	$ 592,798
6	18-inch DR 17 HDPE Pipe	lf	124	$ 1,000	$ 124,283
7	Manholes	ea	10	$ 11,000	$ 110,000
8	30% Contingency	%	30%	$ 1,183,952	$ 355,186
Subtotal - Conceptual Opinion of Probable Construction Cost (2)					**$ 1,539,000**
Engineering and Administration Cost					
9	Design	%	10%	$ 1,539,000	$ 154,000
10	Environmental/Permitting	%	10%	$ 1,539,000	$ 154,000
11	Construction Management/Inspection	%	15%	$ 1,539,000	$ 231,000
12	District Administration	%	5%	$ 1,539,000	$ 77,000
Subtotal - Engineering and Administration Cost (2)					**$ 616,000**
Total Conceptual Opinion of Probable Project Cost (2)					**$ 2,155,000**

Notes
(1) See Figure A for limits of improvement
(2) Costs rounded to nearest $1,000.

Abbreviations
DR: dimension ration
HDPE: high density polyethylene
OPPC: opinion of probable project cost

OVERALL - CIP PROJECTS
2025 SEWER SYSTEM MASTER PLAN
EAST PALO ALTO, CA

LEGEND

- SERVICE AREA BOUNDARY
- PROPOSED PIPE TO BE REPLACED
- MANHOLE
- LAMPHOLE
- MANHOLE/LAMPHOLE NUMBER C11

CIP 1.1, CIP 1.2, CIP 2.1, CIP 2.2, CIP 2.3, CIP 2.4, CIP 2.5, CIP 2.6, CIP 2.7, CIP 3.1, CIP 3.2, CIP 3.3, CIP 3.4

NOTE: 1. ALL SEWERS ARE 6" IN DIAMETER, UNLESS DESIGNATED OTHERWISE.
* DIFFERENT SIZE IN MODEL

ABBREVIATIONS

CIP CAPITAL IMPROVEMENT PROJECT

CAPITAL IMPROVEMENT PROJECTS	
PROJECT NUMBER	COST ($)
1.1	6,042,000
1.2	11,315,000
2.1	7,466,000
2.2	9,795,000
2.3	17,635,000
2.4	9,239,000
2.5	1,401,000
2.6	1,377,000
2.7	5,832,000
3.1	1,786,000
3.2	1,949,000
3.3	1,398,000
3.4	2,155,000

NORTH

SCALE
1" = 1000'

FREYER & LAURETA, INC.
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DATE:	06/20/2025
SCALE:	1" = 1000'
DESIGNED:	ZG
DRAWN:	
CHECKED:	RO
PROJ. ENGR:	JTT

FIGURE
A

JOB NO.
221009

APPENDIX F

IMPACT FEE MEMORANDUM

Impact Fee Memorandum

Re:	East Palo Alto – Sewer Fee Determination
Date:	June 20 2025
To:	Richard Perez, City of East Palo Alto
	Humza Javed, P.E. City of East Palo Alto
From:	Greg Arifian P.E., Freyer & Laureta, Inc.
	Rheanna Ostrea, Freyer & Laureta, Inc.
	Zoe Gnass, Freyer & Laureta, Inc.
Reviewed:	Jeffrey Tarantino, P.E., Freyer & Laureta, Inc.

1 Introduction

Freyer and Laureta, Inc. (F&L) has prepared this memorandum to outline the proposed Sanitary Sewer Capital Improvement Program (CIP) identified in the 2025 Sewer System Master Plan for the East Palo Alto Sanitary District's (EPASD). The memorandum serves as a comprehensive guide to address existing infrastructure deficiencies and accommodate future development needs.

The memorandum discusses the following information:

- Improvements needed to improve the overall reliability and resiliency of the existing sanitary sewer collection system.
- Improvements needed necessary to support future development as approved by the City of East Palo Alto (City).
- Proportional allocation of improvements costs between existing and future customers.
- Development of an impact fee for new developments requiring sanitary sewer service.
- CIPs identified within the 2025 Sewer System Master Plan (2025 Master Plan)
- Potential cash flow scenarios for each CIP alternative to evaluate potential adjustments to the Annual Sewer Charge (ASC), which may be required and subject to a future and separate Proposition 218 process.

The analysis shows that the costs for existing customers are based on the repair and replacement costs of the existing system while the developers will pay the costs for expanding the sewer system to accommodate new development. The CIP projects identified for existing infrastructure will be repaired or maintained by a combination of public financing, existing ratepayers, and new developments.

2 2025 Master Plan Analysis

The 2025 Master Plan involved hydraulic modeling and condition assessments to recommend improvements addressing identified system deficiencies. Improvements were categorized into four groups to develop the CIP projects based on the type of deficiency:

- Category 1 - Existing Pipe Capacity Deficiencies: Improvements to address current hydraulic capacity deficiencies under present-day flow conditions. Approximately 7,285 linear feet (LF) of pipe require upsizing to meet the minimum four-foot freeboard criteria for surcharging under Peak Wet Weather Flow (PWWF).

- Category 2 - Future Pipe Capacity Deficiencies: Improvements to address projected capacity constraints due to future growth and development. Approximately 13,848 LF of pipe must be upsized under PWWF to accommodate anticipated increases in flow.

- Category 3 - Pipe Structural Deficiencies: Improvements to address physical structural defects identified through closed-circuit television (CCTV) inspections. Approximately 9,796 LF of pipes are identified as structurally deficient and prioritized for replacement.

- Category 4 - Remaining Sewer System: Improvements to address the remaining pipes within the collection system. Approximately 142,928 LF of pipe is recommended for phased replacement over a 20-year planning period to ensure long-term serviceability.

3 Impact Fee - Calculation Methodology

3.1 Developer's Share of Capacity Assurance

An evaluation of hydraulic capacity improvements from Category 1 and Category 2 was conducted to determine the proportionate cost responsibility for new development. The capacity assessment identified shared infrastructure upgrades that benefit both existing and future users. The analysis was performed based on pipe sizing requirements and projected flow contributions.

3.1.1 Category 1: Existing Capacity Improvements

A portion of Category 1 improvements were identified as shared infrastructure upgrades that benefit both existing and future users. The analysis for proportionate cost responsibility was compared to the overall cost for Category 1 CIP projects. The total estimated cost for Category 1 CIP projects is approximately $17.7 million. The list of Category 1 pipes to be improved is listed in **Table 1** and the Conceptual Opinion of Probable Project Cost (OPPC) is in **Table 2.**

Approximately 1,684 linear feet (LF) of pipeline improvements identified in Category 1 were determined to serve both existing and future capacity needs and the shared benefit segments are illustrated in **Figure 1**.

3.1.2 Beech Street Improvements

The Beech Street segment shown in Figure 1 requires different pipe sizes under existing and future scenarios. For existing capacity improvements under Category 1, the proposed pipe diameter is 24-inch HDPE while future development under Category 2 necessitates an increase to 30-inch HDPE. A planning-level OPPC was prepared for both diameters, with the cost difference attributed to the upsizing totaling approximately $524,000. The differential cost between Category 1 and Category 2 improvements represents the portion of the improvement cost assignable to future development. The cost breakdown is presented in **Table 3**.

3.1.3 Trunk Line Improvements

In contrast, the trunk line improvements require the same pipe size under both existing and future scenarios. Therefore, a flow-based cost allocation method was used. The system currently has an existing average dry weather flow (ADWF) capacity of approximately 1.56 million gallons per day (MGD). Future development is projected to increase flows by an equivalent amount, 1.84 MGD, which approximately increases the total flow within the system by more than half. As a result, the cost of the trunk line improvements is allocated equally (50/50) between existing and future customers.

The total OPPC for the trunk line improvements is estimated at $8,440,000, with $4,220,000 assigned to new development. The OPPC for the trunk line improvement is in **Table 4**.

3.1.4 Summary Cost Analysis

Based on both the pipe sizing and flow-based analyses, the portion of Category 1 improvements that benefit new development is estimated to be approximately **25%**. The full cost allocation summary is shown in **Table 5**.

3.2 Developer's Improvement

Category 2 solely focuses on addressing projected capacity constraints driven by future growth and development. As these improvements will be pipe size upgrades driven by developers, the cost of these improvements will be accounted for in the development's connection fees. The total OPC for the trunk line improvements is estimated at $49,046,000. The list of pipes to be upsized is in **Table 6** and the OPC for the Category 2 projects is presented in **Table 7**.

4 Proposed Development Impacts

4.1 Anticipated Developments

The City provided a list of developments planned for the 2025/26 fiscal year. Additionally, the Master Plan identified other planned developments that have been approved or are in planning with City. The known developments have been assumed to be within the 2026/27 and 2027/28 fiscal years. The list, along with the anticipated number of residential units or square feet of commercial, industrial, or office space, is shown in **Table 8**.

Table 9 calculates the Equivalent Dwelling Units (EDUs) that are associated with each the anticipated developments. EPASD utilizes the EDUs to calculate the Impact Fee.

5 Impact Fee

As part of the ongoing development of the Master Plan and identification of new CIP projects, EPASD intends to update its impact fee to accurately reflect the costs associated with planned system improvements and infrastructure expansion. .

This fee has been calculated based on the following cost components:

- Developer's Share of Capacity Assurance: Approximately 25 percent of the costs associated with existing capacity assurance improvements, which are expected to provide benefits to new development.
- Developer's Improvement: 100 percent of the costs related to capacity deficiencies that are directly attributable to new development demands.
- Buy-In Treatment Cost: A buy-in cost of $5 million per 1.0 million gallons per day (MGD) of treatment capacity, representing the proportional reimbursement by developers for the available capacity at the PAWRQCP.

The calculation method used to determine the fee is presented in **Table 10**. The impact fee developed is $7,800. A regular review of the impact fee should be completed to ensure that the impact fee reflects the costs incurred to accommodate City-approved developments.

6 Proposed Operating and Maintenance Plan

The City has contracted with West Bay Sanitary District (WBSD) to operate and maintain the collection system. The collection system will continue to operate in accordance with Statewide SSO Waste Discharge Requirements and RWQCB Sewer System Management Plan guidelines. WBSD and the City has an agreement for the Operation and Maintenance of Sewer Collection System, the annual budget in the 2024/25 fiscal year was $1,724,120. Per email

from Richard Perez on April 24, 2025, the current annual contract is $1,799,152, which is an increase of 4.37% from the previous year. **Table 11** presents the operating expenses for the EPASD collection system.

In addition to the labor costs for operating the collection system, EPASD contributes the operating and capital costs for the Palo Alto (Regional Water Quality Control Plant PARWQCP) as outlined in the existing agreement. In reviewing the *East Palo Alto Sanitary District, 2019 Sewer Rate Study (Rate Study)*, F&L identified that the study included a summary of anticipated treatment operation, capital, and debt service costs. We have summarized the anticipated costs for PARWQCP treatment and capital improvements in **Table 12**.

7 Capital Improvement Projects

The 2025 Master Plan identified recommendations for Capital Improvement Program (CIP) projects, based on the four categories. The CIP projects were developed and grouped primarily according to their pipeline Category. However, in several cases, CIP improvements with different categories will be addressed in the same project due to overlap or immediate proximity. Below is a summary of the project Groups. A summary of the CIP project identified in the 2025 Master Plan can be seen in **Table 13**.

8 Annual Budget Cash Flow

F&L evaluated the year over year cash flow for operations and improvements of the sanitary sewer collection system. **Table 14** presents F&L's cash flow project for five fiscal years beginning with Fiscal Year 2025/26. The cash flow analysis includes the following key items:

- The Annual Sewer Charge (ASC) is set at $660. Per information from EPASD, the service charge is not expected to increase this fiscal year. It is recommended that a five-percent annual escalation be applied to reflect current economic conditions and the anticipated annual repair and replacement program to address the deficiencies identified in the EPASD CCTV TM.
- The proposed impact fee is to be $7,800 per EDU, similar to the ASC, and an annual 5-percent escalation is applied.
- The total number of anticipated new EDUs for each fiscal year is provided based on the information presented in **Table 9**.
- The total number of connected EDUs is also provided, including accounting for new EDUs that were assumed to be added during each fiscal year. The City shall confirm for EPASD the EDUs to be added each fiscal year.
- The beginning reserve fund balance is $23 million as provided by the EPASD.
- Category 4 pipes for the remaining sewer system assets not currently identified as hydraulically or structurally deficient but nearing the end of their expected service life. These pipes are recommended for phased replacement over a 20-year period to maintain system integrity and service reliability.
- Revenues include the ASC, connection fees, property taxes presented in the EPASD Rate Study, ERAF Rebate/Former RDAF presented in the EPASD Rate Study, and interest earned on reserve funds.
- Expenses including labor and other operating expenses for the collection system, Sewer Rehab Improvements to fund annual point repair projects, Category 4 Improvements, PAWRQCP annual treatment costs, EPASD share of existing PARWQCP debt service, EPASD share of project PARWQCP debt service, and EPASD 2011 SRF Loan debt service presented in the EPASD Rate Study.

For each fiscal year, the project expenses are projected revenues are calculated and presented. If expenses in a given fiscal year are greater than the project revenues, the Reserve Funds are used to balance the expenses and revenues. In utilizing portions of the existing Reserve Funds each fiscal year, the existing customers' contributions to the reserves over the prior years are utilized to fund the CIPs for the existing deficiencies.

At the end of the five-year evaluation period, the projected Reserve Fund balance is $2.4 Million. As EPASD receives its revenue payments twice per year as part of the property tax collection, sufficient reserves to fund at least six months of operation are suggested. The cash flow evaluation presented in **Table 14** maintains a minimum of 12-months of Reserve Funds for each given fiscal year.

The cash flow review above will be impacted by the Operating & Maintenance expenses, PARWQCP Treatment Expenses, and projected developments. If additional information on the actual Reserve Fund balance becomes available, the cash flow analysis will be updated.

Attachments:

Tables:

- Table 1: Category 1 Improvement Pipes
- Table 2: Category 1 OPC
- Table 3: Beech Street Improvement Comparison OPC
- Table 4: Trunk Line Improvement OPC
- Table 5: Developer's Share of Capacity Assurance
- Table 6: Category 2 Improvement Pipes
- Table 7: Category 2 OPC
- Table 8: Proposed Developments: Anticipated Completion Prior to FY 2027/2028
- Table 9: Equivalent Dwelling Units Over the Next Five Fiscal Years
- Table 10: Impact Fee Calculation
- Table 11: Estimated Annual Operating & Maintenance Expenses
- Table 12: PARWQCP Treatment Expenses Calculation
- Table 13: CIP Project Summary
- Table 14: Wastewater Enterprise Fund Cash Flow Projections

Figures

- Figure 1: Shared Capacity Improvements

Table 1
Category 1 Improvement Pipes
Sewer Impact Fee Memorandum
East Palo Alto, California

Segment	Length (Feet)	Existing Diameter (Inches)	Proposed Diameter (Inches)
B15+B49	331	8	12
B16+B15	327	8	12
B19+B12	500	6	10
B49+B14	328	8	12
C1+B16	402	8	12
C2+C1	204	8	10
C3+C2	398	6	10
C4+C3	436	6	10
C5+C4	328	6	10
C6+C5	87	6	10
C12+C1	265	6	10
D7+D6	398	6	10
H34+H17	269	6	10
H35+H34	322	6	10
H36+H35	474	6	10
I4+I3	243	18	30
K28+K4	242	10	16
L1+L21	223	10	16
L21+K28	68	10	16
T17+T34	407	21	30
T18+T17	540	21	30
T36+T18	494	21	30

Notes
(1) Category 1 Improvements are from EPASD 2025 Master Plan.

Abbreviations
PWWF: Peak Wet Weather Flow

Table 2
Category 1 OPPC
Sewer Impact Fee Memorandum
East Palo Alto, California

Item No.	Description	Units	Quantity (2)	Unit Price	Budget
Conceptual Opinion of Probable Construction Cost					
1	Mobilization	%	5%	$ 7,446,563	$ 372,328
2	Traffic Control	%	15%	$ 7,446,563	$ 1,116,985
3	Sheeting, Shoring, and Bracing	%	5%	$ 7,446,563	$ 372,328
4	10-inch DR 17 HDPE Pipe	lf	3,680	$500	$ 1,840,055
5	12-inch DR 17 HDPE Pipe	lf	1,388	$600	$ 832,715
6	16-inch DR 17 HDPE Pipe	lf	533	$900	$ 480,091
7	30-inch DR 17 HDPE Pipe	lf	1,684	$2,550	$ 4,293,703
8	Manholes	ea	29	$ 11,000	$ 319,000
9	30% Contingency	%	30%	$ 9,627,204	$ 2,888,161
Subtotal - Conceptual Opinion of Probable Construction Cost (2)					**$ 12,515,000**
Engineering and Administration Cost					
10	Design	%	10%	$ 12,515,000	$ 1,252,000
11	Environmental/Permitting	%	10%	$ 12,515,000	$ 1,252,000
12	Construction Management/Inspection	%	15%	$ 12,515,000	$ 1,877,000
13	District Administration	%	5%	$ 12,515,000	$ 626,000
Subtotal - Engineering and Administration Cost (2)					**$ 5,007,000**
Total Conceptual Opinion of Probable Project Cost (2)					**$ 17,522,000**

Notes

(1) Category 1 Improvements are from EPASD 2025 Master Plan.
(2) Costs rounded to nearest $1,000.

Abbreviations

DR: dimension ration
HDPE: high density polyethylene
OPPC: opinion of probable project cost

Table 3
Beech Street OPPC Improvement Comparison
Sewer Impact Fee Memorandum
East Palo Alto, California

2025 - Beech Street Improvement

Item No.	Description	Units	Quantity	Unit Price	Budget
Conceptual Opinion of Probable Construction Cost					
1	Mobilization	%	5%	$ 388,213	$ 19,411
2	Traffic Control	%	15%	$ 388,213	$ 58,232
3	Sheeting, Shoring, and Bracing	%	5%	$ 388,213	$ 19,411
4	24-inch DR 17 HDPE Pipe	lf	243	$ 1,600	$ 388,213
5	Manholes (3)	ea	2	$ 11,000	$ 22,000
6	30% Contingency	%	30%	$ 507,266	$ 152,180
Subtotal - Conceptual Opinion of Probable Construction Cost (2)					**$ 659,000**
Engineering and Administration Cost					
7	Design	%	10%	$ 659,000	$ 66,000
8	Environmental/Permitting	%	10%	$ 659,000	$ 66,000
9	Construction Management/Inspection	%	15%	$ 659,000	$ 99,000
10	District Administration	%	5%	$ 659,000	$ 33,000
Subtotal - Engineering and Administration Cost (2)					**$ 264,000**
Total Conceptual Opinion of Probable Project Cost (2)					**$ 923,000**

2035 Enhanced - Beech Street Improvement

Item No.	Description	Units	Quantity	Unit Price	Budget
Conceptual Opinion of Probable Construction Cost					
1	Mobilization	%	5%	$ 618,714	$ 30,936
2	Traffic Control	%	15%	$ 618,714	$ 92,807
3	Sheeting, Shoring, and Bracing	%	5%	$ 618,714	$ 30,936
4	30-inch DR 17 HDPE Pipe	lf	243	$2,550	$ 618,714
5	Manholes (3)	ea	2	$ 11,000	$ 22,000
6	30% Contingency	%	30%	$ 795,393	$ 238,618
Subtotal - Conceptual Opinion of Probable Construction Cost (2)					**$ 1,034,000**
Engineering and Administration Cost					
7	Design	%	10%	$ 1,034,000	$ 103,000
8	Environmental/Permitting	%	10%	$ 1,034,000	$ 103,000
9	Construction Management/Inspection	%	15%	$ 1,034,000	$ 155,000
10	District Administration	%	5%	$ 1,034,000	$ 52,000
Subtotal - Engineering and Administration Cost (2)					**$ 413,000**
Total Conceptual Opinion of Probable Project Cost (2)					**$ 1,447,000**

OPCC Difference:	**$ 524,000**

Notes
(1) See Table 3 and Figure 2 for limits of improvements.
(2) Quantities rounded to nearest 10 feet.
(2) Costs rounded to nearest $1,000.

Abbreviations
DR: dimension ration
HDPE: high density polyethylene
OPPC: opinion of probable project cost

Table 4
Conceptual OPPC Trunkline Improvements (1)
Sewer Impact Fee Memorandum
East Palo Alto, California

Item No.	Description	Units	Quantity	Unit Price	Budget
Conceptual Opinion of Probable Construction Cost					
1	Mobilization	%	5%	$ 3,674,988	$ 183,749
2	Traffic Control	%	15%	$ 3,674,988	$ 551,248
3	Sheeting, Shoring, and Bracing	%	5%	$ 3,674,988	$ 183,749
4	30-inch DR 17 HDPE Pipe	lf	1,441	$2,550	$ 3,674,988
5	Manholes (3)	ea	4	$ 11,000	$ 44,000
6	30% Contingency	%	30%	$ 4,637,736	$ 1,391,321
Subtotal - Conceptual Opinion of Probable Construction Cost (2)					**$ 6,029,000**
Engineering and Administration Cost					
7	Design	%	10%	$ 6,029,000	$ 603,000
8	Environmental/Permitting	%	10%	$ 6,029,000	$ 603,000
9	Construction	%	15%	$ 6,029,000	$ 904,000
10	District Administration	%	5%	$ 6,029,000	$ 301,000
Subtotal - Engineering and Administration Cost (2)					**$ 2,411,000**
Total Conceptual Opinion of Probable Project Cost (2)					**$ 8,440,000**

Notes
(1) See Figure 1 for limits of improvements.
(2) Costs rounded to nearest $1,000.

Abbreviations
DR: dimension ration
HDPE: high density polyethylene
OPPC: opinion of probable project cost

Table 5
Developer's Share of Capacity Assurance
Sewer Impact Fee Memorandum
East Palo Alto, California

Capacity Assurance Cost	
Difference Pipe Size Change (1)	$ 524,000
50/50 Split on Developers Trunk Line (2)	$ 4,220,000
Total	$ 4,744,000
Category 1 - Existing Deficiency Costs (3)	$ 17,522,000
Shared Capacity of Developers (4)	27%

Notes
(1) See Table 3 for the cost required for upsizing.
(2) See Table 4 for Developers Trunk Line.
(3) See Table 1 for the Existing Cpacity deficiencies
(4) Shared Capacity cost for developers was determined by taking the total of the shared cost and dividing it by the overall total for the existing deficiency cost.

Table 6
Category 2 Improvement Pipes
Sewer Impact Fee Memorandum
East Palo Alto, California

Segment	Length (Feet)	Existing Diameter (Inches)	Proposed Diameter (Inches)
A9+A10	181	15	24
A10+A15	299	15	24
A15+A16	435	15	24
A16+A21	296	15	24
A21+A23	155	15	24
A23+A22	14	15	24
A22+A29	369	18	24
A29+T29	345	18	30
B37+B6	262	6	10
D1+E4	354	12	24
D21+D19	391	8	12
D22+D21	149	8	12
E2+E1	283	12	24
E3+E2	280	12	24
E4+E3	357	12	24
F7+T25	477	6	10
F8+F7	357	6	10
F23+F8	327	6	10
H12+H11	333	8	12
H13+H12	108	8	12
H14+H13	446	8	12
H15+H62	201	8	12
H16+H60	351	8	12
H17+H57	397	8	12
H57+H16	40	8	12
H60+H15	99	8	12
H62+H14	233	8	12
I5+I31	135	18	30
I6+I5	411	18	30
I31+I4	321	18	30
I37+I6	48	15	30
M2+M44	42	8	12
M3+M2	380	8	12
M31+M3	357	8	12
M44+I15	62	12	12
T11+T10	326	24	24
T12+T11	482	24	24
T19+T36	6	24	30
T20+T19	332	18	30
T21+T20	338	21	30
T22+T37	191	21	30
T23+T22	373	18	30
T24+T23	317	18	30
T25+T24	282	18	30
T26+T25	306	18	30
T27+T26	356	18	30
T28+T27	162	18	30
T29+T28	234	18	30
T30+T12	285	24	24
T31+T30	351	24.2	24
T32+T31	125	24.2	24
T37+T21	83	21	30

Abbreviations
PWWF: Peak Wet Weather Flow

Table 7
Category 2 OPPC
Sewer Impact Fee Memorandum
East Palo Alto, California

Item No.	Description	Units	Quantity	Unit Price	Budget
Conceptual Opinion of Probable Construction Cost					
1	Mobilization	%	5%	$ 21,030,484	$ 1,051,524
2	Traffic Control	%	15%	$ 21,030,484	$ 3,154,573
3	Sheeting, Shoring, and Bracing	%	5%	$ 21,030,484	$ 1,051,524
4	10-inch DR 17 HDPE Pipe	lf	1,423	$ 500	$ 711,723
5	12-inch DR 17 HDPE Pipe	lf	3,590	$ 600	$ 2,153,944
6	24-inch DR 17 HDPE Pipe	lf	4,593	$ 1,600	$ 7,348,965
7	30-inch DR 17 HDPE Pipe	lf	4,242	$ 2,550	$ 10,815,852
8	Manholes (3)	ea	60	$ 11,000	$ 660,000
9	30% Contingency	%	30%	$ 26,948,105	$ 8,084,432
Subtotal - Conceptual Opinion of Probable Construction Cost (2)					**$ 35,033,000**
Engineering and Administration Cost					
10	Design	%	10%	$ 35,033,000	$ 3,503,000
11	Environmental/Permitting	%	10%	$ 35,033,000	$ 3,503,000
12	Construction Management/Inspection	%	15%	$ 35,033,000	$ 5,255,000
13	District Administration	%	5%	$ 35,033,000	$ 1,752,000
Subtotal - Engineering and Administration Cost (2)					**$ 14,013,000**
Total Conceptual Opinion of Probable Project Cost (2)					**$ 49,046,000**

Notes

(1) Category 2 Improvements are from EPASD 2025 Master Plan.
(2) Costs rounded to nearest $1,000.

Abbreviations

DR: dimension ration
HDPE: high density polyethylene
OPPC: opinion of probable project cost

Table 8
Proposed Developments: Anticipated Completion Prior to FY 2027/2028 (1) (2)
Sewer Impact Fee Memorandum
East Palo Alto, California

Land-Use Category	Type	Projected Completed/In Construction (3)										FY 2025/2026 (4)								FY 2026/2027			
		2485 Pulgas Ave (Private Improvements)		Light Tree Apartments (1805 East Bayshore Road)		Mid-Pen Housing (965 Weeks)		University Plaza Phase 1		1950 Bay Road		2001 Manhattan (Woodland Parks)		717 Donohoe		990 Garden		1201 Runnymede		University Plaza Phase 2 (Sobrato Phase II) (5)		2331 University Ave (Clarum) (5)	
		Added	Removed	Added	Removed	Added	Removed	Added	Removed	Added	Removed	Added	Removed	Added	Removed	Added	Removed	Added	Removed	Added	Removed	Added	Removed
Residential (Units)	Single-Residential Multiple-Residential	51		94		131				63		551		14		6		20				33	
Commercial - Office (sf)	Office							165,915		74,435										203,967			
Commercial - Non-Office (sf)	Restaurant Hotel/Motel Commercial Medical School Church Recreational Retirement																			8,690		2,500	
Industrial (sf)	Industrial																						

Notes
(1) Proposed developments anticipated to be completed within the next five fiscal years and is subject to change.
(2) See Figure 2 for locations of proposed developments.
(3) Units and square footage are taken from the calculations in the 2025 Master Plan.
(4) Project list received by the District to be completed during the 2025/2026 fiscal year.
(5) EDU count and square footage information for proposed developments were found in Table 5 from the Sanitary Sewer CIP and Operations Memo by Freyer & Laureta, Inc dated November 2022.

Abbreviations
FY: fiscal year
sf: square feet

Table 9
Equivalent Dwelling Units Over the Next Five Fiscal Years (1)
Sewer Impact Fee Memorandum
East Palo Alto, California

Land-Use Category	Type	Flow, 2022-23 (hcf) (2)	EDU, 2022-23 (2) (3) (4)	Completed Project EDU, 2024-25 (4)	EDU, 2025-26 (4)	EDU, 2026-27 (4)	EDU, 2027-28 (4)
Residential (5)	Single-Residential	--	3,371	3,596	4,187	4,187	4,197
	Multiple-Residential	--	368	368	368	401	401
Commercial - Office (6)	Office	4,662	48	168	168	168	278
Commercial - Non-Office (6)	Restaurant	6,468	66	66	66	66	66
	Hotel/Motel	15,716	161	161	161	161	161
	Commercial	23,376	240	240	240	295	295
	Medical	1,296	13	13	13	13	13
	School	21,188	217	217	217	217	217
	Church	5,551	57	57	57	57	57
	Recreational	890	9	9	9	9	9
	Retirement	372	4	4	4	4	4
Industrial (6)	Industrial	2,976	30	30	30	30	30
Total (7) (8)	--	--	**4,584**	**4,930**	**5,521**	**5,609**	**5,729**

Notes

(1) The increase in Equivalent Dwelling Units (EDU) per year are based on the major proposed developments and their anticipated completion fiscal year.

(2) Number of residential units and flows for all other land uses for fiscal year 2022-23 are assumed to be the same as reported the EPASD "Sewer Service Charges Fiscal Year 2020-2021" report dated July 2020. The referenced report listed that there were a total of 38 customers "manually billed" but no flow or EDU information was provided for the 38 manually billed customers to allow inclusion in the development of projected EDUs.

(3) For non-residential land uses, the total number of equivalent EDUs is calculated by multiplying the flows in HCF by 748 gallons per hcf and then dividing by 200 gallons per EDU.

(4) Numbers of EDU are rounded to the nearest whole number.

(5) Both Single-Residential and Multiple-Residential are assumed to be one EDU per unit.

(6) The EDU calculations for Commercial and Industrial land-use categories use the commercial and industrial unit flows found in EPASD's Standard Specs B1.03-3 and B1.03-4.

(7) The EDU calculations use a rate of 200 gallons per day (gpd) per EDU.

(8) The calculated infiltration rate in EPASD's Standard Specs Section B1.03-5 was ignored since infiltration and inflow will be corrected as part of the PWWF improvements presented in Table 1 and improvements will utilized HDPE that will have fused pipe, which has a considerably lower infiltration rate.

Abbreviations

EDU: equivalent dwelling unit
EPASD: East Palo Alto Sanitary District
hcf: hundreds of cubic feet
HDPE: high density polyethylene
PWWF: peak wet weather flow

References

1. Sewer Service Charges, Fiscal Year 2020-2021 prepared by EPASD dated July 2020.

Table 10
Impact Fee Calculations
Sewer Impact Fee Memorandum
East Palo Alto, California

AT FULL BUILDOUT		
Projected Total ADWF Increase (gpd) (1)		1,560,000
Projected Total EDU Increase (2)		7800
Development Share of Cost of Capacity Assurance (3)	$	4,380,500
Total Cost of Improvements Due to Development (4)	$	49,046,000
Total Cost of Treatment (5)	$	7,800,000
Impact Fee per EDU(6)	**$**	**7,800**

Notes

(1) Projected Total ADWF Increase is from the EPASD 2025 Wastewater Masterplan.

(2) Projected Total EDU Increase was calculated using a rate of 200 gpd/EDU.

(3) The Development Share of the Cost of the Capacity Assurance is 25% of the costs presented in Table 2. The Capacity Assurance project reduce the potential for sanitary sewer overflows during peak wet weather flows that is a current system deficiency. However, implementing the Capacity Assurance project results in adding additional capacity for both average dry weather flow and peak dry weather flow that is a benefit to new development.

(4) See Table 7 for cost of improvements due to development.

(5) Total Cost of Treatment is based on EPASD reported cost of $5 million per 1.0 MGD of treatment capacity. It should be noted that EPASD current 7.96% ownership of the PARWQCP is equivalent to ADWF capacity of 3.06 MGD. The total project ADWF at full buildout is 3.3 MGD based on 200 gpd/EDU and 12,730 EDUs. Therefore, the Total Cost of Treatment presented above is for new development to buy-in to the available treatment capacity.

(6) Impact fee is calculated by dividing the total cost of improvements, capacity assurance, and treatment by the projected Total EDU increase and rounding to nearest $100.

Abbreviations

ADWF: Average Dry Weather Flow
EDUs: Equivalent Dwelling Units
gpd: gallons per day

Table 11
Estimated Annual Operating & Maintenance Expenses
Sewer Impact Fee Memorandum
East Palo Alto, California

	2024/25	2025/26	2026/27	2027/28	2028/29	2028/29
Cost Escalation		4.37%	4.37%	4.37%	4.37%	4.37%
Proposed Operating & Maintenance Expenses						
WBSD Contractual Amount (1)	$ 1,724,120	$ 1,799,000	$ 1,878,000	$ 1,960,000	$ 2,046,000	$ 2,135,000
EPASD Salaries Wages & Benefits		$ 400,000	$ 417,000	$ 435,000	$ 454,000	$ 474,000
Total Operating & Maintenance Expenses		$ 1,724,120	$ 2,199,000	$ 2,295,000	$ 2,395,000	$ 2,500,000

Notes

2024/25 fiscal year was $1,724,120. Per email from Richard Perez on April 24, 2025, the current annual contract is $1,799,152, which is an increase of 4.37% from the previous year. The same annual cost escalation of 4.37% is applied in each subsequent fiscal year following Fiscal Year 2024/25.
(2) Costs rounded to nearest $1,000.

Abbreviations

EPASD: East Palo Alto Sanitary District
WBSD: West Bay Sanitary District

Table 12
PARWQCP Treatment Expenses Calculation (1)
Sewer Impact Fee Memorandum
East Palo Alto, California

	2025/26	2026/27	2027/28	2028/29	2029/30
EPASD Share of PARWQCP (2)	7.64%	7.64%	7.64%	7.64%	7.64%
PARWQCP CAPITAL IMPROVEMENTS (3)					
Existing Debt Service	$ 128,000	$ 128,000	$ 128,000	$ 128,000	$ 128,000
Planned Debt Serve	$ 517,000	$ 517,000	$ 517,000	$ 517,000	$ 517,000
Total EPASD Share of Capital Improvements	**$ 645,000**	**$ 645,000**	**$ 645,000**	**$ 645,000**	**$ 645,000**
PARWQCP OPERATING EXPENSES (3)					
Treatment O&M	$ 2,412,000	$ 2,470,000	$ 2,546,000	$ 2,624,000	$ 2,703,000
Minor CIP Fund	$ 253,000	$ 26,000	$ 267,000	$ 274,000	$ 281,000
Total EPASD Share of Operating Expenses	**$ 2,665,000**	**$ 2,496,000**	**$ 2,813,000**	**$ 2,898,000**	**$ 2,984,000**
Total EPASD Share of Treatment Expenses	**$ 3,310,000**	**$ 3,141,000**	**$ 3,458,000**	**$ 3,543,000**	**$ 3,629,000**

Notes

(1) EPASD does not currently utilize its full 7.64% allocation of treatment capacity and therefore the annual PARWQCB operating costs do not reflect EPASD's full utilization of its capacity. As more EPASD EDUs are connected to the system, the annual rate adjustment is calculated by the proportionate increase in Total EPASD Connected EDUs to reflect the anticipated increase operating expenses.

(2) EPASD share of operating and capital expenses is from the PARWQCP Capital Program Finance Committee Meeting presentation dated 11/17/20, on page 10.

(3) All costs from Table 3 of the EPASD 2019 Sewer Capacity Rate Study dated April 17, 2019.

Abbreviations

EPASD: East Palo Alto Sanitary District
PARWQCP: Palo Alto Regional Water Quality Control Plant
EDUs: Equivalent Dwelling Units

References

1. PARWQCB Capital Program Finance Committee Meeting presentation can be accessed from the following link:
https://www.cityofpaloalto.org/files/assets/public/agendas-minutes-reports/reports/city-manager-reports-cmrs/year-archive/2020-2/11172020-item-2-presentation.pdf?t=74441.91
2. EPASD 2019 Sewer Rate Study dated April 17, 2019 can be accessed from the following link:
https://www.epasd.com/home/showpublisheddocument/3588/637116752736400000

Table 13
Overall – Proposed Capital Improvement Plan
Sewer Impact Fee Memorandum
East Palo Alto, California

Project #	Improvement Category Type (1)			Improvement Description	Proposed Pipe Sizes	Proposed Development (If applicable)	Project Priority	Approximate Length of Pipe (LF)	Projected OPPC ($)	Notes
1.1	1		3	Pipeline Replacement on Menalto Avenue, Poplar Avenue, Bay Road, and Elliot Drive	8-inch, 10-inch, 12-inch HDPE DR 17			4,833	$ 6,042,000	Projects will need Encroachment Permit with City of Menlo Park. Project will involve crossing Bayshore Freeway.
1.2	1			Pipeline Replacement on Trunk Line in Creek and Beech Street	30-inch HDPE DR 17			1,684	$ 9,910,000	Environmental Permits will be required. Trunk Line improvements are located on Creek.
1.3	1		3	Pipeline Replacement on Larkspur Drive and Gardenia Ave	8-inch, 12-inch, 16-inch HDPE DR 17			984	$ 1,724,000	Project will require coordination with PG&E for gas line.
2.0		2		11 Smart Cover Meters to be installed. Per V&A study in 2013, there were 11 sub-catch basin areas.	-			-	$ 134,000	Project will reinstate City's Flow Monitoring Program.
2.1	1	2	3	Pipeline Replacement on Bayshore Road, Donohoe Street, Cooley Ave, and O'Connor Street	8-inch, 10-inch, 12-inch, 24-inch HDPE DR 17	Woodland Parks (2001 Manhattan) & 2120-60 Euclid Avenue	See Note 2	3,460	$ 7,466,000	Project will involve crossing Bayshore Freeway. Project should be continued to be re-evaluated as structural deficiencies may be moved to a higher priority project if proposed development projects are not constructed soon.
2.2	1	2		Pipeline Replacement on University Avenue, Runnymede Street, Clarke Avenue, and Beech Street	10-inch, 12-inch HDPE DR 17	Woodland Parks (2001 Manhattan) & 2120-60 Euclid Avenue	See Note 2	4,188	$ 9,795,000	Project will include coordination with PG&E on gas line on Beech Street.
2.3		2		Pipeline Replacement on Trunk Line in Creek	30-inch HDPE DR 17	Ravenswood Area	See Note 2	2,981	$ 17,635,000	Environmental Permits will be required. Trunk Line improvements are located on Creek.
2.4		2	3	Pipeline Replacement on Bay Road and Pulgas Avenue	8-inch, 10-inch, 24-inch, 30-inch HDPE DR 17	2485 Pulgas Avenue (3) 2535 Pulgas Ave (Office) 2519 Pulgas Ave (Office) 1804 Bay Road 1675 Bay Road	See Note 2	2,799	$ 9,293,000	Project should be continued to be re-evaluated as structural deficiencies may be moved to a higher priority project if proposed development projects are not constructed soon.
2.5		2		Pipeline Replacement on Maple Lane	10-inch HDPE DR 17	Mid-Pen Housing (965 Weeks Street) (3)	See Note 2	1,161	$ 1,401,000	
2.6		2		Pipeline Replacement on O'Connor Street	12-inchHDPE DR 17	Light Tree Apartments (East Bayshore Road) (3)	See Note 2	841	$ 1,248,000	Project will require coordination for two 24-inch PG&E Gas Main Transmissions.
2.7		2		New Parallel Trunk Line within San Francisquito Creek on Palo Alto Golf Course	24-inch HDPE DR 17	Ravenswood Area	See Note 2	1,569	$ 5,832,000	Project should be re-evaluated on a yearly basis. As project scope on developments may be reduced/removed.
3.1			3	Pipeline Replacements on Dumbarton Avenue, Palo Verde Way, Lilac Lane, Flen Way, Capitol Avenue, Woodland Avenue, and Bayshore Road	8-inch, 10-inch HDPE DR 17			3,998	$ 4,061,000	
3.2			3	Pipe Replacements on Bay Road, Weeks Street, Garden Street, Clarke Avenue, and Pulgas Avenue	8-inch, 16-inch, 18-inch HDPE DR 17			2,431	$ 3,657,000	

(1) Category 2 projects that have Category 3 Structural Deficient projects should continue to be re-evaluated as the Category 3 pipes may move to a higher priority CIP project depending on development construction and the yearly CIP budget for rehabilitation projects.
(2) Project timeline will be dependent on when the proposed developments are constructed. City to assess every fiscal year.
(3) Developments have already been completed.

Table 14
Wastewater Enterprise Fund Cash Flow Projections
Sanitary Sewer Capital Improvement and Operation Plan Development
East Palo Alto, California

	2025/26	2026/27	2027/28	2028/29	2029/30
Overall Rate Adjustment	0%	5%	5%	5%	5%
Annual Sewer Charge (per EDU) (1)	$660	$693	$728	$764	$802
Connection Fee (per EDU) (2)	$7,800	$8,190	$8,600	$9,029	$9,481
Total New EDUs (3)	591	89	120	630	-
Total EDUs (3)	4,930	5,521	5,609	5,729	6,359
Interest Earnings Rate	0.5%	0.5%	0.5%	0.5%	0.5%
Beginning Reserve Funds (9)	**$23,000,000**	**$22,539,286**	**$14,132,274**	**$5,383,315**	**$5,222,232**
REVENUES					
Sewer Service Charges (4)	$3,253,486	$3,416,161	$4,017,010	$4,285,821	$4,596,380
Connection Fees (5)	$4,609,800	$728,500	$1,031,940	$5,688,569	$0
Property Taxes (6)	$521,000	$536,630	$552,729	$569,311	$586,390
ERAF Rebate/Former RDAF (6)	$300,000	$300,000	$300,000	$300,000	$300,000
Investment Earnings (7)	$115,000	$112,696	$70,661	$26,917	$26,111
Total Revenues	**$8,799,286**	**$5,093,988**	**$5,972,340**	**$10,870,618**	**$5,508,882**
EXPENSES					
Operating & Maintenance					
WBSD Contractual Amount (8)	$1,799,000	$1,878,000	$1,960,000	$2,046,000	$2,135,000
EPASD Salaries Wages & Benefits(8)	$400,000	$417,000	$435,000	$454,000	$474,000
PARWQCP Wastewater Treatment (6)	$2,665,000	$2,496,000	$2,813,000	$2,898,000	$2,984,000
Subtotal	**$4,864,000**	**$4,791,000**	**$5,208,000**	**$5,398,000**	**$5,593,000**
Capital & Other Non-Operating					
Category 3A Projects (9)	$ 2,000,000	$ 2,000,000	$ 2,000,000	$ 2,000,000	$ 2,000,000
Category 1 Projects (10)	$1,672,000	$5,986,000	$6,789,300	$2,909,700	$0
Subtotal	**$3,672,000**	**$7,986,000**	**$8,789,300**	**$4,909,700**	**$2,000,000**
Debt Service					
EPASD 2011 SRF Loan (6)	$79,000	$79,000	$79,000	$79,000	$79,000
Share of Existing PARWQCP Debt (6)	$128,000	$128,000	$128,000	$128,000	$128,000
Share of Projected PARWQCP Debt (6)	$517,000	$517,000	$517,000	$517,000	$517,000
Subtotal	**$724,000**	**$724,000**	**$724,000**	**$724,000**	**$724,000**
Total Expenses	**$9,260,000**	**$13,501,000**	**$14,721,300**	**$11,031,700**	**$8,317,000**
Revenues Less Expenses	**($460,714)**	**($8,407,012)**	**($8,748,960)**	**($161,082)**	**($2,808,118)**
Ending Reserve Fund	**$22,539,286**	**$14,132,274**	**$5,383,315**	**$5,222,232**	**$2,414,114**

Notes
(1) Proposed Annual Sewer Charge is shown as the rate for existing customers and will not increase for 2025/26. Information provied from Rich Perez via emaill on April 4, 2025.
(2) Proposed Connection Fee consists of a share of cost for capacity assurance and developers cost as shown in Table 10.
(3) See Table 9 for the current number of EDUs and estimate for annual increase in EDUs.
(4) Sewer Service Charges is calculated by multiplying Total EDUs by Annual Sewer Service Charge.
(5) Impact Fees is calculated by multiplying Total New EDUs by Impact Fee.
(6) Source of revenues and expenses is Table 4 of the East Palo Alto Sanitary District 2019 Sewer Rate Study prepared by Bartle Wells Associates dated April 17, 2019.
(7) Investment income is interest income on Beginning Fund Reserve.
(8) Operating & Maintenance Expenses are presented in Table 11.
(9) The City Sewer Rehab Improvement is an ongoing annual program to replace pipes that are found to be damaged or at the end of service life but not included Capacity Assurance Improvements or Developer Impact Capacity Improvements.
(10) Capacity Assurance Improvements is an annual expenditure to implement the improvements identified in Table 2 over a 15 year period. The design and construction will be completed in phases beginning in Fiscal Year 2024/25 once new development begins to come on line.
(11) Reserve Fund was stated to be $23 million as of June 30, 2024 per email by Tomohito Oku on April 25, 2025.

Abbreviations
EDUs: Equivalent Dwelling Units
EPASD: East Palo Alto Sanitary District
PARWQCP: Palo Alto Regional Water Quality Control Plant

References
1. East Palo Alto Sanitary District 2019 Sewer Rate Study prepared by Bartle Wells Associates dated April 17, 2019 can be accessed from the following link:
https://www.epasd.com/home/showpublisheddocument/3588/637116752736400000



LEGEND

- SERVICE AREA BOUNDARY
- PIPE SEGMENT WITH CATEGORY 1 DEFICIENCY (DEVELOPER SHARED COST)
- MANHOLE •C11
- LAMPHOLE °C11
- MANHOLE/LAMPHOLE NUMBER C11

NOTES:
1. ALL SEWERS ARE 6" IN DIAMETER, UNLESS DESIGNATED OTHERWISE.

NORTH

SCALE
1" = 1000'

SHARED CAPACITY IMPROVEMENTS
SEWER IMPACT FEE MEMORANDUM
EAST PALO ALTO, CA

FREYER & LAURETA, INC.
CIVIL ENGINEERS • SURVEYORS • CONSTRUCTION MANAGERS
150 Executive Park Blvd • Suite 4200 • San Francisco, CA 94134
(415)534-7070 • www.freyerlaureta.com

DATE:	06/20/2025
SCALE:	1" = 1000'
DESIGNED:	ZG
DRAWN:	
CHECKED:	RO
PROJ. ENGR:	JTT

FIGURE
1

JOB NO.
221009

FREYER & LAURETA, INC

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POLICY AND ACTION 13.1

EAST PALO ALTO CITY COUNCIL STAFF REPORT

DATE: July 15, 2025

TO: Honorable Mayor and Members of the City Council

VIA: Melvin E. Gaines, City Manager

BY: Hanson Hom, Deputy Manager, Special Projects
Karen Camacho, Housing & Economic Development Manager
Amy Chen, Community & Economic Development Director

SUBJECT: Accept Evaluation Report on Measure HH Pilot Workforce Development Program and Authorize Issuance of Request for Proposals to Continue the Program

Recommendation

1. Review and accept the evaluation report from Informing Change on the Measure HH Pilot Workforce Development Program;
2. Receive updates from the three organizations that have been contracted to implement the Pilot Program;
3. Provide input on the recommended enhancements to the Measure HH Workforce Development Program; and
4. Adopt a resolution:
    a. Authorizing the City Manager to issue a Request for Proposals ("RFP") to accept proposals to continue the Measure HH Workforce Development Program with recommended program and operational enhancements; and
    b. Finding that the proposed action does not constitute a "project" within the meaning of the California Environmental Quality Act ("CEQA") pursuant to CEQA Guidelines sections 15378(b)(4) and (5) in that it is a governmental fiscal, organizational, or administrative activity that will not result in direct or indirect changes in the environment.

POLICY AND ACTION 13.1

Alignment with City Council Strategic Plan

This recommendation is primarily aligned with:

Priority: Comprehensive Housing
Priority: Land Use, Economic and Workforce Development

Background

Pilot Program

Measure HH is a parcel tax approved by East Palo Alto voters in 2018 to address the dual challenges of affordable housing and local employment opportunities. The parcel tax is restricted to three uses: (1) affordable/supportive housing (minimum 35 percent of funds), (2) workforce development in STEM and building trades, and (3) administration (maximum 15 percent).

With the objective of providing training and access for East Palo Alto residents to high-quality jobs, the City Council allocated $775,215 in November 2022 to launch the Measure HH Pilot Workforce Development Program ("Pilot Program"). Additionally, through a competitive RFP process, the Council authorized entering into agreements with three local workforce organizations (JobTrain, Live In Peace, and StreetCode Academy) to implement the Pilot Program. These organizations were selected for their strong community ties and proven track records in job training and placement, particularly for underrepresented groups.

The Pilot Program was launched for an 18-month pilot period in March 2023. On September 3, 2024, the City Council extended the pilot period through May 31, 2025, and allocated additional funds to the three organizations totaling $366,418. Recently, on June 17, 2025, the City Council further extended the pilot period to December 31, 2025, to allow for completion of expenditures and extended tracking and monitoring of participants.

The goals of the Pilot Program include providing job training, placement, and support services to East Palo Alto residents in the STEM and building trades employment sectors, with an emphasis on living-wage jobs. The City Council set aspirational metrics, including: 85 percent course completion, 75 percent job placement within three months, an average starting wage of $22–$25/hour, and achievement of a living wage within 36 months of program completion. Note: in 2023, the living wage was approximately $28/hour in San Mateo County based on a single adult without children.

Quarterly performance reports on the Pilot Program from the three organizations are available on the City's website: https://www.ci.east-palo-alto.ca.us/econdev/page/measure-hh-pilot-workforce-development-program

Third-Party Evaluation

When the City launched the Pilot Program, the City Council expressed interest in obtaining a

third-party consultant to comprehensively evaluate the results at the end of the pilot period and recommend program and operational enhancements. In March 2024, the City Council authorized staff to obtain a workforce consultant firm to evaluate the Pilot Program with the following objectives:

- Assess program outcomes: Determine the effectiveness of the pilot in meeting its goals for job training, placement, and wage attainment;
- Inform program improvements: Identify strengths, challenges, and areas for refinement to enhance future workforce development efforts; and
- Suggest evaluation criteria: Establish tools and metrics for tracking long-term wage and employment outcomes, supporting data-driven policy decisions for future funding cycles.

The evaluation is intended to provide findings and recommendations for improving the accountability, transparency, and effectiveness of the Workforce Development Program to better serve East Palo Alto residents that are seeking careers in the STEM and building trades sectors. The evaluation would assist the City in refining the program scope and allocating funds to continue the program beyond the pilot period.

Analysis

Program Evaluation

After a competitive RFP process, on July 16, 2024, the City Council approved a contract with Informing Change to conduct the program evaluation. Informing Change's scope of services included outcome assessment, program improvement recommendations, a landscape scan, and wage assessment tool development. The evaluation was conducted from August 2024 to April 2025 and included interviews, focus groups, site visits, and data analysis. During this period, a Council subcommittee also provided direction on the evaluation process. Based on background research, initial interviews with the three organizations, and input from councilmembers, an evaluation plan was reviewed and accepted by the City Council on January 7, 2025.

The findings and conclusions of the evaluation conducted by Informing Change are contained in their report entitled *Measure HH Pilot Workforce Development Program Evaluation Report ("Evaluation"),* dated June 2025 (Attachment 1). The Evaluation reflects early input from the Council subcommittee on preliminary findings, a landscape scan of other workforce development programs (see Evaluation, Appendix C), and comments from City staff and the three organizations on a draft report. The accomplishments of the Pilot Program are summarized below with supporting data available in the Evaluation.

Summary of Program Accomplishments

1. **Program Participants**
    a. The Pilot Program funded job training and support services for 97 East Palo Alto residents through the programs offered by the three organizations.
    b. Demographics:
        - The racial/ethnic backgrounds of participants are similar to the overall East Palo Alto population.
        - The proportion of female-identifying residents participating in the Pilot Program is

lower than the overall East Palo Alto population.
- Participants skew slightly younger than the overall East Palo Alto population.
- Participants are more likely to hold a high school diploma or equivalent and less likely to have college or advanced education than the overall East Palo Alto population. Nearly half of the participants were unemployed when they began their training.

2. Outcomes

a. Of the participants who completed the program, post-program data is available for 53 participants. Of those 53, 81 percent were hired for jobs related to their training.

b. The unemployed group fell from 47 percent pre-program to 8 percent post-program.

c. The average (mean) hourly wage of participants employed full-time after completing their respective program was $26.68.

d. Participants credit their newly acquired skills and knowledge for supporting their access to new jobs and increased wages. They are optimistic about their future earning potential.

e. Participants identify benefits beyond employment, including skills and knowledge gains, exposure to different career paths, and increased confidence and motivation to continue growing.

3. Key Factors Affecting Participants' Success

a. Program Benefits:
- Removal of financial barriers to participation
- Welcoming and encouraging environment with high-quality staff and educators
- Multiple program modalities and options
- Different career counseling approaches to help participants determine a pathway
- Offer of wraparound support services

b. Employment Challenges:
- Recent downturn in job market
- Seasonal nature of work (e.g., trades jobs)
- Shift of STEM jobs toward freelancing and gig work
- Wait-time to join a union

Evaluation Recommendations and Conclusion

The primary objective of the Evaluation is to recommend strategies for improving the future of the Measure HH Workforce Development Program. The improvements recommended by Informing Change are described in the Evaluation and their recommendations are listed in Attachment 2. The consultant's recommendations are broadly grouped into three categories:

- Improving Access to Employment Opportunities
- Sustaining and Strengthening Program Approaches
- Monitoring Wages and Other Outcomes

The Evaluation concludes by posing the following questions to highlight considerations for shaping the next phase of the Measure HH Workforce Development Program:

- How can the City Council and City staff elevate the Measure HH's profile amongst potential employers and champion EPA residents?
- What types of jobs in STEM and trades align with or diverge from the job landscape and the jobs residents are seeking and securing after attending Measure HH-funded training?
- What measures or metrics are most helpful to the City for assessing program results and making decisions for the future? What measures or metrics are important to partners? What needs to be shifted to collect and synthesize these measures or metrics regularly?

Recommended Program Enhancements

Based on Informing Change's findings and recommendations and input from the three organizations, City staff is recommending the following program enhancements which are aligned with the Evaluation. These recommendations would be incorporated into a new RFP to invite organizations to submit proposals to participate in the Workforce Development Program. Similar provisions would be included in the scope of services for future agreements with the selected organizations. Prior to releasing the RFP and awarding agreements, the administrative demands on the City and the selected organizations should be understood to ensure sufficient staff capacity for implementing the programs and achieving the desired outcomes. A consultant may be advisable to assist Housing staff in managing components of the program.

1. **Expand Eligible Programs and Training Opportunities:** Within the parameters of Measure HH, allow consideration of training and employment programs that cover a broader range of STEM and building trades skills jobs which could achieve a living wage. For example, allow for potential STEM training opportunities beyond the high-tech, software, or computer programming categories. Additionally, consider training programs for entrepreneurial skills such as contractor law and small business formation, and expanded building trades skills such as project development, construction management, or technical support.
2. **Deepen Employer Engagement and Partnerships**
    a. Establish an Employer Advisory Council: Consider recruiting an association or organization that can convene a standing group of local employers from STEM and trades sectors to provide input on hiring needs and program scope and design. Schedule quarterly meetings and invite employer feedback on participant preparedness and job placement processes.
    b. Facilitate Direct Employer Connections**:** Recruit an association or organization that can organize biannual networking events and job fairs connecting program participants with local employers, and support City staff in actively brokering introductions between Measure HH partners and employers.
    c. Clarify Employer Roles and Secure Hiring Partnerships: In the next RFP, request contractors to outline employer engagement strategies and potential partnerships with employers to secure internships and job opportunities. Consider including financial incentives to achieve these strategies.
3. **Expand Paid Internships, Apprenticeships, and Work-Based Learning**
    a. Fund Paid Internships and Exposureships: Allocate a portion of Measure HH funds

specifically for paid internships and exposureships, modeled after successful programs like Year Up United, which achieved an 80 percent employment rate within four months of completion.

b. Leverage First Source Hiring Ordinance**:** Explore strengthening the implementation of the City's First Source Hiring Ordinance by incentivizing City contractors and grantees to collaborate with employers to prioritize East Palo Alto residents for job openings and internships through the possible use of Measure HH funds.

c. Support Union Pathways**:** Recruit a trades association or similar organization that can support establishing partnerships between training providers and local unions to prioritize program graduates for union membership and apprenticeships and provide access to stable living-wage jobs.

4. Enhance Program Accessibility and Wraparound Supports

a. Continue and Expand Wraparound Supports: Recruit an agency or organization to provide or coordinate with other providers to offer wraparound services such as financial assistance, career counseling, transportation, childcare, and flexible scheduling tailored to the individual needs of participants. Monitor and report on the use and outcomes of these supports.

b. Increase Multilingual Access: Fund Spanish-language and other multilingual training options to reach East Palo Alto residents who speak Spanish at home. Encourage sector/job-related English classes for Spanish language speakers as well as Spanish classes for English speakers to improve workplace communication.

c. Broaden Pathways: Allow Measure HH funds to support entrepreneurship, apprenticeships, and college pathways, including scholarships for ongoing education at local colleges and technical programs for STEM and building trades specialties.

d. Address Under-represented Populations: Encourage organizations to propose strategies for increasing program participation of populations that are under-represented in the STEM and building trades sectors.

5. Improve Data Collection, Reporting, and Longitudinal Tracking

a. Standardize Data Reporting: Develop and implement a shared data reporting template or centralized database for all contractors, ensuring consistent collection of participant demographics, completion rates, job placements, and wage outcomes. Consider the staffing needs to compile and monitor the data.

b. Establish Data-Sharing Agreements: Include formal data-sharing agreements in all contracts to ensure data privacy and facilitate comprehensive program evaluation.

c. Fund Longitudinal Tracking: Allocate resources for contractors to track participant employment and wage outcomes at 6, 12, 24, and 36 months post-completion. Update wage targets annually to reflect the current living wage in San Mateo County (e.g., $34.76/hour for a single adult without children in 2025).

d. Performance Metrics and Accountability: Establish feasible, measurable, and standardized goals for completion rates, job placement, wage attainment, and long-term outcomes that align with the Measure HH program goals and targets.

6. **Foster Collaboration and Continuous Improvement**
    a. Encourage Inter-Partner Collaboration: Support organizations in assessing, counseling, and interviewing program applicants to understand their interests and refer them to suitable programs, including partner programs, that best match their goals. Share program updates, successes, and best practices at regularly scheduled partner meetings.
    b. Build Alumni Networks: Support the creation of formal alumni networks for program graduates to offer peer mentorship, ongoing career support, and feedback to improve programming. This responsibility can be tasked to an agency or organization or achieved through the collective efforts of the contracted organizations (e.g., jointly hosted alumni events.)
    c. Solicit Ongoing Feedback: Implement regular participant and employer satisfaction surveys and use results to inform program adjustments.

Next Steps

Staff recommends that the City Council review and accept the Evaluation by Informing Change and provide input on the recommended enhancements to the Measure HH Workforce Development Program. JobTrain, Live In Peace, and StreetCode Academy will also make brief presentations at the Council meeting to provide additional insights on the accomplishments and outcomes of the Pilot Program.

It is further recommended that the City Council consider directing staff to prepare and issue an RFP to accept proposals from qualified agencies and organizations to continue the Program with up to $850,000 in Measure HH funds that have been allocated in the Fiscal Year 2025-26 budget.

Based on the City Council's direction, staff would initiate an RFP process and, upon City Council authorization, execute agreements with organizations to launch the next phase of the Measure HH Workforce Development Program. The proposed implementation timeline is as follows:

- *Summer–Fall 2025:* Develop new RFP language, data templates, employer engagement strategies, and performance goals and measures.
- *Winter 2025/2026*: Release RFP, review proposals, conduct interviews, and recommend contractors to City Council.
- *Winter/Spring 2026*: City Council authorizes entering into agreements with contractors and amends budget allocation, if needed. Execute agreements and finalize data-sharing and reporting methodology.
- *Ongoing (2026 and beyond)*: Monitor implementation, convene partners and employers, collect and analyze data, post-performance reports, and report outcomes to City Council. Convene advisory groups and begin outreach to employers and unions.

Fiscal Impact

POLICY AND ACTION 13.1

On June 17, 2025, the City Council adopted the Fiscal Year 2025-26 budget which allocated up to $850,000 in Measure HH funds to continue the Workforce Development Program. The funds will be awarded to selected organizations upon completion of the RFP process.

At the end of June 2025, the estimated balance in the Measure HH Fund is approximately $7.2 million. Sufficient funds are available to fund future contracts after issuance of an RFP, for continuation of the Measure HH Workforce Development Program. It should be noted, however, that the fund is not intended to be used exclusively for creating job opportunities. A minimum of 35 percent of the fund must be reserved to support the production of affordable housing, which would benefit from a build-up of the fund balance.

On February 6, 2024, with adoption of the 2024-2028 Affordable Housing Strategy, the City Council discussed allocating 50 percent of Measure HH funds to affordable housing projects for the next five years. As City staff develops the program to solicit funding opportunities for affordable housing projects, proposals will be brought to the Council through a separate process.

The Measure HH special tax, set at $2.50 per square foot on commercial office space of 25,000 square feet or more, generates approximately $1,677,000 annually. However, fluctuating financial and market conditions may affect the annual revenue generated. With favorable economic conditions in the future, the fund could grow more quickly once office development proceeds in the Ravenswood Business District.

Public Notice

The public was provided notice by making the agenda and report available on the City's website and on a bulletin board located at City Hall: 2415 University Avenue, East Palo Alto.

Environmental

The proposed action does not constitute a "project" with the meaning of the California Environmental Quality Act ("CEQA") pursuant to CEQA Guidelines sections 15378(b)(4) and (5) in that it is a governmental fiscal, organizational, or administrative activity that will not result in direct or indirect changes in the environment.

Government Code § 84308

Applicability of Levine Act: No.

Analysis of Levine Act Compliance: Not applicable.

Attachments

1. Evaluation of Measure HH Pilot Workforce Development Program
2. Summary of Evaluation Recommendations
3. Resolution

INFORMING CHANGE

Measure HH Pilot Workforce Development Program Evaluation Report

JUNE 2025

Prepared for:
The City of East Palo Alto

Prepared by:
Informing Change

Acknowledgments

Informing Change would like to acknowledge and express our gratitude to those who participated in our study. This includes East Palo Alto residents who participated in evaluation interviews and focus groups, staff from Measure HH partners—JobTrain, Live In Peace, and StreetCode Academy—who participated in sensemaking sessions, coordinated interviews and provided data to the evaluation, and East Palo Alto city staff and City Council members who guided the evaluation to inform the ongoing evolution of the Measure HH Pilot Workforce Development Program to support East Palo Alto residents.

THIS REPORT WAS PREPARED BY:

- **Evan Gattozzi**, Senior Associate, Informing Change
- **Rebekah Blume,** Associate, Informing Change
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- **Amy Chu,** Research Assistant, Informing Change
- **Johnny Du**, Writer/Editor, Informing Change
- **Michael P. Arnold,** PhD, MSW, MPH, Partner & Co-Executive Director, Informing Change

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Introduction

MEASURE HH & THE PILOT WORKFORCE DEVELOPMENT PROGRAM

The influx of large companies into Silicon Valley—primarily from the technology sector—has brought benefits and challenges to long-time East Palo Alto (**EPA**) residents. Concerned that new economic development would lead to rising rents and displacement without creating accessible employment opportunities for current residents, over 75% of EPA voters approved **Measure HH** in Fall 2018. Measure HH is a revenue source for the City of East Palo Alto (**the City**) funded through an annual parcel tax of $2.50 per square foot on commercial office spaces of 25,000 square feet or more. The funds can only be used to create or maintain programs that (a) provide affordable or supportive housing or (b) facilitate access to job opportunities in EPA in the science, technology, engineering, and mathematics (**STEM**) sectors and building trades, and strengthen the City's First Source Hiring Program.[1,2]

In 2020, the City engaged Brightline Defense Project (**Brightline**), a Bay Area consulting team, to identify strategies to maximize the use of Measure HH funds to facilitate access to job opportunities for EPA residents. Brightline's final 2021 report highlighted promising sectors with upwardly mobile jobs and identified potential initiatives to support EPA residents in obtaining those jobs. In the report, they recommended that the City support job training and career certification opportunities in the building trades, technology and STEM (science, technology, engineering, mathematics), life sciences and biotech, or entrepreneurship sectors in partnership with local organizations that currently administer such programs. Brightline proposed eight initiatives. Although they emphasized the importance of training opportunities such as pre-apprenticeships and internships, they acknowledged these typically cost more than less-intensive workforce development (**WFD**) models.

With these considerations, the City designed the Measure HH Pilot Workforce Development Program (**the pilot**) to provide job training to EPA residents in the STEM and building trades sectors. In early 2022, the City issued a Request for Proposals (**RFP**) to identify organizations to receive Measure HH funding and partner in the pilot. These organizations would provide training opportunities to residents and support their access to jobs that offer a living wage (defined by the City Council as a minimum of $28 an hour in 2022 for a single adult without children).

In March 2023, the City entered into 18-month contracts with three local organizations (**partners**) to execute the pilot program: **JobTrain**, **Live In Peace**, and **StreetCode Academy** **(StreetCode)**. These organizations met the recommendations put forth to the City Council and demonstrated a consistent track record of providing WFD services in EPA. In September 2024, the City Council extended the initial pilot program for six months to February 2025 (referred to as Phase I) and allocated additional Measure HH funds to the three organizations to continue the pilot program (referred to as Phase II) to May 2025. The Phase II allocation allowed the pilot program to continue while Informing Change was conducting its evaluation.

[1] https://www.ci.east-palo-alto.ca.us/econdev/page/workforce-development

[2] A maximum of 15% of Measure HH funds can also be used to pay for the cost to the City of administering and reporting on the ordinance.

THE EVALUATION

In Spring 2024, the City issued an RFP for a third-party, external organization to evaluate the pilot program and commissioned Informing Change in August 2024 as the independent, third-party evaluator. The evaluation has three key goals (see **Appendix A** for the questions that guided the evaluation):

1. Understand the pilot's initial, short-term outcomes (and progress toward outcomes), particularly related to supporting residents' access to jobs and career mobility in high-tech STEM sectors and building trades.
2. Inform improvements to the pilot.
3. Inform the East Palo Alto City Council about evaluating future wage outcomes and the potential for wage growth.

We intend this evaluation to inform the City Council on highlights, insights, and lessons about the Measure HH pilot program and its potential to meet the employment needs of East Palo Alto residents. We include recommendations to consider when refining the program and allocating Measure HH funds beyond the pilot period.

Methods

We conducted the evaluation activities from August 2024 through April 2025, and included the following methods and data:

Interviews & Focus Groups

We interviewed or facilitated focus groups with 14 EPA residents who participated in Measure HH-funded programs, nearly meeting our initial goal of 15 interviews: JobTrain (9), Live In Peace (2), and StreetCode (3). Eight of these residents attended trades programs, and six attended STEM programs.

We also interviewed four (4) employer partners in the trades and technology sectors. At least one of the employer partners' companies employed an EPA resident who had attended Measure HH-funded programs.

Site Visits

We visited each program partner's site to understand their context further and learn firsthand about the programs being offered. We also conducted an on-site participant focus group.

Field Research

We researched comparable WFD programs to understand their structures, outcomes, and processes. This learning helped us identify similarities and differences and understand benchmarks to make recommendations and contextualize evaluation results.

Background Documents & Program Data Analysis

We reviewed RFPs, council meeting notes, and the partners' quarterly performance reports on the Measure HH pilot program. We also aggregated and analyzed data from these quarterly reports and additional data from partners about residents participating in their Measure HH-funded programs.

Exploratory Interviews with City Staff & Partners

At the outset of the evaluation, we conducted six (6) exploratory interviews: three (3) with City staff and City Council Measure HH evaluation subcommittee members and three (3) with Measure HH partners.

Sensemaking Sessions

We held two (2) sensemaking sessions to contextualize and refine preliminary findings. One session included City staff and program partners, and the other included City staff and City Council evaluation subcommittee members.

Strengths & Limitations

We used a mixed-methods approach in our evaluation, examining qualitative and quantitative data to provide a holistic understanding of the pilot model and initial outcomes. We gathered multiple perspectives, including residents participating in Measure HH-funded programs, employers, city staff, and Measure HH partners.

There are a few key limitations to the evaluation:

1. JobTrain graduates are overrepresented in our interview data, as we interviewed nearly twice as many (9) compared to Live In Peace and StreetCode graduates combined (5).

2. Evaluation resources allowed for five interviews with employer partners. We fell one interview short of our intended goal, as few employers were responsive to interview requests. More employer partner interviews are needed to provide greater representation.

3. Background and wage data are not consistently available for all EPA residents receiving training via Measure HH funding. Partners collected pre-program employment data for most participating residents (81 of 97) and post-program employment data for about half (49 of 97). Given logistic and capacity constraints, partners did not consistently collect pre-program wage data prior to the evaluation. We are therefore unable to provide this information. Future attempts to track and collect pre-program wages will need to account for this task's labor- and time-intensive nature and the sensitivity required to prevent discouraging program participation while encouraging ongoing communication between participants and program staff.

4. Due to the evaluation's short time frame, we are unable to provide longitudinal data on employment attainment, job growth, and wage growth. Future data collection and analysis will be required to understand these long-term Measure HH outcomes for residents fully.

REPORT OVERVIEW

In this report, we share evaluation findings about the Measure HH Workforce Development Pilot Program and considerations for the program's evolution. We organize the report into the following sections:

1. **Pilot Findings:** Includes data and findings about the backgrounds and characteristics of EPA residents participating in Measure HH-funded programs, pilot outcomes about employment, wages, and other benefits, and factors that support or inhibit outcomes.

2. **Discussion & Recommendations:** Offers evaluation insights, reflections, and recommendations for city staff and the City Council to consider in the next phase of the pilot program.

3. **Appendices**: Includes Evaluation Questions (**Appendix A**), Measures of Interest (**Appendix B**), and Landscape Scan (**Appendix C**).

Pilot Findings

REACH & RESIDENTS

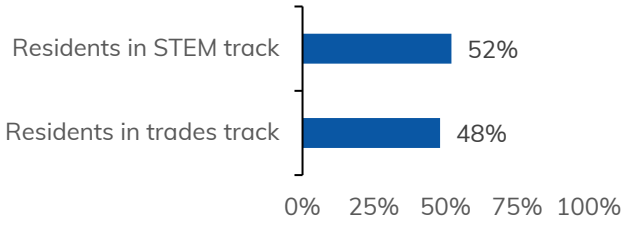
To ensure Measure HH-funded programs were reaching a diverse selection of residents in East Palo Alto, the City asked its partners to collect and report on select demographic and employment data about participating residents. While the pilot phase agreement terms set goals for program completion rates and post-program wages, there were no specific demographic targets for Measure HH-funded programs other than requiring that funding support EPA residents.[3] At the time of the evaluation, not all data points were available for all residents participating in Measure HH-funded programs. Throughout this report, we summarize the available data collected by partners and indicate the number of residents represented in each chart and table.

The Measure HH Pilot Workforce Development Program funded job training for 97 East Palo Alto residents in three local training programs (Exhibit 1). Residents were slightly more likely to choose STEM than trades training opportunities (**Exhibit 2**). Program partners noted that much of their recruitment happens through word of mouth, friends and family members, resources at school, and community reputation.

EXHIBIT 1
Participation by Partner Program (N=97)

PARTNER PROGRAM	EPA PARTICIPATING RESIDENTS
JobTrain	48
Live In Peace	30
StreetCode Academy	19
TOTAL	97

EXHIBIT 2
Program Track (N=97)



"I heard about [the training] through my family, sister, and brother. I think my mother also came through here doing different programs."[4]

STEM & TRADES WORKFORCE DEMOGRAPHIC DATA

Blue boxes throughout the Reach & Residents section include demographic data about the STEM and trades workforce to set additional context and comparisons to the pilot's reach.

Research shows the US STEM workforce gradually diversified between 2011-21, with increased representation of women and underrepresented racial/ethnic groups.[5] Even so, disparities persist. Construction industry statistics, where women, Black, and Asian workers are underrepresented, tell a different story about diversity in the trade.

[3] "Table 1. Pilot Phase I Agreement Terms," from East Palo Alto City Staff Report, by Karen Camacho, Housing and Economic Development Manager; Hanson Hom, Deputy Manager Special Projects; and Amy Chen, Community and Economic Development Director (September 3, 2024).
[4] All quotes in blue are from interviews conducted with EPA residents who participated in Measure HH-funding programs.
[5] National Center for Science and Engineering Statistics (NCSES), Directorate for Social, Behavioral and Economic Sciences, National Science Foundation. (2023). Diversity and STEM. Women, Minorities, People with Disabilities. Retrieved May 21, 2025 from https://www.luminafoundation.org/wp-content/uploads/2023/02/Diversity.and_.STEM_.2023.pdf

Race/Ethnicity

The racial/ethnic backgrounds of East Palo Alto residents participating in Measure HH-funded programs are similar to the overall EPA population (Exhibit 3).[6] The proportion of residents participating in Measure HH-funded programming compared to the general EPA population is slightly lower for those identifying as Hispanic/Latino, white, or multi-racial, and slightly higher for those identifying as Black or Pacific Islander.

EXHIBIT 3

Program Participant & EPA Census Data Race/Ethnicity

RACE / ETHNICITY	MEASURE HH RESIDENTS (N=97)	EAST PALO ALTO CENSUS DATA (N=30,034)
Hispanic or Latino	57%	66%
Black	20%	11%
Pacific Islander	17%	7%
Multi-Racial	8%	15%
White (non-Hispanic)	6%	12%
Decline to state	2%	-

EPA is majority Hispanic or Latino, and just over half its residents (52%) speak Spanish at home.[7] As such, program partners, City staff, and City councilmembers emphasized the importance of reaching Spanish-speaking residents via Measure HH-funded programs. JobTrain regularly offers English classes for Spanish speakers to increase their language proficiency and support their success in JobTrain's courses, which are currently offered only in English.[8] During the pilot, StreetCode added opportunities to meet Spanish-speaking residents' needs by translating their website into Spanish and adding a Spanish-language class in 2025 via Measure HH.[9]

RACE/ETHNICITY & THE STEM & TRADES WORKFORCE

- In 2021, **Hispanic** workers represented 15%, **Asian** workers 10%, and **Black** workers 9% of the total STEM workforce compared to 18%, 6%, and 11%, respectively, of the general workforce.[10]
- The proportion of **Hispanic** workers in the construction industry increased from 20% in 2003 to 30% in 2020, compared to 18% of the general workforce. **Black** (5%) and **Asian** (2%) workers are underrepresented in the construction industry, compared to 11% and 6% of the general workforce, respectively.[11]
- In 2020, Hispanic, Black, and American Indian or Alaska Native STEM workers had **lower median earnings** than white or Asian STEM workers.[12]
- In 2020, the median weekly earnings for unionized construction workers were $1,254, compared to $920 for non-union construction workers.[13] However, **union membership varies by race**, with white (15%) and Black (12.7%) workers more likely to be in unions compared to Hispanic (8.7%) and Asian (7.6%) workers.[14]

[6] East Palo Alto Census Data is drawn from: US Census Bureau. (2020). RACE. *Decennial Census, DEC Demographic and Housing Characteristics, Table P8*. Retrieved April 7, 2025, from https://data.census.gov/table/DECENNIALDHC2020.P8?g=160XX00US0620956. The US Census counts Hispanic or Latino identification separately from race. Due to this, the total percentage in the EPA Census Data column exceeds 100%.

[7] US Census Bureau, 2020 Decennial Data. (2020). Populations and People. Retrieved May 1, 2025, from https://data.census.gov/vizwidget?g=160XX00US0620956&infoSection=Language+Spoken+at+Home.

[8] The specific English classes offered for Spanish speakers include basic and intermediate English, as well as computer skills in Spanish: https://www.jobtrainworks.org/english-education-evening-classes/

[9] Interested residents can view StreetCode's website in Spanish (https://streetcode.org/es/), but there is no option to filter programming options by language of instruction (https://streetcode.org/es/classes/).

[10] National Center for Science and Engineering Statistics (**NCSES**), Directorate for Social, Behavioral and Economic Sciences, National Science Foundation. (2023). Diversity and STEM. Women, Minorities, People with Disabilities. Retrieved May 21, 2025 from https://www.luminafoundation.org/wp-content/uploads/2023/02/Diversity.and_.STEM_.2023.pdf

[11] US Bureau of Labor Statistics (2022).The Construction Industry: Characteristics of the Employed, 2003–20. Retrieved May 23, 2025 from https://www.bls.gov/spotlight/2022/the-construction-industry-labor-force-2003-to-2020/home.htm .

[12] *Supra*, note 10.

[13] *Supra*, note 11.

[14] *Ibid.*

Gender

The proportion of female-identifying residents participating in Measure HH-funded training is lower than the overall EPA population (Exhibit 4).[15]

EXHIBIT 4
Program Participant & EPA Census Data Sex

SEX	MEASURE HH RESIDENTS (N=97)	EAST PALO ALTO CENSUS DATA (N=29,143)
Female	30%	52%
Male	68%	48%
Decline to state	2%	-

Nearly all female residents whose training was funded through Measure HH chose the STEM track rather than the trades track. Program partners adopted a range of approaches to recruit and support women in their programs, including those in the trades. For example, JobTrain partners with organizations like Women in Construction to promote gender diversity in classes and on-site resources like daycare that help ease barriers for parents, especially women. StreetCode reported that their new Spanish-language programming attracted primarily female residents.

Regarding female participants' limited participation in trades programs, partners emphasized that they respect all participants' expressed interests and hope to assist them in choosing the right job or career pathway that suits them. While partners provide opportunities for career exploration, exposure, and education in STEM, trades, and other sectors, they intentionally avoid directing participants down a path that does not align with participants' preferences and choices.

GENDER & THE STEM & TRADES WORKFORCE

- In 2023, the **gender** gap in STEM remains significant, with women making up only 28% of the STEM workforce.[16]
- In 2020, women had **lower median earnings** than men in multiple STEM occupations, including those in science, engineering, science-related, engineering-related, and middle-skill occupations.[17]
- In 2020, about 11% of employees in the construction industry identified as **women**, similar to recent years.[18]

[15] US Census Bureau, US Department of Commerce. (2023). Age and Sex. *American Community Survey, ACS 5-Year Estimates Subject Tables, Table S0101*. Retrieved April 7, 2025, from https://data.census.gov/table/ACSST5Y2023.S0101?g=160XX00US0620956. Percentages do not add up to 100% due to rounding.
[16] Professional Education. The Gender Gap in STEM: Still Gaping in 2023. Retrieved May 21, 2025, from https://professionalprograms.mit.edu/blog/leadership/the-gender-gap-in-stem/.
[17] *Supra*, note 10..
[18] US Bureau of Labor Statistics (2022).The Construction Industry: Characteristics of the Employed, 2003–20. Retrieved May 23, 2025 from https://www.bls.gov/spotlight/2022/the-construction-industry-labor-force-2003-to-2020/home.htm .

Age

Participating residents skew slightly younger than the overall EPA population over 17 years of age (Exhibit 5).[19] Participant residents ranged from 17 to 57 years of age, with an average (mean) of 26.0 years.

EXHIBIT 5
Program Participant & EPA Census Data Age

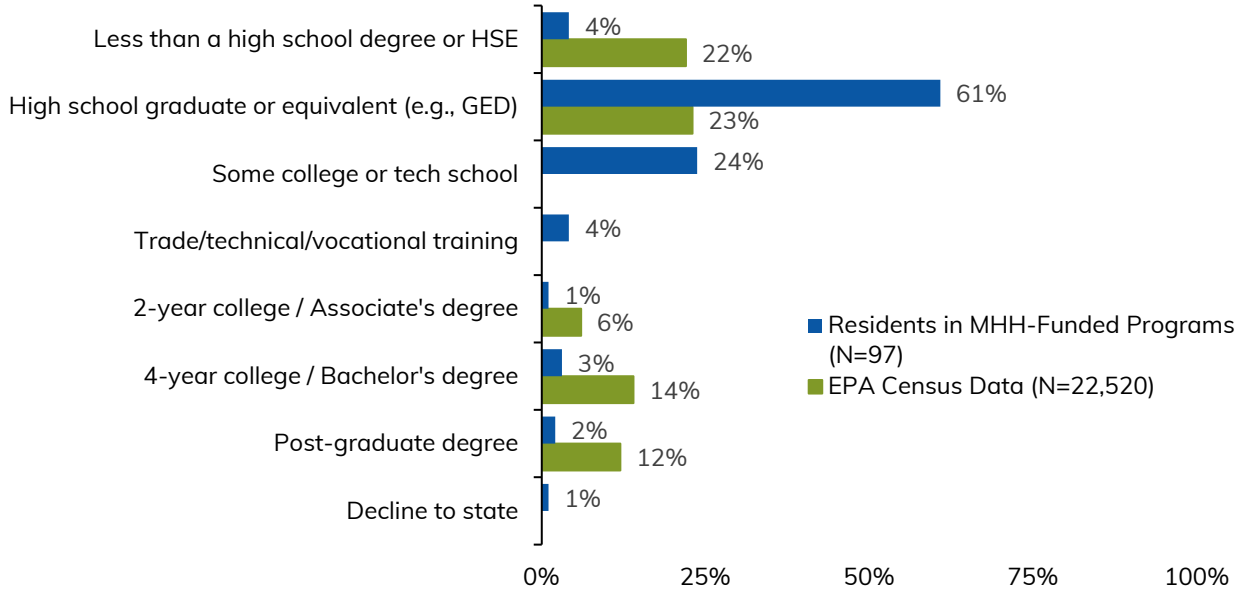
AGE RANGE	MEASURE HH RESIDENTS (N=73)	EAST PALO ALTO CENSUS DATA (N=29,143)
0-14	0%	17%
15-17	1%	5%
18-24	59%	10%
25-44	36%	32%
45-64	4%	25%
65+	0%	10%

Over half (60%) of participating residents are under 25 years old compared to 32% of all EPA residents. Live In Peace specifically serves young people 24 years old and younger, which contributes to Measure HH partners serving a larger percentage of young people compared to the overall age distribution of the EPA population. JobTrain and StreetCode are not focused on serving specific ages.

Education Level

Participating residents are more likely to hold a high school diploma or equivalent and less likely to hold a 2-year, 4-year, or post-graduate degree than the overall EPA population (Exhibit 6).[20]

EXHIBIT 6
Program Participant & EPA Census Data Highest Education Level Completed



[19] Supra, note 15.
[20] Census data about residents in trade/technical/vocational educational opportunities is not available.

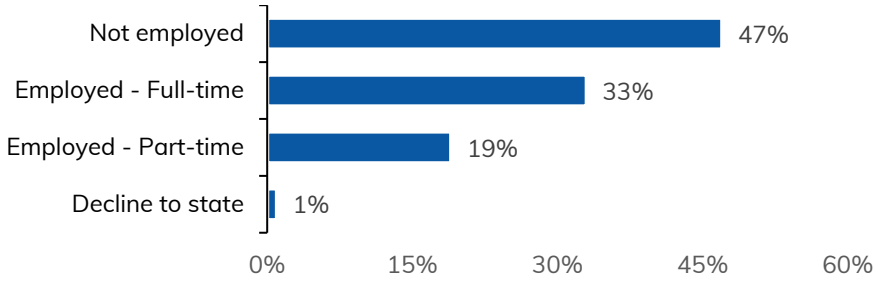
EDUCATIONAL ATTAINMENT & THE STEM & TRADES WORKFORCE

- A higher portion of STEM **workers with a high school diploma or less are employed in STEM occupations that require credentials** like certificates or an associate's degree (i.e., middle-skill occupations), while a larger portion of those with a **bachelor's degree or higher work in science- and engineering-related occupations**.[21]
- Construction workers have "the **lowest levels of education** among all industries except for agriculture."[22] About 40% of construction workers had some college attainment, compared to about 65% of the general workforce.[23] Educational attainment is likely higher for the one in five industry workers employed in management, business, and financial operations positions rather than in production.[24]
- The Center for Education and the Workforce projects that, by 2031, **over half (52%) of construction jobs will require a high school diploma or less**, 30% will require **additional middle-skill training**, and 18% will require a **bachelor's degree**.[25] The Center for Construction Research & Training notes that "most construction knowledge is learned on the job or from special courses, licensing, or certification requirements and apprenticeships" rather than through formal education, and that many construction jobs have historically had no formal education requirements.[26] However, this might change as more industry workers are encouraged to attend apprenticeship programs, trade or vocational schools, association training classes, or community college.[27]

Employment Status

Nearly half of the participating residents were not employed when they began their Measure HH-funded training (Exhibit 7). The proportion of participants unemployed at entry (47%) is overrepresented compared to the proportion in the overall EPA population (4%).[28]

EXHIBIT 7
Pre-Program Employment
(n=81)



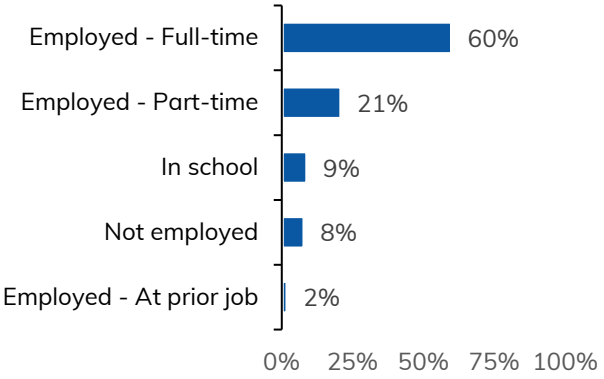
[21] National Science Board. (2024). The STEM Labor Force: Scientists, Engineers, and Skilled Technical Workers. Retrieved May 21, 2025 from https://ncses.nsf.gov/pubs/nsb20245.
[22] CPWR - The Center for Construction Research and Training. (2018). Chart Book (6th edition): Education and Training – Educational Attainment and Internet Usage in Construction and Other Industries. Retrieved May 21, 2025 https://www.cpwr.com/research/data-center/the-construction-chart-book/chart-book-6th-edition-education-and-training-educational-attainment-and-internet-usage-in-construction-and-other-industries/
[23] *Ibid.*
[24] *Supra*, note 18.
[25] Carnevale, A. P., Smith, N., Van Der Werf, M., & Quinn, M. C. (2023). National Report - After Everything: Projections of Jobs, Education, and Training Requirements through 2031. Retrieved May 21, 2025 https://cew.georgetown.edu/cew-reports/projections2031/
[26] *Supra*, note 22.
[27] *Supra*, note 22.
[28] East Palo Alto, CA Unemployment Rate (I:EPACAUR) 3.60% for March 2025: https://ycharts.com/indicators/east_palo_alto_ca_unemployment_rate#:~:text=East%20Palo%20Alto%2C%20CA%20Unemployment%20Rate%20is%20at%203.60%25%2C,long%20term%20average%20of%209.18%25.

EMPLOYMENT OUTCOMES

Partners shared post-program employment data for 53 of 97 (55%) participating residents. Of these 53, 81% were employed after completing a Measure HH-funded program (**Exhibit 8**), most in a field related to their training. Post-program employment rates were similar across the two tracks. Notably, **the group not employed fell from 47% pre-program to 8% post-program** in both STEM and trades sectors**.** All participating residents who were unemployed at the start of the program and for whom we have pre- and post-program employment data were employed at least part-time by the end of the program (13 residents).

> "I learned from working—hands on, helping my family [with] construction … But I need to know safety basics, how to use the tools, apply to the city code, and stuff like that … I learned a lot from [the training] about mathematics and how to properly use the tools."

EXHIBIT 8
Post-Program Employment (n=53)



Residents who completed Measure HH-funded training were hired for jobs in fields related to their training. For example, residents have been hired as certified nursing assistants, sheet metal workers, electricians, plumbers, property managers, and drywallers, and some within union trades and others non-union. One resident pursued entrepreneurship and started their own photography business. Other residents are working in construction, IT, or tech companies. Data on specific jobs and responsibilities was unavailable.[29] Partners support younger residents who may be building skills for their first job and older adults looking to start a second career or upskill in their current job or industry.[30]

WAGE OUTCOMES

At the time of the evaluation, partners reported wage data for all but two residents from whom post-program data were collected (51 of 53). **The average (mean) hourly wage of participating residents employed full-time after completing their respective programs was $26.68.**

Exhibit 9 on the following page shows the hourly wage outcomes for participating residents working full- and part-time in the STEM and trades industries after their Measure HH-funded training. Additionally, residents not employed before receiving Measure HH-funded training now earn an average hourly wage of $24.16 in STEM and $23.33 in trades.[31]

[29] These examples are not exhaustive. Measure HH partners collect residents' employment data individually and in various ways. The pilot program does not require partners to collect or report the data consistently so that data can be cleanly aggregated and reported.
[30] Some examples of participants in more mature age categories are featured on JobTrain's website: https://www.jobtrainworks.org/meet-our-clients/. Similarly, StreetCode's Work Innovation Program is open both to people new to work in the technology sector, and to those aiming to "Upgrade [their] Tech Skills in [their] Current Line of Work" in order to "Land a Higher-Payer Job": https://streetcode.org/wip/
[31] Partners collected pre-program employment data for 81 of 97 participating residents (84%). Pre-program wage data is not available for all participants for whom we have pre-program employment data. However, we know that almost half of these residents were not employed when they started a Measure HH-funded program (**Exhibit 7**). The available data shows that the post-program average hourly wage of all those previously unemployed is $23.68.

EXHIBIT 9
Post-Program Average Hourly Wages
(n=49)

EMPLOYMENT STATUS AFTER MEASURE HH TRAINING	AVERAGE HOURLY (MEAN) WAGE		
	STEM	Trades	Overall
Employed – Full-time	$28.29	$25.87	$26.68
Employed – Part-time	$21.25	$21.93	$21.68
Employed – At prior job	N/A	$17.00	$17.00
Overall Average	**$26.13**	**$24.47**	**$25.02**

For the Measure HH Pilot Workforce Development Program, the City set a target post-program minimum hourly wage using MIT's Living Wage Calculator.[32] In 2021, the living wage estimate in San Mateo County **for a single adult without children** was $28 per hour. For 2025, the estimate for the same household type is $34.76. Living wage estimates are calculated based on household size, as discussed later in this report. Measure HH also defines program success as residents earning this target wage no longer than 36 months after completing their training program.

Using the 2021 target of $28 per hour:

- The average hourly wage for participating residents employed full-time after completing their respective programs is 95% of the City's target wage ($26.68, unadjusted for household size and number of wage earners).
- The average hourly wage for participating residents working full-time in the STEM sector ($28.29) exceeds the City's unadjusted target wage.
- The average hourly wage for participating residents working full-time in the trades sector is 92% of the City's unadjusted target wage ($25.80).

Compared to the updated 2025 living wage estimate of $34.26 for a single adult without children, the average hourly wage for participating residents employed full-time after completing their respective programs is 81% of the City's unadjusted target wage, 77% for those working in STEM, and 74% for those working in the trades.

Employment and wage outcomes are intertwined. Participating residents credit their newly acquired skills and knowledge for supporting their access to new jobs and increased wages. They are optimistic about their future earning potential. Among the participating residents we interviewed, many shared that their hourly wages increased after their training and that they expect to earn even higher wages after they complete more training and obtain additional certifications.

One interviewee, now a union apprentice, is very optimistic about her future earning potential now that she is a union member and on a clear career path. She credits her Measure HH-funded training for supporting her in reaching this point. While involved in this program, she learned about and applied to the union pre-apprenticeship program. After her first application attempt was unsuccessful, she practiced her interview skills with the leaders of the Measure HH-funded program and was accepted on her second attempt.

[32] Living Wage Calculation for San Mateo County, California: https://livingwage.mit.edu/counties/06081.

> "[The Measure HH-funded program] knew I needed a little push, so that's what they did. It helped that they brought in people from [the union] to speak to us … [Measure HH-funded program leaders] don't let go of your hand until you've made it. Even then […] they'll try to make sure that you're okay."

A second interviewee went from earning $18-$19 to $25 an hour after their training, saying the training "helped a lot to get me to that level" by providing construction experience. This participant plans to pursue an HVAC certificate to increase their earning potential further.

A third interviewee working in the trades shared that his experience finding a job required initiative and early morning drives to dozens of construction sites to job hunt. Thanks to his Measure HH-funded experience, construction portfolio from the program, and received certifications, he secured employment, making an initial $22 an hour with growth potential, $2 more than he was previously making in a field with limited growth potential. Still, he feels the pressure regarding the seasonal nature of non-union construction jobs that aren't readily available. On the other hand, union jobs are more challenging to secure and have long wait times or require years of apprenticeship and experience.

None of these three interviewees had formal experience in or knowledge of the trades before receiving Measure HH-funded training. These interviewees now earn a higher hourly wage than in their prior jobs, with potential for longer-term stability and growth opportunities.

OTHER BENEFITS FOR PARTICIPATING RESIDENTS

Residents completing Measure HH-funded training experience many benefits beyond employment, including skill and knowledge gains, exposure to different career paths, and increased confidence and motivation to continue growing.

> "Reflecting on how my participation in [the Measure HH-funded program] has impacted my outlook: it's been instrumental in shaping my confidence regarding career growth and income potential. [The program] has provided me with valuable resources, skills, and networking opportunities that expanded my understanding of what's possible. Learning from peers and mentors in the program has not only improved my technical abilities but reinforced the importance of pursuing sustainable career paths that align with my passions."

Interviewees named **industry-specific skills, knowledge, and certifications** gained through training as immediately useful for helping their resumes stand out to potential employers. Participating residents experienced **career exploration** and found career paths that meet their skills, interests, and needs. Interviewees also reported developing the **skills they needed for job application processes**, such as creating their resumes, and interviewing practice that helped residents present themselves in a polished and professional manner. Interviewees reported increased confidence and said they now have marketable experience to employers. Going through a Measure HH-funded program inspired some interviewees to pursue certificates to **build additional skills** and **increase wages.**

FACTORS SUPPORTING & INHIBITING OUTCOMES

> "[The Measure HH-funded program] offers students or people like me the opportunity to see that there is other work. We just have to know where it is or where to look."

Five key factors supporting resident success in Measure HH-funded programs emerged through our evaluation:

1. The pilot effectively **removes financial barriers to access**. When asked if they would consider other job-training programs or why they were attracted to those funded by Measure HH, many interviewees noted that the free nature of these programs was a significant factor in their decision.

2. Partners **foster welcoming and encouraging environments with high-quality staff and educators** who promote learning, community connection, and confidence-building. Interviewees described how the trainers and teachers, whom they characterized as knowledgeable and compassionate, created nurturing learning environments where residents feel safe and encouraged to explore career paths. Interviewees also appreciated the programs' efforts to connect residents with trainers, such as offering meals, checking in regularly, and providing open office hours.

3. Partners **offer multiple program modalities** to appeal to different needs and learning styles. During our interviews, we heard two distinct perspectives: one interviewee preferred self-guided programming with only occasional in-person meetings, while another preferred a more structured environment where all participating residents attended the same course and received instruction simultaneously. Providing a variety of program formats can help meet the preferences and scheduling needs of EPA's diverse community members.

4. All three Measure HH partners **offer different career counseling approaches to help participating residents determine a pathway** aligned with their interests and goals. Interviewees learned about potential pathways to start and grow their careers (e.g., union and non-union options in construction, plumbing, electrical, other trades, property management, cybersecurity, entrepreneurship, and pursuing additional certifications to increase income). StreetCode offers "exposureships" during which tech company representatives meet participating residents to give them a sense of whether they might like to work in a specific job, field, or profession. At JobTrain's Project Build, the program instructor provides insight into different trades pathways, the pros and cons of joining unions, and entrepreneurship. Live In Peace emphasizes helping youth find the right career path rather than rushing them into a particular trajectory, reporting, "We are working with individuals as they figure out their career paths, which is what Live In Peace does best." They acknowledge that from the outside, "this can look like a slow process" and that one common challenge of working with youth is that "they aren't sure what career path they want to follow yet."[33]

5. Besides job training services, Measure HH partners **offer wraparound supports and services** to address residents' holistic needs and encourage program completion. Interviewees were often aware of the available services and resources. Several discussed utilizing services to facilitate travel to and from job training programs, access necessary technology for learning, connect with other residents and community members during meals, and address their most pressing needs. For instance, legal services were critical to one interviewee who received assistance resolving a legal issue during a background

[33] From "Measure HH Grant - Quarterly Report, Q3, January 31, 2024" by Live In Peace, Inc: https://www.cityofepa.org/sites/default/files/fileattachments/community_amp_economic_development/page/22178/live_in_peace_quarterly_report_january_2024_redacted.pdf

check. In their quarterly reports, partners reported that they provide the wraparound supports to EPA residents (**Exhibit 10**) and all of their job-training participants to address barriers to program outcomes and completion, including navigating legal issues and the legal system, experiencing divorce, addressing mental health challenges, being flagged during a background check, etc. Interviewees expressed a desire for more legal services and mental health support.

EXHIBIT 10
Wraparound Supports Provided by Measure HH Partners

JOBTRAIN	LIVE IN PEACE	STREETCODE ACADEMY
• Help with government benefits applications (e.g., CalFresh, Medi-Cal, WIC, disability insurance) • Legal services • Onsite preschool for children ages 3-5 (sliding scale based on income) • A job center and student lounge • Transportation assistance • Tutoring and academic assistance (e.g., GED support) • Access to an alumni network • Beginning and Intermediate English classes for non-native speakers • Spanish-language basic computer skills courses	• Necessary prerequisites for training programs, such as driver's licenses, stable housing, and transportation, and tutoring for exams/tests • Tutoring, life coaching, career counseling • Scholarships and stipends • Daycare • Mental health support • Supplies	• Connecting local innovators-in-residence with dedicated career coaches • Shadowship opportunities in diverse corporate environments • Transportation assistance • Childcare assistance • Free loaned tech devices • Community building opportunities

> "Participating in [the training] has opened my eyes to community. There are actually people and programs that actually care for and provide opportunities for people in the community … I believe [the training] provides the tools and opportunities to achieve greater income and greater opportunities to achieve more income."

The residents we spoke to acknowledged that many factors influence their ability to secure jobs with a living wage. While they are generally hopeful that their experience in the Measure HH-funded programs—including training, certifications, and career exposure—will help them in the long run, they observe a competitive job market that requires a lot of individual initiative. For some, personal challenges, sometimes sensitive in nature, can introduce challenges to employment.

Residents build important skills and gain necessary experience to apply for STEM and trades jobs. However, the pilot does not guarantee employment or paid internships following program completion, which can create an earnings gap that is difficult for participating residents to navigate. Interviewees identified a handful of additional contextual factors that impeded prompt access to employment opportunities. Interviewees described:

- **A general economic downturn during interviews in winter 2025**, which City Council also discussed in fall 2024, affected both the STEM and trades sectors. Tech company **layoffs** around a similar timeframe mean more workers compete for fewer opportunities.

- Trades jobs follow a **seasonal calendar**. Residents may complete their training during a time with fewer job opportunities.
- STEM jobs with fixed wages and predictable career paths may be declining, as interviewees, partners, and subcommittee members see the sector **shifting toward freelancing and gig work and increasing its reliance on artificial intelligence** (**AI**).
- Applicants interested in trade unions face **long waits to join a union**.

Residents described challenges landing their first entry-level job, especially in STEM fields. One interviewee working in STEM described challenges securing good IT jobs because they often require prior experience, which is difficult to obtain for entry-level positions. Residents saw the most success related to employment when the Measure HH program partner directly connected them to a potential employer.

> "It's that Catch-22 problem. [Employers] won't take you because you don't have experience, and you can't get experience because they won't take you."

> "I looked into getting into the trades. A lot of the places that hire for the trades require you to have experience right off the bat …. They said that the easiest way to get experience would be a pre-apprenticeship, which was [the Measure HH-funded program]."

Discussion & Recommendations

Although the Measure HH Pilot Workforce Development Program is achieving many of its desired outcomes, there is room for growth as it moves into its next pilot phase. We offer the following recommendations for the program's ongoing evolution based on the evaluation data and findings.

> "Before the [training], my feelings towards IT were, 'Oh, that could never be me.' You have to grow up playing with or loving tech, and that wasn't my experience. I was always told, 'Don't touch the computer.' That was my feeling towards technology. 'Don't break that, don't touch that.' When I went the IT route, I still struggled with those feelings because … it's burned into my memory. It's very empowering to be in this field, and that's ultimately what I want to do and where I want to be."

1. IMPROVING ACCESS TO EMPLOYMENT OPPORTUNITIES

A key goal of the voter-approved Measure HH is to facilitate access to job opportunities for city residents, particularly considering the recent influx of large employers. Our findings and discussions with partners, City staff, and local employers highlighted the need to strengthen employer engagement to achieve this goal. Multiple ways exist for Measure HH funds and resources to expand EPA residents' access to job opportunities.

Recommendation 1.1: The City of East Palo Alto can do more to boost the visibility of this program among local employers and increase employer buy-in.

Interviewees, partners, and City Council subcommittee members discussed how finding employment is often heavily relational, based on connections, familiarity, and having the necessary skills and qualifications. Measure HH partners have relationships with local employers and regularly connect their training participants and employers, and at least one partner convenes a local employer advisory group that offers insights into the local employment landscape and collaborates with employers to create and update curricula to ensure programs promote industry standards. Another partner collaborates with local employers to provide participants with exposureships. Employers we interviewed were often unaware of the Measure HH pilot, indicating a potential opportunity for the City to raise the program's profile and connect partner organizations and residents to local employers.

Partners frequently expressed their desire for the City to support connections and networking with employers. One partner expressed that the City Council can send a powerful message to employers by elevating EPA's local talent. Our field research suggests employer engagement is critical to supporting positive outcomes via job training programs. The City has the opportunity to engage employers directly via the pilot and through Measure HH-funded partners. **Appendix C** includes practices for partnering with employers that support positive outcomes via job training programs.

The City could also explore convening potential employers and residents for peer connection and networking opportunities. City staff could facilitate these networks or provide funding to partners via a revised RFP to propose how they could support coordination with employers.

Recommendation 1.2: Support an apprenticeship model or paid internships with local employers to expand access to job opportunities.

Our research of other WFD programs showed that many successful programs offer direct access to apprenticeship and internship opportunities as a benefit of completing the training. Both apprenticeships and internships can lead to long-term employment. Apprenti[34] offers paid tech apprenticeships that allow participants to learn while working and earning an income. Employers are asked to have a job ready for apprentices, as long as the apprentice demonstrates growth and can perform the job duties after completing the apprenticeship. Year Up United guarantees an internship with a corporate partner for its participants as part of their programming; relatedly, 80% of Year Up United graduates are employed within four months of completing the program.[35] The City or county could leverage relationships to offer internships and forge new relationships with private companies' talent acquisition specialists to effectively build potential inroads. Directly supporting apprenticeships and internships, in addition to sector-specific technical skills, can expand the potential to support EPA residents. Entrepreneurial training would also provide a new avenue, and could be enhanced by mentorship and networking with other entrepreneurs. Any of these approaches would require the City to consider new approaches to funding training (e.g., how to fund internships and apprenticeships with business or organizations).

Recommendation 1.3: Maximize first-source hiring practices for city-funded projects and make direct connections for residents pursuing Measure HH-funded training.

The City adopted a first-source hiring ordinance alongside the Measure HH parcel tax to expand employment opportunities for residents.[36] However, there have been fewer opportunities than hoped to implement the policy. The City might consider improving the implementation of the first-source hiring policy for City-funded projects by actively facilitating partnerships between residents and contractors. Partners believe the City Council can be instrumental in connecting residents to these job opportunities by promoting residents' talent.

Recommendation 1.4: Maximize relationships between unions and programs funded through Measure HH.

Unions may be able to prioritize membership opportunities for graduates of local training programs. Exploring this avenue could provide several program graduates with access to union membership and guaranteed wages. Foothill College also offers a trades apprenticeship program connected to California unions, which could serve as another pathway to skill-building and employment.[37]

2. SUSTAINING & STRENGTHENING MEASURE HH PILOT WORKFORCE DEVELOPMENT PROGRAM APPROACHES

Although many residents may have the requisite skills for entry-level and higher-level job openings with EPA employers, others will benefit from access to job training, career readiness, and career exposure opportunities. Successful career readiness and job training programs are grounded in relationship building, community building, career counseling, and career exploration. Multiple ways exist for Measure HH funds and resources to sustain and strengthen WFD approaches and outcomes for EPA residents.

[34] https://apprenticareers.org/
[35] Year Up United. Student FAQs. Retrieved May 1, 2025 from https://www.yearup.org/students/student-faqs#module-6
[36] City of East Palo Alto California. First Source Hiring Ordinance. Retrieved May 1, 2025 from https://www.ci.east-palo-alto.ca.us/econdev/page/first-source-hiring-ordinance.
[37] https://foothill.edu/apprenticeships/

Recommendation 2.1: Continue funding programs that provide work-ready skill development and wraparound supports, and expand funding to account for recruitment costs and costs associated with matching residents to programs and opportunities best aligned with their skills and interests.

EPA residents in Measure HH-funded programs have various needs and face challenges in their daily lives, affecting their ability to complete training and access jobs. Wraparound supports, including (but not limited to) legal resources, resume building, and interview practice, help residents address these needs and their overall well-being, and support their ability to complete job training, build confidence, and access jobs. Wraparound supports and work-ready skill development are common among workforce development programs, and something Measure HH should continue to help residents achieve employment goals.

Partners also discussed the administrative efforts needed to recruit and match participants to the program and pathway that would best support participant goals. Upfront funding could help partners cover these administrative and marketing costs to reach residents and employers alike.

Recommendation 2.2: Fund more Spanish-language and multilingual training to reach East Palo Alto's majority Spanish-speaking population.

Partners currently offer a few opportunities for Spanish-speakers in Spanish (e.g., JobTrain hosts Spanish-language computing classes, and StreetCode expanded its offerings to include a Spanish-language course) or for residents to improve their English literacy (e.g., JobTrain). Consider how Measure HH can further support this population by funding Spanish-language classes and training.

Councilmembers and program staff discussed the importance of offering programming in multiple languages with us. They reflected that multilingualism is a marketable skill in fields relevant to the Measure HH pilot and may open access to additional employment and advancement opportunities.

Our research provides insight into multiple options for English Language Learners (**ELLs**). For example, organizations and community colleges provide bilingual training or training for ELLs geared toward specific learning or career pathways.

- **GOAL (Growing Opportunities in America for Latinos)** (Indianapolis, IN)[38] is a bilingual English/Spanish manufacturing bridge program for adults. Run by the Labor Institute for Training, which secured $3.2 million in Department of Labor funding through the TechHire Grant in 2016, the program aims to grow advanced manufacturing technical skills for residents with limited English proficiency. It offers free credentialling in Safety, Quality Practices and Measurement, Manufacturing Processes and Production, and Maintenance Awareness.

- The **Spanish American Committee for a Better Community** (Cleveland, OH) offers bilingual job-readiness and soft skills training through their workforce development program. The organization hosts a 6-week bilingual (English-Spanish) construction course, the Latino Construction Program, which provides bilingual training for Spanish speakers to help them overcome language barriers and earn a free Occupational Safety and Health Administration (**OSHA**) certification.

- **Foothill College** (Los Altos Hills, CA) offers multiple ESL pathways, including bridges to college and mathematics, and advanced offerings[39] which can help ELLs advance through Foothill's STEM and other career pathways. [40]

[38] Joy, L, Toglia, J. 2020. Growing Opportunities in Manufacturing through Bilingual Upskilling. Jobs for the Future. Retrieved June 1, 2025 from https://www.jff.org/idea/growing-opportunities-manufacturing-through-bilingual-upskilling/.
[39] https://www.foothill.edu/esl/
[40] https://foothill.programmapper.com/academics/interest-clusters/1caa9223-79ad-4e43-817c-6d06e629a41f

California-based organizations and community colleges also offer ESL classes emphasizing general English language acquisition, computer skills, and workforce preparation:

- **City College of San Francisco** offers a one-year SL Vocational Office Training Program[41] to help students develop computer skills, build skills needed to start and boost careers, and enhance English skills. While not specific to STEM or trades, it helps ELLs learn current technology and prepare for jobs.
- **North Orange Continuing Education** (Anaheim) provides an example of offering language development and workforce preparation that provides English Language Learners with the skills to get a job and move into higher-wage jobs faster.[42]

Recommendation 2.3: Apply an expansive definition of STEM training and jobs to the Measure HH Pilot Workforce Development Program and fund multiple pathways to access STEM training.

We heard from partners and participating residents that their successes are expansive and include entrepreneurship within STEM or jobs requiring STEM knowledge, even if they do not work directly in a STEM field. The US Bureau of Labor Statistics notes many definitions of what can be considered a STEM occupation.[43] Job search website Indeed notes that STEM fields continue evolving and expanding.[44] Applying a broad definition of STEM to Measure HH will allow EPA residents to pursue a pathway to STEM-related employment that best fits their skills and interests.

Sensemaking session participants suggested shifting Measure HH funding to support community college scholarships for intensive tech training would offer an additional avenue for residents to develop and expand their skills for tech-based jobs.

Recommendation 2.4: Support collaboration across partners.

Partners shared that while they coordinate informally, Measure HH could support their formal collaboration to ensure residents are paired with a best-fit job training program. Collaboration across the three pilot contractors could also help connect residents to wraparound supports, increasing eligibility for services from any Measure HH-funded programs that meet individual residents' needs.

3. MONITORING WAGES & OTHER OUTCOMES

The final evaluation goal is to inform the East Palo Alto City Council about evaluating future wage outcomes and the potential for wage growth.[45] Leveraging our experience and drawing on field research and partner reflections, we compiled promising practices supporting data collection and analysis related to wages among multiple organizations. We provide reflections on how the Measure HH Pilot Workforce Development Program can enhance practices that City staff have already implemented.

[41] https://www.ccsf.edu/degrees-certificates/esl-vocational-office-training-program
[42] https://www.noce.edu/programs/english-citizenship/english/
[43] The US Bureau of Labor Statistics (**BLS**) uses varying definitions of STEM across publications. One source defines STEM occupations as "computer and mathematical, architecture and engineering, and life and physical science occupations, as well as managerial and postsecondary teaching occupations related to these functional areas and sales occupations requiring scientific or technical knowledge at the postsecondary level." A second report separates STEM occupations into two major domains, each with two sub-domains.
[44] Indeed. (2024) What Are Stem Fields? Retrieved June 1 2025, from https://www.indeed.com/career-advice/career-development/stem-fields.
[45] Forecasting expected or potential wages by sector or individual was not an expectation of the current contract or Evaluation plan. Should City Council be interested in this type of forecast, we recommend issuing an RFP and contracting with a firm specialized in that.

Recommendation 3.1: Enhance the City's already established data reporting requirements by accounting for varied data capacity amongst partners and the need for standardized data reporting.

The City could improve the data process by providing partners with an easy-to-use reporting template/database (e.g., via Excel, Microsoft Forms). A shared tool will provide partners with greater clarity about how information should be reported, yielding clearer information and analysis via consistent reporting. While the City currently lacks a centralized grants reporting database, it may wish to consider implementing one as part of its ongoing technological improvements.

Recommendation 3.2: Prepare for and fund longitudinal assessments that clearly define a process and align with analysis goals.

Exploring long-term wage growth requires gathering wage data at multiple periods and over time (e.g., 6, 12, 24, and 36 months after training). Setting these goals in advance and informing partners about the frequency is important for defining expectations and collecting consistent data. In one evaluation, WFD programs provided employment services to participants for up to 12 months following program completion or job placement, allowing for regular data updates.[46] One study determined that three years post-program are needed for impact to materialize.[47] Measure HH partners are not funded to support participant residents over time or track outcomes long-term, though they are expected to do so as part of their Measure HH funding agreements. Our experience evaluating similar WFD programs and alumni networks shows that it takes considerable time to maintain connections with alumni; the longer alumni have been out of a program, the harder it is to reach them. Measure HH funding could be directed to support these long-term efforts.

Recommendation 3.3: The City can enhance established data measures to align with Measure HH's goals and partners' program objectives.

One study suggested program completion, job placement, employment retention, and starting wages as "standard measures of workforce development success."[48] These measures are included in Measure HH reporting. However, the program's approach could improve by including data about confounding factors, covariates, and correlates to wages, and allowing for variation among partners that wished for additional data collection measures to show interim progress toward employment goals (i.e., partners differentiated progress based on a client's barriers to employment). Measure HH partners currently provide select personal background information—employment and wage histories, racial/ethnic and language backgrounds, and highest level of education—that can have differential impacts on estimates of wages and wage growth, thus informing the analysis. Additional measures—prior employment sector, occupation, and position—must be gathered and stored alongside wage information for the most robust analysis.

Recommendation 3.4: Fund a staff position to coordinate data sharing and analysis, including establishing formal data-sharing agreements.

Data collection, reporting, and analysis are time-intensive and require a specific skill set. A role dedicated to this process can help ensure data accuracy and integrity and a smooth process for contractors.

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[46] Juniper, C., Boswell, T., & Cumpton, G. (2023). An Evaluation of the City of Austin Investments in Workforce Development. The University of Texas at Austin Lyndon B. Johnson School of Public Affairs. Retrieved from https://sites.utexas.edu/raymarshallcenter/files/2024/07/FINAL_City-of-Austin-Rpt_12-15-2023.pdf.

[47] Rothstein, J., Santillano, R., Von Wachter, T., Khan, W., & Yang, M. (2022). CAAL-Skills: Study of Workforce Training Programs in California. California Policy Lab. Retrieved from https://cwdb.ca.gov/wp-content/uploads/sites/43/2022/08/FINAL-CAAL-Skills_report_ACCESSIBLE.pdf.

[48] Weigensberg, E., Schlecht, C., Laken, F., Goerge, R., Stagner, M., Ballard, P., & DeCoursey, J. (2012). *Inside the Black Box: What Makes Workforce Development Programs Successful?* Chicago: Chapin Hall at the University of Chicago. https://www.researchgate.net/publication/265083339

Contracts between the lead organization (the City of East Palo Alto, in the case of the pilot) and program partners should include formal data-sharing commitments to ensure data safety. Data collection should reflect data that organizations already collect and use for meaning-making or to demonstrate impact, which can increase partner buy-in. It should also reflect sensitivity to residents participating in Measure HH programs and respect their privacy by allowing them to opt out of data collection partially or entirely.

Recommendation 3.5: Be attentive to the increasing cost of living and living wage standards. Consider that it may take longer than initially hoped to earn at the increasing rate.

San Mateo County's living wage has increased since residents voted on Measure HH; the figure also varies by household makeup, considering the number of children and working adults in a household (**Exhibit 11**). Sensemaking participants highlighted that the cost of living will only continue increasing and emphasized that residents who access new jobs after Measure HH-funded training may not immediately earn at the City's target. Long-term tracking is necessary to understand growth toward earning a wage aligned with the City's target.

EXHIBIT 11

2025 San Mateo County Hourly Living Wave based on Household Makeup[49]

	NO CHILDREN	1 CHILD	2 CHILDREN	3 CHILDREN
1 adult	$34.76	$67.89	$89.18	$114.70
2 adults (1 working)	$47.81	$58.01	$62.66	$73.98
2 adults (2 working)	$23.90	$36.16	$46.95	$59.28

CONCLUSION & LOOKING FORWARD

In its initial pilot phase, the Measure HH Pilot Workforce Development Program's partners improved access to employment opportunities, including those in STEM and trades, via training, wraparound support, and attending to well-being for East Palo Alto residents. There is an opportunity for the City to continue offering funding within this current structure and simultaneously expand its approach to include different strategies to achieve similar goals (e.g., connecting with employers, pre-apprentice programs, scholarships).

As we conclude this evaluation, we encourage City staff and Councilmembers to answer the following questions as they coordinate the pilot's next phase:

- How can City Council and City staff elevate Measure HH's profile amongst potential employers and champion EPA residents?
- What types of jobs in STEM and trades align with City Councilmembers' expectations of programmatic outcomes? How do those expectations align with or diverge from the job landscape and the jobs residents are seeking and securing after attending Measure HH-funded training?
- What measures or metrics are most helpful to City staff and City Councilmembers as they assess program results and make decisions for the future? What measures or metrics are important to partners? What needs to shift to collect and synthesize these measures or metrics regularly?

[49] *Supra*, note 32.

We greatly appreciate the City Council's commitment to building the Measure HH Workforce Development Program to meet the needs and aspirations of East Palo Alto residents, and their openness to adapting the program based on evaluation and learning.

Appendix A: Evaluation Questions

This report addresses the following four evaluation questions we developed with input from the City Council evaluation subcommittee and City staff to address the evaluation goals. In some instances, findings relate to multiple evaluation questions or goals.

1. **Outcomes**: What are the initial outcomes of the Measure HH Pilot Workforce Development Program? What supports and barriers drive and impede progress toward achieving programmatic outcomes? *(Goals 1, 2, 3)*

2. **Resources & Implementation**: How are Measure HH resources being used to support local workforce development? What are we learning about what it takes to implement and expand this work? *(Goals 1, 2)*

3. **Field Learning**: What can be learned from other programs similar to the Measure HH Pilot Workforce Development Program? *(Goal 2)*

4. **Wage Mobility**: What is important to consider in understanding the potential for longer-term career and wage growth related to the Measure HH Pilot Workforce Development Program? *(Goal 3)*

Appendix B: Measures of Interest

The East Palo Alto City Council asked Informing Change to report on 40 measures of interest, listed here by evaluation question for reference. We used the measures as a guide while developing data collection tools. The measures are not exhaustive, and we did not expect to collect consistent data about each measure. Instead, the measures organized the learning priorities discussed during background interviews and planning conversations and uplifted key Measure HH staff, partners, and City councilmembers' perspectives. These measures also reflect the spheres of influence closest to Measure HH and the Pilot Workforce Development Program (primarily participating residents and Measure HH partners).

EVALUATION QUESTION 1 (OUTCOMES)

Specific interest in the following measures for individuals:

- Skill and knowledge acquisition; trade/field competency/proficiency
- Certificates or other formal training completed
- Preparedness for available jobs
- Awareness of and access to employment opportunities in tech or trades (such as related fields following program completion)
- Number and type of jobs, internships, and apprenticeships obtained
- Sustainability of employment opportunities (jobs with a living wage, defined as a minimum of $28/hour for a single individual)
- Wages after program completion
- Wages at 6, 12, 18, and 24 months after program completion
- Area of residence (such as within the City of East Palo Alto, outside the City of East Palo Alto but within California, outside California)
- Feeling of belonging in tech or trades
- Feeling of belonging in East Palo Alto and Silicon Valley
- Improved overall well-being
- Conditions that drive or inhibit outcomes

Specific interest in the following measures for contractors:

- Diversity of and increase in student enrollment
- Access to funding and contribution to organizational stability
- Staff capacity and responsiveness to serve East Palo Alto residents (such as for multi-lingual service provision)
- Employer-trainer engagement and collaboration
- Partnerships with employers
- Conditions that drive or inhibit outcomes
- Others identified during the evaluation

EVALUATION QUESTION 2 (RESOURCES & IMPLEMENTATION)

- Number of student placements funded through Measure HH
- Program completion rates
- Characteristics and prior experiences of students (e.g., gender, age, race/ethnicity, level of education, prior employment experience, involvement in the foster system or justice system, language situation/languages spoken)
- Supports contractors provide to students
- Program cost
- Type and benefit of referrals or references contractors provide for students
- Measure HH funding structure, related strengths, and limitations

EVALUATION QUESTION 3 (FIELD LEARNING)

- Program costs
- Funding sources
- Range of supports and approaches provided, from workforce development programs or employers
- Challenges and how they are addressed
- Program results and outcomes
- Conditions that support or inhibit participant success or employee success once hired (such as competition in the tech field)
- Market conditions that support or inhibit participant success
- Forecast of future job landscape and required skills to access those jobs, including market strength and opportunities in STEM compared to building trades
- Current/projected wage levels for different jobs in tech and trades sectors

EVALUATION QUESTION 4 (WAGE MOBILITY)

- Wages prior to program participation (if employed)
- What compels or inhibits employers from providing a living wage
- Skills, roles, etc., associated with wage growth and mobility
- Conditions within the tech and trades sector that support or inhibit wage or career growth

Appendix C: Landscape Scan

PROMISING PRACTICES

Through our field research and experience, we offer promising practices for implementing workforce development programs. Other findings related to collecting data from a portfolio of organizations are incorporated throughout the report.

For Supporting Workforce Development Outcomes

- **Clearly define the participant audience to match individuals** with opportunities aligned with their skill levels and interests.
- **Conduct intake assessments to identify** participant knowledge, skill, commitment level, and any support services needed.
- **Focus training on industry-relevant certifications and skills**, including those in demand by target industries in the region.
- **Provide soft skills and job readiness skill development.**
- **Provide financial compensation** for program participation and completion to encourage participants to stay in training and help reduce financial burden.
- **Offer wraparound services** to address multifaceted needs.
- **Support career navigation to bridge the gap between skill-building and job placement,** such as, but not limited to, apprenticeships, guaranteed internships, and other connections to employers.
- **Build alumni networks** that create formalized ways for peers to connect during the program and after.

For Partnering with Employers

- **Seek committed partners** willing to be involved in different stages of the program, such as participating in advisory boards or giving feedback on the curriculum.
- **Work with employers to identify pre- and post-program participant attributes or skill sets.** Communicate these attributes with partners for effective outreach. Employers in other programs have expressed concerns about participant preparedness for on-site activities. A comprehensive intake assessment and communication of participant backgrounds can prevent unmet expectations.
- **Create a clear definition of employers' responsibilities** and encourage upfront hiring commitments.
- **Advocate and communicate with employers** on the benefits of WFD programs. A 2021 economic policy proposal by the Hamilton Project emphasized that WFD focusing on disadvantaged groups, especially after the COVID-19 pandemic, is cost-effective for employers in building a stronger worker

base.[50] Another article noted the benefit of regional workforce partnerships and local collaboration, in which local employers could recognize they face the same hiring issues and focus on strengthening regional talent pools and pathways.[51]

SOURCES

We reviewed the following sources to conduct the landscape scan for this evaluation.

1. *Apply to Train for a Career in Technology: OEWD's TechSF Program*. City and County of San Francisco. (n.d.). https://www.sf.gov/apply-train-career-technology

2. English, B., Zelenack, S., & Bellotti, J. (2022). *Employer Perspectives on Regional Workforce Partnerships: Lessons from America's Promise*. Princeton, NJ: Mathematica. https://www.mathematica.org/publications/employer-perspectives-on-regional-workforce-partnerships

3. Harvey, D., Bogle, M., & Girod, K. (2024). *Equitable Workforce Development in Disinvested Places: Lessons from the Five-City Equitable Development Workforce Pilot (Year Three Evaluation Report)*. Urban Institute. Retrieved from https://www.urban.org/sites/default/files/2024-11/Equitable-Workforce-Development-in-Disinvested-Places.pdf

4. Holzer, H. J. (2021). *After COVID-19: Building a More Coherent and Effective Workforce Development System in the United States*. The Hamilton Project. https://www.hamiltonproject.org/wp-content/uploads/2022/11/Holzer_LO_v5_1-2.pdf

5. *Job Training in the Bay Area*. Year Up United. (n.d.). https://www.yearup.org/locations/ca-san-jose

6. Johnson, M., Bashay, M., & Bergson-Shilcock, A. (2019). *The Roadmap for Racial Equity: An Imperative for Workforce Development Advocates*. National Skills Coalition. https://files.eric.ed.gov/fulltext/ED603236.pdf

7. Juniper, C., Boswell, T., & Cumpton, G. (2023). *An Evaluation of the City of Austin Investments in Workforce Development*. The University of Texas at Austin Lyndon B. Johnson School of Public Affairs. https://sites.utexas.edu/raymarshallcenter/files/2024/07/FINAL_City-of-Austin-Rpt_12-15-2023.pdf

8. Rothstein, J., Santillano, R., Von Wachter, T., Khan, W., & Yang, M. (2022). *CAAL-Skills: Study of Workforce Training Programs in California*. California Policy Lab. https://cwdb.ca.gov/wp-content/uploads/sites/43/2022/08/FINAL-CAAL-Skills_report_ACCESSIBLE.pdf

9. Weigensberg, E., Schlecht, C., Laken, F., Goerge, R., Stagner, M., Ballard, P., & DeCoursey, J. (2012). *Inside the Black Box: What Makes Workforce Development Programs Successful?* Chicago: Chapin Hall at the University of Chicago. https://www.researchgate.net/publication/265083339

[50] Holzer, H. J. (2021). After COVID-19: Building a More Coherent and Effective Workforce Development System in the United States. The Hamilton Project. Retrieved from https://www.hamiltonproject.org/wp-content/uploads/2022/11/Holzer_LO_v5_1-2.pdf.
[51] English, B., Zelenack, S., & Bellotti, J. (2022). Employer Perspectives on Regional Workforce Partnerships: Lessons from America's Promise. Princeton, NJ: Mathematica. Retrieved from https://www.mathematica.org/publications/employer-perspectives-on-regional-workforce-partnerships.

LANDSCAPE SCAN PROGRAMS FOR REFERENCE

Evaluation resources allowed for a preliminary field scan of workforce development programs inside and outside the Bay Area. We sought examples in two main categories:

1. Programs with a **similar focus** to Measure HH, primarily related to the population reached or technical field (i.e., STEM and trades).

2. Programs that offer **pathways different from Measure HH** (e.g., apprenticeships).

Our scope was limited to desk research, including publicly available information found online. Few organizations we researched provide outcome or evaluation-related information on their websites (e.g., completion rates, placement rates, wages). We provide what little data organizations have made available publicly.

Ultimately, these organizations share numerous promising practices for workforce development programs:

- Paid training opportunities
- Connecting trainees to employers via networking, internship, or apprenticeship opportunities
- Wraparound support to address basic needs and overall wellbeing
- Matching trainees to trainings, programs, or apprenticeships aligned with their skills and interests
- No cost to trainees
- Tailored job training and career readiness training (e.g., resume building, interview practice), and career exploration/coaching

Examples of General Workforce Development Programs Outside the Bay Area

We offer brief summaries of a selection of WFD programs **outside the Bay Area** that provide free, hands-on training to adults. Select trainings provide payment to trainees. Wraparound supports provide trainees with resources to meet their basic needs and enhance their overall well-being.

- **Inspiration Kitchens** (Chicago, IL) provides free hands-on culinary and food service training for low-income adults. The program provides additional services to help participants overcome barriers such as resume assistance, job search and placement support, and paid training.

- **Instituto del Progreso Latino** (Chicago, IL) provides career pathways training for Chicago's Latino community. Training focus ranges, with opportunity for vocational ESL instruction, college prerequisites, digital literacy, and general support to advance their careers and increase pay. Instituto offers a specific healthcare career pathway, enabling students to become Basic Nursing Assistants and supporting tuition and other support to earn additional credentials to advance their careers. The program provides additional wraparound support to help students and their families meet their basic needs and support their overall well-being (e.g., applying for Medicaid/Medicare, SNAP, unemployment, childcare services).

- **JARC** (Chicago, Baltimore, Philadelphia, Providence) provides free manufacturing-related training for low-income adults. Participants can be trained in CNC Machinist, Welding, Mechanical Assembly, and 3D printing. Trainees in Chicago receive a monthly stipend. JARC also offers bilingual training in Spanish and English, a bridge program to help trainees complete coursework to prepare them for manufacturing jobs, financial coaching, public benefits registration, transportation stipends, and resources for food, childcare, and housing. JARC shares that 80% of trainees found a job after or while in training, and 64% of JARC grads double their salary in their first year of employment after graduating.

Examples of Apprenticeship Programs

- **Apprenti** (based in Issaquah, WA, with national reach) is a free tech apprenticeship for adults across the US. Applicants must pass a competency test and receive 40 hours of weekly training once accepted. After completing their technical training, apprentices transition into their on-the-job apprentice positions with a hiring partner. Apprenti asks that hiring partners have full-time positions available for each apprentice they take on, but do not require employers to retain graduated apprentices. Apprenti offers training and opportunities in a range of tech occupations, including software and web development, IT infrastructure and support, business operations and support, cybersecurity, business and data analysis, and other specialized roles. Apprenti shares that they have placed 4,500+ apprentices in living wage jobs across the US and 89% of graduates are retained by their employer.

- **Foothill College** (Los Altos Hills, CA) offers a trade apprenticeship program through local union training offices. Foothill offerings are free to apprenticeship students. Apprentices earn income while learning from a master journeyman and attend Foothill courses up to two nights a week. Apprentices must be over 18 and hold a high school diploma or GED and valid CA driver's license.

Examples of Workforce Development Programs Run or Supported by City/County Workforce Development Offices & Boards

- **Work2Future** (with locations in San José, North San José, and Gilroy and also serving Campbell, Morgan Hill, Saratoga, Los Gatos, Los Altos Hills, Monte Sereno and unincorporated areas of Santa Clara County) is part of the America's Job Centers of California network of federally funded job centers and supported by the Silicon Valley Workforce Development Board. Work2Future provides free job training, workshops, and apprenticeships, as well as offerings in digital literacy, resume development, job search support, interview support, and other job training skills. Currently, Work2Future offers a trades program, through which 80% of graduates go on to employment or admission into an apprenticeship program, and a PG&E PowerPathway entry to an Electrical Operations program, after which 87% of graduates are employed in the construction-utility industry. Paid apprenticeships are available with select partner companies such as **Applied Materials**, **Enablence**, **Infinera**, and **Western Digital.**

- **East Bay Works** is also part of the America's Job Centers of California network and is supported by city and county WFD boards for employers and job seekers. It offers a range of self-directed (e.g., job search workshops and computer classes) and staff-assisted services (e.g., 1-1 career counseling, skills assessment, job training, on-the-job training, job placement, workshops, networking, and skills certification). Offerings are available at no cost to job seekers. Job readiness training includes digital literacy, typing certification, drop-in support, resume review, interview workshop, and more. Training opportunities are available for office career training, certified nursing assistant training, and medical assistant training.

- The **San Francisco Office of Economic and Workforce Development** (**OEWD**) funds the **TECH SF Program,** which offers free tech training through eight local tech organizations. Each organization has its own key audience (e.g., all adults, youth ages 17-24, formerly incarcerated adults, immigrants and refugees with a bachelor's degree). Training focus varies by program (e.g., digital marketing, producing/editing, Google IT certificate training, career exploration and readiness, web design and coding), as does post-program access to career pathways (e.g., mentorship, apprenticeships). OEWD also supports the **TechSF apprenticeship** opportunity, connecting employers to pre-screened, trained candidates. Tech training providers for the 2024-2025 grant year include **BAVC Media**, **Dev/Mission**, **Five Keys**, **Goodwill Comprehensive Job Center**, **Jewish Vocational Services**, **MEDA**, **MissionBit**, and **Upwardly Global**.

- **Regional Occupation Programs**, such as Eden Area ROP (Hayward, CA) and Mission Valley ROP (Fremont, CA), offer career preparation courses for adults. Eden Area ROP offers multiple career-preparation courses for adults. Current offerings include dental assisting and apprenticeship, direct support professionals, electrical training, medical assisting, and welding. Mission Valley offers a pharmacy technician program. Students pay to attend the courses of their choosing. Some ROPs have scholarship opportunities. ROPs do not offer job placement services.



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ATTACHMENT 2
Measure HH Pilot Workforce Development Program Evaluation Report Recommendations
June 2025

1. IMPROVING ACCESS TO EMPLOYMENT OPPORTUNITIES	
1.1. Program Visibility	The City of East Palo Alto can do more to boost the visibility of the program among local employers and increase employer buy-in.
1.2. Internships and Apprenticeships	Support an apprenticeship model or paid internships with local employers to expand access to job opportunities
1.3. First-Source Hiring	Maximize first-source hiring practices for city-funded projects and make direct connections for residents pursuing Measure HH-funded training.
1.4. Unions	Maximize relationships between unions and programs funded through Measure HH.
2. SUSTAINING AND STRENGTHENING MESASURE HH WORKFORCE DEVELOPMENT PROGRAM APPROACHES	
2.1. Skill Development, Support, and Recruitment	Continue funding programs that provide work-ready skill development and wraparound supports, and expand funding to account for recruitment costs and costs associated with matching residents to programs and opportunities best aligned with their skills and interests.
2.2. Spanish/Multi-lingual Training	Fund more Spanish-language and multilingual training to reach East Palo Alto's majority Spanish-speaking population.
2.3. STEM Training	Apply an expansive definition of STEM training and jobs to the Measure HH Workforce Development Program and fund multiple pathways to access STEM training.
2.4. Collaboration	Support collaboration across partners.
3. **MONITORING WAGES AND OTHER OUTCOMES**	
3.1. Data Reporting	Enhance the City's already established data reporting requirements by accounting for varied data capacity among partners and the need for standardized data reporting.
3.2. Longitudinal Assessments	Prepare for and fund longitudinal assessments that clearly define a process and align with analysis goals.
3.3. Data Measures	The City can enhance established data measures to align with Measure HH's goals and partners' program objectives.
3.4. Staffing	Fund a staff position to coordinate data sharing and analysis, including establishing format data-sharing agreements.
3.5. Living Wage	Be attentive to the increasing cost of living and living wage standards. Consider that it may take longer than initially hoped to earn at the increasing rate.

PUBLIC HEARING ITEM 14.1

EAST PALO ALTO CITY COUNCIL STAFF REPORT

DATE: July 15, 2025

TO: Honorable Mayor and Members of the City Council

VIA: Melvin E. Gaines, City Manager

BY: Yajaira Morales, Housing Project Manager
Karen Camacho, Housing & Economic Development Manager
Amy Chen, Community & Economic Development Director

SUBJECT: FY 25-26 Inclusionary In-Lieu Fee Update

Recommendation

Adopt a resolution:

1. Updating the Inclusionary Housing In-Lieu Fees for Fiscal Year 2025-26, including reducing the fee to $268,800 for Ownership/For-Sale Units and increasing the fee to $306,100 for Rental Units, or some other alternative fee level approved by City Council; and

2. Finding that the proposed action does not constitute a "project" with the meaning of the California Environmental Quality Act ("CEQA") pursuant to CEQA Guidelines sections 15378(b)(4) and (5) in that it is a governmental fiscal, organizational or administrative activity that will not result in direct or indirect changes in the environment.

Alignment with City Council Strategic Plan

This recommendation is primarily aligned with:

- Comprehensive Housing

Background

PUBLIC HEARING ITEM 14.1

On November 19, 2019, the City Council adopted Ordinance No. 425, establishing the Inclusionary Housing Ordinance (IHO) and adding Chapter 18.37 to the City of East Palo Alto Development Code. The IHO applies to all new residential development and requires projects with five (5) or more units to provide 20% of the total units at designated affordability levels.[1]

Developments with 5 or More Units (On-Site Requirement)

- Ownership Projects: 20% of units must be inclusionary:
    - 10% for median-income households
    - 10% for moderate-income households
- Rental Projects: 20% of units must be inclusionary:
    - 5% for 35% AMI households
    - 10% for 50% AMI households
    - 5% for 60% AMI households

The IHO also created an In-Lieu Fee option in the following scenarios:

- Residential developments with fewer than five units;
    - Such applicants may alternatively provide one inclusionary unit.
- Projects where the required affordable units result in a fractional unit (e.g., a 7-unit development would require 1.4 units, and the 0.4 fraction triggers an In-Lieu Fee); and
- Residential developments where the developer opts for a City Council approved Alternative Compliance Option, which increases the inclusionary requirement to 25%.

The City Council adopts In-Lieu Fees for both rental and for-sale units by resolution. The In-Lieu Fee provides developers a financial alternative to constructing affordable units. Developers may instead contribute funds toward:

1. The development of future affordable rental housing, or
2. Subsidies for moderate-income homebuyers.[2]

The City Council adopted the initial fee methodology, fees, and associated Inclusionary Housing Guidelines on October 20, 2020, via Resolution No. 141-220,[3] incorporating an analysis by

[1] The inclusionary requirement for for-sale residential developments is to provide: 50% of inclusionary units priced affordable to households at or below median income (80% Area Median Income or AMI) and 50% of inclusionary units priced affordable to households at or below moderate income (120% AMI). The inclusionary requirement for rental developments is to provide: 25% of units at an affordable rent to households at 35% AMI; 50% of units at an affordable rent to households at 50% AMI, and 25% of units at an affordable rent to households at 60% AMI.
[2] A developer of a project with 5 or more units must request approval from the City Council to pursue the In-Lieu Fee payment as an Alternative Compliance Option. Development projects for which an Alternative Compliance Option is requested must therefore be approved by the City Council.
[3] You can also find Chapter 2C of the IHO Guidelines on the City's inclusionary housing webpage under "Supporting Documents" at: https://www.cityofepa.org/housing/page/inclusionary-housing.

David Rosen & Associates (DRA). On July 18, 2023, Council adopted a revised methodology for calculating Inclusionary In-Lieu Fees and annual updates.[4] [5]

This report updates the Ownership/For-Sale and Rental Inclusionary In-Lieu Fees for FY 2025-26 based on DRA's analysis and recommend City Council adoption.

Analysis

Inclusionary Housing Guidelines and In-Lieu Fees

The Inclusionary Housing Ordinance (IHO) outlines the City's In-Lieu Fee methodology, while the Inclusionary Housing Guidelines provide detailed procedures, assumptions, and examples. These Guidelines clarify key ordinance requirements and serve as a resource for developers.

The City Council adopted the original Guidelines on October 20, 2020 and authorized the City Manager to update them as needed (East Palo Alto Municipal Code Section 18.37.090(D)). If any inconsistency exists between the IHO and the Guidelines, the IHO takes precedence. The current version of the Guidelines is available on the City's Inclusionary Housing webpage[6].

The City Council adopts updated In-Lieu at a public hearing each year. Once adopted, staff publish the new fees on the City's website.

Table 1: In-Lieu Fees by Fiscal Year

Fiscal Year	Ownership/For-Sale	Rental
FY 22–23	$190,000	$259,000
FY 23–24	$259,600	$273,400
FY 24–25	$273,400	$299,200
***FY 25–26**	**$268,800**	**$306,100**

*Recommended

In summary, the FY 25-26 update:

[4] The updated Chapters 2A and 2B for the For-Sale In-Lieu Fee and the Rental In-Lieu Fee methodologies are posted on the City's inclusionary housing webpage at: https://www.cityofepa.org/housing/page/inclusionary-housing.

[6] Please see full set of Guidelines under Supporting Documents at: https://www.cityofepa.org/housing/page/inclusionary-housing.

- The Ownership/For-Sale In-Lieu Fee decreases slightly from $273,400 to $268,800. As there was no change in the Area Median Income, this change is largely driven by a rise in the three-year average interest rates from 5.44% to 6.29%.
- The Rental In-Lieu Fee increases from $299,200 to $306,100, due to a 2.3% rise in the Construction Cost Index (CCI) from 2023 to 2024.

Ownership/For-Sale In-Lieu Fee

The Ownership/For-Sale In-Lieu Fee reflects the gap between the market sales price of a "prototypical" unit in East Palo Alto and the sales price affordable to a household (at or below either the 80% or 120% Area Median Income (AMI) affordability levels of the IHO. The affordable housing cost is defined as 30% of the maximum household income at the specified income level (adjusted by household size).

Chapter 2A of the Guidelines[7] illustrates the calculation of Ownership/For-Sale In-Lieu Fee. Please note that in Chapter 2A the figures are displayed without decimals and only show the nearest whole number. The In-Lieu Fee is not rounded until the very end of the calculation. The updated chapters 2A and 2B (see Attachment 2), provide updated guidelines[8] and reflect the most current methodologies and calculations for determining the For-Sale In-Lieu Fee accurately. It's essential to consult these updated guidelines to ensure compliance with the latest standards and practices in calculating the In-Lieu Fees.

The Ownership/For-Sale In-Lieu Fee calculation includes the following baseline assumptions:

1.) a household size of 2.5 persons, which reflects an average condominium size using the occupancy standard of number of bedrooms plus one; and
2.) a maximum household income of 100% AMI, the midpoint of the 80% and 120% affordability targets in the IHO.

Using 2025 HCD State Income Limits for San Mateo County[9], the 100% AMI amounts are:

- $149,300 for a 2-person household
- $167,950 for a 3-person household

The affordable sales price is a multi-step calculation requiring updated inputs on an annual basis. The initial calculation of the affordable housing cost for a maximum household income at 100% AMI is made separately for household sizes of 2 and 3 persons. To arrive at a single affordable sales price for a 2.5-person household at 100% AMI, a weighted average based on the distribution of prototypical condominium types (1- and 2-bedroom units) is calculated from the 2- and 3-person household AMI.

From this initial income calculation, deductions are made to estimate total monthly housing costs: utilities, HOA fees, insurance, and property taxes. This adjusted affordable housing cost

[7] Inclusionary Housing webpage: https://www.cityofepa.org/housing/page/inclusionary-housing.
[8] The most recent update to the In-Lieu Fee calculation methodology was adopted on July 18, 2023.
[9] See 2025 HCD State Income Limits, updated April 23, 2025, at: 2025 State Income Limits

is used to calculate the maximum supportable monthly mortgage amount, assuming a down payment of 5% and a fixed-rate, 30-year amortizing mortgage, with the interest rate taken from the Freddie Mac Mortgage Market Survey, using a three-year average of the first week of January of the previous three calendar years. The three-year average of the 30-year loan term interest rates was adopted in the FY 23-24 guidelines to help reduce volatility.

The market sales price is calculated as a weighted average of condominium sales in East Palo Alto over the previous 3-year period. The difference between the affordable sales price and the market sales price is the In-Lieu Fee.

The updated FY 25-26 Ownership/For-Sale In-Lieu Fee is summarized below:

Table 2: Fiscal Year 2025-2026 Ownership/For-Sale Housing In-Lieu Fee Calculation	
Affordable Price for 100% AMI Household	$484,600*
Market Sales Price	$748,100
Gap for In-Lieu Fee (100% AMI)	$263,500 per unit
2% Increase Due to Delay	$5,300 per unit
Ownership/For-Sale In-Lieu Fee	**$268,800 per unit**

Note: Figures are rounded to the nearest hundredth in this table. Note that numbers are not rounded in actual calculation until the end.
*Calculated based on three-year average of 30-year loan term interest rates.

Rental In-Lieu Fee

As discussed in the DRA memo, provided in the Guidelines as Chapter 2C, the In-Lieu Fee estimates for rental housing represent the financing gap required to develop housing affordable to households at 35% AMI, 50% AMI, and 60% AMI, in the percentages required by the IHO.

The development and operating cost assumptions were used to calculate the gap for a “prototypical” multifamily housing development in East Palo Alto are based on a review of historical project costs and an analysis of 2017-19 applications for the Low-Income Housing Tax Credit program. These can be found in detail in Table A-3 of the DRA memo in Chapter 2C of the Guidelines.

The annual gross rent calculation was based on 30% of the maximum household income at specified AMI levels and household size, less utilities. The final gap calculation, shown in Table A-10 of the DRA memo, also assumes tax credit equity from 4% tax-exempt bonds.

The Rental In-Lieu Fee was previously adjusted annually based on the percentage change in new home prices in San Mateo County, as published in the Northern California Real Estate Construction Report by the Real Estate Research Council of Southern California at California State Polytechnic University, Pomona (RERCSC). For FY 23-24, City Council adopted an annual increase adjustment using the Construction Cost Index (CCI), to help reduce volatility by using construction costs, rather than new home prices, as an index. The calculation of the updated FY 25-26 In-Lieu Fee is shown below. For FY 25-26, the fee is 2.3% higher than the FY 24-25 fee, at $306,100.

The increase for FY 25-26 is set based on the increase in Construction Cost Index (CCI) between 2023 and 2024.

Table 5: Rental Housing In-Lieu Fee Calculation in FY 25-26	
FY 2024-2025 Rental In-Lieu Fee	$299,200
December 2023 CCI	9,654
December 2024 CCI	9,876
Percentage Change	+2.3%
FY 25-26 Rental In-Lieu Fee	**$306,100 per unit**

Note: Figures are rounded in this chart, but not in the calculation. Rental In-Lieu Fee rounded to nearest hundredth.

In-Lieu Fee Payments

Housing Division staff will calculate In-Lieu Fees based on the fee adopted by the Council. Developers must pay all In-Lieu fees before the City issues any Building Permits.

If a developer is required to pay an In-Lieu Fee in addition to constructing units or utilizing another compliance method, this requirement will be detailed in the Inclusionary Housing Agreement. This agreement outlines all inclusionary obligations and is recorded against all units within the development.

To date, most approved projects have chosen to comply with the IHO by constructing on-site affordable units or pursuing another Alternative Compliance Option.

Per the IHO, any In-Lieu Fees collected by the City will be allocated into a designated fund and expended in accordance with applicable laws.

Next Steps

If City Council adopts the proposed resolution approving the recommended In-Lieu Fees, effective through FY 25-26, staff will publish them on the City's website. If approved, in summary, the In-Lieu Fees will change to the following:

Table 6: FY 25-26 In-Lieu Fees	
For-Sale	$268,800
Rental	$306,100

The new In-Lieu Fees will be effective September 16, 2025.

Fiscal Impact

There is no immediate fiscal impact associated with the actions in this staff report. Future residential developments that are subject to the IHO will require the payment of In-Lieu Fees if they fit one of the descriptions provided above. In-Lieu Fee payments will not impact the General Fund but will be set aside as affordable housing funds.

Given the current housing pipeline, it is anticipated that significant In-Lieu Fee revenue will be generated in FY 25-26. Additionally, there are several large projects that have been entitled since the In-Lieu Fees came into effect. As these projects proceed to the building permit stage, the City is expected to receive fee payments. If needed, staff will provide an update on projected revenue for FY 25-26.

Public Notice

The public was provided notice by making the agenda and report available on the City's website and on a bulletin board located at City Hall: 2415 University Avenue, East Palo Alto. Public notice was also provided in the July 3, 2025 Newspaper. Additionally, updated Chapters 2A and 2B of the Inclusionary Housing Guidelines detailing the fee calculations were posted as drafts on the City's website on June 23, 2025.

Environmental

The proposed action does not constitute a "project" with the meaning of the California Environmental Quality Act ("CEQA") pursuant to CEQA Guidelines sections 15378(b)(4) and (5) in that it is a governmental fiscal, organizational or administrative activity that will not result in direct or indirect changes in the environment.

Government Code § 84308

Applicability of Levine Act: No, as the proposed action does not involve an entitlement.

Analysis of Levine Act Compliance: Not applicable.

Attachments

1. Resolution
2. Draft Chapter 2A - Ownership In-Lieu Fees FY25-26
3. Draft Chapter 2B - Rental In-Lieu Fees FY25-26
4. Chapter 2C - DRA Report

RESOLUTION NO. ____ -2025

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF EAST PALO ALTO

UPDATING THE INCLUSIONARY HOUSING IN-LIEU FEES FOR FISCAL YEAR 2025-26, INCLUDING REDUCING THE FEE TO ~~AMOUNTS OF~~ $268,800 FOR OWNERSHIP/FOR-SALE UNITS AND INCREASING THE FEE TO $306,100 FOR RENTAL UNITS, OR SOME OTHER ALTERNATIVE FEE LEVEL APPROVED BY CITY COUNCIL

WHEREAS, on November 19, 2019, the City Council adopted Ordinance No. 425, Inclusionary Housing Ordinance ("Ordinance"), adding Chapter 18.37 to the East Palo Alto Municipal Code; and

WHEREAS, the Ordinance requires that 20% of all units in new market-rate residential developments be affordable to 35% AMI income households, very low-income, low-income, median- income and moderate-income households; and

WHEREAS, the Ordinance requires, under specified conditions, the payment of a fee to the City in-lieu of constructing rental or for-sale inclusionary units within a residential development ("In-Lieu Fees"); and

WHEREAS, the Ordinance provides that these In-Lieu Fees shall be established and amended from time-to-time by resolution of the City Council; and

WHEREAS, the Ordinance further provides that In-Lieu Fee payments shall be placed into an affordable housing fund and shall be expended exclusively to provide rental housing affordable to low income households (or below), ownership housing affordable to moderate-income households (or below), and any special needs populations in the City, consistent with the goals and policies contained in the City's Housing Element, and for administration and compliance monitoring of the Inclusionary Housing program, as approved by the City Council; and

WHEREAS, on October 20, 2020, the City Council held a properly noticed public hearing to adopt the In-Lieu Fee methodology as provided in a report commissioned by the City from David Rosen & Associates and set the In-Lieu Fees through Fiscal Year 2021-22; and

WHEREAS, these In-Lieu Fees must be updated on an annual basis and adopted by City Council resolution, to the methodology outlined in the Report and in the Guidelines, which may be updated from time to time by the City Manager; and.

WHEREAS, on July 18, 2023, the City Council determined that the Construction Cost Index (CCI) is a reasonable alternative index for calculating the Rental In-Lieu Fee, which when applied results in a Rental In-Lieu Fee of $306,100 for Fiscal Year 2025-2026; and

WHEREAS, on July 18, 2023, the City Council also determined that the three-year average of the 30-year loan term interest rates taken from Freddie Mac Mortgage Market Survey is a reasonable alternative variable for calculating the Ownership/For-Sale In-Lieu Fee, which when applied results in an Ownership/For-Sale In-Lieu Fee of $268,800 for Fiscal Year 2025-2026.

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF

EAST PALO ALTO THAT IT HEREBY:

1. Finds the foregoing recitals are true and correct, and are incorporated by this reference into this action;

2. Adopts the inclusionary In-Lieu Fees for Ownership/For-Sale and Rental Units commencing September 16, 2025, as shown in **Exhibit A**, attached and incorporated by reference; and

3. Finds that the action being considered by the City Council is exempt from the California Environmental Quality Act (CEQA) because it is not a "project" pursuant to 15378(b)(4) because it is a fiscal activity which does not involve any commitment to any specific project which may result in a potentially significant impact on the environment.

PASSED AND ADOPTED this 15th day of July 2025, by the following vote:

AYES:
NOES:
ABSENT:
ABSTAIN:

SIGNED: _____
Martha Barragan, Mayor

ATTEST:

_____
James Colin, City Clerk

APPROVED AS TO FORM:

_____
John D. Lê, City Attorney

Exhibit A

inclusionary In-Lieu Fees	
Ownership/For-Sale In-Lieu Fee	**$268,800 per Unit**
Rental In-Lieu Fee	**$306,100 per Unit**

The inclusionary In-Lieu Fees shall be updated by resolution by the City Council on an annual basis and published on the City of East Palo Alto website.

Chapter 2A Calculation of Ownership/For-Sale In-Lieu Fees - Section 18.37.050 (B)

This attachment to the Guidelines describes the method utilized in calculating the For-Sale In-Lieu Fee. The figures below reflect the In-Lieu Fee through Fiscal Year 2025-2026, effective July 16, 2025.

City of East Palo Alto **Ownership/For-Sale Housing In-Lieu Fee Calculation***	
Affordable Price for 100% AMI Household	$484,600**
Market Sales Price (3-Yr SMC Association of Realtors Average)	$748,100
Gap for In-Lieu Fee (100% AMI)	$263,500 per unit
2% Increase Due to Delay	$5,300 per unit
Ownership/For-Sale In-Lieu Fee	**$268,800 per unit**

*Figures are rounded in this chart, but not in the actual calculation. Ownership/For-Sale In-Lieu Fee rounded to nearest hundredth.
**Note change in methodology to average three-year interest rate for loan term.

DRAFT

Illustrative Calculation for the For-Sale In-Lieu Fee for FY 2025-26

I. Annual 100% San Mateo County Income Limit for a 2 and 3-Person Household

2-Person Household 100% AMI	3-Person Household 100% AMI
$149,300	**$167,950**

The final calculation in Section II below will reflect a household size of 2.5. This will be a weighted average, where the 1-bedroom sales price is weighted as 23% of the total and the 2-bedroom sales price is weighted as 77% of the total based on the assumed distribution of dwelling units by bedroom count in the prototype (See Table A-2 in Attachment 2, Condominium column).

II. Calculation of the Annual and Monthly 100% Affordable Payment

2-Person Household 100%AMI	3-Person Household 100%AMI	Explanation
$149,300	$167,950	100% of AMI for 2.5-person household
X .30	X .30	Affordable housing cost not to exceed 30% of annual income
= $44,790	= $50,385	Maximum affordable payment
Divided by 12	Divided by 12	
= $3,733	**= $4,199**	**Maximum monthly affordable payment**

III. Assumptions to Calculate the Affordable Housing Cost for the For-Sale In-Lieu Fee

After the initial adoption of In-Lieu Fees, which were effective through Fiscal Year 2021-22, the following elements of the affordable housing cost calculation will be assumed each year, based upon relevant data pertaining to each. These elements will be determined by referencing industry standard sources. For Fiscal Year 2025-26, the Housing Division has determined the following values:

ITEM	VALUE	RATIONALE/DATA SOURCE	DATE SET
Interest Rate	6.29%	Freddie Mac Primary Mortgage Market Survey (PMMS) http://www.freddiemac.com/pmms/pmms_archives.html	3-Year Average, first week of January
Down Payment	5%	Industry standard/David Rosen & Associates	NA
Property Tax/Special Assessments	1.2%	David Rosen & Associates	NA

DRAFT

Homeowner Associations Dues (HOA)	$200	Average of monthly HOA dues for prototypical developments in East Palo Alto/David Rosen & Associates	NA
Utilities	$259-$325	Monthly estimated utility costs for County of San Mateo Housing Authority (by bedroom count)	Annually, as of 5/1/2025
Property Insurance	$100	Includes homeowners insurance (fire, hazard, etc.)/David Rosen & Associates	NA

IV. Determination of Purchase Related Costs & Affordable Monthly Mortgage Payment (The figures used in this section are based upon the above chart)

2-Person Household **100% AMI**	**3-Person Household** **100% AMI**	**Explanation**
Maximum monthly affordable payment of $3,733 less:	Maximum monthly affordable payment of $4,199 less:	See Part II above
[-] $635	[-] $635	Property taxes and assessments (per month) 1.2%
[-] $200	[-] $200	Homeowner's association dues (per month) $200
[-] $259	[-] $325	Utility allowance (per month)
[-] $100	[-] $100	Property insurance (per month)
[-] $1,194	[-]$1,260	Subtract the sum of all housing related expenses
= $2,539	**=$2,939**	**Remaining amount for maximum monthly mortgage payment**

DRAFT

V. Determination of Affordable Housing Cost (aka Maximum Sales Price)

The maximum sales price is calculated by adding the maximum monthly mortgage payment amount to the assumed down payment that will be contributed by the borrower. The maximum mortgage amount will be based on a fixed rate, 5% down, fully amortizing, widely available owner-occupied loan, and the above calculated maximum monthly mortgage payment allowable. The calculation functions as follows:

2-Person Household 100% AMI	3-Person Household 100% AMI	Explanation
6.29%	6%.29	3 yr avg interest rate, 30 yr loan term
$2,539	$2,939	Maximum monthly mortgage payment allowed
$410,547	$475,279	Maximum mortgage amount
$21,608	$25,015	Assumed downpayment (5%)
$432,155	$500,294	Maximum affordable sales price
$484,600 affordable sales price for 2.5-person household (rounded to nearest thousandth)		Weighted average based on condominium prototype

This amount is known as the "Affordable Housing Cost" for the purpose of determining the for-sale in-lieu fee amount for FY 2024-25.

VI. Calculation of the Annual Median Sales Price

The market-rate sales price is based on a weighted 3-year average of median home prices in San Mateo County provided by the San Mateo County Association of Realtors. This calculation is shown below.

1) First, utilize information provided by the San Mateo County Association of Realtors to determine the annual median sales price of an attached market rate unit (condominiums) for the most recent completed year and for the two prior years.

2) Utilizing the median sale price for each 12-month period, the Housing Department will calculate the median sale price over the past 36-month period.

3) Below is the current estimate based on sales from calendar years 2021-2023.

DRAFT

Median Home Prices City of East Palo Alto 2021-2023		
Year	**Median Price**	**# Sales**
Single Family		
2022	$1,062,500	90
2023	$960,000	80
2024	$1,050,000	91
Weighted Average	**$1,027,000** (rounded to nearest thousandth)	
Condominium		
2022	$788,000	17
2023	$759,500	10
2024	$635,000	7
Weighted Average	**$748,000** (rounded to nearest thousandth)	

This amount is known as the "Median Sales Price Calculation" for the purpose of determining the for-sale in-lieu fee amount for FY 2025-26.

DRAFT

VII. In Lieu Fee Additional Charges

The Ordinance also allows the Housing Department to collect an administrative fee account for the estimated costs of administration. This administrative fee may be levied as part of the In-Lieu Fee or as a separate charge. In addition, the In-Lieu Fee can account for the estimated cost of increases in the price of housing and construction between payment and the acquisition of land and construction of affordable units.

At this time, the In-Lieu Fee described in this document does not include an administrative fee in the calculation. However, the In-Lieu Fee amount shown at the beginning of this Chapter will include a 2% increase to account for the delay between payment and construction of affordable dwelling units, as illustrated in Section VIII.

VIII. Calculation of the For-Sale In-Lieu Fee

Calculate the For-Sale In-Lieu Fee by subtracting the Maximum Affordable Price (Step V) from Median Sales Price Calculation (Step VI). The In-Lieu Fee shall be collected on twenty percent (20%) of the total dwelling units in the Residential Development.

Median Sales Price Calculation (Section VI):	$748,100
	-
Affordable Housing Cost (Section V):	$484,600
	=
Difference:	$ 263,500
	+
In-Lieu Fee Additional Charges:	$ 0
[Administrative Fee]	+
[2% Increase Due to Delay]	$5,300
	=
In-Lieu fee Per Inclusionary Unit	**268,800**

Please see the calculation below using an example Residential Development project containing 100 dwelling units:

Total Number of Dwelling Units:	100
	X
Multiplied by 25%:	.25
	=
Units required to pay In-Lieu Fee:	25
	X
In-Lieu Fee per Inclusionary Unit:	$ $268,800
	=

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In-Lieu Fee for a Residential Development of 100 Dwelling Units:	**$ 6,720,000**

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Chapter 2B Calculation of In-Lieu Fees – Rental - Section 18.37.080 (B)

I. Introduction

The Rental In-Lieu Fee is calculated from the financing gap required to build affordable rental dwelling units using 4% Low Income Housing Tax Credits (LIHTC or tax credits) assuming a blended affordability of 25% of the Inclusionary Units affordable to households at or below 35% AMI (35% AMI), 50% of the Inclusionary Units affordable to households at or below 50% of AMI (very low-income), and the remaining 25% of Inclusionary Units affordable to households at or below 60% AMI (low-income). This reflects the requirement in Section 18.37.050(2).

II. Calculation of the Rental In-Lieu Fee

The City retained David Rosen & Associates to conduct the analysis for the initial calculation of the Rental In-Lieu Fee, beginning in 2020. The multifamily rental prototype used in this calculation is based on historical data from affordable rental multifamily housing prototypes in East Palo Alto and an analysis of 2017-2019 Low Income Housing Tax Credit applications. Further detailed analysis and methodology can be found in Attachment 2C.

During the FY 2021-2022 and FY 2022-2023 updates, the fees were updated using the percentage change in new home prices in the fourth quarter of the previous two years. Given that the data source for new home prices was discontinued, for FY 2024-2025, the City opted to update the fees using the Construction Cost Index (CCI). A summary of the current FY 2025-2026 Rental Housing In-Lieu Fees, updated from the FY 2024-25 Rental Housing In-Lieu Fee Calculation, is provided below:

City of East Palo Alto Baseline Rental Housing In-Lieu Fee Calculation (2020)*	
	Apartments, Structured Parking
Tax Credit Equity per Dwelling Unit	$233,000
Permanent Mortgage Financing per Dwelling Unit	$182,400
Total Sources per Dwelling Unit	$415,400
Development Cost per Dwelling Unit	$665,000
Gap for In-Lieu Fee (Blended AMI)	$250,000 per unit
2% Increase Due to Delay	$5,000 per unit
Baseline In-Lieu Fee for Rental (2020)	**$255,000 per unit**

FY 2025-26 Rental Housing In-Lieu Fee Calculation*	
December 2023 CCI	9,654
December 2024 CCI	9,876
Percentage Change	+2.3%
2024 Rental In-Lieu Fee	$299,200
FY 2025-2026 Rental In-Lieu Fee 2.3% increase)	**$306,100 per unit**

*Figures are rounded in this chart, but not in the actual calculation. Rental In-Lieu Fee rounded to nearest hundredth.

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The full calculation of the baseline Rental In-Lieu Fee and subsequent annual increases are described below.

1. The Total Development Cost is calculated based on the following cost assumptions:

Assumption	**Amount**
Land price	$16,335,000
Building Hard Construction Cost (including prevailing wage and structured parking)	$73,095,000
Soft Costs (including development impact fees)	$22,033,500 (30%)
Total Development Cost	**$111,358,500 ($636,334 per unit)**

2. The Affordable Rent calculation is based on the maximum household income at the income levels specified below, adjusted by household size, less utilities:
   - 35% AMI [25% of dwelling units]
   - 50% AMI [50% of dwelling units]
   - 60% AMI [25% of dwelling units]

   Utility cost varies by bedroom count and is based on the utilities allowances from the Housing Authority of San Mateo County. The occupancy standard is 1.5 persons per bedroom.

3. Net Operating Income and Supportable Mortgage amount are calculated based on Affordable Gross Rents less the following:

Assumption	
Operating Costs	$2,365,078
Replacement Reserves	$43,750
Vacancy	$182,044 (5%)

4. Tax credit equity from 4% tax-exempt bonds is assumed and added to the Permanent Mortgage Amount to calculate the total sources for the project.

Source	**Amount**
Permanent Mortgage	$31,925,408
Tax Credit Equity (4%)	$40,803,684
Total Sources	$72,729,092

5. The gap between the Total Sources and the Total Development Cost is the In-Lieu Fee.

Total Sources	$72,729,092
Total Development Cost (incl. Developer Fee and Capitalized Operating Reserves assumption)	$116,490,147
Gap (In-Lieu Amount)	**$43,761,056 ($250,000 per unit)**

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This In-Lieu Fee is effective through FY 2025-2026, starting July 16, 2025.

Annual adjustments of the Rental In-Lieu Fee were formerly based on the Northern California Real Estate Construction Report published by the Real Estate Research Council of Southern California at California State Polytechnic University, Pomona. The Rental In-Lieu Fee was adjusted based upon the percentage difference in the current completed year new home prices in San Mateo County from the immediately preceding year as published in the Northern California Real Estate Construction Report. Given that the report and data for new home prices is no longer available, the Construction Cost Index (CCI) is used to calculate the Rental In-Lieu Fee adjustment instead.

The updated calculation for annual adjustment is made as follows:

December 2022 Construction Cost Index	9,654
December 2023 Construction Cost Index	9,876
Difference:	222
Divide the difference by the 2022 figure to determine the % difference of the current year and the preceding year:	2.3%
Then multiply the current In-Lieu Fee by 100% plus this percentage:	102.3% x $299,200
In-Lieu Fee per Unit:	**$306,100***

*Figure rounded to nearest hundredth.

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III. In-Lieu Fee Additional Charges

The Housing Division may collect an administrative fee to account for the estimated costs of administration. This administrative fee may be levied as part of the In-Lieu Fee or as a separate charge. In addition, the In-Lieu Fee can account for the estimated cost of increases in the price of housing and construction between payment and the acquisition of land and construction of affordable dwelling units.

The In-Lieu Fee described in this document does not currently include an administrative fee in the calculation. However, the In-Lieu Fee amount shown at the beginning of this Chapter includes a 2% increase to account for the delay between payment and construction of affordable dwelling units.

Please see the calculation below using an example Residential Development project of 100 dwelling units:

Rental In-Lieu Fee (FY 2024-25)		$299,200
Total Number of Dwelling Units:		100
		X
Multiplied by 25%:	__	.25
Units Required to Pay In-Lieu Fee:		25
		X
In-Lieu Fee Per Inclusionary Unit	__	$306,100

In-Lieu Fee for a Residential Development of 100 Dwelling Units: **$7,652,500**

DRAFT

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April 27, 2020

To: Rachel Horst, Patrick Heisinger, Victor Ramirez

From: Nora Lake-Brown

Subject: Inclusionary Housing In Lieu Fee Update

DRA was retained by the City of East Palo to prepare an analysis estimating the in lieu fee associated with potential new requirements under the City's Inclusionary Housing Ordinance to help inform the City Council's consideration of the proposed changes. DRA estimates in lieu fees for both rental and owner housing using an analysis of prototypical housing developments appropriate for East Palo Alto, as summarized in the City of East Palo Alto Inclusionary Housing In Lieu Fee Analysis report dated September 19, 2019. This memorandum summarizes DRA's update of the in lieu fee estimates based on data available through the date of this memo.

The gap calculations are based on the City's intended use of any in-lieu fees raised. For the for-sale units, the in-lieu fee is calculated as the difference between affordable prices by income level and the median sales price of single-family detached or condominium units over the past 36 months[1]. This approximates the gap needed to assist a homebuyer at a target income level to purchase a market-rate home at an affordable housing costs, which is how the City is most likely to use in lieu fees for owner housing. For the rental units, the in lieu fee is calculated from the financing gap required to build affordable rental units using 4% Low Income Housing Tax Credits (LIHTC or tax credits) assuming a blended affordability of 25% of the affordable units at 35% AMI, 50% of affordable units at 50% of AMI, and the remaining 25% of affordable units at 60% AMI. The City anticipates using in lieu fees to assist housing developers in developing affordable rental units as part of a new 4% tax credit-financed projects.

The calculated 2020 In Lieu Fees are summarized on the next page. The tables in Attachment A to this memo detail the updated calculations.

[1] Calculated as the weighted average median price for 2017 to 2019 from the San Mateo County Association of Realtors.

Ownership Housing In Lieu Fee Calculation City of East Palo Alto April, 2020	
	Condominium Type
Affordable Purchase Price for 100% AMI Household	$477,000
Market Sales Price (SMC Association of Realtors 3-Yr Average)	$671,000
Gap for In-Lieu Fee (100% AMI)	**$194,000 per Unit** **$227 per Gross SF**

Sources: San Mateo County Association of Realtors, David Rosen & Associates

Renter Housing In-Lieu Fees per Affordable Unit and per Square Foot City of East Palo Alto April, 2020	
	Apartments, **Structured Parking**
Tax Credit Equity Per Unit Permanent Mortgage Financing Per Unit Total Sources Per Unit	$233,000 $182,400 $250,000
Development Cost Per Unit	$665,000
Gap for In-Lieu Fee (Blended AMI) [2]	**$250,000** **$263 per Gross SF**

Source: David Rosen & Associates

[2] Fee represents a blended affordability assuming 25% of the affordable units at 35% AMI, 50% of affordable units at 50% of AMI, and the remaining 25% of affordable units at 60% AMI.

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Attachment A
East Palo Alto
Affordability Gap and In Lieu Fee Tables

4/27/20

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Table A-1
Summary of Indicated In Lieu Fees Per Affordable Unit and per Affordable Gross
East Palo Alto Affordability Gap and In Lieu Fee Analysis

	Owner		Rental
	Condominiums		Apts. w/ Struct. Pkg
Tenure	*Owner*		*Rental*
Total Residential Units	*175*		*175*
Affordable Residential Units	*35*		*35*
Site Area (SF)	*108,900*		*108,900*
Residential Net SF	*149,500*		*132,900*
Total Net SF	*149,500*		*132,900*
Building Efficiency Ratio	*80%*		*80%*
Residential Gross SF	*186,875*		*166,125*
Approximate Building Stories	*4 Stories*		*4 Stories*
Affordability Gap and In Lieu Fee, Owner Housing			
100% AMI			
Per Affordable Housing Unit	$193,964		N/A
Per Affordable Housing Gross Square Foot (GSF)	$227.12		N/A
Affordability Gap and In Lieu Fee, Renter Housing			
Blended Affordability (1)			$
Per Affordable Housing Unit	N/A		$250,063
Per Affordable Housing Gross Square Foot (GSF)	N/A		$263.42

(1) Assumes the following percentage distribution of affordable rental units by % of AMI: 25% of affordable units at 35% AMI; 50% of affordable units at 50% AMI and 25% of affordable units at 60% AMI. Hard costs in renter gap calculation assume payment of prevailing wages. Assumes leverage from 4% Low Income Housing Tax Credits.

Source: DRA.

Table A-2
Development Prototypes
East Palo Alto Affordability Gap and In Lieu Fee Analysis

	Condominiums	Apts. w/ Struct. Pkg
Total Housing Unit Count	**175 Units**	**175 Units**
Tenure	**Owner**	**Rental**
Existing Zoning		
Permitted FAR		
Total Site Area (Acre)	2.50 Acres	2.50 Acres
Total Site Area (SF)	108,900	108,900
Density (Units Per Acre)	70	70
Construction Type	Podium	Podium
Parking Type	Structured/UG	Structured/UG
Approximate Building Stories	4 Stories	4 Stories
Total Gross Building SF (Excl. Pkg.)	**186,875**	**166,125**
FAR Based on Gross SF	**1.7**	**1.5**
Net Residential Square Feet	149,500 SF	132,900 SF
Net SF Retail/Community Facility	0 SF	0 SF
Net SF Common Space	0 SF	0 SF
Total Net Building SF	149,500 SF	132,900 SF
Building Efficiency Ratio (%)	80%	80%
Unit Bedroom Count Distribution		
Studio/Loft	0%	0%
One Bedroom	23%	40%
Two Bedroom	77%	50%
Three Bedroom	0%	10%
Four Bedroom	0%	0%
Total	100%	100%
Units by BR Count		
Studio/Loft	0	0
One Bedroom	40	70
Two Bedroom	135	88
Three Bedroom	0	17
Four Bedroom	0	0
Total Residential Units	175	175
Unit Size (Net SF)		
Studio/Loft		
One Bedroom	700 SF	650 SF
Two Bedroom	900 SF	800 SF
Three Bedroom	1,100 SF	1,000 SF
Four Bedroom		
Average Unit Size	*854 SF*	*759 SF*
Parking Ratio (Spaces/Unit)		
Studio/Loft	1.00	0.00
One Bedroom	1.00	1.00
Two Bedroom	1.50	1.50
Three Bedroom	2.00	2.00
Four Bedroom	2.00	2.00
Average Spaces/Unit	1.39	1.35
Structured/Underground Parking Spaces	243 Spaces	236 Spaces
Tuck-Under Parking Spaces	0 Spaces	0 Spaces
Surface Parking Spaces	0 Spaces	0 Spaces
Total Parking Spaces Provided	**243 Spaces**	**236 Spaces**
Gross SF/Parking Space (Incl. Circulation)	300 SF	300 SF
Total Gross Parking SF	72,900 SF	70,800 SF
Parking SF Underground/Structured	72,900 SF	70,800 SF
Parking SF Tuck Under	0 SF	0 SF
Parking SF Surface	0 SF	0 SF

Source: DRA.

Table A-3
Development Cost Assumptions and Budgets
East Palo Alto Affordability Gap and In Lieu Fee Analysis
2019

		Condominiums	Apts. w/ Struct. Pkg
Tenure		**Owner**	**Rental**
Construction Type		**Podium**	**Podium**
Total Residential Units		*175*	*175*
Average Unit Size (Net SF)		*854*	*759*
Residential Net SF		*149,500*	*132,900*
Total Net Building SF		*149,500*	*132,900*
Total Gross SF Building Area (Excluding Parking)		*186,875*	*166,125*
Total Gross SF Building Area (Including Subt. Parking)		*259,775*	*236,925*
Structured/Underground Parking Spaces		*243*	*236*
Underground Parking Area (SF)		*72,900*	*70,800*
Total Parking Spaces		*243*	*236*
Total Parking SF		*72,900*	*70,800*
Site Area (SF)		*108,900*	*108,900*
Approximate Building Stories		*4*	*4*
FAR (Based on Gross SF)		*1.37*	*1.22*
Buildable Square Feet		*149,500*	*132,900*
ASSUMPTIONS			
Development Cost Assumptions			
Land Price	Per Hsg. Unit	$43,560	$93,343
	Per Site SF	$70	$150
Bldg. Hard Construction Cost	Per Net SF (1)		
Bldg. Hard Construction Cost (1)	Per Net SF	$350	$550
Pkg. Costs Incl. In Hard Costs	*1=No, 0=Yes*	*0*	*0*
Underground Parking Construction	Per SF Parking Area	$0	$0
Hard Cost Contingency	% of Hard Costs	0.0%	0.0%
Soft Costs (Incl. Dev. Impact Fees)	% of Hard Costs + Cont.	30%	30%
Owner Housing Sales Costs	% of Gross Sales	5%	5%
Loan to Cost Ratio	% of TDC	65%	65%
Equity as a % of TDC		35%	35%
Loan to Value Ratio	% of Capitaliz. Value	75%	75%
Debt Coverage Ratio		1.25	1.25
Interest Rate		5.5%	5.5%
Amortization Term	Years	30.0	30.0
Capitalization Rate (2)			
Return on Cost	% of TDC, Incl. Land	12.0%	12.0%
Construction and Sales/Stabilization Period (Months)		36 Months	24 Months
DEVELOPMENT BUDGET			
Low Scenario			
Land Acquisition		$7,623,000	$16,335,000
Construction Hard Costs		$52,325,000	$73,095,000
Soft Costs		$15,697,500	$21,928,500
Total Development Costs, Including Land		**$75,645,500**	**$111,358,500**
TDC Per Gross SF		$405	$670
TDC Per Housing Unit		$432,260	$636,334
TDC per Net SF Residential Area		$506	$838
Total Development Costs, Excluding Land		**$68,022,500**	**$95,023,500**
TDC per Gross SF		$364	$572
TDC Per Housing Unit		$388,700	$542,991
TDC per Net SF Residential Area		$455	$715

(1) Hard construction costs include parking construction. For renter prototypes, estimated hard costs assume payment c
(2) Based on CBRE "U.S. Cap Rate Survey, Advance Review, H1 2019", July 2019. For San Jose, multifamily infill cap ra

Source: DRA

Table A-4
Affordable Sales Price Calculations by Income Level
Owner Housing
East Palo Alto Affordability Gap and In Lieu Fee Analysis

Assumptions

2019 Median Income, San Mateo County			$143,100	
Affordable Mortgage Principal and Interest as a % of Income			30%	
No. of Bedrooms		**1 Bedroom**	**2 Bedroom**	**3 Bedroom**
Household Size		**2.0 Persons**	**3.0 Persons**	4 Persons
Household Size Income Adjust. Factor		**80%**	**90%**	100%
Owner Utility Allowance (1)		$151	$189	$234
Monthly HOA Fee: Market-Rate Units	$200			
Monthly Property Insurance	$100			
Property Tax Rate (2)	1.20%			
Mortgage Interest Rate (3)	3.50%			
Term (Years)	30			
Downpayment (% of Sales Price)	5.00%			

Per Unit Affordable Sales Price by Unit Bedroom Count

		1 Bedroom	**2 Bedroom**	**3 Bedroom**
100% AMI				
Annual Gross Income		$114,480	$128,790	$143,100
Affordable Monthly Housing Expense		$2,862	$3,220	$3,578
Less: Monthly Utility Allowance		($151)	($189)	($234)
Less: HOA/Maintenance Expense		($200)	($200)	($200)
Less: Property Insurance		($100)	($100)	($100)
Available for Principal, Interest, Taxes		$2,411	$2,731	$3,044
Less: Property Taxes (4)	1.20%	$565	$640	$714
Supportable Mortgage		$536,918	$608,180	$677,884
Assumed Assessed Value at Sale	95.00%	$565,176	$640,189	$713,562
Available for Mortg. Principal and Interest		$1,846	$2,091	$2,330
Supportable Mortgage		$411,056	$465,613	$518,977
Plus: Downpayment @	5.00%	$21,635	$24,505	$27,315
Affordable Sales Price (Rounded)		**$432,700**	**$490,100**	**$546,300**

(1) Assumes electric heating, cooking, water heating, other electric, water and trash collection.
(2) Estimated to include property taxes and assessments.
(3) Source: Freddie Mac Primary Mortgage Market Survey (PMMS) average weekly rate for March 26, 2020 for
(4) Property taxes estimated by multiplying the affordable sales price by the property tax rates.
Source: DRA

Table A-5
Median Home Prices
City of East Palo Alto
2017 to 2019

Year	Median Price	# of Sales
Single-Family		
2017	$839,000	123
2018	$980,000	112
2019	$965,000	91
Weighted Average	$922,613	
Total		326
Condominium		
2017	$672,000	15
2018	$750,000	4
2019	$637,500	10
Weighted Average/	$670,862	
Total		29

Source: San Mateo County Association of Realtors; DRA.

Table A-6
Owner Gap and In Lieu Fee Calculation
Condominium
City of East Palo Alto Affordability Gap Analysis

Income Level	No. of BR	Unit SF	Maximum Monthly Housing Cost (1)	Affordable Sales Price Per Unit (1)	3-Year Trailing Ave. Single-Family Median Home Price (2)	Gap Per Affordable Unit	Gap Per Affordable Unit SF	% of Total Units by Unit Bedroom Count (3)
70% of AMI	1	700	$2,436	$356,200	$670,862	$314,662	$449.52	23%
80% of AMI	1	700	$2,784	$418,700	$670,862	$252,162	$360.23	23%
90% of AMI	1	700	$3,132	$481,100	$670,862	$189,762	$271.09	23%
100% of AMI	1	700	$2,862	$432,700	$670,862	$238,162	$340.23	23%
120% of AMI	1	700	$3,434	$535,300	$670,862	$135,562	$193.66	23%
70% of AMI	2	900	$2,741	$404,200	$670,862	$266,662	$296.29	77%
80% of AMI	2	900	$3,132	$474,300	$670,862	$196,562	$218.40	77%
90% of AMI	2	900	$3,524	$544,700	$670,862	$126,162	$140.18	77%
100% of AMI	2	900	$3,220	$490,100	$670,862	$180,762	$200.85	77%
120% of AMI	2	900	$3,864	$605,700	$670,862	$65,162	$72.40	77%
70% of AMI	Weighted Average (1)	854	$2,671	$393,160	$670,862	$277,702	$325.18	100%
80% of AMI	Weighted Average (1)	854	$3,052	$461,512	$670,862	$209,350	$245.14	100%
90% of AMI	Weighted Average (1)	854	$3,434	$530,072	$670,862	$140,790	$164.86	100%
100% of AMI	Weighted Average (1)	854	$3,138	$476,898	$670,862	$193,964	$227.12	100%
120% of AMI	Weighted Average (1)	854	$3,765	$589,508	$670,862	$81,354	$95.26	100%

(1) From Table A-5
(2) Weighted average median condominium sales price for East Palo Alto for 2016, 2017 and 2018.
(3) Percent of units by bedroom count for the owner Prototype #1.

Source: DRA.

Table A-7
Utility Allowances
East Palo Alto Affordability Gap and In Lieu Fee Analysis

No. of Bedrooms	**Studio**	**1 Bedroom**	**2 Bedroom**	**3 Bedroom**	**4 Bedroom**
Heating					
Natural Gas					
Electric	$14	$17	$21	$26	$31
Cooking					
Natural Gas					
Electric	$6	$7	$10	$13	$16
Water Heating					
Natural Gas					
Electric	$14	$16	$21	$25	$30
Other Electric	$18	$22	$32	$45	$58
Assumed Tenant-Paid Utilities, All Electric (1)	**$52**	**$62**	**$84**	**$109**	**$135**

(1) Assumes electric cooking, heating, water heating, and other electric.

Source: Housing Authority of the County of San Mateo, effective 11/1/2019.

Table A-8
Affordable Rent Calculations by Income Level
Rental Housing
East Palo Alto Affordability Gap and In Lieu Fee Analysis

Assumptions

2020 Median Income, San Mateo County	$143,100
2020 Adjusted Median Income for Calculating Rents (1)	$174,000
Affordable Housing Expense As a % of Income (2)	30%

No. of Bedrooms	**Studio**	**1 Bedroom**	**2 Bedroom**	**3 Bedroom**	**4 Bedroom**
Household Size	1.0 Persons	1.5 Persons	3.0 Persons	4.5 Persons	6.0 Persons
Household Size Income Adjust. Factor	70%	75%	90%	104%	116%
Renter Utility Allowance (3)	$52	$62	$84	$109	$135

	Studio	**1 Bedroom**	**2 Bedroom**	**3 Bedroom**	**4 Bedroom**
Per Unit Supportable Mortgage By Income Level					
35% of MFI					
Annual Income Limit	$42,630	$45,675	$54,810	$63,336	$70,644
Affordable Monthly Housing Expense	$1,066	$1,142	$1,370	$1,583	$1,766
Less: Monthly Utility Allowance	($52)	($62)	($84)	($109)	($135)
Affordable Monthly Rent	$1,014	$1,080	$1,286	$1,474	$1,631
50% of Median					
Annual Income Limit	$60,900	$65,250	$78,300	$90,480	$100,920
Affordable Monthly Housing Expense	$1,523	$1,631	$1,958	$2,262	$2,523
Less: Monthly Utility Allowance	($52)	($62)	($84)	($109)	($135)
Affordable Monthly Rent	$1,471	$1,569	$1,874	$2,153	$2,388
60% of Median					
Annual Income Limit	$73,080	$78,300	$93,960	$108,576	$121,104
Affordable Monthly Housing Expense	$1,827	$1,958	$2,349	$2,714	$3,028
Less: Monthly Utility Allowance	($52)	($62)	($84)	($109)	($135)
Affordable Monthly Rent	$1,775	$1,896	$2,265	$2,605	$2,893

Summary of Affordable Rents	**Studio**	**1 Bedroom**	**2 Bedroom**	**3 Bedroom**	**4 Bedroom**
35% of Median	$1,014	$1,080	$1,286	$1,474	$1,631
40% of Median	$1,166	$1,243	$1,482	$1,701	$1,883
50% of Median	$1,471	$1,569	$1,874	$2,153	$2,388
70% of Median	$1,775	$1,896	$2,265	$2,605	$2,893
80% of Median	$2,384	$2,548	$3,048	$3,510	$3,902
130% of Median	$3,907	$4,179	$5,006	$5,772	$6,425

(1) Since the Bay Area is a high housing cost area, income limits for households at 80% of AMI are adjusted upwards from the straight AMI calculations; the effective median income equals $161,400 for a household of four at 100% AMI.
(2) Assumes 30% of gross income for rent plus utilities.
(3) Assumes tenants pay for electric cooking, heating, water heating and other electric. Based on utility allowances from the Housing Authority of San Mateo County, effective 11/1/2018.
Source: HUD; Housing Authority of San Mateo County; DRA.

Table A-9
Rental Net Operating Income and Supportable Mortgage
Prototype 4
Apts. w/ Struct. Pkg
East Palo Alto Affordability Gap and In Lieu Fee Analysis

	Projections		Assumptions	
	No Tax Credits	4% Tax Credits, Tax Exempt Bonds	No Tax Credits	4% Tax Credits, Tax Exempt Bonds
Number of Units by Income Level			**% Units by Income and Unit BR Count**	
35% AMI			**35% AMI**	**35% AMI**
One Bedroom	18	18	25%	25%
Two Bedroom	22	22	25%	25%
Three Bedroom	4	4	25%	25%
40% AMI			**40% AMI**	**40% AMI**
One Bedroom	0	0	0%	0%
Two Bedroom	0	0	0%	0%
Three Bedroom	0	0	0%	0%
50% AMI			**50% AMI**	**50% AMI**
One Bedroom	35	35	50%	50%
Two Bedroom	43	43	50%	50%
Three Bedroom	9	9	50%	50%
60% AMI			**60% AMI**	**60% AMI**
One Bedroom	18	18	25%	25%
Two Bedroom	22	22	25%	25%
Three Bedroom	4	4	25%	25%
Monthly Gross Rents			**Monthly Rent by Income and BR Count**	
35% AMI			35% AMI	Tax Credit Rents
One Bedroom	$19,440	$19,440	One Bedroom	$1,080
Two Bedroom	$28,292	$28,292	Two Bedroom	$1,286
Three Bedroom	$5,896	$5,896	Three Bedroom	$1,474
50% AMI			50% AMI	
One Bedroom	$54,915	$54,915	One Bedroom	$1,569
Two Bedroom	$80,582	$80,582	Two Bedroom	$1,874
Three Bedroom	$19,377	$19,377	Three Bedroom	$2,153
60% AMI			60% AMI	
One Bedroom	$34,128	$34,128	One Bedroom	$1,896
Two Bedroom	$49,830	$49,830	Two Bedroom	$2,265
Three Bedroom	$10,420	$10,420	Three Bedroom	$2,605
Annual Gross Rents	$3,640,872	$3,640,872		
Less: Vacancy	($182,044)	($182,044)		
Less: Operating Costs	($1,050,000)	($1,050,000)	**Total Units:**	175
Less: Replacement Reservses	($43,750)	($43,750)		
Net Operating Income	$2,365,078	$2,365,078	One Bedroom	40%
Annual Debt Service	$2,056,590	$2,056,590	Two Bedroom	50%
Permanent Mortgage Amount	$28,585,163	$31,925,408	Three Bedroom	10%
Vacancy Rate	5.00%	5.00%		
Annual Operating Cost Per Unit	$6,000	$6,000		
Annual Replace. Reserve/Unit (1)	$250	$250		
Mortgage Interest Rate	6.00%	5.00%		
Debt Coverage Ratio	1.15	1.15		
Term (Years)	30	30		

Source: DRA

Table A-10
Rental Gap and In Lieu Fee With 4% Tax Credits
Prototype 4
Apts. w/ Struct. Pkg
East Palo Alto Affordability Gap and In Lieu Fee Analysis

	No Tax Credits	4% Tax Credits, Tax Exempt Bonds	Assumptions	
SOURCES AND USES				
			Total Units	175
PERMANENT SOURCES OF FUNDS			Acres	2.50
Federal Tax Credit Equity (1)	$0	$40,803,684	Unit/Acre	70.00
Permanent Mortgage	$28,585,163	$31,925,408	Gross Bldg SF	166,125
Deferred Developer Fee (2)	$0	$0		
Gap Financing Required	$97,026,862	$43,761,056		
TOTAL SOURCES	**$125,612,025**	**$116,490,147**		
Permanent Gap Financing/Unit	$554,439	**$250,063**		
Permanent Gap Financing/SF	$584.06	**$263.42**		
PERMANENT USES OF FUNDS				
Land Acquisition Costs	$16,335,000	$16,335,000		
Direct Construction Costs	$73,095,000	$73,095,000		
Soft Costs	$21,928,500	$22,033,500		
Capitalized Operating Reserve (3)	$0	$776,647		
Developer Fee/Profit (4)	$14,253,525	$4,250,000		
TOTAL COST	**$125,612,025**	**$116,490,147**		
Total Cost Per Unit	$717,783	$665,658		
Assumptions and Calculations				
			% of Cost in Basis (Exluding Land)	
Tax Credit Basis			**4% Tax Credits**	
Land Acquisition Costs	N/A	$0	0%	
Direct Construction Costs	N/A	$73,095,000	100%	
Soft Costs	N/A	$9,915,075	45%	
Developer Overhead and Profit	N/A	$4,250,000	100%	
Total Tax Credit Basis	N/A	$87,260,075	87%	
Basis Boost (%) (5)	N/A	130%		
Total Tax Credit Basis	N/A	**$113,438,098**		
Tax Credit Rate (Per CTCAC) (6)	N/A	3.27%		
Annual Tax Credits (7)	N/A	$3,709,426		
Tax Credit Pricing	N/A	$1.10		
Maximum Federal Tax Credit Equity		$40,803,684		

N/A = not applicable.
(1) Equals annual tax credits multiplied by tax credit pricing multiplied by 10 years.
(2) DRA did not estimate the deferred developer fees that could be used to reduce or close the gap.
(3) Under California Tax Credit Allocation Committee (CTCAC), minimum reserve pf 3 months operations plus debt service.
(4) For no tax credit scenario, assumes 15% of hard plus soft costs. For 4% tax credits, equals 15% of eligible basis to a maximum of $2.5 M plus $10,000 per unit per CTCAC Regulations.
(5) Projects located in a Qualified Census Tract (QCT) or Difficult to Develop Area (DDA) are eligible for a 30% basis boost. East Palo Alto zip code 94303 is a DDA.
(6) 2019 tax credit factors from CTCAC.
(7) Equals total tax credit basis multiplied by tax credit rate.

Source: DRA

EAST PALO ALTO CITY COUNCIL STAFF REPORT

DATE: July 15, 2025

TO: Honorable Mayor and Members of the City Council

VIA: Melvin E. Gaines, City Manager

BY: Tomohito Oku, Finance Director

SUBJECT: Cost Allocation Plan and User Fee reports and amendment to City's Master Fee Schedule – Continued from June 17, 2025

Recommendation

Adopt a resolution:

1. Approving the Cost Allocation Plan and User and Regulatory Fee Study as the basis for amending the Master Fee Schedule;
2. Amending the City's Master Fee Schedule, based on Cost Allocation Plan and User and Regulatory Fee Study; and
3. Finding the proposed action does not constitute a "project" with the meaning of the California Environmental Quality Act ("CEQA") pursuant to CEQA Guidelines sections 15378(b)(4) and (5) in that it is a governmental fiscal, organizational or administrative activity that will not result in direct or indirect changes in the environment.

Alignment with City Council Strategic Plan

This recommendation is primarily aligned with:

- Priority: Governance, Organizational Strength, and Fiscal Sustainability

Background

This item is a continuation of the public hearing originally held on June 17, 2025, regarding the proposed updates to the City's comprehensive fee schedule. During that meeting, the City Council received staff's presentation and initial public comments. In response to community interest and in recognition of the importance of stakeholder engagement, the Council directed

staff to extend the public hearing to allow additional time for community developers, interested residents, and other members of the public to provide input on the proposed fee changes.

Accordingly, the public hearing has been continued to the July 15, 2025 City Council meeting to facilitate further community participation and ensure that all feedback is considered before any final action is taken. No changes to the proposed fee schedule have been made since the June 17 meeting; however, staff will continue to accept and review comments submitted in writing or made during the public hearing.

Public Notice

The public was provided notice by making the agenda and report available on the City's website and on a bulletin board located at City Hall: 2415 University Avenue, East Palo Alto. In addition, a notice of public hearing was published on a local newspaper on June 6, 2025.

Environmental

The proposed action does not constitute a "project" with the meaning of the California Environmental Quality Act ("CEQA") pursuant to CEQA Guidelines sections 15378(b)(4) and (5) in that it is a governmental fiscal, organizational or administrative activity that will not result in direct or indirect changes in the environment.

Government Code § 84308

Applicability of Levine Act: No, as the proposed action does not involve an entitlement.

Analysis of Levine Act Compliance: Not applicable.

Attachments

1. Resolution to amend City's Master Fee Schedule
2. Staff Report from June 17, 2025, City Council Meeting
3. Cost Allocation Plan study report
4. User and Regulatory Fee study report
5. Comparative Schedule of Current and Proposed User and Regulatory Fees

Exhibit A

Fee Name	Unit	New Proposed Fee
Planning		
Pre-Application Fees		
Hourly Pre-Application (1 hr. minimum)	Per Hour	$337
Pre-Application Services for Projects Subject to City's Pre-Application Ordinance	Deposit	$8,312
Preliminary Ministerial Review Hourly (2 hr. minimum)	Per Hour	$337
Appeals		
Appeals to City Council (if initiated by City Council - no charge)	Each	$9,361
Appeals to Planning Commission	Each	$9,361
Subdivision		
Certificate of Compliance	Each	$2,147
Condominium Conversion	Deposit	$41,000
Final Maps Planning Review of Engineering Application		
4 lots or less	Each	$1,682
5 - 25 lots	Each	$2,020
>25 lots	Each	$2,357
Lot Line Adjustment	Each	$2,695
Lot Line Merger	Each	$2,695
Tentative Map		
4 lots or less	Each	$8,354
5 - 25 lots	Each	$10,042
>25 lots	Deposit	$11,730
Tentative Map Extension	Each	$2,731
Tentative Map Modification	Each	$3,744
Design Review*		
Administrative	Each	$4,715
Planning Commission Review	Each	$14,866
Garage Conversions / Minor ADR (400-s-f. or less)	Per Hour	$337
Permit Adjustment Minor	Each	$693
Permit Adjustment Major	Each	$1,345
Legislative Actions		
General Plan Amendment	Deposit	$22,000
Planned Unit Development	Deposit	$15,000
Zone Change/Text Amendment	Deposit	$12,000
Tree Removal*		
1-2 trees	Base	$506
3 or more	Per Tree	$29
Signage*		
Master/Common Sign Program	Each	$8,154
Permanent Sign	Per Sign	$1,048
Temporary Sign	Per Sign	$494
Use Permit*		
Administrative Use Permit (AUP) / Special Use Permit (SUP)	Each	$4,715
Conditional Use Permits (CUP)	Each	$14,866
Public Convenience/Necessity Application - Filing Fees	Each	$1,775
Renewal /Modification to Conditions		
AUP / SUP	Each	$2,900
CUP	Each	$7,269
Temporary Use Permit		
Minor	Each	$337
Administrative	Each	$2,734
Major	Each	$4,715
Major TUP Annual Renewal	Each	$1,386
Zoning Relief		
Parking Exception	Per Hour	$337
Variance	Each	$3,406
Environmental		
Categorical Exemption		
Standard	Each	$1,386
Infill/Other		
Staff Led	Each	$3,412
Consultant Cost	Deposit	Actual Cost
Initial Study		
Consultant Cost	Deposit	Actual Cost
Initial Study - Mitigated Negative Declaration/ Negative Declaration		
Consultant Cost (Will include a 15% staff management fee)	Deposit	Actual Cost
Environmental Impact Studies (EIR)		
EIR Report - Consultant Cost (Will include a 15% staff management fee)	Deposit	Actual Cost
Mitigation Monitoring - one-time	Each	$3,749
Notice of Determination (NOD) - CEQA Filing	Each	Per State
Zoning Clearance (Administrative Review)		
Other Accessory	Per Hour	$337

Fee Name	Unit	New Proposed Fee
Other Administrative Fees		
Building Permit Review		
Minor Res- Improvement	Each	$337
Tenant Improvements	Each	$1,012
Addition of s. f.	Each	$337
New SFD	Each	$337
New Multifamily	Each	$1,350
New Commercial	Each	$1,350
Miscellaneous Planning		
Noticing/Special Noticing (each mailing)	Each	$675
Newspaper Ad Publication	Deposit	$400
Written Determination by City Planning Manager	Each	$1,422
Planning Hourly Fee (1 hr. minimum)	Per Hour	$337
Refund Administrative Fee	Each	Per Policy

*Note: Time extensions will be charged at 10% of base Permit fee

Fee Name	Unit	New Proposed Fee
Building		
Building Permit and Plan Check		
Building Plan Check - Single Family Residential		
Base fee up to $5,000	Base	$246.45
Base fee at $5,000	Base	$246.45
Each additional $1,000 or fraction thereof	Each additional $1,000	$30.81
Base fee at $25,000	Base	$862.58
Each additional $1,000 or fraction thereof	Each additional $1,000	$24.65
Base fee at $50,000	Base	$1,478.70
Each additional $1,000 or fraction thereof	Each additional $1,000	$49.29
Base fee at $100,000	Base	$3,943.20
Each additional $1,000 or fraction thereof	Each additional $1,000	$14.79
Base fee at $500,000	Base	$9,858.00
Each additional $1,000 or fraction thereof	Each additional $1,000	$7.39
Base fee at $1,000,000	Base	$13,554.75
Each additional $1,000 or fraction thereof	Each additional $1,000	$1.23
Base fee at $5,000,000	Base	$18,483.75
Each additional $1,000 or fraction thereof	Each additional $1,000	$2.46
Base fee at $10,000,000	Base	$30,806.25
Each additional $1,000 or fraction thereof	Each additional $1,000	$1.23
Building Permit/Inspection - Single Family Residential		
Base fee up to $5,000	Base	$796.45
Base fee at $5,000	Base	$796.45
Each additional $1,000 or fraction thereof	Each additional $1,000	$59.73
Base fee at $25,000	Base	$1,991.11
Each additional $1,000 or fraction thereof	Each additional $1,000	$55.75
Base fee at $50,000	Base	$3,384.90
Each additional $1,000 or fraction thereof	Each additional $1,000	$51.77
Base fee at $100,000	Base	$5,973.34
Each additional $1,000 or fraction thereof	Each additional $1,000	$9.96
Base fee at $500,000	Base	$9,955.57
Each additional $1,000 or fraction thereof	Each additional $1,000	$9.96
Base fee at $1,000,000	Base	$14,933.36
Each additional $1,000 or fraction thereof	Each additional $1,000	$6.22
Base fee at $5,000,000	Base	$39,822.30
Each additional $1,000 or fraction thereof	Each additional $1,000	$3.98
Base fee at $10,000,000	Base	$59,733.44
Each additional $1,000 or fraction thereof	Each additional $1,000	$1.99
Building Plan Check - Commercial/Multi-Family/Industrial		
Base fee up to $5,000	Base	$246.45
Base fee at $5,000	Base	$246.45
Each additional $1,000 or fraction thereof	Each add'l $1,000	$16.43
Base fee at $50,000	Base	$985.80
Each additional $1,000 or fraction thereof	Each add'l $1,000	$29.57
Base fee at $100,000	Base	$2,464.50
Each additional $1,000 or fraction thereof	Each add'l $1,000	$24.65
Base fee at $500,000	Base	$12,322.50
Each additional $1,000 or fraction thereof	Each add'l $1,000	$5.91
Base fee at $1,000,000	Base	$15,279.90
Each additional $10,000 or fraction thereof	Each add'l $10,000	$40.53
Base fee at $10,000,000	Base	$51,754.50
Each additional $10,000 or fraction thereof	Each add'l $10,000	$61.61
Base fee at $20,000,000	Base	$113,367.00
Each additional $10,000 or fraction thereof	Each add'l $10,000	$68.51
Base fee at $50,000,000	Base	$318,906.30
Each additional $10,000 or fraction thereof	Each add'l $10,000	$59.44
Base fee at $100,000,000	Base	$616,125.00
Each additional $10,000 or fraction thereof	Each add'l $10,000	$9.24
Base fee at $500,000,000	Base	$985,800.00
Each additional $10,000 or fraction thereof	Each add'l $10,000	$4.62
Building Permit/Inspection - Commercial/Multi-Family/Industrial		
Base fee up to $5,000	Base	$298.67
Base fee at $5,000	Base	$298.67
Each additional $1,000 or fraction thereof	Each add'l $1,000	$46.46
Base fee at $50,000	Base	$2,389.34
Each additional $1,000 or fraction thereof	Each add'l $1,000	$51.77
Base fee at $100,000	Base	$4,977.79
Each additional $1,000 or fraction thereof	Each add'l $1,000	$11.45
Base fee at $500,000	Base	$9,557.35
Each additional $1,000 or fraction thereof	Each add'l $1,000	$10.75
Base fee at $1,000,000	Base	$14,933.36

Fee Name	Unit	New Proposed Fee
Each additional $10,000 or fraction thereof	Each add'l $10,000	$98.45
Base fee at $10,000,000	Base	$103,537.97
Each additional $10,000 or fraction thereof	Each add'l $10,000	$103.54
Base fee at $20,000,000	Base	$207,075.93
Each additional $10,000 or fraction thereof	Each add'l $10,000	$69.03
Base fee at $50,000,000	Base	$414,151.87
Each additional $10,000 or fraction thereof	Each add'l $10,000	$124.25
Base fee at $100,000,000	Base	$1,035,379.67
Each additional $10,000 or fraction thereof	Each add'l $10,000	$25.88
Base fee at $500,000,000	Base	$2,070,759.35
Each additional $10,000 or fraction thereof	Each add'l $10,000	$12.94
Miscellaneous Fees - Flat Rate Permits		
Demolition Minor	Flat	$406
Commercial Demoliton		Refer to Valuation Table
ADU Building Permit Resource Center Fee	Each	$1,700
Single Family Dwelling Remodels (No Modifications to Walls):		
Kitchen Remodel	Flat	$1,042
Bathroom Remodel	Flat	$843
Door/Window Replacements (up to 20 Windows):		
Up to 4 Windows	Flat	$497
More than 4 and up to 20 Windows	Flat	$696
Greater than 20 Windows		Refer to Valuation Table
Fences:		
Over 7 ft - 64 l.f.	Flat	$398
Over 7 ft - Each additional 16 l.f. over 64 l.f.	Each Addl. 16 l.f.	$66
Non-Wood Fence CMU fence		Refer to Valuation Table
Photovoltaic Systems (Solar Systems):		
Solar - Residential	Each	$445
Solar - Commercial	Each	
Up to 50 kW	Each	$1,336
51kW - 250kW	Each	$3,071
250+kW	Each	$6,446
Property Research/Site Inspection for Business License	Each	$199
Re-roof: - Residential		
Up to 10,000 sq. ft. (No structural modification)	Flat	$597
Structural or Non-structural greater than 10,000 sq. ft.		Refer to Valuation Table
Electric Vehicle Charging Station (Residential)		
Residential	Flat	$398
Commercial		Refer to Valuation Table
Mechanical, Plumbing, Electrical Permit Fees		
Processing Fee - MEP	% of Permit Fee	40%
MEP Inspections & Plan Check		
Water Heaters and Residential Commodes	Each	$199
Residential/Simple Standalone MPE Permit: (fee includes up to 3 from the list below)		
Simple Mechanical Items:		
Addition to Each heating appliance, refrigeration unit, cooling unit, absorption unit, or Each heating, cooling, absorption, or evaporative cooling system.	Each	$199
HVAC change out - existing dwelling	Each	$199
Air-handling unit over 10,000 CFM	Each	$398
Evaporative cooler	Each	$398
Ventilation fan connected to a single duct	Each	$199
Hood and duct system	Each	$398
Duct systems	Each	$199
Miscellaneous mechanical (wall furnace, condensing units, gas outlet/gas test, etc.)	Each	$199
Other simple mechanical	Each	$199
Simple Electrical Items:		
Receptacle, switch, and lighting outlets and fixtures		
1-20 devices	Each	$398
Each Additional 20 Devices	Each Add'l 20 Devices	$199
Pole or platform-mounted lighting fixtures	Each	$199
Residential appliances		
1-5 devices	Each	$199

Fee Name	Unit	New Proposed Fee
Each Additional 5 Devices	Each Add'l 5 Devices	$199
Appliances not exceeding one horsepower (HP), kilowatt (KW), or kilovolt-ampere (KVA), in rating	Each	$199
Busways	Each	$199
Trolley and plug-in-type busways - Each 100 feet or fractionthereof	Each	$199
Signs, outline lighting, and marquees	Each	$199
Signs, outline lighting, or marquees supplied from one branchcircuit	Each	$199
Services of 600 volts or less and not over 400 amperes inrating	Each	$199
Miscellaneous apparatus, conduits, and conductors	Each	$199
Residential swimming pools	Each	$298
Portable generators less than 10,000 W	Each	$199
Temporary power panel/service	Each	$199
Temporary power pole	Each	$199
Other simple electrical	Each	$199
Simple Plumbing Items:		
Plumbing fixtures	Per 3 Fixtures	$199
Building sewer	Each	$398
Rainwater systems	Each	$199
Industrial waste pretreatment interceptor	Each	$398
Water piping system and/or water treating equipment	Each	$199
Repair or alteration of drainage or vent piping system	Each	$199
Lawn sprinkler systems	Each	$199
Backflow devices	Each	$199
Atmospheric-type vacuum breakers	Each	$199
Gas test	Each	$199
Gas outlets		
1-4 fixtures	Each	$199
Each Additional 4 Fixtures	Each Add'l 4 Fixtures	$199
Solar water systems	Each	$199
Other simple plumbing	Each	$199
Additional Plan Review / Inspection Services		
Complex/Commercial Standalone MEP Permits		Based on Valuation
Alternative Means and Methods	Hourly	$222
Extension Requests for Building Permits	Hourly	$184
Replacement of Job Card (Building Permit Card)	Each Hourly	$84
Deferred Submittals	Hourly	$238
Inspection Supplemental Fee (Projects that require more inspections than average, the Building Official may charge additional inspection fees)	Hourly	$196
Accessibility Hardship Exemption	Hourly	$227
Additional Plan Check required by changes, additions, or revisionsto plans	Hourly	$238
Plan Check for Planning Entitlement Projects	Hourly	$238
Appeals:		
Appeal to Building Official	Each	$629
Appeal to City Council	Each	$1,049
Certificate of Occupancy / Temporary Certificate of Occupancy	Hourly Each	$204
Fire Damage Inspection	Each	$196
Inspections outside of normal business hours	Hourly	$234
Pre-Site Inspection / Re-inspection - SFD	Hourly Each	$196
Pre-Site Inspection / Re-inspection - Other than SFD	Hourly Each	$196
Records Research	Per 30 Minutes	$91
Reproduction of Plans	Per Page	$168
Written Interpretation of Building Code	Hourly Each	$205
Temporary Use Permit		
Normal Business Hours	Hourly Each	$196
After Hours	Hourly Each	$230
Address Assignment	Each	$337
Surcharges		
General Plan Maintenance Fee	% of Building Permit	27.40%
Ravenswood Business District (RBD) Specific Plan Maintenance Fee	Per Sq. Ft.	$0.26

Fee Name	Unit	New Proposed Fee
Code Enforcement		
Code Enforcement Investigation	Per Hour	$185
Recording & Removal of Liens	Each	$600
Notary	Each	$15

Fee Name	Unit	New Proposed Fee
Housing		
Inclusionary Housing Agreement Recordation (Resale Restriction, Deed of Trust, Regulatory Agreement)[1]*	Each	$616
Below Market Rate (BMR) Fees		
Monthly Monitoring Fee (Contracted Out)[2]	Per Unit	$126
Sale or Resale (Contracted Out)	% of Loan	3%
Compliance Fee[3]	Per Incident	$411
Monthly Loan Servicing - Amortized Loan (Contracted Out)	Per Unit	Actual Cost
Monthly Loan Servicing - Deferred Loan (Contracted Out)	Per Unit	Actual Cost
Loan Set-Up (Contracted Out)	Each	Actual Cost
Loan Foreclosure (Contracted Out)	Each	Actual Cost
Affordable Housing Compliance Plan (Not Recorded)		
Application:		
Application Process	Each	$532
Alternative Compliance Application Review		
4 units or less	Each	$1,671
5 units or more	Each	$3,343
Application Modification / Amendment	Each	$266
Review of Household Occupancy Eligibility (Initial Lease-Up / Change of Occupancy)	Per Unit	$205
Review of Waiver, Adjustment or Reduction Request	Per Unit	$272
Rent Registry[4]		
Residential Inspection Upon Change in Occupancy	Per Unit	$330
Annual Monitoring Compliance Fee - Just Cause Units	Per Unit	$53
Annual Monitoring Compliance Fee - Fully Exempt Units	Per Unit	$37

[1] 100% Affordable Housing is exempt

[2] Monthly fee for the term of affordability for units of affordable housing development agreements starting 7/1/2025

[3] Per non-compliance incident

[4] Any Housing not under rent stablization ordinance

*County Fees may apply

Rent Stablizations*		
Annual Registration	Per Year Per Unit	$369
Cloud-Storage	Per Unit Registered	$20
Ellis Act Withdrawn Property Administrative Fee	Per Unit Application	$309
Late Processing Fee:		
Failure to File before Jan. 31st	Each	$25
Failure to Submit Statement Withing 30 Days After Receipt of the Notice	Each	$50
Appeal to the Board:		
Filing of Appeal	Base	$1,175
Each Additional Unit	Each Addl Unit	$587
Landlord Petition:		
First Installment		
First Unit	Base	$83
Each Additional Unit in the Same Building	Each Addl Unit	$41
Second Installment		
First Unit	Base	$55
Each Additional Unit in the Same Building	Each Addl Unit	$27
Tenant Petition:		
First Installment		
First Unit	Base	$35
Each Additional Unit in the Same Building	Each Addl Unit	$17
Second Installment		
First Unit	Base	$23
Each Additional Unit in the Same Building	Each Addl Unit	$11

*All Rent Stabilization Fees are subject to RSP Board approval in October 2025

Fee Name	Unit	New Proposed Fee
Engineering		
Grading - Plan Review		
< 50 Cubic Yards	Each	$4,335
50 - 100 Cubic Yards	Each	$4,335
101-500 Cubic Yards	Each	$6,098
> 501 Cubic Yards	Deposit	$17,357
Grading - Inspection		
< 50 Cubic Yards	Each	$5,586
50 - 100 Cubic Yards	Each	$8,594
101-500 Cubic Yards	Each	$21,485
> 501 Cubic Yards	Deposit	$25,782
Public Improvements - Plan Review		
Base fee up to $10,000	Base	$3,271
Base fee at $10,000	Base	$3,271
Each add'l $10,000 or fraction thereof	Each add'l $10,000 or fraction thereof	$3,066
Base fee at $50,000	Base	$15,535
Each add'l $10,000 or fraction thereof	Each add'l $10,000 or fraction thereof	$2,174
Base fee at $100,000	Base	$26,404
Each add'l $10,000 or fraction thereof	Each add'l $10,000 or fraction thereof	$1,087
Base fee above $500,000	Deposit	$37,169
Public Improvements - Inspection		
Base fee up to $10,000	Base	$2,149
Base fee at $10,000	Base	$2,149
Each add'l $10,000 or fraction thereof	Each add'l $10,000 or fraction thereof	$1,074
Base fee at $50,000	Base	$6,446
Each add'l $10,000 or fraction thereof	Each add'l $10,000 or fraction thereof	$2,578
Base fee at $100,000	Base	$19,337
Each add'l $10,000 or fraction thereof	Each add'l $10,000 or fraction thereof	$1,289
Base fee above $500,000	Deposit	$38,674
Encroachment Permit		
Minor Frontage Improvements such as sidewalk, curb, gutter, driveway	Each	$721
Utility connections, excavations, potholing	Each	$1,033
Temporary closure of sidewalk, bike/vehicle lane(s), street	Each	$1,033
Any other work encroaching into the public right-of-way	Each	$1,033
Street Cut Fee	Each	$1,033
Encroachment Permit - Other		
Administration and Coordination of Water Meter	Each	$402
Debris Box / Temporary Storage	Per Week	$1,234
Traffic Control Plan Review	Per Street	$1,192
Traffic Control Field Inspection/Monitoring	Per Day	$537
Hauling	Per Week	$617
Parking Restriction in the Right of Way	Each	$506
Final Parcel Map / Tract Map: City Admin Cost (consultant costs are passed through to applicant)		
Parcel Map (4 Lots Less)	Each	$4,545
Tract Map (5 or More Lots)	Each	$6,061
Certificate of Compliance / Street Right-of-Way (ROW) Vacation		
Certificate of Compliance	Each	$4,545
Street ROW Vacation	Each	$4,545
Transportation Permit		
Single Trip	Per Trip	$16
Annual	Yearly	$90
Administrative Fees		
Request for Letter (e.g.- Flood Hazard Letter)	Each	$750
Bond Administration and Release	Each	$375
4th and Subsequent Plan Review Fee	Each	$937
Re-inspection Fee	Each	$1,074
After-Hours Inspection (minimum 4 hours)	Hourly	$253
Staff Augmentation / Technical Review	Houlr	$252
Planning Application Review / Support		
Tentative Maps (4 lots or less)	Each	$5,811
Tentative Maps (5 lots or more)	Each	$5,811
Tentative Map Extension / Modification	Each	$3,915
Second Unit Permit	Each	$750
Use Permit (all types)	Each	$750
Hourly Pre-Application	Each	$473
Lot Line Adjustment	Each	$4,545
Lot Line Merger	Each	$4,545

Fee Name	Unit	New Proposed Fee
Building Plan Review / Support		
Minor Residential Improvement	Each	$375
TI (Tenant Improvement) or Addition of square feet	Each	$750
New SFD (Single Family/ Dwelling)	Each	$1,500
New Multifamily or Commercial	Each	$3,000

Fee Name	Unit	New Proposed Fee
Environmental Services Programs		
NPDES		
BMP Inspection:		
2,500 to 10,000 square feet	Each	$364
10,001 square feet to 1 acre	Each	$547
1 acre to 5 acres	Each	$729
5+ acres	Each	$1,094
C.4 Inspection:		
Low Priority	Each	$547
High Priority	Each	$547
Discharge Inspection:		
Initial Inspection (3 Hours)	Each	$547
Each Additional Hour	Hourly	$182
Monitoring, Sampling or Testing, Lab analysis, cost, and rental equipment charges	Deposit	Actual Cost
Illicit Discharge Clean-Up in the Public Right-of-Way:		
Initial Inspection (3 Hours)	Each	$547
Each Additional Hour	Hourly	$182
Vacant Property Inspections, Illegal Dumping, Encampments, etc.	Per Inspection	$319
Administrative Citation		
Minor Discarge (inert substance)	Each	$116
Major Discharge (non-inert substance, per storm drain impact)	Each	$1,153
Other Services Not Listed	Hourly	$182
Stormwater Design Review		
Single Family	Each	$729
Other:		
2,500 to 10,000 square feet	Each	$364
10,001 square feet to 1 acre	Each	$547
1 acre to 5 acres	Each	$729
5+ acres	Each	$1,094
Water Efficiency Landscape Ordinance Plan Review		
80% or more low-to-no water use	Per Acre	$1,459
80% or less low-to-no water use	Per Acre	$1,459
Solid Waste Enclosure Design Review		
Less than 1 acre or low concern projects	Each	$364
1 acre or high concern projects	Each	$729
Misc. Fees		
Each Additional Plan Review after first three reviews	Hourly	$182
Environmental Impact Studies (EIR)	Each	$912

Fee Name	Unit	New Proposed Fee
Police		
Fingerprinting (Livescan)	Each	$170
Vehicle Release:		
During Regular Business Hours	Each	$49
During Nights or Weekends or Holidays	Each	$193
Tow Company Cost	Each	Actual Cost
Repossession - Verification Fee	Each	$15
Proof of Correction Citation - Sign-off	Each	$25
Clearance Letter	Each	$127
Permit Review - Private Security Company - CSO Review:		
CSO Review	Per Hour Each	$137
Executive Review	Per Hour Each	$250
False Alarm Response - (charge is per response after first two responses within a single calendar year)	Per Officer	$65
Loud Party Response	Per Minute / Per Officer / Per Dispatcher	Actual Cost
Assistance to Planning Division Security Plan Review for New Business:		
CSO Review	Per Hour Each	$137
Executive Review	Per Hour Each	$250
Redaction Services - Body Worn Camera Video (Contractor):		
City Processing	Per Hour Each	$186
Consultant Cost	Each	Actual Cost
Officer Support of City Special Events:		
Officer	Hourly - Per Officer	$223
Sgt	Hourly - Per Officer	$255
Captain	Hourly - Per Officer	$250
Community Service Officer	Hourly - Per Officer	$137

Fee Name	Unit	New Proposed Fee
Community Services		
Special Event Permit - Application Processing		
Community Event Category 2 Events	Each	$500
Parade/Street Closure Category 3 Events	Each	$500
Police - Alcohol Distribution	Per Event	$61
Special Event Permit - On-Site Event Support		
Community Services		
Business Hours	Hourly	$106
After Business Hours	Hourly	$112
Overtime / Holiday Rate	Hourly	$119
Security Guard	Hourly	$65
Building Facility Rental Fees		
Residents of East Palo Alto		
Community Room (at City Hall)		
Non Peak Day Rental (Mon-Fri)	Hourly	$47
Peak Day Rental (Sat-Sun)	Hourly	$59
Cooley Landing Education Center		
Non Peak Day Rental (Mon-Fri)	Hourly	$84
Peak Day Rental (Sat-Sun)	Hourly	$105
YMCA City Room		
Non Peak Day Rental (Mon-Fri)	Hourly	$32
Peak Day Rental (Sat-Sun)	Hourly	$40
Non-Residents of East Palo Alto		
Community Room (at City Hall)		
Non Peak Day Rental (Mon-Fri)	Hourly	$118
Peak Day Rental (Sat-Sun)	Hourly	$118
Cooley Landing		
Non Peak Day Rental (Mon-Fri)	Hourly	$209
Peak Day Rental (Sat-Sun)	Hourly	$209
YMCA City Room		
Non Peak Day Rental (Mon-Fri)	Hourly	$80
Peak Day Rental (Sat-Sun)	Hourly	$80
Non-Profit		
Community Room (at City Hall)		
Non Peak Day Rental (Mon-Fri)	Hourly	$30
Peak Day Rental (Sat-Sun)	Hourly	$30
Cooley Landing		
Non Peak Day Rental (Mon-Fri)	Hourly	$52
Peak Day Rental (Sat-Sun)	Hourly	$52
YMCA City Room		
Non Peak Day Rental (Mon-Fri)	Hourly	$20
Peak Day Rental (Sat-Sun)	Hourly	$20
Park Facility Rental Fees		
All Locations - rental of park, pavilion, or barbeque areas for special events	Hourly	$50
Equipment Rentals		
Community Room		
Projector	Each	$15
Table Covers	Per Table Per Day	$10
City Room		
Television	Each	$20
Cooley Landing		
Projector	Each	$15
Table Covers	Per Table Per Day	$10

Fee Name	Unit	New Proposed Fee
Miscellaneous Fees		
Photocopy:		
8.5" x 11" (black & white single side)	Each	$0.10
8.5" x 11" (color single side)	Each	$0.25
Finance Department		
Checks Returned by Bank or Financial Institution Due to Insufficient Funds		
First Returned Check	Per Check	$25
Each Additional Check	Per Check	$35
Overdue Invoices	Per Annum	$10 or 10% whichever is greater
Credit Card Surcharge	% of Transaction	3.50%

Fee Name	Unit	New Proposed Fee
East Palo Alto Sanitary District		
Connection Fees		
SFR	Each	$10,621
ADU	Each	$10,621
MFR	Each	$10,621
COM	Each	$10,621
IND	Each	$10,621
Plan Check		
Additional Plan Review	Per Hour	$236
Plan Check - New		
House	Each	$708
ADU (Detahced)	Each	$708
MFR	Each	$944
COM	Each	$944
IND	Each	$944
Plan Check - Remodeling / Existing		
SFR	Each	$472
ADU	Each	$472
MFR	Each	$472
COM	Each	$472
IND	Each	$472
Inspections		
Lateral	Each	$992
Additional Inspections	Per Hour	$496
Permit Application (T1, T2, T3)		
SFR (T1)	Each	$149
ADU (T1)	Each	$149
MFR (T2)	Each	$149
COM (T3)	Each	$149
IND (T3)	Each	$149
Main Line Extension		
Main Line Extension Permit	Per Hour	$236

City of East Palo Alto
Development Impact Fees
Update: effective May 5, 2025

Fee No.	Fee Name	Unit / Data Input Required	Notes	Current Fee	Adopted Fee (effecitve May 5, 2025)
Development Impact Fees					
1	**Parks and Trails**				
	ADU (new livable area above 750 sf)	Square Foot		$1,653/DU	$10.57
	Single-Family	Square Foot		$4,133/DU	$10.57
	Townhouse	Square Foot		$4,133/DU	$10.57
	Multi-Family Housing (Rental)	Square Foot		$2,847/DU	$14.89
	Office/Research & Development	Square Foot		$1.15	$2.25
	Industrial	Square Foot		$0.46	$0.90
	Retail	Square Foot		$0.77	$1.50
	Other Non-Residential	Peak Service Population (per person)		$918.00	$901.00
2	**Public Facilities**				
	ADU (new livable area above 750 sf)	Square Foot		$2,899/DU	$8.49
	Single-Family	Square Foot		$7,248/DU	$8.49
	Townhouse	Square Foot		$7,248/DU	$8.49
	Multi-Family Housing	Square Foot		$4,993/DU	$11.80
	Office/Research & Development	Square Foot		$2.01	$1.81
	Industrial	Square Foot		$0.81	$0.72
	Retail	Square Foot		$1.34	$1.21
	Other Non-Residential	Peak Service Population (per person)		$1,611.00	$724.00
3	**Storm Drainage**				
	ADU within RBD (area above 750 sf)	Impervious acre	(1)	$1,936/DU	$332,825.00
	ADU within RBD (area above 750 sf)	Impervious acre	(1)	$1,120/DU	$127,390.00
	All Land Uses within RBD	Impervious acre	[1]	$121,000.00	$332,825.00
	All Land Uses outside RBD	Impervious acre	[1]	$70,000.00	$127,390.00
4	**Citywide Transportation (applies to all projects outside and within RBD)**		(1)		
	ADU (new livable area above 750 sf)	Square Foot		$943DU	$0.58
	Single-Family	Square Foot		$2,358/DU	$0.58
	Townhouse	Square Foot		$2,358/DU	$0.58
	Multi-Family Housing	Square Foot		$1,775/DU	$0.64
	Office/Research & Development	Square Foot		$7.33	$1.28
	Industrial	Square Foot		$4.77	$0.80
	Retail	Square Foot		$7.33	$1.28
	Other Non-Residential	PM Peak Hour Vehicle Trips (per trip)		$6,898.00	$1,658.00
5	**RBD Transportation (applies to projects within RBD only)**		(1)		

	ADU (new livable area above 750 sf)	Square Foot		$943DU	$2.14
	Single-Family	Square Foot		$2,358/DU	$2.14
	Townhouse	Square Foot		$2,358/DU	$2.14
	Multi-Family Housing	Square Foot		$1,775/DU	$2.40
	Office/Research & Development	Square Foot		$7.33	$4.75
	Industrial	Square Foot		$4.77	$2.96
	Retail	Square Foot		$7.33	$4.75
	Other Non-Residential	PM Peak Hour Vehicle Trips (per trip)		$6,898.00	$7,828.00
6	**Water Capacity**				
	Within RBD:		(1)		
	ADU (new livable area above 750 sf)	Square Foot		$5,014/DU	$2.72
	Single-Family	Square Foot		$8,147/DU	$2.72
	Townhouse	Square Foot		$8,147/DU	$2.72
	Multi-Family Housing	Square Foot		$5,014/DU	$3.27
	Non-Residential	Meter Size - 3/4"		$11,907.00	$6,749.00
	Non-Residential	Meter Size - 1"		$19,845.00	$11,242.00
	Non-Residential	Meter Size - 1.5"		$39,691.00	$22,502.00
	Non-Residential	Meter Size - 2"		$63,505.00	$36,000.00
	Non-Residential	Meter Size - 3"		$31.33	$67,488.00
	Non-Residential	Meter Size - 4"		$31.33	$112,474.00
	Non-Residential	Meter Size > 4", Gallons Per Day		$31.33	$17.76
	Outside RBD:		(1)		
	ADU (new livable area above 750 sf)	Square Foot		$5,014/DU	$4.52
	Single-Family	Square Foot		$8,147/DU	$4.52
	Townhouse	Square Foot		$8,147/DU	$4.52
	Multi-Family Housing	Square Foot		$5,014/DU	$5.45
	Non-Residential	Meter Size - 3/4"		$11,907.00	$11,237.00
	Non-Residential	Meter Size - 1"		$19,845.00	$18,718.00
	Non-Residential	Meter Size - 1.5"		$39,691.00	$37,465.00
	Non-Residential	Meter Size - 2"		$63,505.00	$59,938.00
	Non-Residential	Meter Size - 3"		$31.33	$112,366.00
	Non-Residential	Meter Size - 4"		$31.33	$187,267.00
	Non-Residential	Meter Size > 4", Gallons Per Day		$31.33	$29.57

[1] RBD - Ravinswood Business District/4 Corners Specific Plan Area

RESOLUTION NO. x

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF EAST PALO ALTO

ADOPTING AMENDMENTS TO THE MASTER FEE SCHEDULE

WHEREAS, the City of East Palo Alto maintains a Master Fee Schedule that establishes the fees and charges imposed for a wide range of municipal services and activities including user and regulatory fees as well as developer impact fees; and

WHEREAS, the City of East Palo Alto periodically modifies the Master Fee Schedule to account for program changes and other costs, and to ensure existing fees and charges do not exceed the costs of service, and further, re-align fees with desired cost recovery policies; and

WHEREAS, on March 4, 2025, the City Council held a noticed public hearing to receive public comments on the Nexus Study Update, Financial Feasibility Analysis, Fee Comparison Survey, and recommended updates to the parks and trails, public facilities, transportation, storm drainage, and water capacity impact fees; and

WHEREAS, pursuant to the Mitigation Fee Act and other applicable state laws and Chapters 13.24 and 13.28 of the City of East Palo Alto Municipal Code, the City Council adopted the updated park and trails, public facilities, storm drainage, and transportation, water capacity, and storm drainage development impact fees which became effective on May 4, 2025, and are only incorporated by reference therein, as they were already adopted by the Council on May 4, 2025; and

WHEREAS, the City contracted with Matrix Consulting Group, LTD (Matrix) to conduct a comprehensive Cost Allocation Plan (CAP) and a citywide user and regulatory fees studies, including developing data and conducting staff surveys as necessary to determine reasonable estimated costs of services pursuant to Article XIIIC, Section 1 of the State Constitution, thereby updating and amending the Master Fee Schedule**;** and

WHEREAS, the City held a properly noticed public hearing on June 17, 2025, continued it on July 15, 2025, and reviewed the Matrix user and regulatory fee study report, including recommended changes to the Master Fee Schedule**;** and

NOW, THEREFORE, BE IT RESOLVED THAT THE CITY COUNCIL OF THE CITY OF EAST PALO ALTO HEREBY:

1. Finds the foregoing recitals are true and correct, and are incorporated by this reference into this action;
2. Approves the Cost Allocation Plan (April 2025) and User and Regulatory Fee Study (June 2025) prepared by Matrix Consulting Group, Ltd;
3. Adopts the Master Fee Schedule, attached hereto as **Exhibit A** and made a part here of, based on the User and Regulatory Fee Study;
4. Approves the effective date of all fees set forth in **Exhibit A** shall be 60 days after the date of this Resolution, or September 16, 2025, unless otherwise noted therein; and
5. Finding the proposed action does not constitute a “project” with the meaning of the California Environmental Quality Act (“CEQA”) pursuant to CEQA Guidelines sections 15378(b)(4) and

(5) in that it is a governmental fiscal, organizational or administrative activity that will not result in direct or indirect changes in the environment.

PASSED AND ADOPTED this 15th day of July 2025, by the following vote:

AYES:

NOES:

ABSENT:

ABSTAIN:

Martha Barragan. Mayor

ATTEST:

James Colin, City Clerk

APPROVED AS TO FORM:

John D. Lê, City Attorney

EAST PALO ALTO CITY COUNCIL STAFF REPORT

DATE: June 17, 2025

TO: Honorable Mayor and Members of the City Council

VIA: Melvin E. Gaines, City Manager

BY: Tomohito Oku, Finance Director

SUBJECT: Cost Allocation Plan and User Fee reports and amendment to City's Master Fee Schedule

Recommendation

Adopt a resolution:

1. Approving the Cost Allocation Plan and User and Regulatory Fee Study as the basis for amending the Master Fee Schedule;
2. Amending the City's Master Fee Schedule, based on Cost Allocation Plan and User and Regulatory Fee Study; and
3. Finding the proposed action does not constitute a "project" with the meaning of the California Environmental Quality Act ("CEQA") pursuant to CEQA Guidelines sections 15378(b)(4) and (5) in that it is a governmental fiscal, organizational or administrative activity that will not result in direct or indirect changes in the environment.

Alignment with City Council Strategic Plan

This recommendation is primarily aligned with all the City Council Strategic goals:

- Promote Housing, Economic and Workforce Development
- Implement the Comprehensive Transportation and Mobility Plan
- Promote Health & Public Safety
- Ensure Our Financial and Organizational Health
- Improve the City's Water Infrastructure
- Develop and Implement a Comprehensive Facilities Master Plan
- Enhance Community Services and Parks for Residents

Background

The City of East Palo Alto maintains a Master Fee Schedule that establishes the fees and charges imposed for a wide range of municipal services and activities. These include user and regulatory fees—such as those related to planning, building, public works, code enforcement, parks, housing and police services—as well as developer impact fees for infrastructure improvements including transportation, parks, water, stormwater, and public facilities.

Under California law, cities are authorized to recover the reasonable cost of services through fees, provided they do not exceed the estimated cost of providing the service (Cal. Const., art. XIIIC, §1). The City's Master Fee Schedule is periodically reviewed and updated to ensure compliance with legal requirements and alignment with the City's fiscal policies on cost recovery and service efficiency.

To support these objectives, the City engaged Matrix Consulting Group, Ltd. in November 2024 to prepare a comprehensive Cost Allocation Plan (CAP) and User and Regulatory Fee Study. These studies assist the City in identifying the actual cost of providing municipal services and help departments evaluate appropriate user fees based on cost recovery targets. The results offer an analytical tool to understand service levels, demand, and the full cost of service delivery—enabling informed policy decisions on which fees can and should be charged. The City last conducted similar studies during Fiscal Year 2019–20.

Separately, the City completed an updated Development Impact Fee Nexus Study, resulting in the adoption of new development impact fees by the City Council on March 4, 2025. These updated fees became effective on May 4, 2025, and are included as a separate chapter in the Master Fee Schedule. While not part of the Matrix study, the impact fees reflect the City's broader commitment to maintaining fiscal sustainability and ensuring that new development pays its fair share of infrastructure costs.

Together, the updated CAP and User fee study, and the impact fee schedule reinforce the City's dedication to transparency, equity, and financial stewardship.

This staff report includes two components: the **Cost Allocation Plan** and the **User and Regulatory Fee Study**. It presents the findings of both studies for City Council review and discussion. Based on the results of these studies, staff recommends adopting a resolution to amend the City's Master Fee Schedule to ensure that fees reflect the actual cost of providing services and align with the City's cost recovery goals.

Analysis

Full Cost Allocation Plan

The **Cost Allocation Plan (CAP)** provides a systematic and transparent method for distributing the costs of central support services—such as Finance, Human Resources, and the City Manager's Office—to City departments and funds that benefit from them. Developed

by the Matrix Consulting Group, the CAP reflects the City's current organizational structure, budget, and service relationships.

Purpose and Benefits of the CAP:

The CAP serves multiple purposes:

- **Fairness and Equity**: It ensures that internal overhead costs are allocated proportionally to departments and programs based on their actual use of central services.
- **Cost Recovery**: It enables the City to appropriately charge enterprise funds, special revenue funds, and other non-General Fund sources, ensuring that the General Fund is not subsidizing unrelated activities.
- **Fee Setting**: It provides the overhead component necessary to establish defensible full-cost user and regulatory fees.
- **Transparency and Accountability**: It documents allocation logic and supports data-driven financial planning, grant management, and internal service reimbursements.
- **Budget Development**: The FY2025–26 proposed budget incorporates this updated CAP to allocate indirect costs accurately across all departments and funds, improving the integrity of cost projections and supporting informed resource decisions.

The methodology used adheres to Generally Accepted Accounting Principles (GAAP) and guidance under the federal Office of Management and Budget (OMB) 2 CFR Part 200, utilizing the double step-down allocation method to recognize both direct and interdepartmental support relationships.

Overview of Central Services and Allocations:

The CAP is based on FY2024–25 budgeted expenditures and includes the following 10 central service divisions/departments:

- **City Council**
- **City Manager – Administration**
- **City Clerk**
- **Human Resources**
- **City Attorney**
- **Finance**
- **Public Works – Administration**
- **Public Works – Maintenance**
- **Non-Departmental**
- **Building Use** (depreciation of City-owned facilities)

Each central service was assigned appropriate allocation bases (e.g., number of employees, budget share, number of transactions, or work orders) to proportionally distribute overhead to the receiving divisions/departments.

From a total of $16.73 million in central service costs, the plan allocated $9.01 million to operating departments and funds. The remaining $7.72 million was excluded from allocation to avoid burdening departments with costs unrelated to their operations (e.g., elections, litigation, citywide park maintenance).

Inclusion of the East Palo Alto Sanitary District (EPASD):

A key update in the CAP is the inclusion of the East Palo Alto Sanitary District (EPASD), which became a subsidiary district of the City as of October 1, 2024. The previous CAP did not include EPASD, as it operated as an independent district. With the reorganization, City departments now provide direct administrative, financial, legal, and managerial services to the District.

Given the heightened public interest and need for accountability to ratepayers, it is important to underscore that the overhead charges allocated to EPASD are based on a transparent and defensible methodology that reflects the actual cost of City services provided. The inclusion of EPASD in the CAP promotes equity and fiscal integrity across all funds and ensures that EPASD pays only its proportionate share of shared City resources.

The total FY25 overhead allocated to EPASD is $939,297, as summarized in the following table (from Table 4 of the Results Memo):

Central Service	EPASD Support
Building Use	$0
10101 City Council	$29,697
11111 City Manager – Administration	$246,295
11112 Clerk Services	$43,541
11113 Human Resources	$18,732
12121 City Attorney	$122,009
13131 Finance	$344,932
21211 PW – Administration	$134,091
21213 PW – Maintenance	$0
95951 Non-Departmental	$0
Total	**$939,297**

These allocations reflect services such as:

- Executive oversight by the City Manager, who also serves as General Manager of EPASD, with assistance from the Assistant City Manager, Assistant to the City Managers, and Executive Assistant
- Legal support from the City Attorney for governance and compliance,
- Day-to-day budgeting, accounting, and billing handled by the Finance Department,
- Operational coordination through the Public Works Department.

It should be noted that insurance and information technology (IT) services are not included in the CAP but are instead allocated separately through the City's internal service funds, which are structured as sub-funds of the General Fund. EPASD pays its proportional share of these

costs based on the models using the number of employees managed through those internal service mechanisms.

Where direct activity data was unavailable, estimates were developed using conservative, industry-standard allocation bases. Future iterations of the CAP will incorporate refined data as the City further integrates EPASD operations.

Annual CAP Adjustments:

In addition to adopting the updated Cost Allocation Plan (CAP) as part of this staff report, staff recommends implementing an annual inflationary adjustment to the CAP chargebacks using the regional Consumer Price Index (CPI). This approach ensures that internal overhead cost distributions remain aligned with changes in the cost of providing central support services such as City Manager Administration, finance, human resources, and facilities.

The Consumer Price Index for the San Francisco-Oakland-Hayward region, or another index reflective of the City's cost structure, should be applied to the CAP's cost pool totals to adjust allocations in subsequent fiscal years, subject to City Council review and approval. This annual adjustment mechanism will allow the City to maintain accuracy and fairness in cost allocations across departments and funds, including enterprise and special revenue funds, without the administrative burden of conducting a full CAP study each year.

Full CAP updates are generally recommended every three to five years, or in response to significant organizational or cost structure changes. In the interim, a CPI-based update is a transparent, efficient, and widely accepted tool to ensure the City continues to equitably distribute indirect costs in accordance with current financial conditions and service levels. Implementing this adjustment framework will help safeguard fiscal integrity, promote transparency, and support consistent cost recovery practices across City operations.

Staff will return each year as part of the budget process with a proposed CPI-based adjustment for Council consideration and approval.

User and Regulatory Fee Study

Project Background and Overview:

In November 2024, the City of East Palo Alto engaged Matrix Consulting Group to conduct a comprehensive User and Regulatory Fee Study as part of a broader initiative to improve cost transparency, update the City's Master Fee Schedule, and align user fees with the actual cost of service. The current effort was performed in parallel with the City's updated Cost Allocation Plan (CAP) to ensure that indirect costs were properly incorporated into the full cost of services.

The Matrix Consulting Group analyzed the cost-of-service relationships that exist between fees for service activities in the following areas: Building, Code Enforcement, Community Services,

Engineering, Environmental Services, Finance, Housing, Planning, Police, Rent Stabilization, and East Palo Alto Sanitation District.

The study evaluates the full cost of services provided by City departments to individual applicants, property owners, and other external users. It is intended to ensure that fees are aligned with current service delivery costs, minimize unintended General Fund subsidies, and promote equity in how services are financed.

General Project Approach and Methodology:

Matrix Consulting Group used a widely accepted "bottom-up" cost analysis methodology to determine the full cost of providing City services. This approach begins by estimating the time required per unit of activity for each staff position involved in fee-related services. Once time estimates are established, all relevant cost components are applied to calculate the full cost of service, including:

- **Direct Costs**: Budgeted salaries, benefits, and allowable departmental expenditures for FY2024–25.
- **Indirect Costs**: Programmatic, departmental, and citywide overhead support

The following key steps were taken in the development of the fee study:

1. **Staff Interviews** – City departments worked with the consultant to clarify existing fees and identify new services.
2. **Data Collection** – Matrix gathered time estimates, staffing levels, and cost data using FY2024–25 budget information.
3. **Cost Analysis** – The full cost of each service was calculated using Matrix's cost modeling tools.
4. **Review and Validation** – Results were reviewed and validated by department managers

This approach ensures that the resulting fee calculations are transparent, detailed, and grounded in current budget and operational data.

Summary of Results:

When comparing fee-related revenue to the total annual cost, the City is recovering only 86% of its costs – resulting in under-recovery of approximately $549,000. The following table shows the revenue collected, total cost, cost recovery percentage and the shortfall by major division.

Division	Fee-Related Revenue	Fee-Related Cost	Difference	Cost Recovery %
Building	$2,300,000	$2,485,326	($185,326)	93%
Community Services	$43,676	$131,085	($87,409)	33%
Engineering	$120,501	$140,284	($19,783)	86%
Planning	$268,638	$208,231	$60,407	129%
Rent Stabilization	$549,900	$867,150	($317,250)	63%
Total	**$3,282,715**	**$3,832,076**	**($549,361)**	**86%**

The Fee-Related Revenue is calculated based on the current fee and the current service level while the Fee-Related Cost is developed by this study. The largest deficit is in relation to Rent Stabilization at $317,250, which is in relation to incorporating overhead associated with administering the rent stabilization program. The high level of cost recovery is anticipated for the City as the City had recently completed a fee study in 2020 and has conducted annual fee increases.

The detailed documentation of this study will show an over-collection for some fees (on a per unit basis) and an undercharge for most others. The results of this analysis provides the Department and the City with guidance on how to right-size their fees to ensure that each service unit is set at an amount that does not exceed the full cost of providing that service. Staff recommend full cost recovery for almost all fees except for certain community services (park and recreation) fees considering equity and reasonableness to community members.

Results Overview by Division:

This section provides a high-level summary of the User and Regulatory Fee Study results by City division. For more detailed information on each fee, including modifications to the current fee schedule such as elimination, consolidation, or addition of specific fees. Staff recommend referring to **Attachment 3 – User and Regulatory Fee Study Report**. While individual cost calculations are not included, the attachment offers important context to support the recommendations outlined in this report.

Building:

The Building Division within the Community and Economic Development Department is responsible for ensuring compliance with the California Building Code through services such as plan review, permit issuance, inspections, and code enforcement. The Division works directly with property owners, contractors, and developers to ensure that construction projects meet safety, structural, and accessibility standards.

The fee study calculated the full cost of building-related services, incorporating direct staff labor, materials, and overhead allocations based on the Citywide overhead. Services evaluated include permit processing, plan checks, field inspections, re-inspections, and administrative services.

Eliminated Fees: Staff proposed eliminating fees associated with Building's review of Planning and Engineering Services, as those are captured on their respective fee schedules. They also propose to eliminate the 'Processing Fee' as that is captured in the base permit fees.

New Fees: Staff proposed the addition of the following fees, to capture services already provided but not codified:

- Processing Fee to review mechanical, electrical, and plumbing (MEP) plans
- Reproduction of plans
- Accessory Dwelling Units (ADU) Building Permit Resource Center access

As shown in **Attachment 3 (Table 4, page 11)**, the study identified a number of valuation-based fees—especially those for lower-dollar construction projects—that are not recovering the full cost of service. Conversely, a small number of fees reflect slight over-recoveries where flat charges exceed staff time needed. These imbalances suggest the need for targeted adjustments.

To support the development of ADUs in East Palo Alto, the City has joined the newly formed San Mateo County ADU Resource Center. As outlined in the FY24-25 and FY25-26 budgets, East Palo Alto pays an annual membership fee of $34,000 for access to the ADU Resource Center and its staff. The Center provides public workshops and offers direct support to ADU applicants during open office hours. Membership dues vary by jurisdiction and are based on the number of ADUs projected in each jurisdiction's Housing Element. While keeping ADU development costs low is important, this membership directly benefits ADU applicants and is currently funded through the City's General Fund without cost recovery.

To address this, the City could implement an ADU Resource Center fee for each ADU applicant. This would offset the membership cost and reduce the burden on the General Fund. The potential to recover these costs was previously noted in a City Council report on November 12, 2024[1].

Based on prior year workload, the Building Division collected approximately $2.3 million in revenue against a total projected cost of $2,485,326, resulting in a shortfall of $185,000 and a cost recovery rate of 93%. The study recommends right-sizing valuation-based fees to improve alignment with actual staff effort, especially for smaller projects where the City is currently subsidizing service delivery.

The proposed fee adjustments for Building services are detailed in **Attachment 3 (Table 4, page 11)**, which outlines the current fee, full cost, and recommended changes by category.

Code Enforcement:

[1] November 12, 2024 City Council (Item 3.2): https://d3n9y02raazwpg.cloudfront.net/cityofepa/66c51685-d815-11ee-98bb-0050569183fa-3408cd31-ecd7-4429-9d91-65986d552499-1730779159.pdf

The Code Enforcement Unit, also part of the Community and Economic Development Department, enforces property maintenance, building, and zoning codes to address violations such as illegal construction, blight, or unpermitted uses.

The study evaluated the cost of inspections, case management, and administrative processing based on staff time and overhead allocations. These activities help maintain community standards and ensure safety and habitability.

As shown below and in **Attachment 3 (Table 12, page 19)**, code enforcement fees are all new except for the notary fee. The study recommends implementing those fees that reflect the staff time and resources required for investigation, documentation, and follow-up actions on violations. The Code Enforcement Investigation fee will be applied specifically when Notices of Violations or Citations are issued, ensuring it aligns with the enforcement process for addressing such cases. This fee is intended to offset the costs associated with investigating valid complaints and to discourage repeat violators from excessively utilizing staff resources.

Planning:

The Planning Division, part of the Community and Economic Development Department, oversees both current and long-range planning, maintains the City's General Plan, and enforces Zoning Regulations. The Division charges fees for a variety of services including pre-application review, design review, zoning clearance, subdivision review, use permits, rezonings, environmental review, and entitlement approvals.

The fee study calculated the full cost of each service, incorporating direct staff time, divisional expenses, and Citywide overhead. As shown in **Attachment 3 (Table 20, page 34)**, the analysis identified a mix of over- and under-recoveries across the Planning Division's fee schedule. The largest under-recovery is $4,166 for 'Master/Common Sign Program'. The largest over-recovery is in relation to 'Tentative Maps', particularly those that involve five or more parcels. Fortunately, these are rare and would not have much of a cumulative effect on the fee revenue. In discussion with staff, changes in processes and increased efficiency are resulting in a reduced level of staff effort needed to process these entitlements. For example, final maps are primarily a Public Works / Engineering function, and therefore, the cost has shifted from Planning to Engineering for those services.

Eliminated Fees: Staff proposed eliminating the following fees, as these services are no longer offered by City staff or are now offered by other departments within the City:

- Zoning Review for Business License
- Public Utility Tower
- Research / Document Review
- Address Assignment (transferred to the Building Division)

New Fees: Staff proposed the addition of fees for minor and major 'Permit Adjustments'.

Condensed Fees: To streamline the fee schedule, staff proposed condensing the following fees:

- The ‘Temporary Use Permit’ section was condensed into a ‘Minor’, ‘Administrative’, and ‘Major’ fee to streamline the fee schedule.
- The ‘Parking Exception’ fee was condensed into a singular per hour fee.
- The ‘Variance’ fees were condensed into a singular fee.
- The ‘Staff Management & Review’ was removed from all Environmental related fees.
- The ‘Zoning Clearance’ was consolidated into a singular fee.
- Minor Modification to Conditions’ and ‘Modifications to Conditions’ are captured within the Renewal / Modifications to Conditions section under the respective fee category that aligns with the type of application being modified.
- Initial Study - Negative Declaration’ is captured under ‘Initial Study - Mitigated Negative Declaration/ Negative Declaration’.
- Noticing Fee’ is captured under ‘Noticing/Special Noticing’.
- Zoning Text Amendment’ and ‘Zone Change’ were combined into a single fee.

Modified Fees: The following fee modifications were proposed to better clarify the services being provided.

- The ‘Hourly SB 35 Pre-Application (5 hr. minimum)’ was renamed the ‘Preliminary Ministerial Review Hourly (2 hr. minimum)’ to accurately reflect the service offered.
- ‘Condominium Conversion’ was switched to a deposit fee.
- The ‘Garage Conversions / Minor ADR (120 s-f. or less)’ was renamed the ‘Garage Conversions / Minor ADR (400 s-f. or less)’ to accurately reflect the service offered.
- The ‘Permanent Sign Program’ was renamed ‘Permanent Sign’.
- The ‘1 Year Approval Renewal’ was renamed the ‘Major TUP Annual Renewal’ to accurately reflect the service offered.

Based on prior year’s workload, Planning services generate a surplus of approximately $60,000, with an overall cost recovery rate of 129%. The results indicate a need to rebalance specific fees to better reflect actual staff effort and maintain cost equity across applicants.

The detailed proposed fee adjustments for the Planning Division are provided in **Attachment 3 (Table 20, page 34).**

Rent Stabilization:

The Rent Stabilization Program is administered by the Community and Economic Development Department and is responsible for implementing and enforcing the City’s rent stabilization and tenant protection ordinances. Key services include registration and tracking of rental units, processing petitions and appeals, investigating violations, conducting public outreach, and providing staff support to the Rent Stabilization Board.

The fee study evaluated the full cost of administering the Rent Stabilization Program, incorporating direct labor costs, division-specific expenses, and Citywide overhead. The analysis also considered the complexity and legal obligations associated with administering a regulatory program that affects a significant portion of the City’s rental housing stock. **The fees under this section are governed by Ordinance No. 330 and Chapter 14.04 of the Municipal Code, and therefore, they are subject to a specific approval process**.

As shown in **Attachment 3 (Table 23, page 39)**, the study found that current fees recover only 63% of total costs. The largest driver of under-recovery is the program's share of administrative and overhead costs, which had not been fully accounted for in previous calculations. The study also notes that some functions, such as legal support, outreach, and hearings, have expanded in scope, further increasing program costs.

Based on prior year workload, the Rent Stabilization Program generates approximately $549,900 in revenue compared to a total cost of $867,150, resulting in a shortfall of $317,250 and a cost recovery rate of 63%. The fee study supports reevaluating fee levels to reflect the true cost of program administration, while balancing affordability and equity considerations for both landlords and tenants.

The detailed Rent Stabilization fee schedule, showing the full cost, current fee, and proposed updates, is provided in **Attachment 3 (Table 23, page 39)**.

Housing:

The Housing Division within the Community and Economic Development Department, manages programs related to affordable housing preservation, tenant protections, and housing policy implementation. Fee-related services include the administration of loan agreements, monitoring of affordability covenants, and other compliance duties. All of the fees administered by the Housing Division are newly proposed.

The study assessed the cost of these services using staff labor, legal review, program management, and indirect cost allocations. These fees support the City's efforts to maintain affordable housing and ensure ongoing compliance with funding conditions.

New Fees: Staff proposed new housing fees related to inclusionary housing as part of City's municipal code chapter 18.37 which allows the City to charge fees related to inclusionary housing requirements, as long as there is a fee schedule to support these fees. Staff also proposed new housing fees related to below market rate (BMR) affordable housing compliance as well as rent registry program. The following table details the fee name and total cost associated with each service offered.

Fee Name	Total Cost
Inclusionary Housing Agreement Recordation (Resale Restriction, Deed of Trust, Regulatory Agreement)	$616
Below Market Rate (BMR) Fees	
Monthly Monitoring Fee (Contracted Out)	$126
Sale or Resale (Contracted Out)	3%
Compliance Fee	$411
Monthly Loan Servicing - Amortized Loan (Contracted Out)	Actual Cost
Monthly Loan Servicing - Deferred Loan (Contracted Out)	Actual Cost
Loan Set-Up (Contracted Out)	Actual Cost
Loan Foreclosure (Contracted Out)	Actual Cost
Affordable Housing Compliance Plan (Not Recorded)	
Application:	
Application Process	$532
Alternative Compliance Application Approval	
4 Unit or Less	$1,671
5 Units or More	$3,343
Application Modification / Amendment	$266
Review of Household Occupancy Eligibility (Initial Lease-Up / Change of Occupancy)	$205
Review of Waiver, Adjustment or Reduction Request	$272
Rent Registry	
Residential Inspection Upon Change in Occupancy	$330
Annual Monitoring Compliance Fee - Just Cause Units	$53
Annual Monitoring Compliance Fee - Fully Exempt Units	$37

Community Services:

The Community Services Division within the City Manager's Office oversees recreational programming and facility use, including park reservations, pavilion rentals, and community events. Its responsibilities are primarily service-oriented and support quality of life for East Palo Alto residents through access to public spaces and community programming.

The fee study evaluated the full cost of services provided by Community Services by incorporating direct staff time, materials, and applicable overhead using Citywide overhead. Services reviewed included rental and use of indoor and outdoor spaces, permits for community events, and related administrative functions.

As shown in **Attachment 3 (Table 13, page 20),** the analysis found that most Community Services fees are significantly under-recovering their costs. In particular, fees related to facility rentals and community events fall well below the actual cost of service, resulting in substantial General Fund subsidies.

Based on prior year workload, Community Services generates approximately $43,676 in annual fee revenue compared to a total cost of $131,085, resulting in a deficit of $87,409 and a cost recovery rate of just 33%. The fee study recommends evaluating the reasonableness and

equity of specific fee increases, particularly for services heavily used by residents and community organizations.

The studied fee schedule for Community Services, including cost comparisons and detailed calculations, is presented in **Attachment 3 (Table 13, page 20).** However, staff recommend General Fund subsidies for certain fees—particularly for services accessed by vulnerable or lower-income residents—to ensure they remain reasonable, accessible, and aligned with neighboring jurisdictions, thereby reducing the risk of non-compliance or unpermitted activities due to cost barriers.

Engineering:

The Engineering Division within the Public Works Department oversees the review and inspection of public infrastructure improvements associated with private development. This includes permits for work in the public right-of-way, grading and encroachment permits, construction inspections, and utility coordination. The Division ensures that all improvements comply with City standards and do not adversely affect public infrastructure.

The fee study assessed the full cost of engineering services, including direct staff time, contract support, and overhead allocations from Citywide overhead. Services analyzed include excavation permits, grading plan review, stormwater inspections, and final map processing, among others.

New Fees: Staff proposed the addition of the following fees as they highlight services already offered but not codified on the fee schedule:

- Administration and Coordination of Water Meter
- Hauling
- Parking Restriction in the Right of Way
- Staff Augmentation / Technical Review
- Address Assignment (transferred from Planning Division)

Eliminated Fees: Staff proposed eliminating the following fees, as these services are no longer offered by City staff, covered under other fees, or are now offered by other departments within the City:

- Job Card Replacement
- Design Review – Administrative
- Architectural Supervision
- General Plan Amendment
- Zone Change / Text Amendment
- Tree Removal Permit
- Zoning Relief
- Initial Study
- EIR
- Mitigation Monitoring
- Encroachment Permit – Fence

As shown in **Attachment 3 (Table 15, page 24)**, the study found that Engineering services are generally under-recovering their full costs. Several fees—particularly those for grading and utility inspections—do not fully reflect the time and resources needed for proper review and compliance monitoring. In contrast, a small number of fees slightly exceed actual costs, but these are exceptions.

Based on prior year workload, the Engineering Division generates approximately $103,173 in annual fee revenue compared to a total annual projected cost of $122,927, resulting in an annual shortfall of $19,754 and a cost recovery rate of 84%. The study recommends targeted fee adjustments to better align charges with actual service costs and reduce reliance on General Fund support.

The full list of proposed Engineering Division fees, cost calculations, and recovery levels is detailed in **Attachment 3 (Table 15, page 24)**.

EPASD:

The East Palo Alto Sanitary District (EPASD), now governed as a subsidiary district of the City since October 1, 2024, is responsible for providing wastewater collection services within its service area and overseen by the Public Works Department. Fee-related activities include sewer connection permits, capacity charges, and other regulatory services associated with new development.

The fee study assessed the full cost of EPASD's fee-supported services, using direct labor estimates, contractual support, and the City's Cost Allocation Plan to determine appropriate overhead. This was the first time EPASD was included in the City's cost studies since the governance transition, ensuring consistency and equity with other City departments and divisions.

As shown in **Attachment 3 (Table 25, page 41)**, the study found nearly all the fees administered by the Sanitary District show an under-recovery for the associated costs. The largest under-recovery is for a ‘Lateral’ at $792. The smallest undercharges are for Permit Application (T1, T2, T3) Category at $49. The study provides an updated framework to align EPASD’s fees with the true cost of service delivery.

The detailed fee schedule for EPASD is provided in **Attachment 3 (Table 25, page 41).**

Environmental Services:

The Environmental Services Division, under the Public Works Department, oversees compliance with state and local environmental regulations, including stormwater management, waste discharge, and inspection programs related to new development and construction.

The fee study evaluated the cost of providing these regulatory services by assessing staff time, compliance monitoring activities, and overhead. These services are important for ensuring compliance with environmental protection mandates.

Eliminated Fees: Staff proposed eliminating the following fees as these services are no longer offered by City staff, covered under other fees, or are now offered by other departments within the City:

- Grading Inspection for Construction BMPs
- Support to Planning Fees
- Single Family
- Support to Building Fees
- Stormwater Design Review

As shown in **Attachment 3 (Table 17, page 27)**, many environmental-related fees fall below the full cost of delivery. The study recommends aligning fees more closely with actual costs, especially where there is a clear nexus between the regulated activity and City staff effort.

Police:

The Police Department provides services related to public safety, records processing, special event staffing, and vehicle releases. These services often generate requests for records, background checks, or staff time at community events, some of which are recoverable through user fees.

The fee study evaluated the full cost of services by incorporating staff labor, administrative support, and overhead based on the Cost Allocation Plan. The analysis included common services such as fingerprinting, report copying, and police presence at events.

Eliminated Fees: Staff proposed eliminating the 'Redaction Services - Body Worn Camera Video (City Staff)' as this service is no longer offered and is covered through the contractor category.

New Fees: Staff proposed the addition of the following fees as they highlight services already offered but not codified on the fee schedule:

- Permit Review - Private Security Company - CSO Review
- Assistance to Planning Division Security Plan Review for New Business

Expanded Fees: Due to large variability in how the fees are administered, staff proposed expanding 'Officer Support of City Special Events' to include multiple classifications.

As shown in **Attachment 3 (Table 22, page 37)**, most police-related fees are under-recovering their costs, although a few recover the full cost. The study recommends modest adjustments to better align fees with actual service delivery costs while considering the accessibility of essential public safety services.

Fee Name	Current Fee	Total Cost	Difference
Code Enforcement Investigation	New	$185	N/A
Recording & Removal of Liens	New	$600	N/A
Notary[2]	$15	$15	$0

Summary Of Legal Restrictions And Policy Considerations:

Once the full cost of providing City services is determined, the next step is for the City Council to finalize the appropriate fee levels—up to, but not exceeding, the actual cost of service, in accordance with legal requirements. This is a policy-level decision that involves weighing the City's fiscal sustainability goals against community needs and values.

In setting fees, one key consideration is who benefits from the service. If a service provides a direct, individual benefit—such as a permit, inspection, or rental—full cost recovery is generally appropriate. Conversely, services that deliver broader community or shared benefits may justify a partial subsidy funded through the General Fund. The Council may also take into account socioeconomic impacts, particularly for services accessed by vulnerable or lower-income residents, and review market comparability to ensure the City's fees remain reasonable in relation to neighboring jurisdictions. These factors can be complex and may require thoughtful policy discussion.

The User and Regulatory Fee Study provides a detailed, data-driven foundation to support fees that are fair, transparent, and legally defensible. As part of this process, City staff have recommended fee increases where current charges fall short of actual costs, and reductions where fees exceed cost, to ensure compliance with state law.

While market comparisons can offer helpful context, they should be used as a supplementary tool, not the primary basis for fee-setting. Ultimately, fees should reflect the actual cost of services, promote fiscal responsibility, and support equitable access to City programs and resources.

Subsidized Fees:

Staff proposes less than full cost recovery for the following fees related to Community Services:

Fee Name	Unit	Current Fee	Total Cost	Proposed Fee
Special Event Permit - Application Processing				
Community Event Category 2 Events	Each	$182	$1,038	$500
Parade/Street Closure Category 3 Events	Each	$489	$2,132	$500
Police - Alcohol Distribution	Per Event	$65	$61	$61
Building Facility Rental Fees				
Residents of East Palo Alto				
Community Room (at City Hall)				
Non Peak Day Rental (Mon-Fri)	Hourly	$17	$118	$47
Peak Day Rental (Sat-Sun)	Hourly	$17	$118	$59
Cooley Landing Education Center				
Non Peak Day Rental (Mon-Fri)	Hourly	$87	$209	$84
Peak Day Rental (Sat-Sun)	Hourly	$87	$209	$105
YMCA City Room				
Non Peak Day Rental (Mon-Fri)	Hourly	$17	$80	$32
Peak Day Rental (Sat-Sun)	Hourly	$17	$80	$40
Non-Profit				
Community Room (at City Hall)				
Non Peak Day Rental (Mon-Fri)	Hourly	New	$118	$30
Peak Day Rental (Sat-Sun)	Hourly	New	$118	$30
Cooley Landing				
Non Peak Day Rental (Mon-Fri)	Hourly	New	$209	$52
Peak Day Rental (Sat-Sun)	Hourly	New	$209	$52
YMCA City Room				
Non Peak Day Rental (Mon-Fri)	Hourly	New	$80	$20
Peak Day Rental (Sat-Sun)	Hourly	New	$80	$20
Park Facility Rental Fees				
All Locations - rental of park, pavilion, or barbeque areas for special events	Hourly	$17	$112	$50

The recommended subsidies apply exclusively to fees charged to East Palo Alto residents and local nonprofit organizations. While all subsidized fees proposed in this staff report represent increases over current charges, they remain below the average levels observed in comparable jurisdictions, as shown in Attachment 3 (Appendix – Comparative Survey, page 47). Based on historical usage data, the estimated annual General Fund subsidy for these fees is approximately $20,000.

These subsidies are intended to ensure that cost is not a barrier to participation, particularly for lower-income residents, and to encourage compliance with City policies—such as event permitting—by making fees reasonable and accessible. Maintaining equitable access to community services while discouraging unpermitted activities supports both the City's fiscal goals and its broader community engagement objectives.

Annual Fee Adjustments:

In addition to amending the City's Master Fee Schedule based on the updated User and Regulatory Fee Study, staff also recommends implementing annual inflationary adjustments to applicable fees to maintain cost recovery between full studies. For user and regulatory fees, staff proposes using the regional Consumer Price Index (CPI)—specifically for the San Francisco-Oakland-Hayward region or a comparable index reflective of the City's cost environment—subject to City Council review and approval. A CPI-based adjustment is a widely accepted practice that allows the City to account for increases in labor, materials, and

operating costs without the need for a full-scale fee study each year. This mechanism will help the City sustain its cost recovery levels and minimize reliance on General Fund subsidies for fee-supported services.

By contrast, annual inflationary adjustments to development impact fees are governed by Municipal Code Section 13.28.100. That section authorizes annual adjustments "by a percentage equal to the change in the Construction Cost Index (CCI) as most recently published by the Engineering News Record (ENR)".

Fiscal Impact

If all proposed fee modifications are adopted, General Fund revenues are projected to increase by approximately $529K annually, depending on actual service volumes. These estimates reflect full implementation of the updated User and Regulatory Fee Study recommendations, which aim to bring fees closer to the actual cost of service delivery.

To the extent the City does not recover the full cost for these services, the General Fund will subsidize the difference, reducing tax revenues available for broader community services. By aligning fees with the Cost Allocation Plan and cost recovery goals, the City can improve fiscal sustainability and ensure equitable support for both individual and community-wide services.

Public Notice

The public was provided notice by making the agenda and report available on the City's website and on a bulletin board located at City Hall: 2415 University Avenue, East Palo Alto. In addition, a notice of public hearing was published on a local newspaper on June 6, 2025.

Environmental

The proposed action does not constitute a "project" with the meaning of the California Environmental Quality Act ("CEQA") pursuant to CEQA Guidelines sections 15378(b)(4) and (5) in that it is a governmental fiscal, organizational or administrative activity that will not result in direct or indirect changes in the environment.

Government Code § 84308

Applicability of Levine Act: No, as the proposed action does not involve an entitlement.

Analysis of Levine Act Compliance: Not applicable.

Attachments

1. Resolution to amend City's Master Fee Schedule
2. Cost Allocation Plan study report
3. User and Regulatory Fee study report
4. Comparative Schedule of Current and Proposed User and Regulatory Fees

FULL COST ALLOCATION PLAN
FY24-25 Budgeted Expenditures

APRIL 2025

EAST PALO ALTO, CA

MATRIX
CONSULTING GROUP

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EXECUTIVE SUMMARY

The Matrix Consulting Group has prepared this Full Cost Allocation Plan (CAP) for the City of East Palo Alto, CA. The report, which follows, presents a summary of the comprehensive analysis undertaken to identify the appropriate distribution of Citywide administrative and support costs to all City operating departments and programs.

METHODOLOGY

The primary objective of a CAP is to spread costs from central support departments, generally called "Central Service Departments," to those departments, cost centers, and/or funds that receive services in support of conducting their operations. In doing so, an organization can both better understand its full cost of providing specific services to the community and generate organizational awareness regarding indirect (overhead) costs associated with operations. This plan was compiled in accordance with Generally Accepted Accounting Principles and is based on many of the methods of indirect cost allocation defined by the federal Office of Management and Budget's (OMB) Title 2 CFR 200. These principles can be summarized in the following points:

- **Necessary and reasonable:** costs included for allocation should be necessary to the purpose of a department and the services it provides. Expenditures should be in alignment with reasonable costs associated with services, not arbitrarily or intentionally inflated.
- **Determined by allocation "bases" that relate to benefit received:** allocation metrics used to allocate costs should have a nexus to the service being provided and generally reflect associated service levels.

In addition, OMB guidelines outline a method for allocating indirect costs called the double-step down allocation method, which utilizes two "steps" or "passes" to fully allocate costs. The double-step down procedure is reflected in this plan and ensures that the benefit of services between Central Service support departments are recognized first, before final allocations to receivers of services are made. For example:

- **First Step:** Central Service department expenditures are allocated to other Central Service departments and to Receiving departments.
- **Second Step:** Distributes Central Service department expenses and first step allocations to Receiving departments only.

It should be noted that there are two types of cost allocation plans: Full Cost and OMB Compliant. A Full Cost Allocation Plan is generally concerned with determining indirect costs associated with non-general fund sources, as well as funds and departments that charge fees for service. For example, a Full Cost Allocation Plan could be used to justify transfers from non-general fund sources or included in a cost-of-service study to account for indirect overhead. The second form of Cost Allocation Plan is known as an OMB Compliant Plan. An OMB Compliant Plan is generally concerned with the use of the resulting cost allocations to develop, submit, and secure approval for claims. For

example, OMB Compliant allocations could be used to reimburse indirect costs associated with the administration of State and/or Federal grants. An OMB Compliant Plan is far more sensitive in terms of recovering administrative costs within the framework of the specific federal requirements outlined by OMB. This plan is a **Full Cost Allocation Plan**.

PROJECT STEPS

The project team, along with City staff, went through the following steps to develop this CAP:

- Meet with the City of East Palo Alto's administrative staff to customize the structure of the plan
- Identify / classify Central Service support departments
- Determine the major services or "functions" provided by each Central Service support department
- Establish the optimal allocation basis for each function
- Identify the data source and collect allocation basis data and statistics
- Populate the analytical model and calculate results
- Employ quality control processes for accurate results
- Review results with the City
- Revise and finalize
- Discuss implementation strategies
- Document and communicate results

The results of this effort are detailed in the following report.

SUMMARY

In summary, key project details for the cost plan are as follows:

- Cost figures are based on fiscal year 2024-2025 budgeted expenditures
- The allocation methodology is **Full Cost**, not OMB Title 2 CFR 200 Compliant
- The results presented in this plan were derived using a double "step-down" allocation process

The following report provides a well-documented and defensible basis for the team's indirect overhead costs, including the full detail regarding how cost centers were derived, the allocation bases used to allocate associated costs, and a summary schedule that illustrates the total indirect costs associated with Receiving departments and funds.

READING THE PLAN

The final documentation of a CAP can be hundreds of pages in length. The following provides a guide for navigating and reviewing the plan:

- **Table of Contents:** All summary and detail allocation schedules can be referenced here and appear in the same order as shown.
- **Summary of Overhead Allocations:** Lists Central Service departments on one axis and Receiving departments on the other. Shows how much was allocated from each Central Service department to each Receiving department. Summarizes unallocated and direct billed entries and produces a grand total for each axis.
- **Summary of Functions and Allocation Bases:** Recaps the source and basis for each function of each Central Service department. For example, if the Building Maintenance function of the Facilities Management Department allocates by square footage, then the basis for the allocation of that function shown on this schedule would be square footage, and the source would potentially be blueprints of the building or square footage records.
- **Central Service Departments:** Lists all Central Service departments, including their fund, department, and/or division number, along with expenditure totals per department, as well as a subtotal of disallowed costs and a total of all expenditures being allocated through the plan.
- **Grantee Departments:** Lists all Receiving departments, including their fund, department, and/or division number.
- **Detail Reports:** Each Central Service department in the plan has one set of reports. The reports show an aggregate picture of the department's expenses, a function-by-function breakdown of the expenses, each function's allocation, and an allocation summary. Each set of Detail Reports contains:
    - **Narrative:** This is a summary of the Central Service department, including a brief description of the activities performed, the major functions and services provided, and how costs associated with each function are allocated to Receiving departments, or those departments and programs within the organization that benefit from services.
    - **Costs to Be Allocated:** This is a summary of the costs being allocated for the identified Central Service department. This worksheet shows the total expenditures for the Central Service department, along with the incoming allocations from all other Central Service departments.
    - **Departmental Expense Detail:** This worksheet details the Central Service's direct expenditures, provides a recap of the incoming expenses, and arrives at a total this department encumbers on each pass of allocations. This worksheet also adds in incoming allocations and breaks total costs down by function. It also demonstrates how the G&A (General and Administrative)

column is reallocated and subtotals for each pass of the allocations. Here, unallocated functions are dropped from the Plan's calculations.

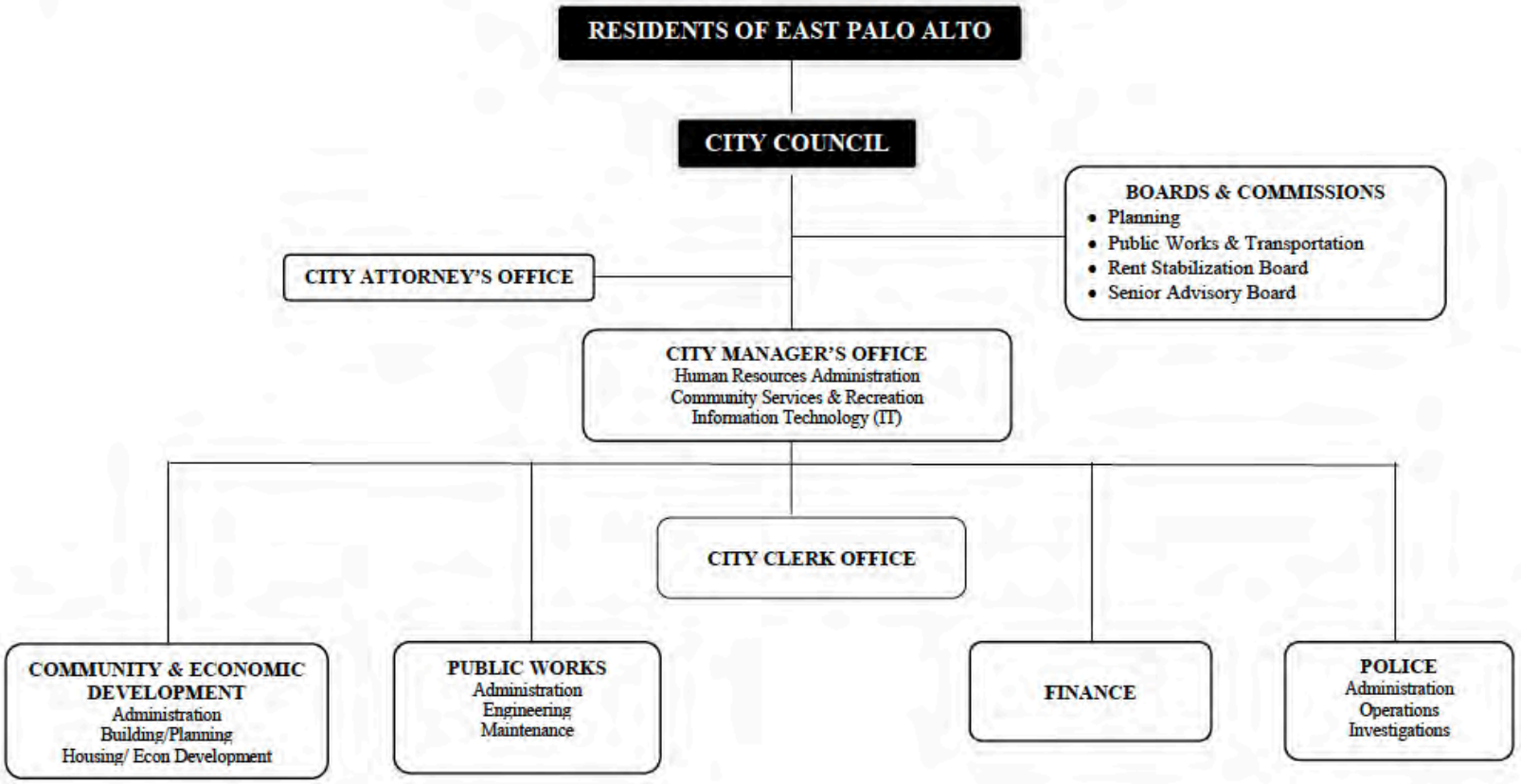
- **Allocation Detail:** For each allocable function, this report shows the Receiving departments its costs are allocated to and the amount allocated per pass.
- **Allocation Summary:** This worksheet shows the total costs being allocated to Receiving departments by function.

The Summary of Overhead Allocations and the Summary of Functions and Allocation Bases are the optimal documents for beginning review of the Cost Allocation Plan. The Summary of Overhead Allocations provides a summary of results and "bottom-line" picture of the analysis. The reviewer may then refer to the Detail Reports for more information on how allocations are derived and shown on the Summary of Overhead Allocations. The Summary of Functions and Allocation Bases provides a matrix detailing the allocation methodology applied to each Central Service department along with the source of the data.

ORGANIZATIONAL CHART

The organizational chart on the following page shows the overall structure for the City of East Palo Alto, including illustrating how each of the City's Departments are organized.

CITY OF EAST PALO ALTO
CITY ORGANIZATIONAL CHART
FY 2024-2025 Budget



SUMMARY OF OVERHEAD ALLOCATIONS

Provided on the following pages are a summary of results and a “bottom-line” picture of the resulting cost allocation plan analysis. This summary shows how much was allocated from each Central Service department to each end Receiving department. Departmental costs have been summarized with unallocated and direct billed entries and produces a grand total for each Central Service department, as well as for each Receiving department. The Central Service departments are listed down the left-hand side and Receiving departments across the top.

SUMMARY OF RESULTING OVERHEAD ALLOCATIONS

Fund	Dept	Div	Name	110-City Manager-14142 Admin Srvcs - Community Programs and Services	110-City Manager-14143 Admin Srvcs - Senior Services	110-Public Works-21212 PW - Engineering	110-Public Works-21214 PW-Environmental Programs	110-Community & Economic Development-31311 CEDE-Administration
			Building Use	$ -	$ 1,290,290	$ 225,000	$ 22,500	$ -
110	City Council	10101	City Council	$ 5,939	$ 31,181	$ 23,757	$ 10,394	$ 1,485
110	City Manager	11111	City Manager - Administration	$ 69,745	$ 33,725	$ 115,565	$ 27,231	$ 30,340
110	City Clerk	11112	Clerk Services	$ 12,991	$ 17,067	$ 27,281	$ 9,094	$ 16,290
110	City Manager	11113	Human Resource	$ 55,095	$ 44,076	$ 66,114	$ 6,611	$ 33,498
110	City Attorney	12121	City Attorney	$ 27,246	$ 6,314	$ 15,567	$ 7,892	$ 29,259
110	Finance	13131	Finance	$ 47,602	$ 41,258	$ 32,931	$ 18,614	$ 27,996
110	Public Works	21211	PW - Administration	$ -	$ -	$ 24,788	$ 6,970	$ -
110	Public Works	21213	PW - Maintenance	$ 146,675	$ 11,756	$ 7,838	$ -	$ -
110	Non-Departmental	95951	Non-Departmental	$ 36,129	$ 28,527	$ 2,534	$ 713	$ 1,815
			Total Allocated	**$ 401,423**	**$ 1,504,194**	**$ 541,375**	**$ 110,018**	**$ 140,682**
			Direct Bill Adjustments					
			Proposed Costs	**$ 401,423**	**$ 1,504,194**	**$ 541,375**	**$ 110,018**	**$ 140,682**

SUMMARY OF RESULTING OVERHEAD ALLOCATIONS

Fund	Dept	Div	Name	110-Community & Economic Development-31313 CEDE - Rent Stabilization	110-Community & Economic Development-31314 CEDE - Planning	110-Community & Economic Development-31315 CEDE - Building Inspection	110-Community & Economic Development-31777 CEDE - Housing Development
			Building Use	$ -	$ 187,500	$ 262,500	$ 13,125
110	City Council	10101	City Council	$ -	$ 26,727	$ 2,970	$ 22,272
110	City Manager	11111	City Manager - Administration	$ 30	$ 106,440	$ 88,170	$ 54,592
110	City Clerk	11112	Clerk Services	$ -	$ 35,090	$ 6,156	$ 19,487
110	City Manager	11113	Human Resource	$ -	$ 55,095	$ 77,133	$ 3,857
110	City Attorney	12121	City Attorney	$ 2,093	$ 63,808	$ 23,677	$ 31,352
110	Finance	13131	Finance	$ 3,297	$ 34,181	$ 75,650	$ 13,450
110	Public Works	21211	PW - Administration	$ -	$ -	$ -	$ -
110	Public Works	21213	PW - Maintenance	$ 1,120	$ -	$ 13,716	$ 3,919
110	Non-Departmental	95951	Non-Departmental	$ 5	$ 2,938	$ 7,233	$ 581
			Total Allocated	**$ 6,544**	**$ 511,780**	**$ 557,205**	**$ 162,635**
			Direct Bill Adjustments				
			Proposed Costs	**$ 6,544**	**$ 511,780**	**$ 557,205**	**$ 162,635**

SUMMARY OF RESULTING OVERHEAD ALLOCATIONS

Fund	Dept	Div	Name	110-Police-41411 Police-Administration	110-Police-41412 Police-Operations	110-Police-41413 Police-Investigations	110-Public Works-99991 Capital Projects	111-Finance-Information Services	112-Finance-Equipment & Vehicle Replacement
			Building Use	$ -	$ -	$ -	$ -	$ -	$ -
110	City Council	10101	City Council	$ 17,818	$ -	$ -	$ -	$ 1,485	$ -
110	City Manager	11111	City Manager - Administration	$ 162,303	$ 275,687	$ 99,399	$ -	$ 28,885	$ 2,376
110	City Clerk	11112	Clerk Services	$ 73,271	$ -	$ -	$ -	$ 1,299	$ -
110	City Manager	11113	Human Resource	$ 99,171	$ 319,552	$ 154,267	$ -	$ 11,019	$ -
110	City Attorney	12121	City Attorney	$ 30,814	$ 21,046	$ 21,046	$ -	$ 31,569	$ -
110	Finance	13131	Finance	$ 159,568	$ 110,168	$ 43,161	$ 216	$ 39,351	$ 8,557
110	Public Works	21211	PW - Administration	$ -	$ -	$ -	$ -	$ -	$ -
110	Public Works	21213	PW - Maintenance	$ 121,483	$ -	$ -	$ -	$ 560	$ -
110	Non-Departmental	95951	Non-Departmental	$ 12,157	$ 20,083	$ 4,365	$ -	$ 10,100	$ -
			Total Allocated	**$ 676,586**	**$ 746,537**	**$ 322,238**	**$ 216**	**$ 124,269**	**$ 10,933**
			Direct Bill Adjustments						
			Proposed Costs	**$ 676,586**	**$ 746,537**	**$ 322,238**	**$ 216**	**$ 124,269**	**$ 10,933**

SUMMARY OF RESULTING OVERHEAD ALLOCATIONS

Fund	Dept	Div	Name	113-Finance-Self Insurance	115-Finance-General Fund Reserve	117-Finance-Community Development Pass Through Fund	201-Public Works-Gas Tax Fund	202-Public Works-Measure A Smc 20 1/2 Sales Tax	203-Public Works-Nat'l Pollutant Discharged Elimation Sys
			Building Use	$ -	$ -	$ -	$ -	$ -	$ 26,250
110	City Council	10101	City Council	$ -	$ -	$ -	$ 2,970	$ -	$ -
110	City Manager	11111	City Manager - Administration	$ 17,718	$ -	$ 16,580	$ 26,330	$ 56	$ 19,119
110	City Clerk	11112	Clerk Services	$ -	$ -	$ -	$ 2,598	$ -	$ -
110	City Manager	11113	Human Resource	$ -	$ -	$ -	$ 7,914	$ -	$ 16,198
110	City Attorney	12121	City Attorney	$ -	$ -	$ -	$ -	$ -	$ -
110	Finance	13131	Finance	$ 32,444	$ 72	$ 43,234	$ 59,151	$ 7,066	$ 43,318
110	Public Works	21211	PW - Administration	$ -	$ -	$ -	$ 49,573	$ 46,121	$ 17,917
110	Public Works	21213	PW - Maintenance	$ -	$ -	$ -	$ -	$ -	$ -
110	Non-Departmental	95951	Non-Departmental	$ -	$ -	$ -	$ -	$ -	$ -
			Total Allocated	**$ 50,163**	**$ 72**	**$ 59,814**	**$ 148,535**	**$ 53,243**	**$ 122,801**
			Direct Bill Adjustments						
			Proposed Costs	**$ 50,163**	**$ 72**	**$ 59,814**	**$ 148,535**	**$ 53,243**	**$ 122,801**

SUMMARY OF RESULTING OVERHEAD ALLOCATIONS

Fund	Dept	Div	Name	204-Community & Economic Development-Rent Stabilization Program	206-Public Works-Park-In-Lieu Fund	207-Community & Economic Development-Housing-In-Lieu Fund	209-Community & Economic Development-Revolving Housing Loans	213-Police-Federal And State Law Enforcement Grants
			Building Use	$ -	$ -	$ -	$ -	$ -
110	City Council	10101	City Council	$ 2,970	$ -	$ -	$ -	$ -
110	City Manager	11111	City Manager - Administration	$ 28,568	$ -	$ 1,654	$ 50	$ 2,683
110	City Clerk	11112	Clerk Services	$ 14,304	$ -	$ -	$ -	$ -
110	City Manager	11113	Human Resource	$ 22,038	$ -	$ -	$ -	$ -
110	City Attorney	12121	City Attorney	$ 139,835	$ -	$ -	$ -	$ -
110	Finance	13131	Finance	$ 59,167	$ 1,080	$ 8,812	$ 8,931	$ 14,118
110	Public Works	21211	PW - Administration	$ -	$ -	$ -	$ -	$ -
110	Public Works	21213	PW - Maintenance	$ -	$ -	$ -	$ -	$ -
110	Non-Departmental	95951	Non-Departmental	$ 13,737	$ -	$ -	$ -	$ -
			Total Allocated	**$ 280,619**	**$ 1,080**	**$ 10,466**	**$ 8,981**	**$ 16,801**
			Direct Bill Adjustments					
			Proposed Costs	**$ 280,619**	**$ 1,080**	**$ 10,466**	**$ 8,981**	**$ 16,801**

SUMMARY OF RESULTING OVERHEAD ALLOCATIONS

Fund	Dept	Div	Name	215-Community & Economic Development-Misc Federal And State Grants	218-Community & Economic Development-Affordable Housing Transient Occupancy Tax (TOT)	219-Community & Economic Development-Measure HH	220-Finance-LMIH Successor Fund	221-Public Works-Lighting Fund
			Building Use	$ -	$ -	$ 18,750	$ 43,125	$ -
110	City Council	10101	City Council	$ 1,485	$ -	$ 2,970	$ -	$ -
110	City Manager	11111	City Manager - Administration	$ 8,011	$ 464	$ 17,208	$ 14,018	$ 5,675
110	City Clerk	11112	Clerk Services	$ 1,299	$ -	$ 2,598	$ -	$ -
110	City Manager	11113	Human Resource	$ -	$ -	$ 13,002	$ 15,757	$ 1,003
110	City Attorney	12121	City Attorney	$ -	$ -	$ -	$ -	$ -
110	Finance	13131	Finance	$ 17,879	$ 7,073	$ 50,856	$ 59,991	$ 30,151
110	Public Works	21211	PW - Administration	$ -	$ -	$ -	$ -	$ 15,386
110	Public Works	21213	PW - Maintenance	$ -	$ -	$ -	$ -	$ -
110	Non-Departmental	95951	Non-Departmental	$ -	$ -	$ -	$ 9,819	$ -
			Total Allocated	**$ 28,674**	**$ 7,538**	**$ 105,384**	**$ 142,710**	**$ 52,215**
			Direct Bill Adjustments					
			Proposed Costs	**$ 28,674**	**$ 7,538**	**$ 105,384**	**$ 142,710**	**$ 52,215**

SUMMARY OF RESULTING OVERHEAD ALLOCATIONS

Fund	Dept	Div	Name	222-Public Works-Drainage Fund	230-Public Safety-Local Grant Fund	231-City Manager-CYSFF - Children/ Youth/ Senior/ Family Fund	233-Community & Economic Development-Silicon Valley Community Fund	234-Public Works-Measure W
			Building Use	$ -	$ -	$ -	$ -	$ -
110	City Council	10101	City Council	$ -	$ -	$ -	$ -	$ -
110	City Manager	11111	City Manager - Administration	$ 6,279	$ 8,421	$ 771	$ -	$ 27
110	City Clerk	11112	Clerk Services	$ -	$ -	$ -	$ -	$ -
110	City Manager	11113	Human Resource	$ 2,862	$ -	$ -	$ -	$ -
110	City Attorney	12121	City Attorney	$ -	$ -	$ -	$ -	$ -
110	Finance	13131	Finance	$ 37,299	$ 25,415	$ 8,240	$ 3,565	$ 6,524
110	Public Works	21211	PW - Administration	$ 12,539	$ -	$ -	$ -	$ 12,253
110	Public Works	21213	PW - Maintenance	$ -	$ -	$ -	$ -	$ -
110	Non-Departmental	95951	Non-Departmental	$ -	$ -	$ -	$ -	$ -
			Total Allocated	**$ 58,979**	**$ 33,836**	**$ 9,011**	**$ 3,565**	**$ 18,804**
			Direct Bill Adjustments					
			Proposed Costs	**$ 58,979**	**$ 33,836**	**$ 9,011**	**$ 3,565**	**$ 18,804**

SUMMARY OF RESULTING OVERHEAD ALLOCATIONS

Fund	Dept	Div	Name	301-Public Works-Capital Improvements Project Funds - Local matching	303-Public Works-Capital Improvements Project Funds - Grant expenditure	305-Public Works-Parks and Trails Impact Fee Fund	306-Public Works-Public Faculties Impact Fee Fund	307-Public Works-Transportation Infrastructure Impact Fee Fund
			Building Use	$ -	$ -	$ -	$ -	$ -
110	City Council	10101	City Council	$ -	$ -	$ -	$ -	$ -
110	City Manager	11111	City Manager - Administration	$ 3,660	$ -	$ -	$ -	$ -
110	City Clerk	11112	Clerk Services	$ -	$ -	$ -	$ -	$ -
110	City Manager	11113	Human Resource	$ 5,510	$ -	$ -	$ -	$ -
110	City Attorney	12121	City Attorney	$ -	$ -	$ -	$ -	$ -
110	Finance	13131	Finance	$ 28,852	$ 9,831	$ 2,125	$ 2,125	$ 2,233
110	Public Works	21211	PW - Administration	$ 133,007	$ 311,408	$ -	$ -	$ -
110	Public Works	21213	PW - Maintenance	$ -	$ -	$ -	$ -	$ -
110	Non-Departmental	95951	Non-Departmental	$ -	$ -	$ -	$ -	$ -
			Total Allocated	**$ 171,029**	**$ 321,239**	**$ 2,125**	**$ 2,125**	**$ 2,233**
			Direct Bill Adjustments					
			Proposed Costs	**$ 171,029**	**$ 321,239**	**$ 2,125**	**$ 2,125**	**$ 2,233**

SUMMARY OF RESULTING OVERHEAD ALLOCATIONS

Fund	Dept	Div	Name	308-Public Works-RBD-I Storm Drain Impact Fee Fund	309-Public Works-RBD-O Storm Drain Impact Fee Fund	510-Public Works-Water Service Fund	511-Public Works-Water Capital Surcharge Fund	512-Public Works-Water Meter Surcharge Fund
			Building Use	$ -	$ -	$ 37,500	$ -	$ -
110	City Council	10101	City Council	$ -	$ -	$ 8,909	$ -	$ -
110	City Manager	11111	City Manager - Administration	$ -	$ -	$ 31,529	$ 4,814	$ -
110	City Clerk	11112	Clerk Services	$ -	$ -	$ 7,795	$ -	$ -
110	City Manager	11113	Human Resource	$ -	$ -	$ 11,019	$ -	$ -
110	City Attorney	12121	City Attorney	$ -	$ -	$ 31,569	$ -	$ -
110	Finance	13131	Finance	$ 1,873	$ 1,621	$ 45,042	$ 16,760	$ 2,521
110	Public Works	21211	PW - Administration	$ -	$ -	$ 10,447	$ 7,449	$ 4,884
110	Public Works	21213	PW - Maintenance	$ -	$ -	$ -	$ -	$ -
110	Non-Departmental	95951	Non-Departmental	$ -	$ -	$ -	$ -	$ -
			Total Allocated	**$ 1,873**	**$ 1,621**	**$ 183,810**	**$ 29,022**	**$ 7,405**
			Direct Bill Adjustments					
			Proposed Costs	**$ 1,873**	**$ 1,621**	**$ 183,810**	**$ 29,022**	**$ 7,405**

SUMMARY OF RESULTING OVERHEAD ALLOCATIONS

Fund	Dept	Div	Name	513-Public Works-Water Capacity Fee Fund	520-Public Works-Garbage Collection Fund (Prop. Tax)	530-Public Works-EPA Sanitary District	705-Non-Departmental-Trust and Agency Fund	706-Non-Departmental-Debt Service Trust
			Building Use	$ -	$ 63,750	$ -	$ -	$ -
110	City Council	10101	City Council	$ -	$ 4,454	$ 29,697	$ -	$ -
110	City Manager	11111	City Manager - Administration	$ -	$ 24,371	$ 246,295	$ 499	$ -
110	City Clerk	11112	Clerk Services	$ -	$ 3,897	$ 43,541	$ -	$ -
110	City Manager	11113	Human Resource	$ -	$ 25,613	$ 18,732	$ 1,071	$ -
110	City Attorney	12121	City Attorney	$ -	$ -	$ 122,009	$ -	$ -
110	Finance	13131	Finance	$ 2,665	$ 45,731	$ 344,932	$ 13,241	$ 684
110	Public Works	21211	PW - Administration	$ -	$ 9,128	$ 134,091	$ -	$ -
110	Public Works	21213	PW - Maintenance	$ -	$ -	$ -	$ -	$ -
110	Non-Departmental	95951	Non-Departmental	$ -	$ -	$ -	$ -	$ -
			Total Allocated	**$ 2,665**	**$ 176,943**	**$ 939,297**	**$ 14,810**	**$ 684**
			Direct Bill Adjustments					
			Proposed Costs	**$ 2,665**	**$ 176,943**	**$ 939,297**	**$ 14,810**	**$ 684**

SUMMARY OF RESULTING OVERHEAD ALLOCATIONS

Fund	Dept	Div	Name	810-Non-Departmental-General Fixed Asset Account Group	820-Non-Departmental-General Long-Term Debt	830-Non-Departmental-0	Other	Other - Closed Out Funds
			Building Use	$ -	$ -	$ -	$ -	$ -
110	City Council	10101	City Council	$ -	$ -	$ -	$ 63,848	$ -
110	City Manager	11111	City Manager - Administration	$ -	$ -	$ -	$ -	$ -
110	City Clerk	11112	Clerk Services	$ -	$ -	$ -	$ 55,862	$ -
110	City Manager	11113	Human Resource	$ -	$ -	$ -	$ -	$ -
110	City Attorney	12121	City Attorney	$ -	$ -	$ -	$ -	$ -
110	Finance	13131	Finance	$ 504	$ 144	$ 360	$ -	$ 1,693
110	Public Works	21211	PW - Administration	$ -	$ -	$ -	$ -	$ -
110	Public Works	21213	PW - Maintenance	$ -	$ -	$ -	$ -	$ -
110	Non-Departmental	95951	Non-Departmental	$ -	$ -	$ -	$ -	$ -
			Total Allocated	**$ 504**	**$ 144**	**$ 360**	**$ 119,709**	**$ 1,693**
			Direct Bill Adjustments					
			Proposed Costs	**$ 504**	**$ 144**	**$ 360**	**$ 119,709**	**$ 1,693**

SUMMARY OF RESULTING OVERHEAD ALLOCATIONS

Fund	Dept	Div	Name	Subtotal	Direct Billed	Unallocated	Total
			Building Use	$2,190,290	$ -	$ -	$ 2,190,290
110	City Council	10101	City Council	$ 261,330	$ -	$ -	$ 261,330
110	City Manager	11111	City Manager - Administration	$1,579,287	$ -	$ -	$ 1,579,287
110	City Clerk	11112	Clerk Services	$ 349,920	$ -	$ 32,924	$ 382,843
110	City Manager	11113	Human Resource	$1,066,208	$ -	$ -	$ 1,066,208
110	City Attorney	12121	City Attorney	$ 605,099	$ -	$ 652,734	$ 1,257,833
110	Finance	13131	Finance	$1,703,320	$ -	$ -	$ 1,703,320
110	Public Works	21211	PW - Administration	$ 795,960	$ -	$ -	$ 795,960
110	Public Works	21213	PW - Maintenance	$ 307,066	$ -	$2,894,028	$ 3,201,094
110	Non-Departmental	95951	Non-Departmental	$ 150,736	$ -	$4,145,527	$ 4,296,264
			Total Allocated	**$9,009,218**	**$ -**	**$7,725,213**	**$ 16,734,431**
			Direct Bill Adjustments	**$ -**			
			Proposed Costs	**$9,009,218**	**$ -**	**$7,725,213**	**$ 16,734,431**

SUMMARY OF FUNCTIONS AND ALLOCATION BASES

The Summary of Functions and Allocation Bases provided on the following pages shows a recap of the allocation methodology applied to each Central Service department. For example, if the Building Maintenance function of the Facilities Management Department allocates by square footage, then the basis for the allocation of that function shown on this schedule would be square footage, and the source would potentially be blueprints of the building or square footage records.

SUMMARY OF FUNCTIONS AND ALLOCATION BASES

CS DEPARTMENT	FUNCTION	SUPPORT %	ALLOCATION BASIS	SOURCE
-- Building Use				
	Permit Center	41%	FTE per Permit Center Occupant	Personnel File
	Senior Center	59%	Direct to Senior Center	-
110-City Council-10101 City Council				
	Citywide Support	100%	# of Agenda Items	Agenda Report
110-City Manager-11111 City Manager - Administration				
	Managerial Support	30%	# of FTE	Personnel File
	Program Support	30%	Budgeted Expenditures	Expenditure Report
	Policy Support	30%	# of Staff Reports	Staff Report List
	Sanitation District	11%	Direct to Sanitation	-
110-City Clerk-11112 Clerk Services				
	Council Support	57%	# of Agenda Items	Agenda Report
	Public Records & Records Management	13%	# of Public Records Requests	PRR Report
	Boards, Commissions, and Committees	10%	# of Board Members	Board Members List
	Public Information & Communications	15%	Equal to All	-
	Elections	5%	Not Allocated	-
110-City Manager-11113 Human Resource				
	Employee Support	100%	# of FTE	Personnel File
110-City Attorney-12121 City Attorney				
	Legal Advice	35%	Equal to All	-
	Council and Board Support	10%	# of Meetings	Meetings Report
	Contracts and Insurance	10%	# of Contracts	Contracts Report
	Public Records and Subpoenas	8%	Not Allocated	-
	Litigation	32%	Not Allocated	-
	Elections	5%	Not Allocated	-
110-Finance-13131 Finance				
	Accounting and Financial Reporting	45%	# of Transactions	Transaction Report
	Payroll	13%	# of FTE	Personnel File
	Budget	24%	Non-personnel budgeted expenditures	Expenditure Report
	Treasury	6%	Equal to all	-
	EPASD Accounting	12%	Direct to EPASD	-
110-Public Works-21211 PW - Administration				
	Management & Oversight	100%	Budget for Public Works Divisions (including Capital Projects & EPASD)	Expenditure Report
110-Public Works-21213 PW - Maintenance				
	Facility Maintenance	21%	# of Work Orders that are specific to Facilities	Work Orders Report
	General Citywide Maintenance	79%	Not Allocated	-

CS DEPARTMENT	FUNCTION	SUPPORT %	ALLOCATION BASIS	SOURCE
110-Non-Departmental-95951 Non-Departmental				
	City Hall Leases	5%	FTE per City Hall dept	Personnel File
	Citywide Support	2%	Budget	Expenditure Report
	Transfers, JPA Costs, & Overhead Allocation	93%	Not Allocated	-

CENTRAL SERVICE DEPARTMENTS (PROVIDERS)

The following page provides a list of all the departments included as Central Services, including their fund, department, and/or division number, along with expenditure totals per department, a subtotal of disallowed costs and cost adjustments, and a total of all expenditures allocated through the plan.

CENTRAL SERVICES DEPARTMENTS (PROVIDERS)

Fund	Dept	Div	Name	Functional Expenditures	Disallowed Costs	Cost Adjustments	Total $
			Building Use	$ -	$ -	$2,190,290	$ 2,190,290
110	City Council	10101	City Council	$ 190,693	$ -	$ -	$ 190,693
110	City Manager	11111	City Manager - Administration	$1,789,936	$ -	$ 22,265	$ 1,812,201
110	City Clerk	11112	Clerk Services	$ 519,926	$ -	$ -	$ 519,926
110	City Manager	11113	Human Resource	$1,047,825	$ -	$ -	$ 1,047,825
110	City Attorney	12121	City Attorney	$1,224,052	$ -	$ 18,397	$ 1,242,449
110	Finance	13131	Finance	$1,401,873	$ -	$ 184,832	$ 1,586,705
110	Public Works	21211	PW - Administration	$ 669,781	$ -	$ 9,674	$ 679,455
110	Public Works	21213	PW - Maintenance	$3,023,508	$ -	$ -	$ 3,023,508
110	Non-Departmental	95951	Non-Departmental	$3,512,197	$ -	$ 929,182	$ 4,441,379

TOTAL ALLOCATED EXPENDITURES **$ 16,734,431**

GRANTEE DEPARTMENTS (RECEIVERS)

The following page provides a list of all the departments included as Receiving departments, including their fund, department, and/or division number.

GRANTEE DEPARTMENTS (RECEIVERS)

FUND	DEPT	DIV	NAME
110	City Manager	14142	Admin Srvcs - Community Programs and Services
110	City Manager	14143	Admin Srvcs - Senior Services
110	Public Works	21212	PW - Engineering
110	Public Works	21214	PW- Environmental Programs
110	Community & Economic Development	31311	CEDE- Administration
110	Community & Economic Development	31313	CEDE - Rent Stabilization
110	Community & Economic Development	31314	CEDE - Planning
110	Community & Economic Development	31315	CEDE - Building Inspection
110	Community & Economic Development	31777	CEDE - Housing Development
110	Police	41411	Police-Administration
110	Police	41412	Police-Operations
110	Police	41413	Police-Investigations
110	Public Works	99991	Capital Projects
111	Finance	-	Information Services
112	Finance	-	Equipment & Vehicle Replacement
113	Finance	-	Self Insurance
115	Finance	-	General Fund Reserve
117	Finance	-	Community Development Pass Through Fund
201	Public Works	-	Gas Tax Fund
202	Public Works	-	Measure A Smc 20 1/2 Sales Tax
203	Public Works	-	Nat'l Pollutant Discharged Elimation Sys
204	Community & Economic Development	-	Rent Stabilization Program
206	Public Works	-	Park-In-Lieu Fund
207	Community & Economic Development	-	Housing-In-Lieu Fund
209	Community & Economic Development	-	Revolving Housing Loans
213	Police	-	Federal And State Law Enforcement Grants
215	Community & Economic Development	-	Misc Federal And State Grants
218	Community & Economic Development	-	Affordable Housing Transient Occupancy Tax (TOT)
219	Community & Economic Development	-	Measure HH
220	Finance	-	LMIH Successor Fund
221	Public Works	-	Lighting Fund
222	Public Works	-	Drainage Fund
230	Public Safety	-	Local Grant Fund
231	City Manager	-	CYSFF - Children/ Youth/ Senior/ Family Fund
233	Community & Economic Development	-	Silicon Valley Community Fund
234	Public Works	-	Measure W
301	Public Works	-	Capital Improvements Project Funds - Local matching
303	Public Works	-	Capital Improvements Project Funds - Grant expenditure
305	Public Works	-	Parks and Trails Impact Fee Fund
306	Public Works	-	Public Faculties Impact Fee Fund
307	Public Works	-	Transportation Infrastructure Impact Fee Fund

GRANTEE DEPARTMENTS (RECEIVERS)

FUND	DEPT	DIV	NAME
308	Public Works	-	RBD-I Storm Drain Impact Fee Fund
309	Public Works	-	RBD-O Storm Drain Impact Fee Fund
510	Public Works	-	Water Service Fund
511	Public Works	-	Water Capital Surcharge Fund
512	Public Works	-	Water Meter Surcharge Fund
513	Public Works	-	Water Capacity Fee Fund
520	Public Works	-	Garbage Collection Fund (Prop. Tax)
530	Public Works	-	EPA Sanitary District
705	Non-Departmental	-	Trust and Agency Fund
706	Non-Departmental	-	Debt Service Trust
810	Non-Departmental	-	General Fixed Asset Account Group
820	Non-Departmental	-	General Long-Term Debt
830	Non-Departmental	-	-
999	Non-Departmental	-	Pooled Cash
-	-	-	Other
-	-	-	Other - Closed Out Funds

COST ALLOCATION PLAN

The following points highlight the information included for each Central Service department for the Cost Allocation Plan:

- **Departmental narrative:** This describes the overall services provided by each Central Service department, the different functions associated with the department, and the allocation bases used to allocate costs to Receiving departments.
- **Costs to be allocated:** This details the total functional cost associated with a department as well as any cost adjustments and incoming costs from other Central Service departments.
- **Departmental expense detail**: This provides a detailed breakout of the expenditures associated with each Central Service department (including personnel and non-personnel expenses), any cost adjustments, disallowed costs, incoming costs, and any unallocated costs.
- **Allocation detail**: This details the allocation metric(s) used to determine the percentage of support and ultimate cost allocated to Receiving departments and accounts for any direct bills for services paid for by departments to the Central Service department.
- **Allocation summary:** This summarizes the total costs allocated to departments by Central Service functional areas.

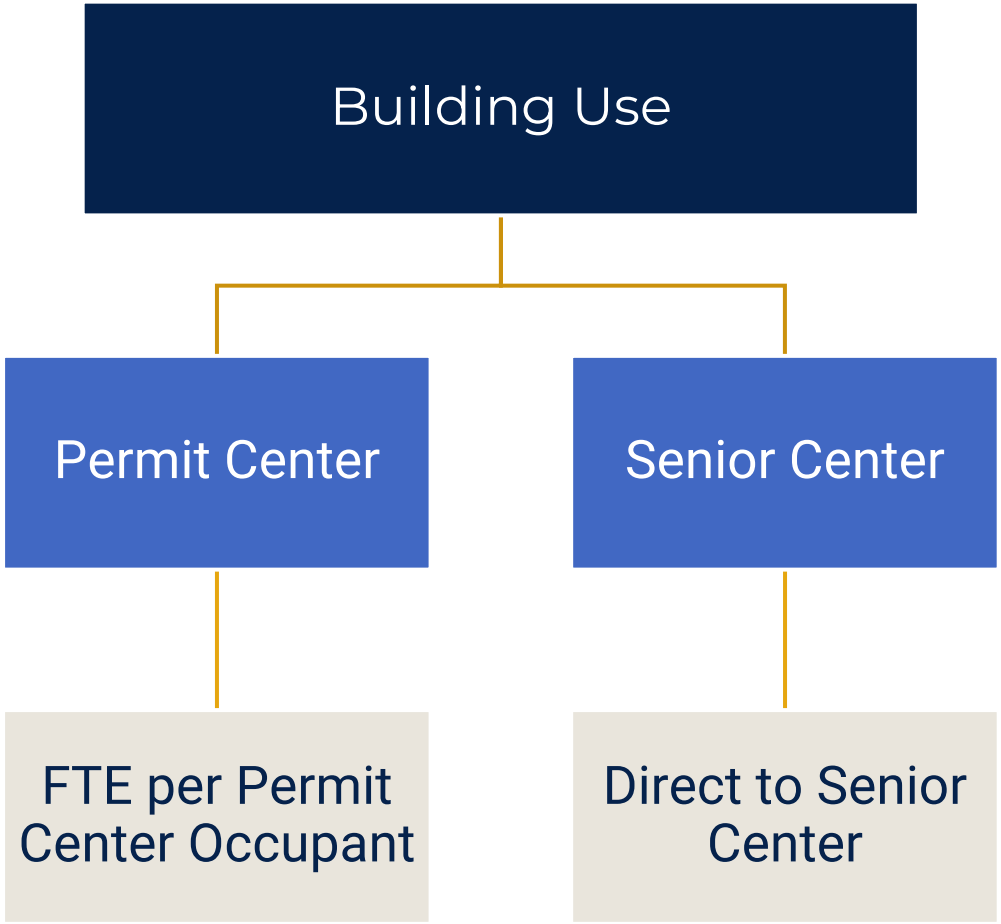
The following pages provide the detailed information outlined above for each Central Service department.

1 BUILDING USE

Building Use was created to distribute annual general fund costs associated with the depreciation of city owned buildings. Building Use costs are allocated to Receiving Departments as follows:

- **Permit Center –** represents the annual depreciation cost associated with the city's permit center. This function is allocated based on the full-time employees per permit center department / division occupant.
- **Senior Center –** represents the annual utilization cost associated with the cities senior center. This function is allocated directly to the senior center.

The chart on the following page illustrates the functions and measures used to allocate Building Use costs. The top tier shows the Central Service department, the second tier shows the functions developed, and the third tier shows the measures used to allocate costs countywide. The pages following the chart provide an aggregate picture of the depreciation expenses, a function-by-function breakdown of expenses, each function's allocation, and an allocation summary.


Building Use
Permit Center
Senior Center
FTE per Permit Center Occupant
Direct to Senior Center

COSTS TO BE ALLOCATED

-- Building Use	First Allocation	Second Allocation	Total
Functional Expenditures	$ -		$ -
Total Disallowed Costs	$ -		$ -
Incoming Costs			
Total Incoming Costs	$ -	$ -	$ -
Building Depreciation	$2,190,290		
Total Cost Adjustments	**$2,190,290**		**$2,190,290**
Total Costs to be Allocated	**$2,190,290**	$ -	**$2,190,290**

-- Building Use

EXPENSE DETAIL

Expense Type	Expense ($)	Permit Center	Senior Center
Personnel			
Subtotal Personnel Cost	$ -	$ -	$ -
Operating Services & Supplies			
Subtotal Operating Cost	$ -	$ -	$ -
FUNCTIONAL EXPENDITURES	$ -	$ -	$ -
Disallowed Costs			
Subtotal Disallowed Costs	$ -	$ -	$ -
Cost Adjustments			
Building Depreciation	$ 2,190,290	$ 900,000	$ 1,290,290
Subtotal Cost Adjustments	**$ 2,190,290**	**$ 900,000**	**$ 1,290,290**
FUNCTIONAL COST	**$ 2,190,290.00**	**$ 900,000.00**	**$ 1,290,290.00**
First Allocation			
Incoming - All Others	$ -	$ -	$ -
Reallocate Admin Costs	$ -	$ -	$ -
Unallocated Costs	$ -	$ -	$ -
Subtotal of First Allocation	**$ 2,190,290.00**	**$ 900,000.00**	**$ 1,290,290.00**
Second Allocation			
Incoming - All Others	$ -	$ -	$ -
Reallocate Admin Costs	$ -	$ -	$ -
Unallocated Costs	$ -	$ -	$ -
Subtotal of Second Allocation	$ -	$ -	$ -
TOTAL ALLOCATED	**$ 2,190,290**	**$ 900,000**	**$ 1,290,290**

-- Building Use

ALLOCATION DETAIL

	Allocation Units	Allocated Percent	Gross Allocation	Direct Billed	First Allocation	Second Allocation	Total
Permit Center							
110-Public Works-21212 PW - Engineering	6.00	25.000%	$ 225,000		$ 225,000	$ -	$ 225,000
110-Public Works-21214 PW- Environmental Programs	0.60	2.500%	$ 22,500		$ 22,500	$ -	$ 22,500
110-Community & Economic Development-31314 CEDE - Planning	5.00	20.833%	$ 187,500		$ 187,500	$ -	$ 187,500
110-Community & Economic Development-31315 CEDE - Building Inspection	7.00	29.167%	$ 262,500		$ 262,500	$ -	$ 262,500
110-Community & Economic Development-31777 CEDE - Housing Development	0.35	1.458%	$ 13,125		$ 13,125	$ -	$ 13,125
203-Public Works-Nat'l Pollutant Discharged Elimation Sys	0.70	2.917%	$ 26,250		$ 26,250	$ -	$ 26,250
219-Community & Economic Development-Measure HH	0.50	2.083%	$ 18,750		$ 18,750	$ -	$ 18,750
220-Finance-LMIH Successor Fund	1.15	4.792%	$ 43,125		$ 43,125	$ -	$ 43,125
510-Public Works-Water Service Fund	1.00	4.167%	$ 37,500		$ 37,500	$ -	$ 37,500
520-Public Works-Garbage Collection Fund (Prop. Tax)	1.70	7.083%	$ 63,750		$ 63,750	$ -	$ 63,750
Total	**24.00**	**100.000%**	**$ 900,000**	**$ -**	**$ 900,000**	**$ -**	**$ 900,000**

Allocation Basis: FTE per Permit Center Occupant

Source of Allocation: Personnel File

-- Building Use

ALLOCATION DETAIL

		Allocation Units	Allocated Percent	Gross Allocation	Direct Billed	First Allocation	Second Allocation	Total
Senior Center								
110-City Manager-14143 Admin Srvcs - Senior Services		1.00	100.000%	$1,290,290		$1,290,290	$ -	$1,290,290
	Total	**1.00**	**100.000%**	**$1,290,290**	**$ -**	**$1,290,290**	**$ -**	**$1,290,290**

Allocation Basis: Direct to Senior Center

ALLOCATION SUMMARY

-- Building Use	Permit Center	Senior Center	Total
110-City Manager-14143 Admin Srvcs - Senior Services	$ -	$1,290,290	$1,290,290
110-Public Works-21212 PW - Engineering	$ 225,000	$ -	$ 225,000
110-Public Works-21214 PW- Environmental Programs	$ 22,500	$ -	$ 22,500
110-Community & Economic Development-31314 CEDE - Planning	$ 187,500	$ -	$ 187,500
110-Community & Economic Development-31315 CEDE - Building Inspection	$ 262,500	$ -	$ 262,500
110-Community & Economic Development-31777 CEDE - Housing Development	$ 13,125	$ -	$13,125.00
203-Public Works-Nat'l Pollutant Discharged Elimation Sys	$ 26,250	$ -	$ 26,250
219-Community & Economic Development-Measure HH	$ 18,750	$ -	$ 18,750
220-Finance-LMIH Successor Fund	$ 43,125	$ -	$ 43,125
510-Public Works-Water Service Fund	$ 37,500	$ -	$ 37,500
520-Public Works-Garbage Collection Fund (Prop. Tax)	$ 63,750	$ -	$ 63,750
Total	**$ 900,000**	**$1,290,290**	**$2,190,290**

2 CITY COUNCIL

City Council is responsible for overseeing legislative processes and providing policy direction to city departments and staff. The Office also manages intergovernmental affairs for the city. City Council costs are allocated to Receiving Departments as follows:

- **Citywide Support** – represents the support associated with overseeing city policies and objectives. These costs have been allocated based on the number of agenda[1] items per department.

The chart on the following page illustrates the functions and measures used to allocate City Council costs. The top tier shows the Central Service department, the second tier shows the functions developed, and the third tier shows measures used to allocate costs citywide. The pages following the chart provide an aggregate picture of the department's expenses, a function-by-function breakdown of expenses, each function's allocation, and an allocation summary.

[1] EPA Sanitary District weighted at 2x due to additional level of effort associated with providing oversight to that functional area.


CITY COUNCIL
Citywide Support
# of Agenda Items

COSTS TO BE ALLOCATED

110-City Council-10101 City Council	First Allocation	Second Allocation	Total
Functional Expenditures	$190,693		$ 190,693
Total Disallowed Costs	$ -		$ -
Incoming Costs			
110-City Council-10101 City Council		$ 9,599	$ 9,599
110-City Manager-11111 City Manager - Administration		$ 54,813	$ 54,813
110-City Clerk-11112 Clerk Services		$ 27,855	$ 27,855
110-City Manager-11113 Human Resource		$ 43,731	$ 43,731
110-City Attorney-12121 City Attorney		$ 79,988	$ 79,988
110-Finance-13131 Finance		$ 22,650	$ 22,650
110-Non-Departmental-95951 Non-Departmental		$ 476	$ 476
Total Incoming Costs	$ -	$ 239,112	$ 239,112
Total Cost Adjustments	$ -		$ -
Total Costs to be Allocated	$190,693	$ 239,112	$ 429,805

110-City Council-10101 City Council

EXPENSE DETAIL

Expense Type	Expense ($)	Citywide Support
Personnel		
Salaries & Benefits	$ 126,193	$ 126,193
Subtotal Personnel Cost	**$ 126,193**	**$ 126,193**
Operating Services & Supplies		
Communication Expenses	$ 7,300	$ 7,300
Professional Services	$ 15,000	$ 15,000
Special Events	$ 10,000	$ 10,000
Supplies and Materials	$ 2,000	$ 2,000
Training Related	$ 30,200	$ 30,200
Subtotal Operating Cost	**$ 64,500**	**$ 64,500**
FUNCTIONAL EXPENDITURES	**$ 190,693.00**	**$ 190,693.00**
Disallowed Costs		
Subtotal Disallowed Costs	**$ -**	**$ -**
Cost Adjustments		
Subtotal Cost Adjustments	**$ -**	**$ -**
FUNCTIONAL COST	**$ 190,693.00**	**$ 190,693.00**
First Allocation		
Incoming - All Others	$ -	$ -
Reallocate Admin Costs	$ -	$ -
Unallocated Costs	$ -	$ -
Subtotal of First Allocation	**$ 190,693.00**	**$ 190,693.00**
Second Allocation		
Incoming - All Others	$ 239,112	$ 239,112
Reallocate Admin Costs	$ -	$ -
Unallocated Costs	$ -	$ -
Subtotal of Second Allocation	**$ 239,112.27**	**$ 239,112.27**
TOTAL ALLOCATED	**$ 429,805**	**$ 429,805**

110-City Council-10101 City Council

ALLOCATION DETAIL

	Allocation Units	Allocated Percent	Gross Allocation	Direct Billed	First Allocation	Second Allocation	Total
Citywide Support							
110-City Council-10101 City Council	15.00	5.034%	$ 9,599		$ 9,599		$ 9,599
110-City Manager-11111 City Manager - Administration	23.00	7.718%	$ 14,718		$ 14,718	$ 19,433	$ 34,151
110-City Clerk-11112 Clerk Services	12.00	4.027%	$ 7,679		$ 7,679	$ 10,139	$ 17,818
110-City Manager-11113 Human Resource	17.00	5.705%	$ 10,878		$ 10,878	$ 14,364	$ 25,242
110-City Attorney-12121 City Attorney	11.00	3.691%	$ 7,039		$ 7,039	$ 9,294	$ 16,333
110-Finance-13131 Finance	31.00	10.403%	$ 19,837		$ 19,837	$ 26,193	$ 46,030
110-Public Works-21211 PW - Administration	10.00	3.356%	$ 6,399		$ 6,399	$ 8,449	$ 14,848
110-Public Works-21213 PW - Maintenance	3.00	1.007%	$ 1,920		$ 1,920	$ 2,535	$ 4,454
110-City Manager-14142 Admin Srvcs - Community Programs and Services	4.00	1.342%	$ 2,560		$ 2,560	$ 3,380	$ 5,939
110-City Manager-14143 Admin Srvcs - Senior Services	21.00	7.047%	$ 13,438		$ 13,438	$ 17,743	$ 31,181
110-Public Works-21212 PW - Engineering	16.00	5.369%	$ 10,239		$ 10,239	$ 13,519	$ 23,757
110-Public Works-21214 PW- Environmental Programs	7.00	2.349%	$ 4,479		$ 4,479	$ 5,914	$ 10,394
110-Community & Economic Development-31311 CEDE- Administration	1.00	0.336%	$ 640		$ 640	$ 845	$ 1,485
110-Community & Economic Development-31314 CEDE - Planning	18.00	6.040%	$ 11,518		$ 11,518	$ 15,209	$ 26,727
110-Community & Economic Development-31315 CEDE - Building Inspection	2.00	0.671%	$ 1,280		$ 1,280	$ 1,690	$ 2,970
110-Community & Economic Development-31777 CEDE - Housing Development	15.00	5.034%	$ 9,599		$ 9,599	$ 12,674	$ 22,272
110-Police-41411 Police-Administration	12.00	4.027%	$ 7,679		$ 7,679	$ 10,139	$ 17,818
111-Finance-Information Services	1.00	0.336%	$ 640		$ 640	$ 845	$ 1,485
201-Public Works-Gas Tax Fund	2.00	0.671%	$ 1,280		$ 1,280	$ 1,690	$ 2,970
204-Community & Economic Development-Rent Stabilization Program	2.00	0.671%	$ 1,280		$ 1,280	$ 1,690	$ 2,970
215-Community & Economic Development-Misc Federal And State Grants	1.00	0.336%	$ 640		$ 640	$ 845	$ 1,485
219-Community & Economic Development-Measure HH	2.00	0.671%	$ 1,280		$ 1,280	$ 1,690	$ 2,970
510-Public Works-Water Service Fund	6.00	2.013%	$ 3,839		$ 3,839	$ 5,070	$ 8,909
520-Public Works-Garbage Collection Fund (Prop. Tax)	3.00	1.007%	$ 1,920		$ 1,920	$ 2,535	$ 4,454
530-Public Works-EPA Sanitary District	20.00	6.711%	$ 12,798		$ 12,798	$ 16,898	$ 29,697
Other	43.00	14.430%	$ 27,516		$ 27,516	$ 36,332	$ 63,848
Total	**298.00**	**100.000%**	**$ 190,693**	**$ -**	**$ 190,693**	**$ 239,112**	**$ 429,805**

Allocation Basis: # of Agenda Items

Source of Allocation: Agenda Report

ALLOCATION SUMMARY

110-City Council-10101 City Council	Citywide Support	Total
110-City Council-10101 City Council	$ 9,599	$ 9,599
110-City Manager-11111 City Manager - Administration	$ 34,151	$ 34,151
110-City Clerk-11112 Clerk Services	$ 17,818	$ 17,818
110-City Manager-11113 Human Resource	$ 25,242	$ 25,242
110-City Attorney-12121 City Attorney	$ 16,333	$ 16,333
110-Finance-13131 Finance	$ 46,030	$ 46,030
110-Public Works-21211 PW - Administration	$ 14,848	$ 14,848
110-Public Works-21213 PW - Maintenance	$ 4,454	$ 4,454
110-City Manager-14142 Admin Srvcs - Community Programs and Services	$ 5,939	$ 5,939
110-City Manager-14143 Admin Srvcs - Senior Services	$ 31,181	$ 31,181
110-Public Works-21212 PW - Engineering	$ 23,757	$ 23,757
110-Public Works-21214 PW- Environmental Programs	$ 10,394	$ 10,394
110-Community & Economic Development-31311 CEDE- Administration	$ 1,485	$ 1,485
110-Community & Economic Development-31314 CEDE - Planning	$ 26,727	$ 26,727
110-Community & Economic Development-31315 CEDE - Building Inspection	$ 2,970	$ 2,970
110-Community & Economic Development-31777 CEDE - Housing Development	$ 22,272	$22,272.44
110-Police-41411 Police-Administration	$ 17,818	$ 17,818
111-Finance-Information Services	$ 1,485	$ 1,484.83
201-Public Works-Gas Tax Fund	$ 2,970	$ 2,970
204-Community & Economic Development-Rent Stabilization Program	$ 2,970	$ 2,970
215-Community & Economic Development-Misc Federal And State Grants	$ 1,485	$ 1,485
219-Community & Economic Development-Measure HH	$ 2,970	$ 2,970
510-Public Works-Water Service Fund	$ 8,909	$ 8,909
520-Public Works-Garbage Collection Fund (Prop. Tax)	$ 4,454	$ 4,454
530-Public Works-EPA Sanitary District	$ 29,697	$ 29,697
Other	$ 63,848	$ 63,848
Total	**$ 429,805**	**$ 429,805**

3 CITY MANAGER

The City Manager's Office is responsible for overseeing City Council policy implementation and providing oversight to City departments and staff. The Office also manages communications and economic development for the City. City Manager costs are allocated to Receiving Departments as follows:

- **Managerial Support** – represents the costs associated with managerial support provided to the city. These costs are allocated based on the number of full-time equivalents per fund, department, and division[2].
- **Program Support** – represents the costs associated with support provided to city programs. These costs are allocated based on budgeted expenditures per fund, department, and division[3].
- **Policy Support** – represents the costs associated with providing policy support to the city. These costs have been allocated based on the number of Staff reports per fund, department, and division[4].
- **Sanitation District** – represents the costs associated with the cities Sanitation District. These costs are allocated directly to Sanitation.

The chart on the following page illustrates the functions and measures used to allocate City Manager's costs. The top tier shows the Central Service department, the second tier shows the functions developed, and the third tier shows measures used to allocate costs citywide. The pages following the chart provide an aggregate picture of the department's expenses, a function-by-function breakdown of expenses, each function's allocation, and an allocation summary.

[2] We excluded the sanitation district from FTE as there is a separate dedicated function related to the City Manager serving as the General Manager of the District.
[3] We excluded the sanitation district from Expenditures as there is a separate dedicated function related to the City Manager serving as the General Manager of the District.
[4] We excluded the sanitation district from Staff Reports as there is a separate dedicated function related to the City Manager serving as the General Manager of the District.


CITY MANAGER
Managerial Support
Program Support
Policy Support
Sanitation District
# of FTE
Budgeted Expenditures
# of Staff Reports
Direct to Sanitation

COSTS TO BE ALLOCATED

110-City Manager-11111 City Manager - Administration	First Allocation	Second Allocation	Total
Functional Expenditures	**$ 1,789,936**		**$ 1,789,936**
Total Disallowed Costs	**$ -**		**$ -**
Incoming Costs			
110-City Council-10101 City Council	$ 14,718	$ 19,433	$ 34,151
110-City Manager-11111 City Manager - Administration		$ 83,310	$ 83,310
110-City Clerk-11112 Clerk Services		$ 39,250	$ 39,250
110-City Manager-11113 Human Resource		$ 43,731	$ 43,731
110-City Attorney-12121 City Attorney		$ 16,655	$ 16,655
110-Finance-13131 Finance		$ 41,768	$ 41,768
110-Public Works-21213 PW - Maintenance		$ 107,907	$ 107,907
110-Non-Departmental-95951 Non-Departmental		$ 38,750	$ 38,750
Total Incoming Costs	**$ 14,718**	**$ 390,803**	**$ 405,521**
Mid-Year Salary Adjustments	$ 22,265		
Total Cost Adjustments	**$ 22,265**		**$ 22,265**
Total Costs to be Allocated	**$ 1,826,919**	**$ 390,803**	**$ 2,217,722**

110-City Manager-11111 City Manager - Administration

EXPENSE DETAIL

Expense Type		Expense ($)	Managerial Support	Program Support	Policy Support	Sanitation District
Personnel						
Salaries & Benefits	$	1,328,196	$ 398,459	$ 398,459	$ 398,459	$ 132,820
Subtotal Personnel Cost	**$**	**1,328,196**	**$ 398,459**	**$ 398,459**	**$ 398,459**	**$ 132,820**
Operating Services & Supplies						
Communication Expenses	$	11,500	$ 3,450	$ 3,450	$ 3,450	$ 1,150
Professional Services	$	275,000	$ 82,500	$ 82,500	$ 82,500	$ 27,500
Property Services	$	15,240	$ 4,572	$ 4,572	$ 4,572	$ 1,524
Staff Support	$	130,000	$ 39,000	$ 39,000	$ 39,000	$ 13,000
Supplies and Materials	$	5,000	$ 1,500	$ 1,500	$ 1,500	$ 500
Training Related	$	25,000	$ 7,500	$ 7,500	$ 7,500	$ 2,500
Subtotal Operating Cost	**$**	**461,740**	**$ 138,522**	**$ 138,522**	**$ 138,522**	**$ 46,174**
FUNCTIONAL EXPENDITURES	**$**	**1,789,936.00**	**$ 536,980.80**	**$ 536,980.80**	**$ 536,980.80**	**$ 178,993.60**
Disallowed Costs						
Subtotal Disallowed Costs	**$**	**-**	**$ -**	**$ -**	**$ -**	**$ -**
Cost Adjustments						
Mid-Year Salary Adjustments	$	22,265				$ 22,265
Subtotal Cost Adjustments	**$**	**22,265**	**$ -**	**$ -**	**$ -**	**$ 22,265**
FUNCTIONAL COST	**$**	**1,812,201.00**	**$ 536,980.80**	**$ 536,980.80**	**$ 536,980.80**	**$ 201,258.60**
First Allocation						
Incoming - All Others	$	14,718	$ 4,361	$ 4,361	$ 4,361	$ 1,635
Reallocate Admin Costs	$	-	$ -	$ -	$ -	$ -
Unallocated Costs	$	-	$ -	$ -	$ -	$ -
Subtotal of First Allocation	**$**	**1,826,918.92**	**$ 541,341.93**	**$ 541,341.93**	**$ 541,341.93**	**$ 202,893.14**
Second Allocation						
Incoming - All Others	$	390,803	$ 115,801	$ 115,801	$ 115,801	$ 43,402
Reallocate Admin Costs	$	-	$ -	$ -	$ -	$ -
Unallocated Costs	$	-	$ -	$ -	$ -	$ -
Subtotal of Second Allocation	**$**	**390,803.44**	**$ 115,800.59**	**$ 115,800.59**	**$ 115,800.59**	**$ 43,401.67**
TOTAL ALLOCATED	**$**	**2,217,722**	**$ 657,143**	**$ 657,143**	**$ 657,143**	**$ 246,295**

110-City Manager-11111 City Manager - Administration

ALLOCATION DETAIL

	Allocation Units	Allocated Percent	Gross Allocation	Direct Billed	First Allocation	Second Allocation	Total
Managerial Support							
110-City Council-10101 City Council	5.00	3.846%	$ 20,821		$ 20,821		$ 20,821
110-City Manager-11111 City Manager - Administration	5.00	3.846%	$ 20,821		$ 20,821		$ 20,821
110-City Clerk-11112 Clerk Services	2.00	1.538%	$ 8,328		$ 8,328	$ 1,930	$ 10,258
110-City Manager-11113 Human Resource	4.00	3.077%	$ 16,657		$ 16,657	$ 3,860	$ 20,517
110-City Attorney-12121 City Attorney	3.00	2.308%	$ 12,492		$ 12,492	$ 2,895	$ 15,387
110-Finance-13131 Finance	6.40	4.923%	$ 26,651		$ 26,651	$ 6,176	$ 32,827
110-Public Works-21211 PW - Administration	3.00	2.308%	$ 12,492		$ 12,492	$ 2,895	$ 15,387
110-Public Works-21213 PW - Maintenance	6.54	5.031%	$ 27,234		$ 27,234	$ 6,311	$ 33,545
110-City Manager-14142 Admin Srvcs - Community Programs and Services	5.00	3.846%	$ 20,821		$ 20,821	$ 4,825	$ 25,646
110-City Manager-14143 Admin Srvcs - Senior Services	4.00	3.077%	$ 16,657		$ 16,657	$ 3,860	$ 20,517
110-Public Works-21212 PW - Engineering	6.00	4.615%	$ 24,985		$ 24,985	$ 5,790	$ 30,775
110-Public Works-21214 PW- Environmental Programs	0.60	0.462%	$ 2,498		$ 2,498	$ 579	$ 3,077
110-Community & Economic Development-31311 CEDE- Administration	3.04	2.338%	$ 12,659		$ 12,659	$ 2,934	$ 15,593
110-Community & Economic Development-31314 CEDE - Planning	5.00	3.846%	$ 20,821		$ 20,821	$ 4,825	$ 25,646
110-Community & Economic Development-31315 CEDE - Building Inspection	7.00	5.385%	$ 29,149		$ 29,149	$ 6,755	$ 35,904
110-Community & Economic Development-31777 CEDE - Housing Development	0.35	0.269%	$ 1,457		$ 1,457	$ 338	$ 1,795
110-Police-41411 Police-Administration	9.00	6.923%	$ 37,477		$ 37,477	$ 8,685	$ 46,162
110-Police-41412 Police-Operations	29.00	22.308%	$ 120,760		$ 120,760	$ 27,985	$ 148,745
110-Police-41413 Police-Investigations	14.00	10.769%	$ 58,298		$ 58,298	$ 13,510	$ 71,808
111-Finance-Information Services	1.00	0.769%	$ 4,164		$ 4,164	$ 965	$ 5,129
201-Public Works-Gas Tax Fund	0.72	0.552%	$ 2,991		$ 2,991	$ 693	$ 3,684
203-Public Works-Nat'l Pollutant Discharged Elimation Sys	1.47	1.131%	$ 6,121		$ 6,121	$ 1,419	$ 7,540
204-Community & Economic Development-Rent Stabilization Program	2.00	1.538%	$ 8,328		$ 8,328	$ 1,930	$ 10,258
219-Community & Economic Development-Measure HH	1.18	0.908%	$ 4,914		$ 4,914	$ 1,139	$ 6,052
220-Finance-LMIH Successor Fund	1.43	1.100%	$ 5,955		$ 5,955	$ 1,380	$ 7,335
221-Public Works-Lighting Fund	0.09	0.070%	$ 379		$ 379	$ 88	$ 467
222-Public Works-Drainage Fund	0.26	0.200%	$ 1,081		$ 1,081	$ 251	$ 1,332
301-Public Works-Capital Improvements Project Funds - Local matching	0.50	0.385%	$ 2,082		$ 2,082	$ 483	$ 2,565
510-Public Works-Water Service Fund	1.00	0.769%	$ 4,164		$ 4,164	$ 965	$ 5,129
520-Public Works-Garbage Collection Fund (Prop. Tax)	2.32	1.788%	$ 9,679		$ 9,679	$ 2,243	$ 11,922
705-Non-Departmental-Trust and Agency Fund	0.10	0.075%	$ 405		$ 405	$ 94	$ 499
Total	**130.00**	**100.000%**	**$ 541,342**	**$ -**	**$ 541,342**	**$ 115,801**	**$ 657,143**

Allocation Basis: # of FTE

Source of Allocation: Personnel File

110-City Manager-11111 City Manager - Administration

ALLOCATION DETAIL

	Allocation Units	Allocated Percent	Gross Allocation	Direct Billed	First Allocation	Second Allocation	Total
Program Support							
110-City Council-10101 City Council	190,693.00	0.454%	$ 2,458		$ 2,458		$ 2,458
110-City Manager-11111 City Manager - Administration	1,789,936.00	4.262%	$ 23,071		$ 23,071		$ 23,071
110-City Clerk-11112 Clerk Services	519,926.00	1.238%	$ 6,701		$ 6,701	$ 1,504	$ 8,206
110-City Manager-11113 Human Resource	1,047,825.31	2.495%	$ 13,506		$ 13,506	$ 3,032	$ 16,538
110-City Attorney-12121 City Attorney	1,224,052.00	2.914%	$ 15,777		$ 15,777	$ 3,542	$ 19,319
110-Finance-13131 Finance	1,401,873.43	3.338%	$ 18,069		$ 18,069	$ 4,056	$ 22,125
110-Public Works-21211 PW - Administration	669,781.00	1.595%	$ 8,633		$ 8,633	$ 1,938	$ 10,571
110-Public Works-21213 PW - Maintenance	3,023,507.74	7.199%	$ 38,970		$ 38,970	$ 8,749	$ 47,719
110-Non-Departmental-95951 Non-Departmental	145,906.00	0.347%	$ 1,881		$ 1,881	$ 422	$ 2,303
110-City Manager-14142 Admin Srvcs - Community Programs and Services	719,240.76	1.712%	$ 9,270		$ 9,270	$ 2,081	$ 11,352
110-City Manager-14143 Admin Srvcs - Senior Services	421,889.00	1.005%	$ 5,438		$ 5,438	$ 1,221	$ 6,659
110-Public Works-21212 PW - Engineering	1,014,978.00	2.417%	$ 13,082		$ 13,082	$ 2,937	$ 16,019
110-Public Works-21214 PW- Environmental Programs	285,397.20	0.680%	$ 3,679		$ 3,679	$ 826	$ 4,504
110-Community & Economic Development-31311 CEDE- Administration	726,923.84	1.731%	$ 9,369		$ 9,369	$ 2,103	$ 11,473
110-Community & Economic Development-31313 CEDE - Rent Stabilization	1,900.00	0.005%	$ 24		$ 24	$ 5	$ 30
110-Community & Economic Development-31314 CEDE - Planning	1,176,783.00	2.802%	$ 15,168		$ 15,168	$ 3,405	$ 18,573
110-Community & Economic Development-31315 CEDE - Building Inspection	2,896,620.00	6.897%	$ 37,335		$ 37,335	$ 8,382	$ 45,717
110-Community & Economic Development-31777 CEDE - Housing Development	232,824.75	0.554%	$ 3,001		$ 3,001	$ 674	$ 3,675
110-Police-41411 Police-Administration	4,868,787.58	11.592%	$ 62,754		$ 62,754	$ 14,088	$ 76,843
110-Police-41412 Police-Operations	8,043,078.00	19.150%	$ 103,668		$ 103,668	$ 23,274	$ 126,942
110-Police-41413 Police-Investigations	1,748,150.00	4.162%	$ 22,532		$ 22,532	$ 5,058	$ 27,591
111-Finance-Information Services	1,297,689.08	3.090%	$ 16,726		$ 16,726	$ 3,755	$ 20,481
112-Finance-Equipment & Vehicle Replacement	150,565.50	0.358%	$ 1,941		$ 1,941	$ 436	$ 2,376
113-Finance-Self Insurance	1,122,624.00	2.673%	$ 14,470		$ 14,470	$ 3,248	$ 17,718
117-Finance-Community Development Pass Through Fund	1,050,500.00	2.501%	$ 13,540		$ 13,540	$ 3,040	$ 16,580
201-Public Works-Gas Tax Fund	1,019,857.66	2.428%	$ 13,145		$ 13,145	$ 2,951	$ 16,096
202-Public Works-Measure A Smc 20 1/2 Sales Tax	3,539.00	0.008%	$ 46		$ 46	$ 10	$ 56
203-Public Works-Nat'l Pollutant Discharged Elimation Sys	733,650.16	1.747%	$ 9,456		$ 9,456	$ 2,123	$ 11,579
204-Community & Economic Development-Rent Stabilization Program	745,119.00	1.774%	$ 9,604		$ 9,604	$ 2,156	$ 11,760
207-Community & Economic Development-Housing-In-Lieu Fund	104,768.00	0.249%	$ 1,350		$ 1,350	$ 303	$ 1,654
209-Community & Economic Development-Revolving Housing Loans	3,174.00	0.008%	$ 41		$ 41	$ 9	$ 50
213-Police-Federal And State Law Enforcement Grants	170,000.00	0.405%	$ 2,191		$ 2,191	$ 492	$ 2,683
215-Community & Economic Development-Misc Federal And State Grants	300,060.00	0.714%	$ 3,868		$ 3,868	$ 868	$ 4,736
218-Community & Economic Development-Affordable Housing Transient Occupancy Tax (TOT)	29,418.00	0.070%	$ 379		$ 379	$ 85	$ 464
219-Community & Economic Development-Measure HH	291,845.58	0.695%	$ 3,762		$ 3,762	$ 844	$ 4,606
220-Finance-LMIH Successor Fund	423,458.83	1.008%	$ 5,458		$ 5,458	$ 1,225	$ 6,683
221-Public Works-Lighting Fund	329,995.31	0.786%	$ 4,253		$ 4,253	$ 955	$ 5,208
222-Public Works-Drainage Fund	313,454.26	0.746%	$ 4,040		$ 4,040	$ 907	$ 4,947
230-Public Safety-Local Grant Fund	533,563.00	1.270%	$ 6,877		$ 6,877	$ 1,544	$ 8,421
231-City Manager-CYSFF - Children/ Youth/ Senior/ Family Fund	48,822.00	0.116%	$ 629		$ 629	$ 141	$ 771
234-Public Works-Measure W	1,740.00	0.004%	$ 22		$ 22	$ 5	$ 27
301-Public Works-Capital Improvements Project Funds - Local matching	69,435.50	0.165%	$ 895		$ 895	$ 201	$ 1,096

110-City Manager-11111 City Manager - Administration

ALLOCATION DETAIL

	Allocation Units	Allocated Percent	Gross Allocation	Direct Billed	First Allocation	Second Allocation	Total
510-Public Works-Water Service Fund	427,767.12	1.018%	$ 5,514		$ 5,514	$ 1,238	$ 6,751
511-Public Works-Water Capital Surcharge Fund	305,000.00	0.726%	$ 3,931		$ 3,931	$ 883	$ 4,814
520-Public Works-Garbage Collection Fund (Prop. Tax)	373,754.79	0.890%	$ 4,817		$ 4,817	$ 1,082	$ 5,899
Total	**41,999,873.40**	**100.000%**	**$ 541,342**	**$ -**	**$ 541,342**	**$ 115,801**	**$ 657,143**

Allocation Basis: Budgeted Expenditures

Source of Allocation: Expenditure Report

110-City Manager-11111 City Manager - Administration

ALLOCATION DETAIL

	Allocation Units	Allocated Percent	Gross Allocation	Direct Billed	First Allocation	Second Allocation	Total
Policy Support							
110-City Council-10101 City Council	12.00	5.825%	$ 31,534		$ 31,534		$ 31,534
110-City Manager-11111 City Manager - Administration	15.00	7.282%	$ 39,418		$ 39,418		$ 39,418
110-City Clerk-11112 Clerk Services	5.00	2.427%	$ 13,139		$ 13,139	$ 3,235	$ 16,374
110-City Manager-11113 Human Resource	16.00	7.767%	$ 42,046		$ 42,046	$ 10,351	$ 52,397
110-City Attorney-12121 City Attorney	6.00	2.913%	$ 15,767		$ 15,767	$ 3,882	$ 19,649
110-Finance-13131 Finance	27.00	13.107%	$ 70,953		$ 70,953	$ 17,467	$ 88,420
110-Public Works-21211 PW - Administration	5.00	2.427%	$ 13,139		$ 13,139	$ 3,235	$ 16,374
110-Public Works-21213 PW - Maintenance	16.00	7.767%	$ 42,046		$ 42,046	$ 10,351	$ 52,397
110-City Manager-14142 Admin Srvcs - Community Programs and Services	10.00	4.854%	$ 26,279		$ 26,279	$ 6,469	$ 32,748
110-City Manager-14143 Admin Srvcs - Senior Services	2.00	0.971%	$ 5,256		$ 5,256	$ 1,294	$ 6,550
110-Public Works-21212 PW - Engineering	21.00	10.194%	$ 55,185		$ 55,185	$ 13,586	$ 68,771
110-Public Works-21214 PW- Environmental Programs	6.00	2.913%	$ 15,767		$ 15,767	$ 3,882	$ 19,649
110-Community & Economic Development-31311 CEDE- Administration	1.00	0.485%	$ 2,628		$ 2,628	$ 647	$ 3,275
110-Community & Economic Development-31314 CEDE - Planning	19.00	9.223%	$ 49,930		$ 49,930	$ 12,292	$ 62,221
110-Community & Economic Development-31315 CEDE - Building Inspection	2.00	0.971%	$ 5,256		$ 5,256	$ 1,294	$ 6,550
110-Community & Economic Development-31777 CEDE - Housing Development	15.00	7.282%	$ 39,418		$ 39,418	$ 9,704	$ 49,122
110-Police-41411 Police-Administration	12.00	5.825%	$ 31,534		$ 31,534	$ 7,763	$ 39,298
111-Finance-Information Services	1.00	0.485%	$ 2,628		$ 2,628	$ 647	$ 3,275
201-Public Works-Gas Tax Fund	2.00	0.971%	$ 5,256		$ 5,256	$ 1,294	$ 6,550
204-Community & Economic Development-Rent Stabilization Program	2.00	0.971%	$ 5,256		$ 5,256	$ 1,294	$ 6,550
215-Community & Economic Development-Misc Federal And State Grants	1.00	0.485%	$ 2,628		$ 2,628	$ 647	$ 3,275
219-Community & Economic Development-Measure HH	2.00	0.971%	$ 5,256		$ 5,256	$ 1,294	$ 6,550
510-Public Works-Water Service Fund	6.00	2.913%	$ 15,767		$ 15,767	$ 3,882	$ 19,649
520-Public Works-Garbage Collection Fund (Prop. Tax)	2.00	0.971%	$ 5,256		$ 5,256	$ 1,294	$ 6,550
Total	**206.00**	**100.000%**	**$ 541,342**	**$ -**	**$ 541,342**	**$ 115,801**	**$ 657,143**

Allocation Basis: # of Staff Reports

Source of Allocation: Staff Report List

110-City Manager-11111 City Manager - Administration

ALLOCATION DETAIL

	Allocation Units	Allocated Percent	Gross Allocation	Direct Billed	First Allocation	Second Allocation	Total
Sanitation District							
530-Public Works-EPA Sanitary District	1.00	100.000%	$ 202,893		$ 202,893	$ 43,402	$ 246,295
Total	**1.00**	**100.000%**	**$ 202,893**	**$ -**	**$ 202,893**	**$ 43,402**	**$ 246,295**

Allocation Basis: Direct to Sanitation

ALLOCATION SUMMARY

110-City Manager-11111 City Manager - Administration	Managerial Support	Program Support	Policy Support	Sanitation District	Total
110-City Council-10101 City Council	$ 20,821	$ 2,458	$ 31,534	$ -	$ 54,813
110-City Manager-11111 City Manager - Administration	$ 20,821	$ 23,071	$ 39,418	$ -	$ 83,310
110-City Clerk-11112 Clerk Services	$ 10,258	$ 8,206	$ 16,374	$ -	$ 34,838
110-City Manager-11113 Human Resource	$ 20,517	$ 16,538	$ 52,397	$ -	$ 89,451
110-City Attorney-12121 City Attorney	$ 15,387	$ 19,319	$ 19,649	$ -	$ 54,355
110-Finance-13131 Finance	$ 32,827	$ 22,125	$ 88,420	$ -	$ 143,372
110-Public Works-21211 PW - Administration	$ 15,387	$ 10,571	$ 16,374	$ -	$ 42,332
110-Public Works-21213 PW - Maintenance	$ 33,545	$ 47,719	$ 52,397	$ -	$ 133,661
110-Non-Departmental-95951 Non-Departmental	$ -	$ 2,303	$ -	$ -	$ 2,303
110-City Manager-14142 Admin Srvcs - Community Programs and Services	$ 25,646	$ 11,352	$ 32,748	$ -	$ 69,745
110-City Manager-14143 Admin Srvcs - Senior Services	$ 20,517	$ 6,659	$ 6,550	$ -	$ 33,725
110-Public Works-21212 PW - Engineering	$ 30,775	$ 16,019	$ 68,771	$ -	$ 115,565
110-Public Works-21214 PW- Environmental Programs	$ 3,077	$ 4,504	$ 19,649	$ -	$ 27,231
110-Community & Economic Development-31311 CEDE- Administration	$ 15,593	$ 11,473	$ 3,275	$ -	$ 30,340
110-Community & Economic Development-31313 CEDE - Rent Stabilization	$ -	$ 30	$ -	$ -	$ 30
110-Community & Economic Development-31314 CEDE - Planning	$ 25,646	$ 18,573	$ 62,221	$ -	$ 106,440
110-Community & Economic Development-31315 CEDE - Building Inspection	$ 35,904	$ 45,717	$ 6,550	$ -	$ 88,170
110-Community & Economic Development-31777 CEDE - Housing Development	$ 1,795	$ 3,675	$ 49,122	$ -	$54,591.88
110-Police-41411 Police-Administration	$ 46,162	$ 76,843	$ 39,298	$ -	$ 162,303
110-Police-41412 Police-Operations	$ 148,745	$ 126,942	$ -	$ -	$ 275,687
110-Police-41413 Police-Investigations	$ 71,808	$ 27,591	$ -	$ -	$ 99,399
111-Finance-Information Services	$ 5,129	$ 20,481	$ 3,275	$ -	$28,885.07
112-Finance-Equipment & Vehicle Replacement	$ -	$ 2,376	$ -	$ -	$ 2,376
113-Finance-Self Insurance	$ -	$ 17,718	$ -	$ -	$ 17,718
117-Finance-Community Development Pass Through Fund	$ -	$ 16,580	$ -	$ -	$ 16,580
201-Public Works-Gas Tax Fund	$ 3,684	$ 16,096	$ 6,550	$ -	$ 26,330
202-Public Works-Measure A Smc 20 1/2 Sales Tax	$ -	$ 56	$ -	$ -	$ 56
203-Public Works-Nat'l Pollutant Discharged Elimation Sys	$ 7,540	$ 11,579	$ -	$ -	$ 19,119
204-Community & Economic Development-Rent Stabilization Program	$ 10,258	$ 11,760	$ 6,550	$ -	$ 28,568
207-Community & Economic Development-Housing-In-Lieu Fund	$ -	$ 1,654	$ -	$ -	$ 1,654
209-Community & Economic Development-Revolving Housing Loans	$ -	$ 50	$ -	$ -	$ 50.09
213-Police-Federal And State Law Enforcement Grants	$ -	$ 2,683	$ -	$ -	$ 2,683
215-Community & Economic Development-Misc Federal And State Grants	$ -	$ 4,736	$ 3,275	$ -	$ 8,011
218-Community & Economic Development-Affordable Housing Transient Occupancy Tax (TOT)	$ -	$ 464	$ -	$ -	$ 464
219-Community & Economic Development-Measure HH	$ 6,052	$ 4,606	$ 6,550	$ -	$ 17,208
220-Finance-LMIH Successor Fund	$ 7,335	$ 6,683	$ -	$ -	$ 14,018
221-Public Works-Lighting Fund	$ 467	$ 5,208	$ -	$ -	$ 5,675
222-Public Works-Drainage Fund	$ 1,332	$ 4,947	$ -	$ -	$ 6,279
230-Public Safety-Local Grant Fund	$ -	$ 8,421	$ -	$ -	$ 8,421

ALLOCATION SUMMARY

110-City Manager-11111 City Manager - Administration	Managerial Support	Program Support	Policy Support	Sanitation District	Total
231-City Manager-CYSFF - Children/ Youth/ Senior/ Family Fund	$ -	$ 771	$ -	$ -	$ 771
234-Public Works-Measure W	$ -	$ 27	$ -	$ -	$ 27
301-Public Works-Capital Improvements Project Funds - Local matching	$ 2,565	$ 1,096	$ -	$ -	$ 3,660
510-Public Works-Water Service Fund	$ 5,129	$ 6,751	$ 19,649	$ -	$ 31,529
511-Public Works-Water Capital Surcharge Fund	$ -	$ 4,814	$ -	$ -	$ 4,813.74
520-Public Works-Garbage Collection Fund (Prop. Tax)	$ 11,922	$ 5,899	$ 6,550	$ -	$ 24,371
530-Public Works-EPA Sanitary District	$ -	$ -	$ -	$ 246,295	$ 246,295
705-Non-Departmental-Trust and Agency Fund	$ 499	$ -	$ -	$ -	$ 499
Total	**$ 657,143**	**$ 657,143**	**$ 657,143**	**$ 246,295**	**$2,217,722**

4 CLERK SERVICES

The Clerk Services Office is responsible for assisting the Mayor and City Council, conducting research, managing records, and providing customer service to the public. Costs associated with the Clerk Services are allocated to Receiving Departments as follows:

- **Council Support** – represents the support associated with supporting the operations and activities of the City Council. These costs are allocated based on the number of agenda items per department.
- **Public Records & Records Management** – represents the support associated with responding to public records requests and managing records on behalf of City departments. These costs are allocated based on the number of public records requests.
- **Boards, Committees, and Commissions** – represents the support associated with managing the activities of the Boards and Commissions. These costs are allocated based on the number of board members per board, committee, and commissions per department.
- **Public Information & Communications Requests** – represents the costs associated with processing public information and communications requests. These costs are equally allocated to all departments.
- **Elections** – represents the costs associated with conducting elections. These costs have not been allocated as this function is in service of the community.

The chart on the following page illustrates the functions and measures used to allocate Clerk Services costs. The top tier shows the Central Service department, the second tier shows the functions developed, and the third tier shows the measures used to allocate costs citywide. The pages following the chart provide an aggregate picture of the department's expenses, a function-by-function breakdown of expenses, each function's allocation, and an allocation summary.


CLERK SERVICES
Council Support
Public Records & Records Management
Boards, Commissions, and Committees
Public Information & Communications
Elections
# of Agenda Items
# of Public Records Request
# of Board Members
Equal to All
Not Allocated

COSTS TO BE ALLOCATED

110-City Clerk-11112 Clerk Services	First Allocation	Second Allocation	Total
Functional Expenditures	**$ 519,926**		**$ 519,926**
Total Disallowed Costs	**$ -**		**$ -**
Incoming Costs			
110-City Council-10101 City Council	$ 7,679	$ 10,139	$ 17,818
110-City Manager-11111 City Manager - Administration	$ 28,169	$ 6,669	$ 34,838
110-City Clerk-11112 Clerk Services		$ 24,317	$ 24,317
110-City Manager-11113 Human Resource		$ 17,492	$ 17,492
110-City Attorney-12121 City Attorney		$ 9,000	$ 9,000
110-Finance-13131 Finance		$ 20,070	$ 20,070
110-Non-Departmental-95951 Non-Departmental		$ 15,014	$ 15,014
Total Incoming Costs	**$ 35,848**	**$ 102,701**	**$ 138,549**
Total Cost Adjustments	**$ -**		**$ -**
Total Costs to be Allocated	**$ 555,774**	**$ 102,701**	**$ 658,475**

110-City Clerk-11112 Clerk Services

EXPENSE DETAIL

Expense Type	Expense ($)	Council Support	Public Records & Records Management	Boards, Commissions, and Committees	Public Information & Communications	Elections
Personnel						
Salaries & Benefits	$ 291,576	$ 166,198	$ 37,905	$ 29,158	$ 43,736	$ 14,579
Subtotal Personnel Cost	**$ 291,576**	**$ 166,198**	**$ 37,905**	**$ 29,158**	**$ 43,736**	**$ 14,579**
Operating Services & Supplies						
Communication Expenses	$ 30,800	$ 17,556	$ 4,004	$ 3,080	$ 4,620	$ 1,540
County Services	$ 100,000	$ 57,000	$ 13,000	$ 10,000	$ 15,000	$ 5,000
Professional Services	$ 90,000	$ 51,300	$ 11,700	$ 9,000	$ 13,500	$ 4,500
Supplies and Materials	$ 2,550	$ 1,454	$ 332	$ 255	$ 383	$ 128
Training Related	$ 5,000	$ 2,850	$ 650	$ 500	$ 750	$ 250
Subtotal Operating Cost	**$ 228,350**	**$ 130,160**	**$ 29,686**	**$ 22,835**	**$ 34,253**	**$ 11,418**
FUNCTIONAL EXPENDITURES	**$ 519,926.00**	**$ 296,357.82**	**$ 67,590.38**	**$ 51,992.60**	**$ 77,988.90**	**$ 25,996.30**
Disallowed Costs						
Subtotal Disallowed Costs	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
Cost Adjustments						
Subtotal Cost Adjustments	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
FUNCTIONAL COST	**$ 519,926.00**	**$ 296,357.82**	**$ 67,590.38**	**$ 51,992.60**	**$ 77,988.90**	**$ 25,996.30**
First Allocation						
Incoming - All Others	$ 35,848	$ 20,433	$ 4,660	$ 3,585	$ 5,377	$ 1,792
Reallocate Admin Costs	$ -	$ -	$ -	$ -	$ -	$ -
Unallocated Costs	$ (27,789)	$ -	$ -	$ -	$ -	$ (27,789)
Subtotal of First Allocation	**$ 527,985.28**	**$ 316,791.17**	**$ 72,250.62**	**$ 55,577.40**	**$ 83,366.10**	**$ -**
Second Allocation						
Incoming - All Others	$ 102,701	$ 58,540	$ 13,351	$ 10,270	$ 15,405	$ 5,135
Reallocate Admin Costs	$ -	$ -	$ -	$ -	$ -	$ -
Unallocated Costs	$ (5,135)	$ -	$ -	$ -	$ -	$ (5,135)
Subtotal of Second Allocation	**$ 97,566.13**	**$ 58,539.68**	**$ 13,351.15**	**$ 10,270.12**	**$ 15,405.18**	**$ -**
TOTAL ALLOCATED	**$ 625,551**	**$ 375,331**	**$ 85,602**	**$ 65,848**	**$ 98,771**	**$ -**

110-City Clerk-11112 Clerk Services

ALLOCATION DETAIL

	Allocation Units	Allocated Percent	Gross Allocation	Direct Billed	First Allocation	Second Allocation	Total
Council Support							
110-City Council-10101 City Council	15.00	5.034%	$ 15,946		$ 15,946		$ 15,946
110-City Manager-11111 City Manager - Administration	23.00	7.718%	$ 24,450		$ 24,450		$ 24,450
110-City Clerk-11112 Clerk Services	12.00	4.027%	$ 12,757		$ 12,757		$ 12,757
110-City Manager-11113 Human Resource	17.00	5.705%	$ 18,072		$ 18,072	$ 4,013	$ 22,085
110-City Attorney-12121 City Attorney	11.00	3.691%	$ 11,694		$ 11,694	$ 2,597	$ 14,290
110-Finance-13131 Finance	31.00	10.403%	$ 32,955		$ 32,955	$ 7,317	$ 40,272
110-Public Works-21211 PW - Administration	4.00	1.342%	$ 4,252		$ 4,252	$ 944	$ 5,196
110-Public Works-21213 PW - Maintenance	16.00	5.369%	$ 17,009		$ 17,009	$ 3,777	$ 20,786
110-City Manager-14142 Admin Srvcs - Community Programs and Services	10.00	3.356%	$ 10,631		$ 10,631	$ 2,360	$ 12,991
110-City Manager-14143 Admin Srvcs - Senior Services	3.00	1.007%	$ 3,189		$ 3,189	$ 708	$ 3,897
110-Public Works-21212 PW - Engineering	21.00	7.047%	$ 22,324		$ 22,324	$ 4,957	$ 27,281
110-Public Works-21214 PW- Environmental Programs	7.00	2.349%	$ 7,441		$ 7,441	$ 1,652	$ 9,094
110-Community & Economic Development-31311 CEDE- Administration	1.00	0.336%	$ 1,063		$ 1,063	$ 236	$ 1,299
110-Community & Economic Development-31314 CEDE - Planning	18.00	6.040%	$ 19,135		$ 19,135	$ 4,249	$ 23,384
110-Community & Economic Development-31315 CEDE - Building Inspection	2.00	0.671%	$ 2,126		$ 2,126	$ 472	$ 2,598
110-Community & Economic Development-31777 CEDE - Housing Development	15.00	5.034%	$ 15,946		$ 15,946	$ 3,541	$ 19,487
110-Police-41411 Police-Administration	12.00	4.027%	$ 12,757		$ 12,757	$ 2,833	$ 15,589
111-Finance-Information Services	1.00	0.336%	$ 1,063		$ 1,063	$ 236	$ 1,299
201-Public Works-Gas Tax Fund	2.00	0.671%	$ 2,126		$ 2,126	$ 472	$ 2,598
204-Community & Economic Development-Rent Stabilization Program	2.00	0.671%	$ 2,126		$ 2,126	$ 472	$ 2,598
215-Community & Economic Development-Misc Federal And State Grants	1.00	0.336%	$ 1,063		$ 1,063	$ 236	$ 1,299
219-Community & Economic Development-Measure HH	2.00	0.671%	$ 2,126		$ 2,126	$ 472	$ 2,598
510-Public Works-Water Service Fund	6.00	2.013%	$ 6,378		$ 6,378	$ 1,416	$ 7,795
520-Public Works-Garbage Collection Fund (Prop. Tax)	3.00	1.007%	$ 3,189		$ 3,189	$ 708	$ 3,897
530-Public Works-EPA Sanitary District	20.00	6.711%	$ 21,261		$ 21,261	$ 4,721	$ 25,982
Other	43.00	14.430%	$ 45,711		$ 45,711	$10,150	$ 55,862
Total	**298.00**	**100.000%**	**$ 316,791**	**$ -**	**$316,791**	**$58,540**	**$375,331**

Allocation Basis: # of Agenda Items

Source of Allocation: Agenda Report

110-City Clerk-11112 Clerk Services

ALLOCATION DETAIL

Public Records & Records Management

	Allocation Units	Allocated Percent	Gross Allocation	Direct Billed	First Allocation	Second Allocation	Total
110-City Manager-11111 City Manager - Administration	1.00	4.000%	$ 2,890		$ 2,890		$ 2,890
110-City Clerk-11112 Clerk Services	4.00	16.000%	$ 11,560		$ 11,560		$ 11,560
110-City Manager-11113 Human Resource	1.00	4.000%	$ 2,890		$ 2,890	$ 668	$ 3,558
110-Finance-13131 Finance	1.00	4.000%	$ 2,890		$ 2,890	$ 668	$ 3,558
110-Public Works-21211 PW - Administration	5.00	20.000%	$ 14,450		$ 14,450	$ 3,338	$ 17,788
110-Community & Economic Development-31315 CEDE - Building Inspection	1.00	4.000%	$ 2,890		$ 2,890	$ 668	$ 3,558
110-Police-41411 Police-Administration	12.00	48.000%	$ 34,680		$ 34,680	$ 8,011	$ 42,691
Total	**25.00**	**100.000%**	**$ 72,251**	**$ -**	**$ 72,251**	**$ 13,351**	**$ 85,602**

Allocation Basis: # of Public Records Requests

Source of Allocation: PRR Report

110-City Clerk-11112 Clerk Services

ALLOCATION DETAIL

	Allocation Units	Allocated Percent	Gross Allocation	Direct Billed	First Allocation	Second Allocation	Total
Boards, Commissions, and Committees							
110-Public Works-21211 PW - Administration	8.00	17.778%	$ 9,880		$ 9,880	$ 1,826	$ 11,706
110-City Manager-14143 Admin Srvcs - Senior Services	9.00	20.000%	$ 11,115		$ 11,115	$ 2,054	$ 13,170
110-Community & Economic Development-31314 CEDE - Planning	8.00	17.778%	$ 9,880		$ 9,880	$ 1,826	$ 11,706
204-Community & Economic Development-Rent Stabilization Program	8.00	17.778%	$ 9,880		$ 9,880	$ 1,826	$ 11,706
530-Public Works-EPA Sanitary District	12.00	26.667%	$ 14,821		$ 14,821	$ 2,739	$ 17,559
Total	**45.00**	**100.000%**	**$ 55,577**	**$ -**	**$ 55,577**	**$10,270**	**$ 65,848**

Allocation Basis: # of Board Members

Source of Allocation: Board Members List

110-City Clerk-11112 Clerk Services

ALLOCATION DETAIL

Public Information & Communications	Allocation Units	Allocated Percent	Gross Allocation	Direct Billed	First Allocation	Second Allocation	Total
110-City Council-10101 City Council	1.00	14.286%	$ 11,909		$ 11,909		$ 11,909
110-City Manager-11111 City Manager - Administration	1.00	14.286%	$ 11,909		$ 11,909		$ 11,909
110-City Attorney-12121 City Attorney	1.00	14.286%	$ 11,909		$ 11,909	$ 3,081	$ 14,990
110-Finance-13131 Finance	1.00	14.286%	$ 11,909		$ 11,909	$ 3,081	$ 14,990
110-Public Works-21211 PW - Administration	1.00	14.286%	$ 11,909		$ 11,909	$ 3,081	$ 14,990
110-Community & Economic Development-31311 CEDE- Administration	1.00	14.286%	$ 11,909		$ 11,909	$ 3,081	$ 14,990
110-Police-41411 Police-Administration	1.00	14.286%	$ 11,909		$ 11,909	$ 3,081	$ 14,990
Total	**7.00**	**100.000%**	**$ 83,366**	**$ -**	**$ 83,366**	**$ 15,405**	**$ 98,771**

Allocation Basis: Equal to All

ALLOCATION SUMMARY

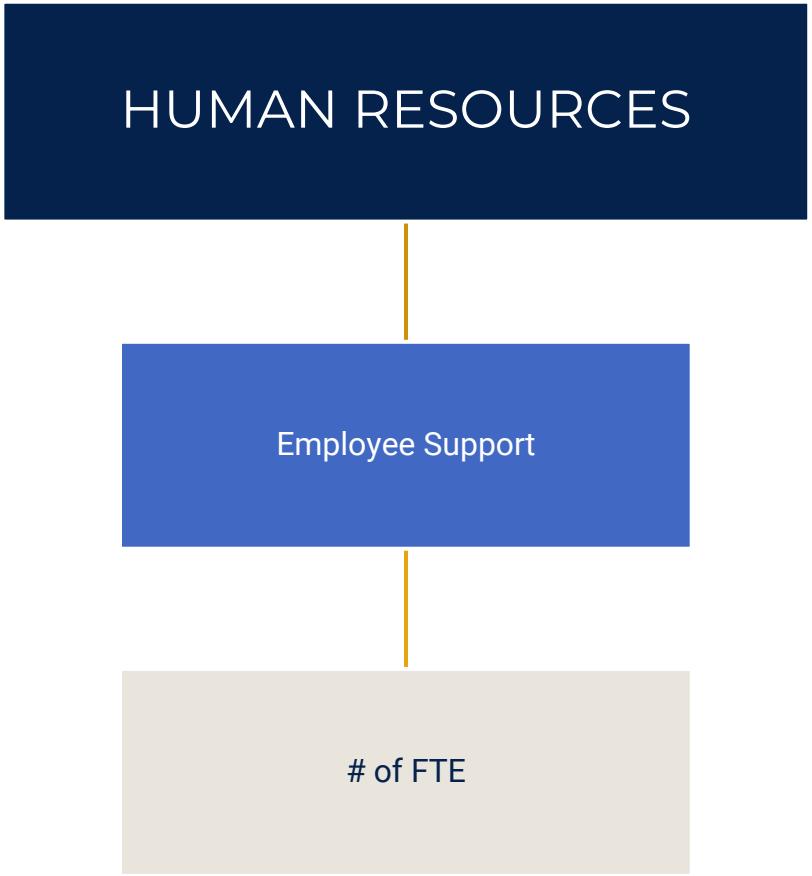
110-City Clerk-11112 Clerk Services	Council Support	Public Records & Records Management	Boards, Commissions, and Committees	Public Information & Communications	Total
110-City Council-10101 City Council	$ 15,946	$ -	$ -	$ 11,909	$ 27,855
110-City Manager-11111 City Manager - Administration	$ 24,450	$ 2,890	$ -	$ 11,909	$ 39,250
110-City Clerk-11112 Clerk Services	$ 12,757	$ 11,560	$ -	$ -	$ 24,317
110-City Manager-11113 Human Resource	$ 22,085	$ 3,558	$ -	$ -	$ 25,642
110-City Attorney-12121 City Attorney	$ 14,290	$ -	$ -	$ 14,990	$ 29,281
110-Finance-13131 Finance	$ 40,272	$ 3,558	$ -	$ 14,990	$ 58,820
110-Public Works-21211 PW - Administration	$ 5,196	$ 17,788	$ 11,706	$ 14,990	$ 49,681
110-Public Works-21213 PW - Maintenance	$ 20,786	$ -	$ -	$ -	$ 20,786
110-City Manager-14142 Admin Srvcs - Community Programs and Services	$ 12,991	$ -	$ -	$ -	$ 12,991
110-City Manager-14143 Admin Srvcs - Senior Services	$ 3,897	$ -	$ 13,170	$ -	$ 17,067
110-Public Works-21212 PW - Engineering	$ 27,281	$ -	$ -	$ -	$ 27,281
110-Public Works-21214 PW- Environmental Programs	$ 9,094	$ -	$ -	$ -	$ 9,094
110-Community & Economic Development-31311 CEDE- Administration	$ 1,299	$ -	$ -	$ 14,990	$ 16,290
110-Community & Economic Development-31314 CEDE - Planning	$ 23,384	$ -	$ 11,706	$ -	$ 35,090
110-Community & Economic Development-31315 CEDE - Building Inspection	$ 2,598	$ 3,558	$ -	$ -	$ 6,156
110-Community & Economic Development-31777 CEDE - Housing Development	$ 19,487	$ -	$ -	$ -	$19,486.57
110-Police-41411 Police-Administration	$ 15,589	$ 42,691	$ -	$ 14,990	$ 73,271
111-Finance-Information Services	$ 1,299	$ -	$ -	$ -	$ 1,299.10
201-Public Works-Gas Tax Fund	$ 2,598	$ -	$ -	$ -	$ 2,598
204-Community & Economic Development-Rent Stabilization Program	$ 2,598	$ -	$ 11,706	$ -	$ 14,304
215-Community & Economic Development-Misc Federal And State Grants	$ 1,299	$ -	$ -	$ -	$ 1,299
219-Community & Economic Development-Measure HH	$ 2,598	$ -	$ -	$ -	$ 2,598
510-Public Works-Water Service Fund	$ 7,795	$ -	$ -	$ -	$ 7,795
520-Public Works-Garbage Collection Fund (Prop. Tax)	$ 3,897	$ -	$ -	$ -	$ 3,897
530-Public Works-EPA Sanitary District	$ 25,982	$ -	$ 17,559	$ -	$ 43,541
Other	$ 55,862	$ -	$ -	$ -	$ 55,862
Total	**$ 375,331**	**$ 85,602**	**$ 65,848**	**$ 98,771**	**$ 625,551**

5 HUMAN RESOURCES

The Human Resources Department assists with hiring and discipline, provides training opportunities, manages labor relations, and administers the City's benefits plans. Human Resources costs are allocated to Receiving Departments as follows:

- **Employee Support** – represents the support associated with providing resources and assistance to employees as it relates to recruitment, training, benefits, and disciplinary action. These costs are allocated based on the number of full-time equivalents per fund, department, and division.

The chart on the following page illustrates the functions and measures used to allocate Human Resources costs. The top tier shows the Central Service department, the second tier shows the functions developed, and the third tier shows the measures used to allocate costs citywide. The pages following the chart provide an aggregate picture of the department's expenses, a function-by-function breakdown of expenses, each function's allocation, and an allocation summary.


HUMAN RESOURCES
Employee Support
# of FTE

COSTS TO BE ALLOCATED

110-City Manager-11113 Human Resource	First Allocation	Second Allocation	Total
Functional Expenditures	**$1,047,825**		**$1,047,825**
Total Disallowed Costs	**$ -**		**$ -**
Incoming Costs			
110-City Council-10101 City Council	$ 10,878	$ 14,364	$ 25,242
110-City Manager-11111 City Manager - Administration	$ 72,208	$ 17,243	$ 89,451
110-City Clerk-11112 Clerk Services	$ 20,962	$ 4,680	$ 25,642
110-City Manager-11113 Human Resource		$ 34,985	$ 34,985
110-City Attorney-12121 City Attorney		$ 12,190	$ 12,190
110-Finance-13131 Finance		$ 42,459	$ 42,459
110-Public Works-21213 PW - Maintenance		$ 107,000	$ 107,000
110-Non-Departmental-95951 Non-Departmental		$ 30,048	$ 30,048
Total Incoming Costs	**$ 104,049**	**$ 262,969**	**$ 367,017**
Total Cost Adjustments	**$ -**		**$ -**
Total Costs to be Allocated	**$1,151,874**	**$ 262,969**	**$1,414,843**

110-City Manager-11113 Human Resource

EXPENSE DETAIL

Expense Type		Expense ($)		Employee Support
Personnel				
Salaries & Benefits	$	633,375	$	633,375
Subtotal Personnel Cost	**$**	**633,375**	**$**	**633,375**
Operating Services & Supplies				
Communication Expenses	$	44,500	$	44,500
County Services	$	50,200	$	50,200
JPA	$	1,000	$	1,000
Professional Services	$	100,000	$	100,000
Special Events	$	15,000	$	15,000
Staff Support	$	150,000	$	150,000
Supplies and Materials	$	16,750	$	16,750
Training Related	$	37,000	$	37,000
Subtotal Operating Cost	**$**	**414,450**	**$**	**414,450**
FUNCTIONAL EXPENDITURES	**$**	**1,047,825.31**	**$**	**1,047,825.31**
Disallowed Costs				
Subtotal Disallowed Costs	**$**	**-**	**$**	**-**
Cost Adjustments				
Subtotal Cost Adjustments	**$**	**-**	**$**	**-**
FUNCTIONAL COST	**$**	**1,047,825.31**	**$**	**1,047,825.31**
First Allocation				
Incoming - All Others	$	104,049	$	104,049
Reallocate Admin Costs	$	-	$	-
Unallocated Costs	$	-	$	-
Subtotal of First Allocation	**$**	**1,151,873.92**	**$**	**1,151,873.92**
Second Allocation				
Incoming - All Others	$	262,969	$	262,969
Reallocate Admin Costs	$	-	$	-
Unallocated Costs	$	-	$	-
Subtotal of Second Allocation	**$**	**262,968.89**	**$**	**262,968.89**
TOTAL ALLOCATED	**$**	**1,414,843**	**$**	**1,414,843**

110-City Manager-11113 Human Resource

ALLOCATION DETAIL

	Allocation Units	Allocated Percent	Gross Allocation	Direct Billed	First Allocation	Second Allocation	Total
Employee Support							
110-City Council-10101 City Council	5.00	3.797%	$ 43,731		$ 43,731		$ 43,731
110-City Manager-11111 City Manager - Administration	5.00	3.797%	$ 43,731		$ 43,731		$ 43,731
110-City Clerk-11112 Clerk Services	2.00	1.519%	$ 17,492		$ 17,492		$ 17,492
110-City Manager-11113 Human Resource	4.00	3.037%	$ 34,985		$ 34,985		$ 34,985
110-City Attorney-12121 City Attorney	3.00	2.278%	$ 26,239		$ 26,239	$ 6,819	$ 33,057
110-Finance-13131 Finance	6.40	4.862%	$ 56,000		$ 56,000	$ 14,553	$ 70,553
110-Public Works-21211 PW - Administration	3.00	2.278%	$ 26,239		$ 26,239	$ 6,819	$ 33,057
110-Public Works-21213 PW - Maintenance	6.54	4.963%	$ 57,171		$ 57,171	$ 14,857	$ 72,028
110-City Manager-14142 Admin Srvcs - Community Programs and Services	5.00	3.797%	$ 43,731		$ 43,731	$ 11,364	$ 55,095
110-City Manager-14143 Admin Srvcs - Senior Services	4.00	3.037%	$ 34,985		$ 34,985	$ 9,091	$ 44,076
110-Public Works-21212 PW - Engineering	6.00	4.556%	$ 52,477		$ 52,477	$ 13,637	$ 66,114
110-Public Works-21214 PW- Environmental Programs	0.60	0.456%	$ 5,248		$ 5,248	$ 1,364	$ 6,611
110-Community & Economic Development-31311 CEDE- Administration	3.04	2.308%	$ 26,588		$ 26,588	$ 6,909	$ 33,498
110-Community & Economic Development-31314 CEDE - Planning	5.00	3.797%	$ 43,731		$ 43,731	$ 11,364	$ 55,095
110-Community & Economic Development-31315 CEDE - Building Inspection	7.00	5.315%	$ 61,223		$ 61,223	$ 15,910	$ 77,133
110-Community & Economic Development-31777 CEDE - Housing Development	0.35	0.266%	$ 3,061		$ 3,061	$ 795	$ 3,857
110-Police-41411 Police-Administration	9.00	6.834%	$ 78,716		$ 78,716	$ 20,456	$ 99,171
110-Police-41412 Police-Operations	29.00	22.020%	$ 253,640		$ 253,640	$ 65,913	$ 319,552
110-Police-41413 Police-Investigations	14.00	10.630%	$ 122,447		$ 122,447	$ 31,820	$ 154,267
111-Finance-Information Services	1.00	0.759%	$ 8,746		$ 8,746	$ 2,273	$ 11,019
201-Public Works-Gas Tax Fund	0.72	0.545%	$ 6,282		$ 6,282	$ 1,632	$ 7,914
203-Public Works-Nat'l Pollutant Discharged Elimation Sys	1.47	1.116%	$ 12,857		$ 12,857	$ 3,341	$ 16,198
204-Community & Economic Development-Rent Stabilization Program	2.00	1.519%	$ 17,492		$ 17,492	$ 4,546	$ 22,038
219-Community & Economic Development-Measure HH	1.18	0.896%	$ 10,321		$ 10,321	$ 2,682	$ 13,002
220-Finance-LMIH Successor Fund	1.43	1.086%	$ 12,507		$ 12,507	$ 3,250	$ 15,757
221-Public Works-Lighting Fund	0.09	0.069%	$ 796		$ 796	$ 207	$ 1,003
222-Public Works-Drainage Fund	0.26	0.197%	$ 2,271		$ 2,271	$ 590	$ 2,862
301-Public Works-Capital Improvements Project Funds - Local matching	0.50	0.380%	$ 4,373		$ 4,373	$ 1,136	$ 5,510
510-Public Works-Water Service Fund	1.00	0.759%	$ 8,746		$ 8,746	$ 2,273	$ 11,019
520-Public Works-Garbage Collection Fund (Prop. Tax)	2.32	1.765%	$ 20,330		$ 20,330	$ 5,283	$ 25,613
530-Public Works-EPA Sanitary District	1.70	1.291%	$ 14,869		$ 14,869	$ 3,864	$ 18,732
705-Non-Departmental-Trust and Agency Fund	0.10	0.074%	$ 850		$ 850	$ 221	$ 1,071
Total	**131.70**	**100.000%**	**$ 1,151,874**	**$ -**	**$1,151,874**	**$262,969**	**$1,414,843**

Allocation Basis: # of FTE

Source of Allocation: Personnel File

ALLOCATION SUMMARY

110-City Manager-11113 Human Resource	Employee Support	Total
110-City Council-10101 City Council	$ 43,731	$ 43,731
110-City Manager-11111 City Manager - Administration	$ 43,731	$ 43,731
110-City Clerk-11112 Clerk Services	$ 17,492	$ 17,492
110-City Manager-11113 Human Resource	$ 34,985	$ 34,985
110-City Attorney-12121 City Attorney	$ 33,057	$ 33,057
110-Finance-13131 Finance	$ 70,553	$ 70,553
110-Public Works-21211 PW - Administration	$ 33,057	$ 33,057
110-Public Works-21213 PW - Maintenance	$ 72,028	$ 72,028
110-City Manager-14142 Admin Srvcs - Community Programs and Services	$ 55,095	$ 55,095
110-City Manager-14143 Admin Srvcs - Senior Services	$ 44,076	$ 44,076
110-Public Works-21212 PW - Engineering	$ 66,114	$ 66,114
110-Public Works-21214 PW- Environmental Programs	$ 6,611	$ 6,611
110-Community & Economic Development-31311 CEDE- Administration	$ 33,498	$ 33,498
110-Community & Economic Development-31314 CEDE - Planning	$ 55,095	$ 55,095
110-Community & Economic Development-31315 CEDE - Building Inspection	$ 77,133	$ 77,133
110-Community & Economic Development-31777 CEDE - Housing Development	$ 3,857	$ 3,856.67
110-Police-41411 Police-Administration	$ 99,171	$ 99,171
110-Police-41412 Police-Operations	$ 319,552	$ 319,552
110-Police-41413 Police-Investigations	$ 154,267	$ 154,267
111-Finance-Information Services	$ 11,019	$11,019.05
201-Public Works-Gas Tax Fund	$ 7,914	$ 7,914
203-Public Works-Nat'l Pollutant Discharged Elimation Sys	$ 16,198	$ 16,198
204-Community & Economic Development-Rent Stabilization Program	$ 22,038	$ 22,038
219-Community & Economic Development-Measure HH	$ 13,002	$ 13,002
220-Finance-LMIH Successor Fund	$ 15,757	$ 15,757
221-Public Works-Lighting Fund	$ 1,003	$ 1,003
222-Public Works-Drainage Fund	$ 2,862	$ 2,862
301-Public Works-Capital Improvements Project Funds - Local matching	$ 5,510	$ 5,510
510-Public Works-Water Service Fund	$ 11,019	$ 11,019
520-Public Works-Garbage Collection Fund (Prop. Tax)	$ 25,613	$ 25,613
530-Public Works-EPA Sanitary District	$ 18,732	$ 18,732
705-Non-Departmental-Trust and Agency Fund	$ 1,071	$ 1,071
Total	**$ 1,414,843**	**$1,414,843**

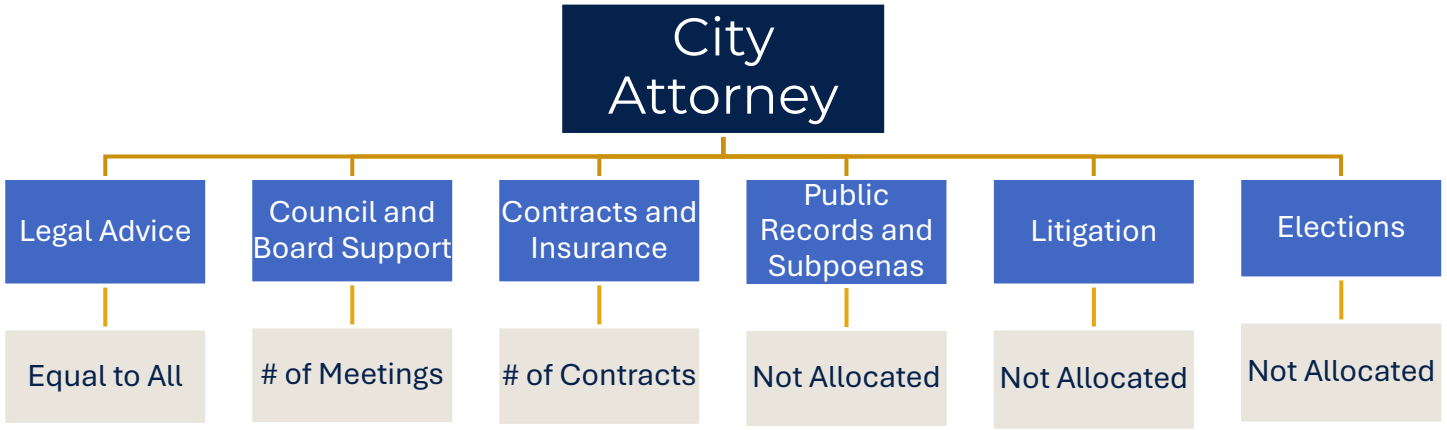
6 CITY ATTORNEY

The City Attorney is responsible for providing legal support and advice to City staff and elected and appointed officials. City Attorney costs are allocated to Receiving Departments as follows:

- **Legal Advice** – represents the support associated with providing legal counsel and services to City departments. These costs are allocated equally[5] to all departments.
- **Council and Board Support** – represents the support with providing legal support to City Council and Boards and committees. These costs have been allocated based on the number of meetings per department.
- **Contracts and Insurance** – represents the support associated with developing legal contracts reviewing insurance requirements on behalf of City departments. These costs have been allocated based on the number of contracts per department.
- **Public Records and Subpoenas** – represents the support associated with responding to public records requests and processing subpoenas. These costs have not been allocated as this function is in relation to requests driven by the public.
- **Litigation** – represents the costs associated with managing and resolving legal disputes on behalf of the overall city. These costs have not been allocated as this function is not directly in relation to specific city departments and is on behalf of the larger city.
- **Elections** – represents the support associated with preparing ballot measures, advising council members that are up for re-election, and other similar services. These costs have not been allocated as this function is not in relation to a specific city department.

The chart on the following page illustrates the functions and measures used to allocate City Attorney costs. The top tier shows the Central Service department, the second tier shows the functions developed, and the third tier shows the measures used to allocate costs citywide. The pages following the chart provide an aggregate picture of the department's expenses, a function-by-function breakdown of expenses, each function's allocation, and an allocation summary.

[5] CEDE was weighted at 3x, Police was weighted at 2x, & Rent stabilization was weighted at 4x.


City Attorney
Legal Advice
Council and Board Support
Contracts and Insurance
Public Records and Subpoenas
Litigation
Elections
Equal to All
# of Meetings
# of Contracts
Not Allocated
Not Allocated
Not Allocated

COSTS TO BE ALLOCATED

110-City Attorney-12121 City Attorney	First Allocation	Second Allocation	Total
Functional Expenditures	**$ 1,224,052**		**$ 1,224,052**
Total Disallowed Costs	**$ -**		**$ -**
Incoming Costs			
110-City Council-10101 City Council	$ 7,039	$ 9,294	$ 16,333
110-City Manager-11111 City Manager - Administration	$ 44,037	$ 10,319	$ 54,355
110-City Clerk-11112 Clerk Services	$ 23,603	$ 5,678	$ 29,281
110-City Manager-11113 Human Resource	$ 26,239	$ 6,819	$ 33,057
110-Finance-13131 Finance		$ 44,508	$ 44,508
110-Public Works-21213 PW - Maintenance		$ 4,534	$ 4,534
110-Non-Departmental-95951 Non-Departmental		$ 23,621	$ 23,621
Total Incoming Costs	**$ 100,917**	**$ 104,772**	**$ 205,689**
Mid-Year Salary Adjustments	$ 18,397		
Total Cost Adjustments	**$ 18,397**		**$ 18,397**
Total Costs to be Allocated	**$ 1,343,366**	**$ 104,772**	**$ 1,448,138**

110-City Attorney-12121 City Attorney

EXPENSE DETAIL

Expense Type	Expense ($)	Legal Advice	Council and Board Support	Contracts and Insurance	Public Records and Subpoenas	Litigation	Elections
Personnel							
Salaries & Benefits	$ 740,002	$ 374,299	$ 109,926	$ 109,926	$ 89,814	$ -	$ 56,037
Subtotal Personnel Cost	**$ 740,002**	**$ 374,299**	**$ 109,926**	**$ 109,926**	**$ 89,814**	**$ -**	**$ 56,037**
Operating Services & Supplies							
Communication Expenses	$ 3,650	$ 1,846	$ 542	$ 542	$ 443	$ -	$ 276
Furniture & Equipment	$ 37,100	$ 18,765	$ 5,511	$ 5,511	$ 4,503	$ -	$ 2,809
Legal & Accounting Services	$ 392,500					$ 392,500	
Professional Services	$ 33,000	$ 16,692	$ 4,902	$ 4,902	$ 4,005	$ -	$ 2,499
Supplies and Materials	$ 7,750	$ 3,920	$ 1,151	$ 1,151	$ 941	$ -	$ 587
Training Related	$ 10,050	$ 5,083	$ 1,493	$ 1,493	$ 1,220	$ -	$ 761
Subtotal Operating Cost	**$ 484,050**	**$ 46,307**	**$ 13,600**	**$ 13,600**	**$ 11,111**	**$ 392,500**	**$ 6,933**
FUNCTIONAL EXPENDITURES	**$ 1,224,052.00**	**$ 420,605.28**	**$ 123,525.48**	**$ 123,525.48**	**$ 100,925.70**	**$ 392,500.00**	**$ 62,970.06**
Disallowed Costs							
Subtotal Disallowed Costs	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
Cost Adjustments							
Mid-Year Salary Adjustments	$ 18,397	$ 9,305	$ 2,733	$ 2,733	$ 2,233	$ -	$ 1,393
Subtotal Cost Adjustments	**$ 18,397**	**$ 9,305**	**$ 2,733**	**$ 2,733**	**$ 2,233**	**$ -**	**$ 1,393**
FUNCTIONAL COST	**$ 1,242,449.00**	**$ 429,910.62**	**$ 126,258.32**	**$ 126,258.32**	**$ 103,158.55**	**$ 392,500.00**	**$ 64,363.19**
First Allocation							
Incoming - All Others	$ 100,917	$ 34,919	$ 10,255	$ 10,255	$ 8,379	$ 31,881	$ 5,228
Reallocate Admin Costs	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Unallocated Costs	$ (605,509)	$ -	$ -	$ -	$ (111,538)	$ (424,381)	$ (69,591)
Subtotal of First Allocation	**$ 737,857.09**	**$ 464,829.91**	**$ 136,513.59**	**$ 136,513.59**	**$ -**	**$ -**	**$ -**
Second Allocation							
Incoming - All Others	$ 104,772	$ 36,253	$ 10,647	$ 10,647	$ 8,699	$ 33,098	$ 5,428
Reallocate Admin Costs	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Unallocated Costs	$ (47,225)	$ -	$ -	$ -	$ (8,699)	$ (33,098)	$ (5,428)
Subtotal of Second Allocation	**$ 57,546.92**	**$ 36,253.00**	**$ 10,646.96**	**$ 10,646.96**	**$ -**	**$ -**	**$ -**
TOTAL ALLOCATED	**$ 795,404**	**$ 501,083**	**$ 147,161**	**$ 147,161**	**$ -**	**$ -**	**$ -**

110-City Attorney-12121 City Attorney

ALLOCATION DETAIL

	Allocation Units	Allocated Percent	Gross Allocation	Direct Billed	First Allocation	Second Allocation	Total
Legal Advice							
110-City Council-10101 City Council	1.00	6.250%	$ 29,052		$ 29,052		$ 29,052
110-City Manager-11111 City Manager - Administration	0.20	1.250%	$ 5,810		$ 5,810		$ 5,810
110-City Clerk-11112 Clerk Services	0.20	1.250%	$ 5,810		$ 5,810		$ 5,810
110-City Manager-11113 Human Resource	0.20	1.250%	$ 5,810		$ 5,810		$ 5,810
110-Finance-13131 Finance	1.00	6.250%	$ 29,052		$ 29,052	$ 2,518	$ 31,569
110-Public Works-21211 PW - Administration	0.25	1.563%	$ 7,263		$ 7,263	$ 629	$ 7,892
110-Public Works-21213 PW - Maintenance	0.25	1.563%	$ 7,263		$ 7,263	$ 629	$ 7,892
110-City Manager-14142 Admin Srvcs - Community Programs and Services	0.20	1.250%	$ 5,810		$ 5,810	$ 504	$ 6,314
110-City Manager-14143 Admin Srvcs - Senior Services	0.20	1.250%	$ 5,810		$ 5,810	$ 504	$ 6,314
110-Public Works-21212 PW - Engineering	0.25	1.563%	$ 7,263		$ 7,263	$ 629	$ 7,892
110-Public Works-21214 PW- Environmental Programs	0.25	1.563%	$ 7,263		$ 7,263	$ 629	$ 7,892
110-Community & Economic Development-31311 CEDE- Administration	0.75	4.688%	$ 21,789		$ 21,789	$ 1,888	$ 23,677
110-Community & Economic Development-31314 CEDE - Planning	0.75	4.688%	$ 21,789		$ 21,789	$ 1,888	$ 23,677
110-Community & Economic Development-31315 CEDE - Building Inspection	0.75	4.688%	$ 21,789		$ 21,789	$ 1,888	$ 23,677
110-Community & Economic Development-31777 CEDE - Housing Development	0.75	4.688%	$ 21,789		$ 21,789	$ 1,888	$ 23,677
110-Police-41411 Police-Administration	0.67	4.167%	$ 19,368		$ 19,368	$ 1,678	$ 21,046
110-Police-41412 Police-Operations	0.67	4.167%	$ 19,368		$ 19,368	$ 1,678	$ 21,046
110-Police-41413 Police-Investigations	0.67	4.167%	$ 19,368		$ 19,368	$ 1,678	$ 21,046
111-Finance-Information Services	1.00	6.250%	$ 29,052		$ 29,052	$ 2,518	$ 31,569
204-Community & Economic Development-Rent Stabilization Program	4.00	25.000%	$ 116,207		$ 116,207	$ 10,070	$ 126,278
510-Public Works-Water Service Fund	1.00	6.250%	$ 29,052		$ 29,052	$ 2,518	$ 31,569
530-Public Works-EPA Sanitary District	1.00	6.250%	$ 29,052		$ 29,052	$ 2,518	$ 31,569
Total	**16.00**	**100.000%**	**$ 464,830**	**$ -**	**$ 464,830**	**$ 36,253**	**$ 501,083**

Allocation Basis: Equal to All

110-City Attorney-12121 City Attorney

ALLOCATION DETAIL

	Allocation Units	Allocated Percent	Gross Allocation	Direct Billed	First Allocation	Second Allocation	Total
Council and Board Support							
110-City Council-10101 City Council	28.00	35.443%	$ 48,385		$ 48,385		$ 48,385
110-Community & Economic Development-31314 CEDE - Planning	20.00	25.316%	$ 34,560		$ 34,560	$ 4,175	$ 38,736
204-Community & Economic Development-Rent Stabilization Program	7.00	8.861%	$ 12,096		$ 12,096	$ 1,461	$ 13,557
530-Public Works-EPA Sanitary District	24.00	30.380%	$ 41,472		$ 41,472	$ 5,010	$ 46,483
Total	**79.00**	**100.000%**	**$ 136,514**	**$ -**	**$ 136,514**	**$ 10,647**	**$ 147,161**

Allocation Basis: # of Meetings

Source of Allocation: Meetings Report

110-City Attorney-12121 City Attorney

ALLOCATION DETAIL

	Allocation Units	Allocated Percent	Gross Allocation	Direct Billed	First Allocation	Second Allocation	Total
Contracts and Insurance							
110-City Council-10101 City Council	4.00	1.869%	$ 2,552		$ 2,552		$ 2,552
110-City Manager-11111 City Manager - Administration	17.00	7.944%	$ 10,845		$ 10,845		$ 10,845
110-City Clerk-11112 Clerk Services	5.00	2.336%	$ 3,190		$ 3,190		$ 3,190
110-City Manager-11113 Human Resource	10.00	4.673%	$ 6,379		$ 6,379		$ 6,379
110-Finance-13131 Finance	7.00	3.271%	$ 4,465		$ 4,465	$ 419	$ 4,884
110-Public Works-21211 PW - Administration	15.00	7.009%	$ 9,569		$ 9,569	$ 897	$ 10,466
110-Public Works-21213 PW - Maintenance	14.00	6.542%	$ 8,931		$ 8,931	$ 837	$ 9,768
110-City Manager-14142 Admin Srvcs - Community Programs and Services	30.00	14.019%	$ 19,137		$ 19,137	$ 1,794	$ 20,932
110-Public Works-21212 PW - Engineering	11.00	5.140%	$ 7,017		$ 7,017	$ 658	$ 7,675
110-Community & Economic Development-31311 CEDE- Administration	8.00	3.738%	$ 5,103		$ 5,103	$ 479	$ 5,582
110-Community & Economic Development-31313 CEDE - Rent Stabilization	3.00	1.402%	$ 1,914		$ 1,914	$ 179	$ 2,093
110-Community & Economic Development-31314 CEDE - Planning	2.00	0.935%	$ 1,276		$ 1,276	$ 120	$ 1,395
110-Community & Economic Development-31777 CEDE - Housing Development	11.00	5.140%	$ 7,017		$ 7,017	$ 658	$ 7,675
110-Police-41411 Police-Administration	14.00	6.542%	$ 8,931		$ 8,931	$ 837	$ 9,768
530-Public Works-EPA Sanitary District	63.00	29.439%	$ 40,189		$ 40,189	$ 3,768	$ 43,957
Total	**214.00**	**100.000%**	**$ 136,514**	**$ -**	**$ 136,514**	**$ 10,647**	**$ 147,161**

Allocation Basis: # of Contracts

Source of Allocation: Contracts Report

ALLOCATION SUMMARY

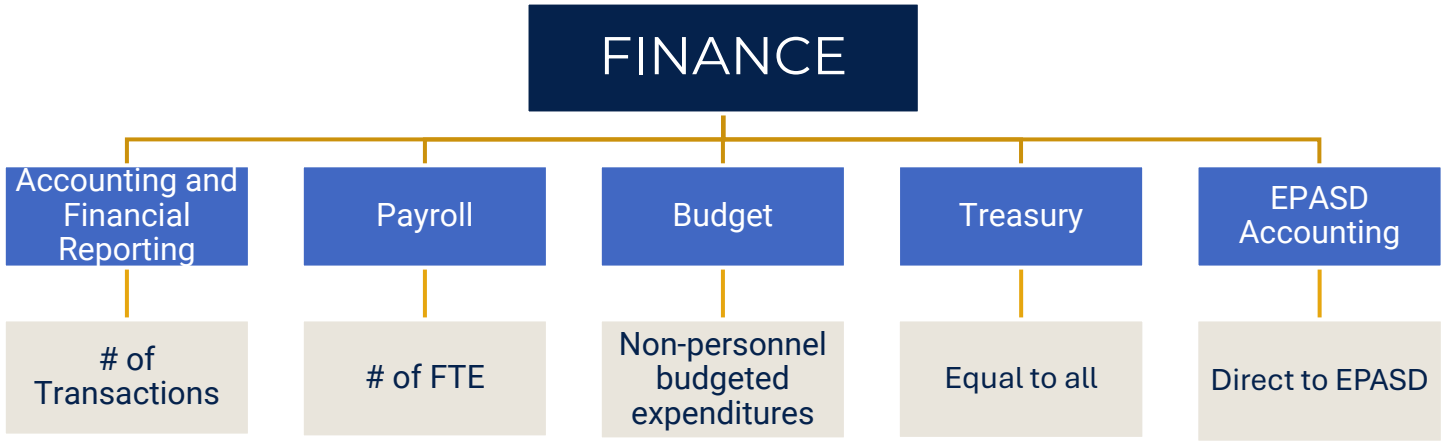
110-City Attorney-12121 City Attorney	Legal Advice	Council and Board Support	Contracts and Insurance	Total
110-City Council-10101 City Council	$ 29,052	$ 48,385	$ 2,552	$ 79,988
110-City Manager-11111 City Manager - Administration	$ 5,810	$ -	$ 10,845	$ 16,655
110-City Clerk-11112 Clerk Services	$ 5,810	$ -	$ 3,190	$ 9,000
110-City Manager-11113 Human Resource	$ 5,810	$ -	$ 6,379	$ 12,190
110-Finance-13131 Finance	$ 31,569	$ -	$ 4,884	$ 36,454
110-Public Works-21211 PW - Administration	$ 7,892	$ -	$ 10,466	$ 18,358
110-Public Works-21213 PW - Maintenance	$ 7,892	$ -	$ 9,768	$ 17,661
110-City Manager-14142 Admin Srvcs - Community Programs and Services	$ 6,314	$ -	$ 20,932	$ 27,246
110-City Manager-14143 Admin Srvcs - Senior Services	$ 6,314	$ -	$ -	$ 6,314
110-Public Works-21212 PW - Engineering	$ 7,892	$ -	$ 7,675	$ 15,567
110-Public Works-21214 PW- Environmental Programs	$ 7,892	$ -	$ -	$ 7,892
110-Community & Economic Development-31311 CEDE- Administration	$ 23,677	$ -	$ 5,582	$ 29,259
110-Community & Economic Development-31313 CEDE - Rent Stabilization	$ -	$ -	$ 2,093	$ 2,093
110-Community & Economic Development-31314 CEDE - Planning	$ 23,677	$ 38,736	$ 1,395	$ 63,808
110-Community & Economic Development-31315 CEDE - Building Inspection	$ 23,677	$ -	$ -	$ 23,677
110-Community & Economic Development-31777 CEDE - Housing Development	$ 23,677	$ -	$ 7,675	$31,352.09
110-Police-41411 Police-Administration	$ 21,046	$ -	$ 9,768	$ 30,814
110-Police-41412 Police-Operations	$ 21,046	$ -	$ -	$ 21,046
110-Police-41413 Police-Investigations	$ 21,046	$ -	$ -	$ 21,046
111-Finance-Information Services	$ 31,569	$ -	$ -	$31,569.44
204-Community & Economic Development-Rent Stabilization Program	$ 126,278	$ 13,557	$ -	$ 139,835
510-Public Works-Water Service Fund	$ 31,569	$ -	$ -	$ 31,569
530-Public Works-EPA Sanitary District	$ 31,569	$ 46,483	$ 43,957	$ 122,009
Total	**$ 501,083**	**$ 147,161**	**$ 147,161**	**$ 795,404**

6 FINANCE

The Finance Department is responsible for the oversight of the Finance department and associated divisions. This division also assists with revenue collection. Finance costs are allocated to Receiving Departments as follows:

- **Accounting and Financial Reporting** – represents the support associated with processing accounting transactions (accounts receivable, accounts payable, journal entries, etc.) as well as developing annual financial reports. These costs are allocated based on the number of Transactions.
- **Payroll** – represents the support associated with processing payroll for all city employees. These costs are allocated based on the full-time equivalents per fund, department, and division.
- **Budget** – represents the support associated with overseeing the budget process and working with city departments to monitor the budget throughout the year. These costs are allocated to the non-personnel budgeted expenditures.
- **Treasury** – represents the support associated with managing the city's investments. These costs are allocated equally to all departments.
- **EPASD Accounting** – represents the support associated with providing financial support such as accounts payable, accounts receivable, financial reporting, and journal entry related support to the East Palo Alto Sanitation District. These costs are allocated directly to East Palo Alto Sanitation District.

The chart on the following page illustrates the functions and measures used to allocate Finance costs. The top tier shows the Central Service department, the second tier shows the functions developed, and the third tier shows the measures used to allocate costs citywide. The pages following the chart provide an aggregate picture of the department's expenses, a function-by-function breakdown of expenses, each function's allocation, and an allocation summary.


FINANCE
Accounting and Financial Reporting
Payroll
Budget
Treasury
EPASD Accounting
# of Transactions
# of FTE
Non-personnel budgeted expenditures
Equal to all
Direct to EPASD

COSTS TO BE ALLOCATED

110-Finance-13131 Finance	First Allocation	Second Allocation	Total
Functional Expenditures	**$1,401,873**		**$1,401,873**
Total Deductions	**$ -**		**$ -**
Incoming Costs			
110-City Council-10101 City Council	$ 19,837	$ 26,193	$ 46,030
110-City Manager-11111 City Manager - Administration	$ 115,672	$ 27,700	$ 143,372
110-City Clerk-11112 Clerk Services	$ 47,754	$ 11,066	$ 58,820
110-City Manager-11113 Human Resource	$ 56,000	$ 14,553	$ 70,553
110-City Attorney-12121 City Attorney	$ 33,517	$ 2,936	$ 36,454
110-Finance-13131 Finance		$ 31,728	$ 31,728
110-Public Works-21213 PW - Maintenance		$ 22,216	$ 22,216
110-Non-Departmental-95951 Non-Departmental		$ 47,396	$ 47,396
Total Incoming Costs	**$ 272,781**	**$ 183,787**	**$ 456,568**
Mid-Year Salary Adjustments	$ 184,832		
Total Cost Adjustments	**$ 184,832**		**$ 184,832**
Total Costs to be Allocated	**$1,859,486**	**$ 183,787**	**$2,043,274**

110-Finance-13131 Finance

EXPENSE DETAIL

Expense Type	Expense ($)	Accounting and Financial Reporting	Payroll	Budget	Treasury	EPASD Accounting
Personnel						
Salaries & Benefits	$1,082,632	$ 552,143	$ 162,395	$ 292,311	$ 75,784	$ -
Subtotal Personnel Cost	**$1,082,632**	**$ 552,143**	**$ 162,395**	**$ 292,311**	**$ 75,784**	**$ -**
Operating Services & Supplies						
Communication Expenses	$ 4,500	$ 2,295	$ 675	$ 1,215	$ 315	$ -
Legal & Accounting Services	$ 248,578	$ 126,775	$ 37,287	$ 67,116	$ 17,400	$ -
Other Services	$ 20,594	$ 10,503	$ 3,089	$ 5,560	$ 1,442	$ -
Professional Services	$ 11,150	$ 5,687	$ 1,673	$ 3,011	$ 781	$ -
Supplies and Materials	$ 6,500	$ 3,315	$ 975	$ 1,755	$ 455	$ -
Training Related	$ 27,919	$ 14,239	$ 4,188	$ 7,538	$ 1,954	$ -
Subtotal Operating Cost	**$ 319,241**	**$ 162,813**	**$ 47,886**	**$ 86,195**	**$ 22,347**	**$ -**
FUNCTIONAL EXPENDITURES	**$ 1,401,873.43**	**$ 714,955.45**	**$ 210,281.01**	**$ 378,505.83**	**$ 98,131.14**	**$ -**
Disallowed Costs						
Subtotal Disallowed Costs	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
Cost Adjustments						
Mid-Year Salary Adjustments	$ 184,832					$ 184,832
Subtotal Cost Adjustments	**$ 184,832**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 184,832**
FUNCTIONAL COST	**$ 1,586,705.43**	**$ 714,955.45**	**$ 210,281.01**	**$ 378,505.83**	**$ 98,131.14**	**$ 184,832.00**
First Allocation						
Incoming - All Others	$ 272,781	$ 122,913	$ 36,151	$ 65,071	$ 16,870	$ 31,776
Reallocate Admin Costs	$ -	$ -	$ -	$ -	$ -	$ -
Unallocated Costs	$ -	$ -	$ -	$ -	$ -	$ -
Subtotal of First Allocation	**$ 1,859,486.37**	**$ 837,868.13**	**$ 246,431.80**	**$ 443,577.25**	**$ 115,001.51**	**$ 216,607.68**
Second Allocation						
Incoming - All Others	$ 183,787	$ 82,813	$ 24,357	$ 43,842	$ 11,366	$ 21,409
Reallocate Admin Costs	$ -	$ -	$ -	$ -	$ -	$ -
Unallocated Costs	$ -	$ -	$ -	$ -	$ -	$ -
Subtotal of Second Allocation	**$ 183,787.25**	**$ 82,812.91**	**$ 24,356.74**	**$ 43,842.13**	**$ 11,366.48**	**$ 21,408.99**
TOTAL ALLOCATED	**$2,043,274**	**$ 920,681**	**$ 270,789**	**$ 487,419**	**$ 126,368**	**$ 238,017**

110-Finance-13131 Finance

ALLOCATION DETAIL

Accounting and Financial Reporting	Allocation Units	Allocated Percent	Gross Allocation	Direct Billed	First Allocation	Second Allocation	Total
110-City Council-10101 City Council	271.00	1.048%	$ 8,777		$ 8,777		$ 8,777
110-City Manager-11111 City Manager - Administration	627.00	2.424%	$ 20,306		$ 20,306		$ 20,306
110-City Clerk-11112 Clerk Services	268.00	1.036%	$ 8,680		$ 8,680		$ 8,680
110-City Manager-11113 Human Resource	734.00	2.837%	$ 23,772		$ 23,772		$ 23,772
110-City Attorney-12121 City Attorney	814.00	3.146%	$ 26,363		$ 26,363		$ 26,363
110-Finance-13131 Finance	320.00	1.237%	$ 10,364		$ 10,364		$ 10,364
110-Public Works-21211 PW - Administration	274.00	1.059%	$ 8,874		$ 8,874	$ 994	$ 9,867
110-Public Works-21213 PW - Maintenance	1,401.00	5.415%	$ 45,373		$ 45,373	$ 5,080	$ 50,454
110-Non-Departmental-95951 Non-Departmental	287.00	1.109%	$ 9,295		$ 9,295	$ 1,041	$ 10,336
110-City Manager-14142 Admin Srvcs - Community Programs and Services	775.50	2.998%	$ 25,116		$ 25,116	$ 2,812	$ 27,928
110-City Manager-14143 Admin Srvcs - Senior Services	709.50	2.742%	$ 22,978		$ 22,978	$ 2,573	$ 25,551
110-Public Works-21212 PW - Engineering	499.00	1.929%	$ 16,161		$ 16,161	$ 1,810	$ 17,970
110-Public Works-21214 PW- Environmental Programs	310.00	1.198%	$ 10,040		$ 10,040	$ 1,124	$ 11,164
110-Community & Economic Development-31311 CEDE- Administration	460.00	1.778%	$ 14,898		$ 14,898	$ 1,668	$ 16,566
110-Community & Economic Development-31313 CEDE - Rent Stabilization	70.00	0.271%	$ 2,267		$ 2,267	$ 254	$ 2,521
110-Community & Economic Development-31314 CEDE - Planning	459.00	1.774%	$ 14,865		$ 14,865	$ 1,664	$ 16,530
110-Community & Economic Development-31315 CEDE - Building Inspection	618.00	2.389%	$ 20,015		$ 20,015	$ 2,241	$ 22,256
110-Community & Economic Development-31777 CEDE - Housing Development	241.00	0.932%	$ 7,805		$ 7,805	$ 874	$ 8,679
110-Police-41411 Police-Administration	1,924.00	7.437%	$ 62,311		$ 62,311	$ 6,977	$ 69,288
110-Police-41412 Police-Operations	1,258.00	4.863%	$ 40,742		$ 40,742	$ 4,562	$ 45,304
110-Police-41413 Police-Investigations	382.00	1.477%	$ 12,372		$ 12,372	$ 1,385	$ 13,757
110-Public Works-99991 Capital Projects	6.00	0.023%	$ 194		$ 194	$ 22	$ 216
111-Finance-Information Services	330.00	1.276%	$ 10,688		$ 10,688	$ 1,197	$ 11,884
112-Finance-Equipment & Vehicle Replacement	47.00	0.182%	$ 1,522		$ 1,522	$ 170	$ 1,693
113-Finance-Self Insurance	139.00	0.537%	$ 4,502		$ 4,502	$ 504	$ 5,006
115-Finance-General Fund Reserve	2.00	0.008%	$ 65		$ 65	$ 7	$ 72
117-Finance-Community Development Pass Through Fund	481.00	1.859%	$ 15,578		$ 15,578	$ 1,744	$ 17,322
201-Public Works-Gas Tax Fund	987.00	3.815%	$ 31,965		$ 31,965	$ 3,579	$ 35,544
202-Public Works-Measure A Smc 20 1/2 Sales Tax	92.00	0.356%	$ 2,980		$ 2,980	$ 334	$ 3,313
203-Public Works-Nat'l Pollutant Discharged Elimation Sys	703.00	2.717%	$ 22,768		$ 22,768	$ 2,549	$ 25,317
204-Community & Economic Development-Rent Stabilization Program	1,199.00	4.635%	$ 38,831		$ 38,831	$ 4,348	$ 43,179
206-Public Works-Park-In-Lieu Fund	30.00	0.116%	$ 972		$ 972	$ 109	$ 1,080
207-Community & Economic Development-Housing-In-Lieu Fund	81.00	0.313%	$ 2,623		$ 2,623	$ 294	$ 2,917
209-Community & Economic Development-Revolving Housing Loans	144.00	0.557%	$ 4,664		$ 4,664	$ 522	$ 5,186
213-Police-Federal And State Law Enforcement Grants	190.00	0.734%	$ 6,153		$ 6,153	$ 689	$ 6,842
215-Community & Economic Development-Misc Federal And State Grants	218.00	0.843%	$ 7,060		$ 7,060	$ 791	$ 7,851
218-Community & Economic Development-Affordable Housing Transient Occupancy Tax (TOT)	77.00	0.298%	$ 2,494		$ 2,494	$ 279	$ 2,773
219-Community & Economic Development-Measure HH	1,196.00	4.623%	$ 38,734		$ 38,734	$ 4,337	$ 43,071
220-Finance-LMIH Successor Fund	1,380.00	5.334%	$ 44,693		$ 44,693	$ 5,004	$ 49,697
221-Public Works-Lighting Fund	547.00	2.114%	$ 17,715		$ 17,715	$ 1,984	$ 19,699
222-Public Works-Drainage Fund	766.00	2.961%	$ 24,808		$ 24,808	$ 2,778	$ 27,586
230-Public Safety-Local Grant Fund	290.00	1.121%	$ 9,392		$ 9,392	$ 1,052	$ 10,444

110-Finance-13131 Finance

ALLOCATION DETAIL

	Allocation Units	Allocated Percent	Gross Allocation	Direct Billed	First Allocation	Second Allocation	Total
231-City Manager-CYSFF - Children/ Youth/ Senior/ Family Fund	98.00	0.379%	$ 3,174		$ 3,174	$ 355	$ 3,529
233-Community & Economic Development-Silicon Valley Community Fund	99.00	0.383%	$ 3,206		$ 3,206	$ 359	$ 3,565
234-Public Works-Measure W	78.00	0.301%	$ 2,526		$ 2,526	$ 283	$ 2,809
301-Public Works-Capital Improvements Project Funds - Local matching	772.00	2.984%	$ 25,002		$ 25,002	$ 2,799	$ 27,802
303-Public Works-Capital Improvements Project Funds - Grant expenditure	273.00	1.055%	$ 8,841		$ 8,841	$ 990	$ 9,831
305-Public Works-Parks and Trails Impact Fee Fund	59.00	0.228%	$ 1,911		$ 1,911	$ 214	$ 2,125
306-Public Works-Public Faculties Impact Fee Fund	59.00	0.228%	$ 1,911		$ 1,911	$ 214	$ 2,125
307-Public Works-Transportation Infrastructure Impact Fee Fund	62.00	0.240%	$ 2,008		$ 2,008	$ 225	$ 2,233
308-Public Works-RBD-I Storm Drain Impact Fee Fund	52.00	0.201%	$ 1,684		$ 1,684	$ 189	$ 1,873
309-Public Works-RBD-O Storm Drain Impact Fee Fund	45.00	0.174%	$ 1,457		$ 1,457	$ 163	$ 1,621
510-Public Works-Water Service Fund	904.00	3.494%	$ 29,277		$ 29,277	$ 3,278	$ 32,555
511-Public Works-Water Capital Surcharge Fund	184.00	0.711%	$ 5,959		$ 5,959	$ 667	$ 6,626
512-Public Works-Water Meter Surcharge Fund	70.00	0.271%	$ 2,267		$ 2,267	$ 254	$ 2,521
513-Public Works-Water Capacity Fee Fund	74.00	0.286%	$ 2,397		$ 2,397	$ 268	$ 2,665
520-Public Works-Garbage Collection Fund (Prop. Tax)	979.00	3.784%	$ 31,706		$ 31,706	$ 3,550	$ 35,256
705-Non-Departmental-Trust and Agency Fund	362.00	1.399%	$ 11,724		$ 11,724	$ 1,313	$ 13,037
706-Non-Departmental-Debt Service Trust	19.00	0.073%	$ 615		$ 615	$ 69	$ 684
810-Non-Departmental-General Fixed Asset Account Group	14.00	0.054%	$ 453		$ 453	$ 51	$ 504
820-Non-Departmental-General Long-Term Debt	4.00	0.015%	$ 130		$ 130	$ 15	$ 144
830-Non-Departmental-0	10.00	0.039%	$ 324		$ 324	$ 36	$ 360
Other - Closed Out Funds	47.00	0.182%	$ 1,522		$ 1,522	$ 170	$ 1,693
Total	**25,871.00**	**100.000%**	**$ 837,868**	**##**	**$ 837,868**	**$ 82,813**	**$ 920,681**

Allocation Basis: # of Transactions

Source of Allocation: Transaction Report

110-Finance-13131 Finance

ALLOCATION DETAIL

	Allocation Units	Allocated Percent	Gross Allocation	Direct Billed	First Allocation	Second Allocation	Total
Payroll							
110-City Council-10101 City Council	5.00	3.797%	$ 9,356		$ 9,356		$ 9,356
110-City Manager-11111 City Manager - Administration	5.00	3.797%	$ 9,356		$ 9,356		$ 9,356
110-City Clerk-11112 Clerk Services	2.00	1.519%	$ 3,742		$ 3,742		$ 3,742
110-City Manager-11113 Human Resource	4.00	3.037%	$ 7,485		$ 7,485		$ 7,485
110-City Attorney-12121 City Attorney	3.00	2.278%	$ 5,613		$ 5,613		$ 5,613
110-Finance-13131 Finance	6.40	4.862%	$ 11,981		$ 11,981		$ 11,981
110-Public Works-21211 PW - Administration	3.00	2.278%	$ 5,613		$ 5,613	$ 687	$ 6,301
110-Public Works-21213 PW - Maintenance	6.54	4.963%	$ 12,231		$ 12,231	$ 1,498	$ 13,729
110-City Manager-14142 Admin Srvcs - Community Programs and Services	5.00	3.797%	$ 9,356		$ 9,356	$ 1,146	$ 10,501
110-City Manager-14143 Admin Srvcs - Senior Services	4.00	3.037%	$ 7,485		$ 7,485	$ 917	$ 8,401
110-Public Works-21212 PW - Engineering	6.00	4.556%	$ 11,227		$ 11,227	$ 1,375	$ 12,602
110-Public Works-21214 PW- Environmental Programs	0.60	0.456%	$ 1,123		$ 1,123	$ 137	$ 1,260
110-Community & Economic Development-31311 CEDE- Administration	3.04	2.308%	$ 5,688		$ 5,688	$ 697	$ 6,385
110-Community & Economic Development-31314 CEDE - Planning	5.00	3.797%	$ 9,356		$ 9,356	$ 1,146	$ 10,501
110-Community & Economic Development-31315 CEDE - Building Inspection	7.00	5.315%	$ 13,098		$ 13,098	$ 1,604	$ 14,702
110-Community & Economic Development-31777 CEDE - Housing Development	0.35	0.266%	$ 655		$ 655	$ 80	$ 735
110-Police-41411 Police-Administration	9.00	6.834%	$ 16,840		$ 16,840	$ 2,062	$ 18,903
110-Police-41412 Police-Operations	29.00	22.020%	$ 54,264		$ 54,264	$ 6,645	$ 60,909
110-Police-41413 Police-Investigations	14.00	10.630%	$ 26,196		$ 26,196	$ 3,208	$ 29,404
111-Finance-Information Services	1.00	0.759%	$ 1,871		$ 1,871	$ 229	$ 2,100
201-Public Works-Gas Tax Fund	0.72	0.545%	$ 1,344		$ 1,344	$ 165	$ 1,508
203-Public Works-Nat'l Pollutant Discharged Elimation Sys	1.47	1.116%	$ 2,751		$ 2,751	$ 337	$ 3,087
204-Community & Economic Development-Rent Stabilization Program	2.00	1.519%	$ 3,742		$ 3,742	$ 458	$ 4,201
219-Community & Economic Development-Measure HH	1.18	0.896%	$ 2,208		$ 2,208	$ 270	$ 2,478
220-Finance-LMIH Successor Fund	1.43	1.086%	$ 2,676		$ 2,676	$ 328	$ 3,003
221-Public Works-Lighting Fund	0.09	0.069%	$ 170		$ 170	$ 21	$ 191
222-Public Works-Drainage Fund	0.26	0.197%	$ 486		$ 486	$ 60	$ 545
301-Public Works-Capital Improvements Project Funds - Local matching	0.50	0.380%	$ 936		$ 936	$ 115	$ 1,050
510-Public Works-Water Service Fund	1.00	0.759%	$ 1,871		$ 1,871	$ 229	$ 2,100
520-Public Works-Garbage Collection Fund (Prop. Tax)	2.32	1.765%	$ 4,349		$ 4,349	$ 533	$ 4,882
530-Public Works-EPA Sanitary District	1.70	1.291%	$ 3,181		$ 3,181	$ 390	$ 3,571
705-Non-Departmental-Trust and Agency Fund	0.10	0.074%	$ 182		$ 182	$ 22	$ 204
Total	**131.70**	**100.000%**	**$ 246,432**	**##**	**$ 246,432**	**$ 24,357**	**$ 270,789**

Allocation Basis: # of FTE

Source of Allocation: Personnel File

110-Finance-13131 Finance

ALLOCATION DETAIL

Budget	Allocation Units	Allocated Percent	Gross Allocation	Direct Billed	First Allocation	Second Allocation	Total
110-City Council-10101 City Council	64,500.00	0.278%	$ 1,232		$ 1,232		$ 1,232
110-City Manager-11111 City Manager - Administration	461,740.00	1.988%	$ 8,820		$ 8,820		$ 8,820
110-City Clerk-11112 Clerk Services	228,350.00	0.983%	$ 4,362		$ 4,362		$ 4,362
110-City Manager-11113 Human Resource	414,450.00	1.785%	$ 7,917		$ 7,917		$ 7,917
110-City Attorney-12121 City Attorney	484,050.00	2.085%	$ 9,246		$ 9,246		$ 9,246
110-Finance-13131 Finance	319,241.00	1.375%	$ 6,098		$ 6,098		$ 6,098
110-Public Works-21211 PW - Administration	29,000.00	0.125%	$ 554		$ 554	$ 60	$ 614
110-Public Works-21213 PW - Maintenance	1,741,700.00	7.501%	$ 33,271		$ 33,271	$ 3,594	$ 36,864
110-Non-Departmental-95951 Non-Departmental	145,906.00	0.628%	$ 2,787		$ 2,787	$ 301	$ 3,088
110-City Manager-14142 Admin Srvcs - Community Programs and Services	346,500.00	1.492%	$ 6,619		$ 6,619	$ 715	$ 7,334
110-City Manager-14143 Admin Srvcs - Senior Services	258,300.00	1.112%	$ 4,934		$ 4,934	$ 533	$ 5,467
110-Public Works-21212 PW - Engineering	68,000.00	0.293%	$ 1,299		$ 1,299	$ 140	$ 1,439
110-Public Works-21214 PW- Environmental Programs	249,000.00	1.072%	$ 4,756		$ 4,756	$ 514	$ 5,270
110-Community & Economic Development-31311 CEDE- Administration	203,600.00	0.877%	$ 3,889		$ 3,889	$ 420	$ 4,309
110-Community & Economic Development-31313 CEDE - Rent Stabilization	1,900.00	0.008%	$ 36		$ 36	$ 4	$ 40
110-Community & Economic Development-31314 CEDE - Planning	303,040.00	1.305%	$ 5,789		$ 5,789	$ 625	$ 6,414
110-Community & Economic Development-31315 CEDE - Building Inspection	1,793,300.00	7.723%	$ 34,256		$ 34,256	$ 3,700	$ 37,956
110-Community & Economic Development-31777 CEDE - Housing Development	155,935.00	0.672%	$ 2,979		$ 2,979	$ 322	$ 3,300
110-Police-41411 Police-Administration	3,285,450.00	14.149%	$ 62,760		$ 62,760	$ 6,779	$ 69,539
110-Police-41412 Police-Operations	100,000.00	0.431%	$ 1,910		$ 1,910	$ 206	$ 2,117
111-Finance-Information Services	1,024,737.18	4.413%	$ 19,575		$ 19,575	$ 2,114	$ 21,689
112-Finance-Equipment & Vehicle Replacement	150,565.50	0.648%	$ 2,876		$ 2,876	$ 311	$ 3,187
113-Finance-Self Insurance	1,122,624.00	4.835%	$ 21,445		$ 21,445	$ 2,316	$ 23,761
117-Finance-Community Development Pass Through Fund	1,050,500.00	4.524%	$ 20,067		$ 20,067	$ 2,167	$ 22,234
201-Public Works-Gas Tax Fund	870,296.00	3.748%	$ 16,625		$ 16,625	$ 1,796	$ 18,420
202-Public Works-Measure A Smc 20 1/2 Sales Tax	3,539.00	0.015%	$ 68		$ 68	$ 7	$ 75
203-Public Works-Nat'l Pollutant Discharged Elimation Sys	530,838.00	2.286%	$ 10,140		$ 10,140	$ 1,095	$ 11,236
204-Community & Economic Development-Rent Stabilization Program	383,150.00	1.650%	$ 7,319		$ 7,319	$ 791	$ 8,110
207-Community & Economic Development-Housing-In-Lieu Fund	104,768.00	0.451%	$ 2,001		$ 2,001	$ 216	$ 2,217
209-Community & Economic Development-Revolving Housing Loans	3,174.00	0.014%	$ 61		$ 61	$ 7	$ 67
213-Police-Federal And State Law Enforcement Grants	170,000.00	0.732%	$ 3,247		$ 3,247	$ 351	$ 3,598
215-Community & Economic Development-Misc Federal And State Grants	300,060.00	1.292%	$ 5,732		$ 5,732	$ 619	$ 6,351
218-Community & Economic Development-Affordable Housing Transient Occupancy Tax (TOT)	29,418.00	0.127%	$ 562		$ 562	$ 61	$ 623
219-Community & Economic Development-Measure HH	76,952.00	0.331%	$ 1,470		$ 1,470	$ 159	$ 1,629
220-Finance-LMIH Successor Fund	170,653.00	0.735%	$ 3,260		$ 3,260	$ 352	$ 3,612
221-Public Works-Lighting Fund	311,045.00	1.339%	$ 5,942		$ 5,942	$ 642	$ 6,583
222-Public Works-Drainage Fund	259,373.00	1.117%	$ 4,955		$ 4,955	$ 535	$ 5,490
230-Public Safety-Local Grant Fund	533,563.00	2.298%	$ 10,192		$ 10,192	$ 1,101	$ 11,293
231-City Manager-CYSFF - Children/ Youth/ Senior/ Family Fund	48,822.00	0.210%	$ 933		$ 933	$ 101	$ 1,033

110-Finance-13131 Finance

ALLOCATION DETAIL

	Allocation Units	Allocated Percent	Gross Allocation	Direct Billed	First Allocation	Second Allocation	Total
234-Public Works-Measure W	1,740.00	0.007%	$ 33		$ 33	$ 4	$ 37
510-Public Works-Water Service Fund	316,957.00	1.365%	$ 6,055		$ 6,055	$ 654	$ 6,709
511-Public Works-Water Capital Surcharge Fund	305,000.00	1.313%	$ 5,826		$ 5,826	$ 629	$ 6,456
520-Public Works-Garbage Collection Fund (Prop. Tax)	90,453.00	0.390%	$ 1,728		$ 1,728	$ 187	$ 1,914
530-Public Works-EPA Sanitary District	4,708,900.00	20.279%	$ 89,951		$ 89,951	$ 9,716	$ 99,667
Total	**23,221,089.68**	**100.000%**	**$ 443,577**	**##**	**$ 443,577**	**$ 43,842**	**$ 487,419**

Allocation Basis: Non-personnel budgeted expenditures

Source of Allocation: Expenditure Report

110-Finance-13131 Finance

ALLOCATION DETAIL

	Allocation Units	Allocated Percent	Gross Allocation	Direct Billed	First Allocation	Second Allocation	Total
Treasury							
110-City Council-10101 City Council	1.00	2.857%	$ 3,286		$ 3,286		$ 3,286
110-City Manager-11111 City Manager - Administration	1.00	2.857%	$ 3,286		$ 3,286		$ 3,286
110-City Clerk-11112 Clerk Services	1.00	2.857%	$ 3,286		$ 3,286		$ 3,286
110-City Manager-11113 Human Resource	1.00	2.857%	$ 3,286		$ 3,286		$ 3,286
110-City Attorney-12121 City Attorney	1.00	2.857%	$ 3,286		$ 3,286		$ 3,286
110-Finance-13131 Finance	1.00	2.857%	$ 3,286		$ 3,286		$ 3,286
110-Public Works-21211 PW - Administration	0.25	0.714%	$ 821		$ 821	$ 98	$ 919
110-Public Works-21213 PW - Maintenance	0.25	0.714%	$ 821		$ 821	$ 98	$ 919
110-Non-Departmental-95951 Non-Departmental	1.00	2.857%	$ 3,286		$ 3,286	$ 392	$ 3,678
110-City Manager-14142 Admin Srvcs - Community Programs and Services	0.50	1.429%	$ 1,643		$ 1,643	$ 196	$ 1,839
110-City Manager-14143 Admin Srvcs - Senior Services	0.50	1.429%	$ 1,643		$ 1,643	$ 196	$ 1,839
110-Public Works-21212 PW - Engineering	0.25	0.714%	$ 821		$ 821	$ 98	$ 919
110-Public Works-21214 PW- Environmental Programs	0.25	0.714%	$ 821		$ 821	$ 98	$ 919
110-Community & Economic Development-31311 CEDE- Administration	0.20	0.571%	$ 657		$ 657	$ 78	$ 736
110-Community & Economic Development-31313 CEDE - Rent Stabilization	0.20	0.571%	$ 657		$ 657	$ 78	$ 736
110-Community & Economic Development-31314 CEDE - Planning	0.20	0.571%	$ 657		$ 657	$ 78	$ 736
110-Community & Economic Development-31315 CEDE - Building Inspection	0.20	0.571%	$ 657		$ 657	$ 78	$ 736
110-Community & Economic Development-31777 CEDE - Housing Development	0.20	0.571%	$ 657		$ 657	$ 78	$ 736
110-Police-41411 Police-Administration	0.50	1.429%	$ 1,643		$ 1,643	$ 196	$ 1,839
110-Police-41412 Police-Operations	0.50	1.429%	$ 1,643		$ 1,643	$ 196	$ 1,839
111-Finance-Information Services	1.00	2.857%	$ 3,286		$ 3,286	$ 392	$ 3,678
112-Finance-Equipment & Vehicle Replacement	1.00	2.857%	$ 3,286		$ 3,286	$ 392	$ 3,678
113-Finance-Self Insurance	1.00	2.857%	$ 3,286		$ 3,286	$ 392	$ 3,678
117-Finance-Community Development Pass Through Fund	1.00	2.857%	$ 3,286		$ 3,286	$ 392	$ 3,678
201-Public Works-Gas Tax Fund	1.00	2.857%	$ 3,286		$ 3,286	$ 392	$ 3,678
202-Public Works-Measure A Smc 20 1/2 Sales Tax	1.00	2.857%	$ 3,286		$ 3,286	$ 392	$ 3,678
203-Public Works-Nat'l Pollutant Discharged Elimation Sys	1.00	2.857%	$ 3,286		$ 3,286	$ 392	$ 3,678
204-Community & Economic Development-Rent Stabilization Program	1.00	2.857%	$ 3,286		$ 3,286	$ 392	$ 3,678
207-Community & Economic Development-Housing-In-Lieu Fund	1.00	2.857%	$ 3,286		$ 3,286	$ 392	$ 3,678
209-Community & Economic Development-Revolving Housing Loans	1.00	2.857%	$ 3,286		$ 3,286	$ 392	$ 3,678
213-Police-Federal And State Law Enforcement Grants	1.00	2.857%	$ 3,286		$ 3,286	$ 392	$ 3,678
215-Community & Economic Development-Misc Federal And State Grants	1.00	2.857%	$ 3,286		$ 3,286	$ 392	$ 3,678
218-Community & Economic Development-Affordable Housing Transient Occupancy Tax (TOT)	1.00	2.857%	$ 3,286		$ 3,286	$ 392	$ 3,678
219-Community & Economic Development-Measure HH	1.00	2.857%	$ 3,286		$ 3,286	$ 392	$ 3,678
220-Finance-LMIH Successor Fund	1.00	2.857%	$ 3,286		$ 3,286	$ 392	$ 3,678
221-Public Works-Lighting Fund	1.00	2.857%	$ 3,286		$ 3,286	$ 392	$ 3,678
222-Public Works-Drainage Fund	1.00	2.857%	$ 3,286		$ 3,286	$ 392	$ 3,678
230-Public Safety-Local Grant Fund	1.00	2.857%	$ 3,286		$ 3,286	$ 392	$ 3,678
231-City Manager-CYSFF - Children/ Youth/ Senior/ Family Fund	1.00	2.857%	$ 3,286		$ 3,286	$ 392	$ 3,678

110-Finance-13131 Finance

ALLOCATION DETAIL

	Allocation Units	Allocated Percent	Gross Allocation	Direct Billed	First Allocation	Second Allocation	Total
234-Public Works-Measure W	1.00	2.857%	$ 3,286		$ 3,286	$ 392	$ 3,678
510-Public Works-Water Service Fund	1.00	2.857%	$ 3,286		$ 3,286	$ 392	$ 3,678
511-Public Works-Water Capital Surcharge Fund	1.00	2.857%	$ 3,286		$ 3,286	$ 392	$ 3,678
520-Public Works-Garbage Collection Fund (Prop. Tax)	1.00	2.857%	$ 3,286		$ 3,286	$ 392	$ 3,678
530-Public Works-EPA Sanitary District	1.00	2.857%	$ 3,286		$ 3,286	$ 392	$ 3,678
Total	**35.00**	**100.000%**	**$ 115,002**	**##**	**$ 115,002**	**$ 11,366**	**$ 126,368**

Allocation Basis: Equal to all

110-Finance-13131 Finance

ALLOCATION DETAIL

		Allocation Units	Allocated Percent	Gross Allocation	Direct Billed	First Allocation	Second Allocation	Total
EPASD Accounting								
530-Public Works-EPA Sanitary District		1.00	100.000%	$ 216,608		$216,608	$21,409	$238,017
	Total	**1.00**	**100.000%**	**$ 216,608**	**##**	**$216,608**	**$21,409**	**$238,017**

Allocation Basis: Direct to EPASD

ALLOCATION SUMMARY

110-Finance-13131 Finance	Accounting and Financial	Payroll	Budget	Treasury
110-City Council-10101 City Council	$ 8,777	$ 9,356	$ 1,232	$ 3,286
110-City Manager-11111 City Manager - Administration	$ 20,306	$ 9,356	$ 8,820	$ 3,286
110-City Clerk-11112 Clerk Services	$ 8,680	$ 3,742	$ 4,362	$ 3,286
110-City Manager-11113 Human Resource	$ 23,772	$ 7,485	$ 7,917	$ 3,286
110-City Attorney-12121 City Attorney	$ 26,363	$ 5,613	$ 9,246	$ 3,286
110-Finance-13131 Finance	$ 10,364	$ 11,981	$ 6,098	$ 3,286
110-Public Works-21211 PW - Administration	$ 9,867	$ 6,301	$ 614	$ 919
110-Public Works-21213 PW - Maintenance	$ 50,454	$ 13,729	$ 36,864	$ 919
110-Non-Departmental-95951 Non-Departmental	$ 10,336	$ -	$ 3,088	$ 3,678
110-City Manager-14142 Admin Srvcs - Community Programs and Services	$ 27,928	$ 10,501	$ 7,334	$ 1,839
110-City Manager-14143 Admin Srvcs - Senior Services	$ 25,551	$ 8,401	$ 5,467	$ 1,839
110-Public Works-21212 PW - Engineering	$ 17,970	$ 12,602	$ 1,439	$ 919
110-Public Works-21214 PW- Environmental Programs	$ 11,164	$ 1,260	$ 5,270	$ 919
110-Community & Economic Development-31311 CEDE- Administration	$ 16,566	$ 6,385	$ 4,309	$ 736
110-Community & Economic Development-31313 CEDE - Rent Stabilization	$ 2,521	$ -	$ 40	$ 736
110-Community & Economic Development-31314 CEDE - Planning	$ 16,530	$ 10,501	$ 6,414	$ 736
110-Community & Economic Development-31315 CEDE - Building Inspection	$ 22,256	$ 14,702	$ 37,956	$ 736
110-Community & Economic Development-31777 CEDE - Housing Development	$ 8,679	$ 735	$ 3,300	$ 736
110-Police-41411 Police-Administration	$ 69,288	$ 18,903	$ 69,539	$ 1,839
110-Police-41412 Police-Operations	$ 45,304	$ 60,909	$ 2,117	$ 1,839
110-Police-41413 Police-Investigations	$ 13,757	$ 29,404	$ -	$ -
110-Public Works-99991 Capital Projects	$ 216	$ -	$ -	$ -
111-Finance-Information Services	$ 11,884	$ 2,100	$ 21,689	$ 3,678
112-Finance-Equipment & Vehicle Replacement	$ 1,693	$ -	$ 3,187	$ 3,678
113-Finance-Self Insurance	$ 5,006	$ -	$ 23,761	$ 3,678
115-Finance-General Fund Reserve	$ 72	$ -	$ -	$ -
117-Finance-Community Development Pass Through Fund	$ 17,322	$ -	$ 22,234	$ 3,678
201-Public Works-Gas Tax Fund	$ 35,544	$ 1,508	$ 18,420	$ 3,678
202-Public Works-Measure A Smc 20 1/2 Sales Tax	$ 3,313	$ -	$ 75	$ 3,678
203-Public Works-Nat'l Pollutant Discharged Elimation Sys	$ 25,317	$ 3,087	$ 11,236	$ 3,678
204-Community & Economic Development-Rent Stabilization Program	$ 43,179	$ 4,201	$ 8,110	$ 3,678
206-Public Works-Park-In-Lieu Fund	$ 1,080	$ -	$ -	$ -
207-Community & Economic Development-Housing-In-Lieu Fund	$ 2,917	$ -	$ 2,217	$ 3,678
209-Community & Economic Development-Revolving Housing Loans	$ 5,186	$ -	$ 67	$ 3,678

ALLOCATION SUMMARY

110-Finance-13131 Finance	Accounting and Financial	Payroll	Budget	Treasury
213-Police-Federal And State Law Enforcement Grants	$ 6,842	$ -	$ 3,598	$ 3,678
215-Community & Economic Development-Misc Federal And State Grants	$ 7,851	$ -	$ 6,351	$ 3,678
218-Community & Economic Development-Affordable Housing Transient Occupancy Tax (TOT)	$ 2,773	$ -	$ 623	$ 3,678
219-Community & Economic Development-Measure HH	$ 43,071	$ 2,478	$ 1,629	$ 3,678
220-Finance-LMIH Successor Fund	$ 49,697	$ 3,003	$ 3,612	$ 3,678
221-Public Works-Lighting Fund	$ 19,699	$ 191	$ 6,583	$ 3,678
222-Public Works-Drainage Fund	$ 27,586	$ 545	$ 5,490	$ 3,678
230-Public Safety-Local Grant Fund	$ 10,444	$ -	$ 11,293	$ 3,678
231-City Manager-CYSFF - Children/ Youth/ Senior/ Family Fund	$ 3,529	$ -	$ 1,033	$ 3,678
233-Community & Economic Development-Silicon Valley Community Fund	$ 3,565	$ -	$ -	$ -
234-Public Works-Measure W	$ 2,809	$ -	$ 37	$ 3,678
301-Public Works-Capital Improvements Project Funds - Local matching	$ 27,802	$ 1,050	$ -	$ -
303-Public Works-Capital Improvements Project Funds - Grant expenditure	$ 9,831	$ -	$ -	$ -
305-Public Works-Parks and Trails Impact Fee Fund	$ 2,125	$ -	$ -	$ -
306-Public Works-Public Faculties Impact Fee Fund	$ 2,125	$ -	$ -	$ -
307-Public Works-Transportation Infrastructure Impact Fee Fund	$ 2,233	$ -	$ -	$ -
308-Public Works-RBD-I Storm Drain Impact Fee Fund	$ 1,873	$ -	$ -	$ -
309-Public Works-RBD-O Storm Drain Impact Fee Fund	$ 1,621	$ -	$ -	$ -
510-Public Works-Water Service Fund	$ 32,555	$ 2,100	$ 6,709	$ 3,678
511-Public Works-Water Capital Surcharge Fund	$ 6,626	$ -	$ 6,456	$ 3,678
512-Public Works-Water Meter Surcharge Fund	$ 2,521	$ -	$ -	$ -
513-Public Works-Water Capacity Fee Fund	$ 2,665	$ -	$ -	$ -
520-Public Works-Garbage Collection Fund (Prop. Tax)	$ 35,256	$ 4,882	$ 1,914	$ 3,678
530-Public Works-EPA Sanitary District	$ -	$ 3,571	$ 99,667	$ 3,678
705-Non-Departmental-Trust and Agency Fund	$ 13,037	$ 204	$ -	$ -
706-Non-Departmental-Debt Service Trust	$ 684	$ -	$ -	$ -
810-Non-Departmental-General Fixed Asset Account Group	$ 504	$ -	$ -	$ -
820-Non-Departmental-General Long-Term Debt	$ 144	$ -	$ -	$ -
830-Non-Departmental-0	$ 360	$ -	$ -	$ -
Other - Closed Out Funds	$ 1,693	$ -	$ -	$ -
Total	**$ 920,681**	**$ 270,789**	**$ 487,419**	**$ 126,368**

ALLOCATION SUMMARY

110-Finance-13131 Finance	EPASD Accounting	Total
110-City Council-10101 City Council	$ -	$ 22,650
110-City Manager-11111 City Manager - Administration	$ -	$ 41,768
110-City Clerk-11112 Clerk Services	$ -	$ 20,070
110-City Manager-11113 Human Resource	$ -	$ 42,459
110-City Attorney-12121 City Attorney	$ -	$ 44,508
110-Finance-13131 Finance	$ -	$ 31,728
110-Public Works-21211 PW - Administration	$ -	$ 17,702
110-Public Works-21213 PW - Maintenance	$ -	$ 101,966
110-Non-Departmental-95951 Non-Departmental	$ -	$ 17,102
110-City Manager-14142 Admin Srvcs - Community Programs and Services	$ -	$ 47,602
110-City Manager-14143 Admin Srvcs - Senior Services	$ -	$ 41,258
110-Public Works-21212 PW - Engineering	$ -	$ 32,931
110-Public Works-21214 PW- Environmental Programs	$ -	$ 18,614
110-Community & Economic Development-31311 CEDE- Administration	$ -	$ 27,996
110-Community & Economic Development-31313 CEDE - Rent Stabilization	$ -	$ 3,297
110-Community & Economic Development-31314 CEDE - Planning	$ -	$ 34,181
110-Community & Economic Development-31315 CEDE - Building Inspection	$ -	$ 75,650
110-Community & Economic Development-31777 CEDE - Housing Development	$ -	$13,450.15
110-Police-41411 Police-Administration	$ -	$ 159,568
110-Police-41412 Police-Operations	$ -	$ 110,168
110-Police-41413 Police-Investigations	$ -	$ 43,161
110-Public Works-99991 Capital Projects	$ -	$ 216
111-Finance-Information Services	$ -	$39,351.38
112-Finance-Equipment & Vehicle Replacement	$ -	$ 8,557
113-Finance-Self Insurance	$ -	$ 32,444
115-Finance-General Fund Reserve	$ -	$ 72
117-Finance-Community Development Pass Through Fund	$ -	$ 43,234
201-Public Works-Gas Tax Fund	$ -	$ 59,151
202-Public Works-Measure A Smc 20 1/2 Sales Tax	$ -	$ 7,066
203-Public Works-Nat'l Pollutant Discharged Elimation Sys	$ -	$ 43,318
204-Community & Economic Development-Rent Stabilization Program	$ -	$ 59,167
206-Public Works-Park-In-Lieu Fund	$ -	$ 1,080
207-Community & Economic Development-Housing-In-Lieu Fund	$ -	$ 8,812
209-Community & Economic Development-Revolving Housing Loans	$ -	$ 8,930.71

ALLOCATION SUMMARY

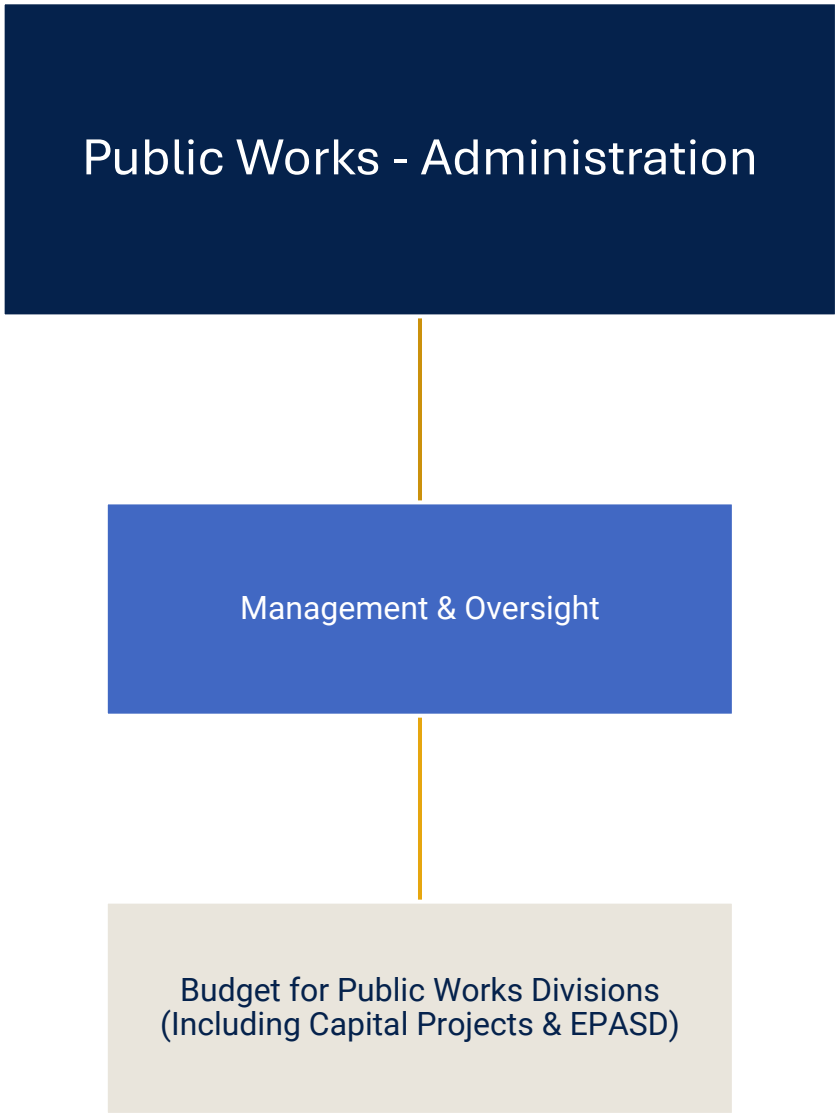
110-Finance-13131 Finance	EPASD Accounting	Total
213-Police-Federal And State Law Enforcement Grants	$ -	$ 14,118
215-Community & Economic Development-Misc Federal And State Grants	$ -	$ 17,879
218-Community & Economic Development-Affordable Housing Transient Occupancy Tax (TOT)	$ -	$ 7,073
219-Community & Economic Development-Measure HH	$ -	$ 50,856
220-Finance-LMIH Successor Fund	$ -	$ 59,991
221-Public Works-Lighting Fund	$ -	$ 30,151
222-Public Works-Drainage Fund	$ -	$ 37,299
230-Public Safety-Local Grant Fund	$ -	$ 25,415
231-City Manager-CYSFF - Children/ Youth/ Senior/ Family Fund	$ -	$ 8,240
233-Community & Economic Development-Silicon Valley Community Fund	$ -	$ 3,565
234-Public Works-Measure W	$ -	$ 6,524
301-Public Works-Capital Improvements Project Funds - Local matching	$ -	$ 28,852
303-Public Works-Capital Improvements Project Funds - Grant expenditure	$ -	$ 9,831
305-Public Works-Parks and Trails Impact Fee Fund	$ -	$ 2,125
306-Public Works-Public Faculties Impact Fee Fund	$ -	$ 2,125
307-Public Works-Transportation Infrastructure Impact Fee Fund	$ -	$ 2,233
308-Public Works-RBD-I Storm Drain Impact Fee Fund	$ -	$ 1,873
309-Public Works-RBD-O Storm Drain Impact Fee Fund	$ -	$ 1,621
510-Public Works-Water Service Fund	$ -	$ 45,042
511-Public Works-Water Capital Surcharge Fund	$ -	$16,759.55
512-Public Works-Water Meter Surcharge Fund	$ -	$ 2,521
513-Public Works-Water Capacity Fee Fund	$ -	$ 2,665
520-Public Works-Garbage Collection Fund (Prop. Tax)	$ -	$ 45,731
530-Public Works-EPA Sanitary District	$ 238,017	$ 344,932
705-Non-Departmental-Trust and Agency Fund	$ -	$ 13,241
706-Non-Departmental-Debt Service Trust	$ -	$ 684
810-Non-Departmental-General Fixed Asset Account Group	$ -	$ 504
820-Non-Departmental-General Long-Term Debt	$ -	$ 144
830-Non-Departmental-0	$ -	$ 360
Other - Closed Out Funds	$ -	$ 1,693
Total	**$ 238,017**	**$2,043,274**

7 PUBLIC WORKS - ADMINISTRATION

The Public Works – Administration division includes staff that provide support to all of the City's public works functions including – maintenance, water, sewer, sanitation, engineering, and capital project support. Public Works – Administration costs are allocated to as follows:

- **Management & Oversight** – represents the support associated with providing management related assistance and oversight to maintenance, water, sewer, environmental, engineering, & capital projects. These costs are allocated based on budgeted expenditures per public works division including capital projects and the East Palo Alto Sanitation District budgets.

The chart on the following page illustrates the functions and measures used to allocate Public Works - Administration costs. The top tier shows the Central Service department, the second tier shows the functions developed, and the third tier shows the measures used to allocate costs citywide. The pages following the chart provide an aggregate picture of the department's expenses, a function-by-function breakdown of expenses, each function's allocation, and an allocation summary.


Public Works - Administration
Management & Oversight
Budget for Public Works Divisions
(Including Capital Projects & EPASD)

COSTS TO BE ALLOCATED

110-Public Works-21211 PW - Administration	First Allocation	Second Allocation	Total
Departmental Expenditures	**$ 669,781**		**$ 669,781**
Total Disallowed Costs	**$ -**		**$ -**
Incoming Costs			
110-City Council-10101 City Council	$ 6,399	$ 8,449	$ 14,848
110-City Manager-11111 City Manager - Administration	$ 34,265	$ 8,068	$ 42,332
110-City Clerk-11112 Clerk Services	$ 40,492	$ 9,189	$ 49,681
110-City Manager-11113 Human Resource	$ 26,239	$ 6,819	$ 33,057
110-City Attorney-12121 City Attorney	$ 16,832	$ 1,527	$ 18,358
110-Finance-13131 Finance	$ 15,863	$ 1,839	$ 17,702
110-Public Works-21213 PW - Maintenance		$ 12,695	$ 12,695
110-Non-Departmental-95951 Non-Departmental		$ 1,671	$ 1,671
Total Incoming Costs	**$ 140,089**	**$ 50,256**	**$ 190,345**
Mid-Year Salary Adjustments	$ 9,674		
Total Cost Adjustments	**$ 9,674**		**$ 9,674**
Total Costs to be Allocated	**$ 819,544**	**$ 50,256**	**$ 869,800**

110-Public Works-21211 PW - Administration

EXPENSE DETAIL

Expense Type	Expense ($)	Management & Oversight
Personnel		
Salaries & Benefits	$ 640,781	$ 640,781
Subtotal Personnel Cost	**$ 640,781**	**$ 640,781**
Operating Services & Supplies		
Communication Expenses	$ 6,000	$ 6,000
Maint.	$ 1,000	$ 1,000
Special Events	$ 3,000	$ 3,000
Supplies and Materials	$ 8,500	$ 8,500
Training Related	$ 10,500	$ 10,500
Subtotal Operating Cost	**$ 29,000**	**$ 29,000**
FUNCTIONAL EXPENDITURES	**$ 669,781.00**	**$ 669,781.00**
Disallowed Costs		
Subtotal Disallowed Costs	**$ -**	**$ -**
Cost Adjustments		
Mid-Year Salary Adjustments	$ 9,674	$ 9,674
Subtotal Cost Adjustments	**$ 9,674**	**$ 9,674**
FUNCTIONAL COST	**$ 679,455.00**	**$ 679,455.00**
First Allocation		
Incoming - All Others	$ 140,089	$ 140,089
Reallocate Admin Costs	$ -	$ -
Unallocated Costs	$ -	$ -
Subtotal of First Allocation	**$ 819,544.06**	**$ 819,544.06**
Second Allocation		
Incoming - All Others	$ 50,256	$ 50,256
Reallocate Admin Costs	$ -	$ -
Unallocated Costs	$ -	$ -
Subtotal of Second Allocation	**$ 50,255.78**	**$ 50,255.78**
TOTAL ALLOCATED	**$ 869,800**	**$ 869,800**

110-Public Works-21211 PW - Administration

ALLOCATION DETAIL

	Allocation Units	Allocated Percent	Gross Allocation	Direct Billed	First Allocation	Second Allocation	Total
Management & Oversight							
110-Public Works-21213 PW - Maintenance	3,023,507.74	8.489%	$ 69,573		$ 69,573	$ 4,266	$ 73,839
110-Public Works-21212 PW - Engineering	1,014,978.00	2.850%	$ 23,355		$ 23,355	$ 1,432	$ 24,788
110-Public Works-21214 PW- Environmental Programs	285,397.20	0.801%	$ 6,567		$ 6,567	$ 403	$ 6,970
201-Public Works-Gas Tax Fund	2,029,857.66	5.699%	$ 46,708		$ 46,708	$ 2,864	$ 49,573
202-Public Works-Measure A Smc 20 1/2 Sales Tax	1,888,539.00	5.303%	$ 43,457		$ 43,457	$ 2,665	$ 46,121
203-Public Works-Nat'l Pollutant Discharged Elimation Sys	733,650.16	2.060%	$ 16,882		$ 16,882	$ 1,035	$ 17,917
221-Public Works-Lighting Fund	629,995.31	1.769%	$ 14,497		$ 14,497	$ 889	$ 15,386
222-Public Works-Drainage Fund	513,454.26	1.442%	$ 11,815		$ 11,815	$ 725	$ 12,539
234-Public Works-Measure W	501,740.00	1.409%	$ 11,545		$ 11,545	$ 708	$ 12,253
301-Public Works-Capital Improvements Project Funds - Local matching	5,446,234.52	15.292%	$ 125,322		$ 125,322	$ 7,685	$ 133,007
303-Public Works-Capital Improvements Project Funds - Grant expenditure	12,751,253.00	35.802%	$ 293,415		$ 293,415	$ 17,993	$ 311,408
510-Public Works-Water Service Fund	427,767.12	1.201%	$ 9,843		$ 9,843	$ 604	$ 10,447
511-Public Works-Water Capital Surcharge Fund	305,000.00	0.856%	$ 7,018		$ 7,018	$ 430	$ 7,449
512-Public Works-Water Meter Surcharge Fund	200,000.00	0.562%	$ 4,602		$ 4,602	$ 282	$ 4,884
520-Public Works-Garbage Collection Fund (Prop. Tax)	373,754.79	1.049%	$ 8,600		$ 8,600	$ 527	$ 9,128
530-Public Works-EPA Sanitary District	5,490,650.00	15.416%	$ 126,344		$ 126,344	$ 7,748	$ 134,091
Total	**35,615,778.76**	**100.000%**	**$ 819,544**	**$ -**	**$ 819,544**	**$ 50,256**	**$ 869,800**

Allocation Basis: Budget for Public Works Divisions (including Capital Projects & EPASD)

Source of Allocation: Expenditure Report

ALLOCATION SUMMARY

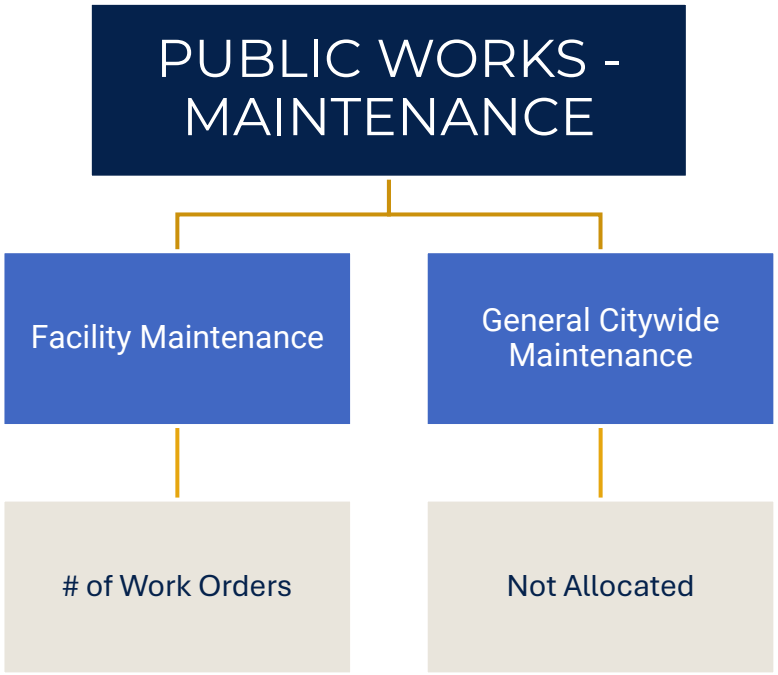
110-Public Works-21211 PW - Administration	Management & Oversight	Total
110-Public Works-21213 PW - Maintenance	$ 73,839	$ 73,839
110-Public Works-21212 PW - Engineering	$ 24,788	$ 24,788
110-Public Works-21214 PW- Environmental Programs	$ 6,970	$ 6,970
201-Public Works-Gas Tax Fund	$ 49,573	$ 49,573
202-Public Works-Measure A Smc 20 1/2 Sales Tax	$ 46,121	$ 46,121
203-Public Works-Nat'l Pollutant Discharged Elimation Sys	$ 17,917	$ 17,917
221-Public Works-Lighting Fund	$ 15,386	$ 15,386
222-Public Works-Drainage Fund	$ 12,539	$ 12,539
234-Public Works-Measure W	$ 12,253	$ 12,253
301-Public Works-Capital Improvements Project Funds - Local matching	$ 133,007	$ 133,007
303-Public Works-Capital Improvements Project Funds - Grant expenditure	$ 311,408	$ 311,408
510-Public Works-Water Service Fund	$ 10,447	$ 10,447
511-Public Works-Water Capital Surcharge Fund	$ 7,449	$7,448.64
512-Public Works-Water Meter Surcharge Fund	$ 4,884	$ 4,884
520-Public Works-Garbage Collection Fund (Prop. Tax)	$ 9,128	$ 9,128
530-Public Works-EPA Sanitary District	$ 134,091	$ 134,091
Total	**$ 869,800**	**$ 869,800**

8 PUBLIC WORKS - MAINTENANCE

The Public Works Maintenance Division is responsible for maintaining the city's parks, public areas, medians, fleet, landscaping, streets, sidewalks, and other city facilities like storm drain facilities. They also manage a number of the city's municipal service contracts. Public Works-Maintenance costs are allocated to Receiving Departments as follows:

- **Facility Maintenance** – represents the costs associated with maintaining city owned facilities. These costs are allocated based on the number of work orders per facility per occupant.
- **General Citywide Maintenance** – represents the costs associated with maintenance-related services to the city's right of way, median, and various other city-owned properties. These costs have not been allocated as they do not support city funds and departments.

The chart on the following page illustrates the functions and measures used to allocate Public Works - Maintenance costs. The top tier shows the Central Service department, the second tier shows the functions developed, and the third tier shows the measures used to allocate costs citywide. The pages following the chart provide an aggregate picture of the department's expenses, a function-by-function breakdown of expenses, each function's allocation, and an allocation summary.


PUBLIC WORKS - MAINTENANCE
Facility Maintenance
General Citywide Maintenance
# of Work Orders
Not Allocated

COSTS TO BE ALLOCATED

110-Public Works-21213 PW - Maintenance	First Allocation	Second Allocation	Total
Functional Expenditures	**$ 3,023,508**		**$ 3,023,508**
Total Disallowed Costs	**$ -**		**$ -**
Incoming Costs	$ -		
110-City Council-10101 City Council	$ 1,920	$ 2,535	$ 4,454
110-City Manager-11111 City Manager - Administration	$ 108,250	$ 25,411	$ 133,661
110-City Clerk-11112 Clerk Services	$ 17,009	$ 3,777	$ 20,786
110-City Manager-11113 Human Resource	$ 57,171	$ 14,857	$ 72,028
110-City Attorney-12121 City Attorney	$ 16,194	$ 1,467	$ 17,661
110-Finance-13131 Finance	$ 91,697	$ 10,270	$ 101,966
110-Public Works-21211 PW - Administration	$ 69,573	$ 4,266	$ 73,839
110-Public Works-21213 PW - Maintenance		$ 207,880	$ 207,880
110-Non-Departmental-95951 Non-Departmental		$ 7,544	$ 7,544
Total Incoming Costs	**$ 361,813**	**$ 278,006**	**$ 639,819**
Total Cost Adjustments	**$ -**		**$ -**
Total Costs to be Allocated	**$ 3,385,321**	**$ 278,006**	**$ 3,663,327**

110-Public Works-21213 PW - Maintenance

EXPENSE DETAIL

Expense Type	Expense ($)	Facility Maintenance	General Citywide Maintenance
Personnel			
Salaries & Benefits	$ 1,281,808	$ 269,180	$ 1,012,628
Subtotal Personnel Cost	**$ 1,281,808**	**$ 269,180**	**$ 1,012,628**
Operating Services & Supplies			
Communication Expenses	$ 16,200	$ 3,402	$ 12,798
County Services	$ 10,000	$ 2,100	$ 7,900
Furniture & Equipment	$ 15,000	$ 3,150	$ 11,850
Janitorial	$ 150,000	$ 31,500	$ 118,500
Maint.	$ 505,000	$ 106,050	$ 398,950
Professional Services	$ 361,000	$ 75,810	$ 285,190
Property Services	$ 10,000	$ 2,100	$ 7,900
Rentals	$ 280,000	$ 58,800	$ 221,200
Supplies and Materials	$ 384,500	$ 80,745	$ 303,755
Training Related	$ 10,000	$ 2,100	$ 7,900
Subtotal Operating Cost	**$ 1,741,700**	**$ 365,757**	**$ 1,375,943**
FUNCTIONAL EXPENDITURES	**$ 3,023,507.74**	**$ 634,936.63**	**$ 2,388,571.11**
Disallowed Costs			
Subtotal Disallowed Costs	**$ -**	**$ -**	**$ -**
Cost Adjustments			
Subtotal Cost Adjustments	**$ -**	**$ -**	**$ -**
FUNCTIONAL COST	**$ 3,023,507.74**	**$ 634,936.63**	**$ 2,388,571.11**
First Allocation			
Incoming - All Others	$ 361,813	$ 75,981	$ 285,832
Reallocate Admin Costs	$ -	$ -	$ -
Unallocated Costs	$(2,674,404)	$ -	$ (2,674,404)
Subtotal of First Allocation	**$ 710,917.39**	**$ 710,917.39**	**$ -**
Second Allocation			
Incoming - All Others	$ 278,006	$ 58,381	$ 219,624
Reallocate Admin Costs	$ -	$ -	$ -
Unallocated Costs	$ (219,624)	$ -	$ (219,624)
Subtotal of Second Allocation	**$ 58,381.19**	**$ 58,381.19**	**$ -**
TOTAL ALLOCATED	**$ 769,299**	**$ 769,299**	**$ -**

110-Public Works-21213 PW - Maintenance

ALLOCATION DETAIL

	Allocation Units	Allocated Percent	Gross Allocation	Direct Billed	First Allocation	Second Allocation	Total
Facility Maintenance							
110-City Manager-11111 City Manager - Administration	68.00	15.179%	$ 107,907		$ 107,907		$ 107,907
110-City Manager-11113 Human Resource	67.43	15.051%	$ 107,000		$ 107,000		$ 107,000
110-City Attorney-12121 City Attorney	2.86	0.638%	$ 4,534		$ 4,534		$ 4,534
110-Finance-13131 Finance	14.00	3.125%	$ 22,216		$ 22,216		$ 22,216
110-Public Works-21211 PW - Administration	8.00	1.786%	$ 12,695		$ 12,695		$ 12,695
110-Public Works-21213 PW - Maintenance	131.00	29.241%	$ 207,880		$ 207,880		$ 207,880
110-City Manager-14142 Admin Srvcs - Community Programs and Services	74.86	16.709%	$ 118,788		$ 118,788	$ 27,887	$ 146,675
110-City Manager-14143 Admin Srvcs - Senior Services	6.00	1.339%	$ 9,521		$ 9,521	$ 2,235	$ 11,756
110-Public Works-21212 PW - Engineering	4.00	0.893%	$ 6,347		$ 6,347	$ 1,490	$ 7,838
110-Community & Economic Development-31313 CEDE - Rent Stabilization	0.57	0.128%	$ 907		$ 907	$ 213	$ 1,120
110-Community & Economic Development-31315 CEDE - Building Inspection	7.00	1.563%	$ 11,108		$ 11,108	$ 2,608	$ 13,716
110-Community & Economic Development-31777 CEDE - Housing Development	2.00	0.446%	$ 3,174		$ 3,174	$ 745	$ 3,919
110-Police-41411 Police-Administration	62.00	13.839%	$ 98,386		$ 98,386	$ 23,097	$ 121,483
111-Finance-Information Services	0.29	0.064%	$ 453		$ 453	$ 106	$ 560
Total	**448.00**	**100.000%**	**$ 710,917**	**$ -**	**$ 710,917**	**$ 58,381**	**$ 769,299**

Allocation Basis: # of Work Orders that are specific to Facilities

Source of Allocation: Work Orders Report

ALLOCATION SUMMARY

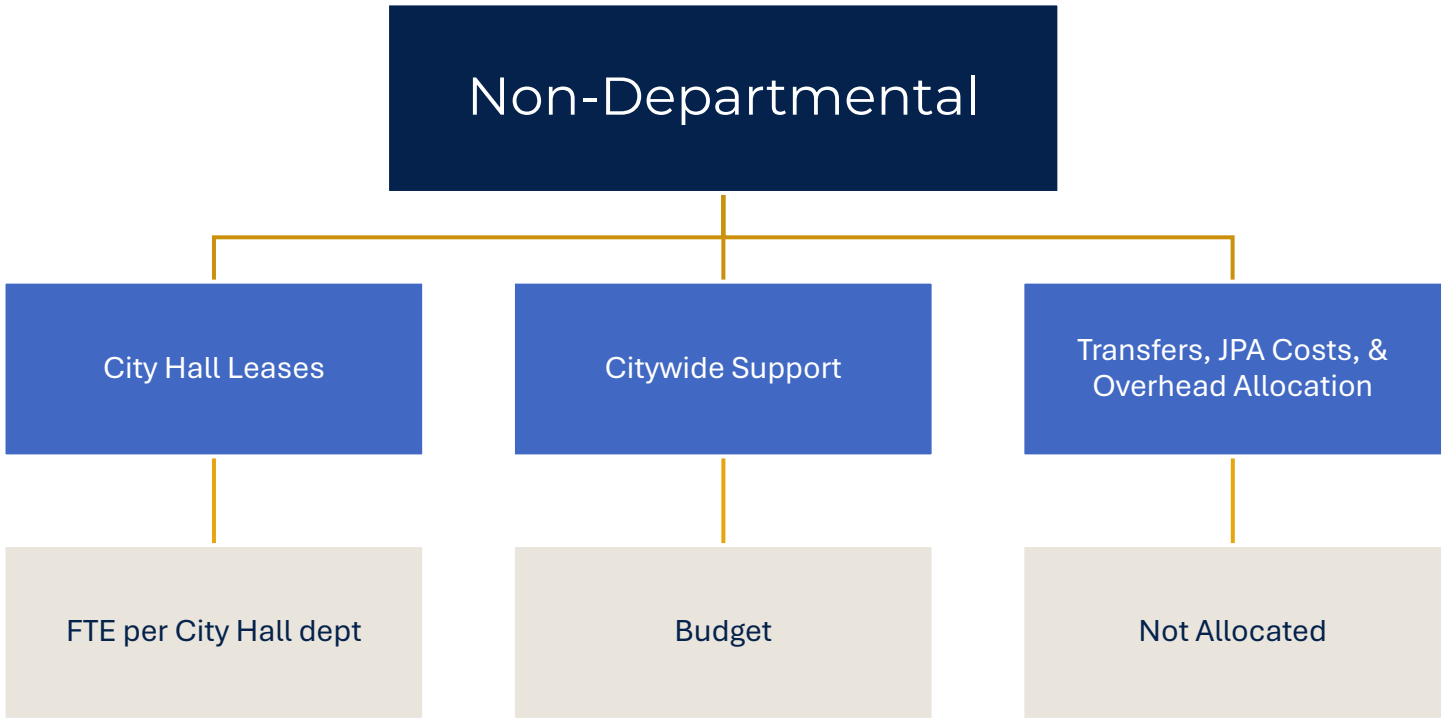
110-Public Works-21213 PW - Maintenance	Facility Maintenance	Total
110-City Manager-11111 City Manager - Administration	$ 107,907	$ 107,907
110-City Manager-11113 Human Resource	$ 107,000	$ 107,000
110-City Attorney-12121 City Attorney	$ 4,534	$ 4,534
110-Finance-13131 Finance	$ 22,216	$ 22,216
110-Public Works-21211 PW - Administration	$ 12,695	$ 12,695
110-Public Works-21213 PW - Maintenance	$ 207,880	$ 207,880
110-City Manager-14142 Admin Srvcs - Community Programs and Services	$ 146,675	$ 146,675
110-City Manager-14143 Admin Srvcs - Senior Services	$ 11,756	$ 11,756
110-Public Works-21212 PW - Engineering	$ 7,838	$ 7,838
110-Community & Economic Development-31313 CEDE - Rent Stabilization	$ 1,120	$ 1,120
110-Community & Economic Development-31315 CEDE - Building Inspection	$ 13,716	$ 13,716
110-Community & Economic Development-31777 CEDE - Housing Development	$ 3,919	$3,918.80
110-Police-41411 Police-Administration	$ 121,483	$ 121,483
111-Finance-Information Services	$ 560	$ 559.83
Total	**$ 769,299**	**$ 769,299**

9 NON-DEPARTMENTAL

Non-departmental is typically a catch all department that captures any general fund expenses that cannot be identified to a specific department. Non-departmental costs are allocated as follows:

- **City Hall Leases** – represents expenditures associated with leasing city hall. These costs are allocated based on the Full-time Equivalent (FTE) per City Hall dept.
- **Citywide Support** – represents the costs associated with citywide communications, training, and dues. These costs are allocated based on budget.
- **Transfers, JPA Costs, & Overhead Allocation** – represents the costs associated with budget transfers, Joint Powers Authority Costs, & overhead allocations. These costs have not been allocated as they are not in relation to a specific city department.

The chart on the following page illustrates the functions and measures used to allocate Non-Departmental costs. The top tier shows the Central Service department, the second tier shows the functions developed, and the third tier shows the measures used to allocate costs citywide. The pages following the chart provide an aggregate picture of the department's expenses, a function-by-function breakdown of expenses, each function's allocation, and an allocation summary.


Non-Departmental
City Hall Leases
Citywide Support
Transfers, JPA Costs, & Overhead Allocation
FTE per City Hall dept
Budget
Not Allocated

COSTS TO BE ALLOCATED

110-Non-Departmental-95951 Non-Departmental	First Allocation	Second Allocation	Total
Functional Expenditures	**$3,512,197**		**$3,512,197**
Total Disallowed Costs	**$ -**		**$ -**
Incoming Costs			
110-City Manager-11111 City Manager - Administration	$ 1,881	$ 422	$ 2,303
110-Finance-13131 Finance	$ 15,368	$ 1,734	$ 17,102
110-Non-Departmental-95951 Non-Departmental		$ 364	$ 364
Total Incoming Costs	**$ 17,248**	**$ 2,520**	**$ 19,768**
Overhead Allocation	$ 929,182		
Total Cost Adjustments	**$ 929,182**		**$ 929,182**
Total Costs to be Allocated	**$4,458,627**	**$ 2,520**	**$4,461,147**

110-Non-Departmental-95951 Non-Departmental

EXPENSE DETAIL

Expense Type	Expense ($)	City Hall Leases	Citywide Support	Transfers, JPA Costs, & Overhead Allocation
Personnel				
Subtotal Personnel Cost	**$ -**	**$ -**	**$ -**	**$ -**
Operating Services & Supplies				
Communication Expenses	$ 14,715	$ -	$ 14,715	$ -
County Services	$ 93,500	$ -	$ -	$ 93,500
JPA	$ 452,367	$ -	$ -	$ 452,367
Overhead Allocation	$ (929,182)	$ -	$ -	$ (929,182)
Professional Services	$ 215,000	$ -	$ -	$ 215,000
Property Services	$ 27,313	$ -	$ 27,313	$ -
Rentals	$ 240,093	$ 231,093	$ 9,000	$ -
Supplies and Materials	$ 200	$ -	$ 200	$ -
Training Related	$ 31,900	$ -	$ 31,900	$ -
Transfers	$ 3,366,291	$ -	$ -	$ 3,366,291
Subtotal Operating Cost	**$ 3,512,197**	**$ 231,093**	**$ 83,128**	**$ 3,197,976**
FUNCTIONAL EXPENDITURES	**$ 3,512,196.67**	**$ 231,093.00**	**$ 83,128.00**	**$ 3,197,975.67**
Disallowed Costs				
Subtotal Disallowed Costs	**$ -**	**$ -**	**$ -**	**$ -**
Cost Adjustments				
Overhead Allocation	$ 929,182			$ 929,182
Subtotal Cost Adjustments	**$ 929,182**	**$ -**	**$ -**	**$ 929,182**
FUNCTIONAL COST	**$ 4,441,378.67**	**$ 231,093.00**	**$ 83,128.00**	**$ 4,127,157.67**
First Allocation				
Incoming - All Others	$ 17,248	$ 897	$ 323	$ 16,028
Reallocate Admin Costs	$ -	$ -	$ -	$ -
Unallocated Costs	$ (4,143,186)	$ -	$ -	$ (4,143,186)
Subtotal of First Allocation	**$ 315,441.30**	**$ 231,990.47**	**$ 83,450.83**	**$ -**
Second Allocation				
Incoming - All Others	$ 2,520	$ 131	$ 47	$ 2,342
Reallocate Admin Costs	$ -	$ -	$ -	$ -
Unallocated Costs	$ (2,342)	$ -	$ -	$ (2,342)
Subtotal of Second Allocation	**$ 178.28**	**$ 131.12**	**$ 47.17**	**$ -**
TOTAL ALLOCATED	**$ 315,620**	**$ 232,122**	**$ 83,498**	**$ -**

110-Non-Departmental-95951 Non-Departmental

ALLOCATION DETAIL

	Allocation Units	Allocated Percent	Gross Allocation	Direct Billed	First Allocation	Second Allocation	Total
City Hall Leases							
110-City Manager-11111 City Manager - Administration	1,972.00	14.778%	$ 34,284		$ 34,284		$ 34,284
110-City Clerk-11112 Clerk Services	789.00	5.913%	$ 13,717		$ 13,717		$ 13,717
110-City Manager-11113 Human Resource	1,578.00	11.826%	$ 27,434		$ 27,434		$ 27,434
110-City Attorney-12121 City Attorney	1,183.00	8.865%	$ 20,567		$ 20,567		$ 20,567
110-Finance-13131 Finance	2,525.00	18.922%	$ 43,898		$ 43,898		$ 43,898
110-City Manager-14142 Admin Srvcs - Community Programs and Services	1,972.00	14.778%	$ 34,284		$ 34,284	$ 49	$ 34,333
110-City Manager-14143 Admin Srvcs - Senior Services	1,578.00	11.826%	$ 27,434		$ 27,434	$ 39	$ 27,473
111-Finance-Information Services	394.00	2.953%	$ 6,850		$ 6,850	$ 10	$ 6,860
204-Community & Economic Development-Rent Stabilization Program	789.00	5.913%	$ 13,717		$ 13,717	$ 20	$ 13,737
220-Finance-LMIH Successor Fund	564.00	4.227%	$ 9,805		$ 9,805	$ 14	$ 9,819
Total	**13,344.00**	**100.000%**	**$ 231,990**	**$ -**	**$ 231,990**	**$ 131**	**$ 232,122**

Allocation Basis: FTE per City Hall dept

Source of Allocation: Personnel File

110-Non-Departmental-95951 Non-Departmental

ALLOCATION DETAIL

	Allocation Units	Allocated Percent	Gross Allocation	Direct Billed	First Allocation	Second Allocation	Total
Citywide Support							
110-City Council-10101 City Council	190,693.00	0.570%	$ 476		$ 476		$ 476
110-City Manager-11111 City Manager - Administration	1,789,936.00	5.351%	$ 4,466		$ 4,466		$ 4,466
110-City Clerk-11112 Clerk Services	519,926.00	1.554%	$ 1,297		$ 1,297		$ 1,297
110-City Manager-11113 Human Resource	1,047,825.31	3.133%	$ 2,614		$ 2,614		$ 2,614
110-City Attorney-12121 City Attorney	1,224,052.00	3.660%	$ 3,054		$ 3,054		$ 3,054
110-Finance-13131 Finance	1,401,873.43	4.191%	$ 3,498		$ 3,498		$ 3,498
110-Public Works-21211 PW - Administration	669,781.00	2.002%	$ 1,671		$ 1,671		$ 1,671
110-Public Works-21213 PW - Maintenance	3,023,507.74	9.039%	$ 7,544		$ 7,544		$ 7,544
110-Non-Departmental-95951 Non-Departmental	145,906.00	0.436%	$ 364		$ 364		$ 364
110-City Manager-14142 Admin Srvcs - Community Programs and Services	719,240.76	2.150%	$ 1,794		$ 1,794	$ 1	$ 1,796
110-City Manager-14143 Admin Srvcs - Senior Services	421,889.00	1.261%	$ 1,053		$ 1,053	$ 1	$ 1,053
110-Public Works-21212 PW - Engineering	1,014,978.00	3.035%	$ 2,532		$ 2,532	$ 2	$ 2,534
110-Public Works-21214 PW- Environmental Programs	285,397.20	0.853%	$ 712		$ 712	$ 1	$ 713
110-Community & Economic Development-31311 CEDE- Administration	726,923.84	2.173%	$ 1,814		$ 1,814	$ 1	$ 1,815
110-Community & Economic Development-31313 CEDE - Rent Stabilization	1,900.00	0.006%	$ 5		$ 5	$ 0	$ 5
110-Community & Economic Development-31314 CEDE - Planning	1,176,783.00	3.518%	$ 2,936		$ 2,936	$ 2	$ 2,938
110-Community & Economic Development-31315 CEDE - Building Inspection	2,896,620.00	8.660%	$ 7,227		$ 7,227	$ 6	$ 7,233
110-Community & Economic Development-31777 CEDE - Housing Development	232,824.75	0.696%	$ 581		$ 581	$ 0	$ 581
110-Police-41411 Police-Administration	4,868,787.58	14.556%	$ 12,147		$ 12,147	$ 10	$ 12,157
110-Police-41412 Police-Operations	8,043,078.00	24.047%	$ 20,067		$ 20,067	$ 16	$ 20,083
110-Police-41413 Police-Investigations	1,748,150.00	5.227%	$ 4,362		$ 4,362	$ 4	$ 4,365
111-Finance-Information Services	1,297,689.08	3.880%	$ 3,238		$ 3,238	$ 3	$ 3,240
Total	**33,447,761.69**	**100.000%**	**$ 83,451**	**$ -**	**$ 83,451**	**$ 47**	**$ 83,498**

Allocation Basis: Budget

Source of Allocation: Expenditure Report

ALLOCATION SUMMARY

110-Non-Departmental-95951 Non-Departmental	City Hall Leases	Citywide Support	Total
110-City Council-10101 City Council	$ -	$ 476	$ 476
110-City Manager-11111 City Manager - Administration	$ 34,284	$ 4,466	$ 38,750
110-City Clerk-11112 Clerk Services	$ 13,717	$ 1,297	$ 15,014
110-City Manager-11113 Human Resource	$ 27,434	$ 2,614	$ 30,048
110-City Attorney-12121 City Attorney	$ 20,567	$ 3,054	$ 23,621
110-Finance-13131 Finance	$ 43,898	$ 3,498	$ 47,396
110-Public Works-21211 PW - Administration	$ -	$ 1,671	$ 1,671
110-Public Works-21213 PW - Maintenance	$ -	$ 7,544	$ 7,544
110-Non-Departmental-95951 Non-Departmental	$ -	$ 364	$ 364
110-City Manager-14142 Admin Srvcs - Community Programs and Services	$ 34,333	$ 1,796	$ 36,129
110-City Manager-14143 Admin Srvcs - Senior Services	$ 27,473	$ 1,053	$ 28,527
110-Public Works-21212 PW - Engineering	$ -	$ 2,534	$ 2,534
110-Public Works-21214 PW- Environmental Programs	$ -	$ 713	$ 713
110-Community & Economic Development-31311 CEDE- Administration	$ -	$ 1,815	$ 1,815
110-Community & Economic Development-31313 CEDE - Rent Stabilization	$ -	$ 5	$ 5
110-Community & Economic Development-31314 CEDE - Planning	$ -	$ 2,938	$ 2,938
110-Community & Economic Development-31315 CEDE - Building Inspection	$ -	$ 7,233	$ 7,233
110-Community & Economic Development-31777 CEDE - Housing Development	$ -	$ 581	$ 581.36
110-Police-41411 Police-Administration	$ -	$ 12,157	$ 12,157
110-Police-41412 Police-Operations	$ -	$ 20,083	$ 20,083
110-Police-41413 Police-Investigations	$ -	$ 4,365	$ 4,365
111-Finance-Information Services	$ 6,860	$ 3,240	$10,099.89
204-Community & Economic Development-Rent Stabilization Program	$ 13,737	$ -	$ 13,737
220-Finance-LMIH Successor Fund	$ 9,819	$ -	$ 9,819
Total	**$ 232,122**	**$ 83,498**	**$ 315,620**

COMPREHENSIVE USER FEE STUDY REPORT

JUNE 2025

EAST PALO ALTO, CA

MATRIX
CONSULTING GROUP

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INTRODUCTION AND EXECUTIVE SUMMARY

The report, which follows, presents the results of the Comprehensive User Fee study conducted by Matrix Consulting Group for the City of East Palo Alto, California.

PROJECT BACKGROUND AND OVERVIEW

The City of East Palo Alto last conducted a formal fee study in 2020. The purpose of this study is to evaluate and determine the full cost (direct and indirect) of providing a variety of city services. The Matrix Consulting Group analyzed the cost-of-service relationships that exist between fees for service activities in the following areas: Building, Code Enforcement, Community Services, Engineering, Environmental Services, Finance, Housing, Planning, Police, Rent Stabilization, and East Palo Alto Sanitation District. The results of this study provide a tool for understanding current service levels and the cost for those services.

GENERAL PROJECT APPROACH AND METHODOLOGY

The methodology employed by Matrix Consulting Group is a widely accepted "bottom up" approach to cost analysis, where time spent per unit of fee activity is determined for each position within a Department or Program. Once time spent for a fee activity is determined, all applicable City costs are then considered in the calculation of the "full" cost of providing each service. The following table provides an overview of types of costs applied in establishing the "full" cost of services provided by the City:

TABLE 1: OVERVIEW OF COST COMPONENTS

Cost Component	*Description*
Direct	Fiscal Year 2024-25 Budgeted salaries, benefits, and allowable expenditures.
Indirect	Division, departmental, clerical, and Citywide support.

Together, the cost components in the table above comprise the calculation of the total "full" cost of providing a service, regardless of whether a fee for that service is charged.

The work accomplished by Matrix Consulting Group in the analysis of the proposed fees for service involved the following steps:

- **Department / Program Staff Interviews:** The project team interviewed department / program staff regarding their needs for clarification to the structure of existing fee items or for addition of new fee items.

- **Data Collection:** Data was collected for each permit / service, including time estimates. In addition, all budgeted costs and staffing levels for Fiscal Year 2024-25 were entered into Matrix Consulting Group's analytical software model.
- **Cost Analysis:** The full cost of providing each service included in the analysis was established.
- **Review and Approval of Results with City Staff:** Department management has reviewed and approved these documented results.

A more detailed description of user fee methodology and legal and policy considerations are provided in subsequent chapters of this report.

SUMMARY OF RESULTS

When comparing fee-related revenue with the calculated total annual cost, the City is under-recovering its costs by approximately $547,000 or recovering 86% of its costs. The following table shows the revenue collected, the total annual cost, the resulting difference, and the resulting cost recovery percentage by major division.

TABLE 2: ANNUAL COST RECOVERY ANALYSIS

Division	Fee-Related Revenue	Fee-Related Cost	Difference	Cost Recovery %
Building	$2,300,000	$2,485,326	($185,326)	93%
Community Services	$43,676	$131,085	($87,409)	33%
Engineering	$120,501	$140,284	($19,783)	86%
Planning	$265,755	$202,806	$62,949	131%
Rent Stabilization	$549,900	$867,150	($317,250)	63%
Total	**$3,279,832**	**$3,826,651**	**($546,819)**	**86%**

The largest deficit is in relation to Rent Stabilization at $317,000, which is in relation to incorporating overhead associated with administering the rent stabilization program. The high level of cost recovery is anticipated for the City as the City had recently completed a fee study in 2020 and has conducted annual fee increases.

The detailed documentation of this study will show an over-collection for some fees (on a per unit basis) and an undercharge for most others. The results of this analysis will provide the Department and the City with guidance on how to right-size their fees to ensure that each service unit is set at an amount that does not exceed the full cost of providing that service. The display of the cost recovery figures shown in this report are meant to provide a basis for policy development discussions among City Councilmembers and City staff and do not represent a recommendation for where or how the City Council should act. The setting of the "rate" or "price" for services, whether at full cost recovery or lower, is a policy decision to be made only by the City Council with input from City staff and the community.

CONSIDERATIONS FOR COST RECOVERY POLICY AND UPDATES

The Matrix Consulting Group recommends that the City use the information contained in this report to discuss, adopt, and implement a formal Cost Recovery Policy, including a mechanism for the annual update of fees for service.

ADOPT A FORMAL COST RECOVERY POLICY

The Government Finance Officers Association's (GFOA) best practices for *Establishing Government Charges and Fees* states that governmental entities should adopt formal policies regarding charges and fees which include the jurisdiction's intention to recover the full cost or partial costs of providing services, sets forth circumstances under which the jurisdiction might set a charge for fee at less than or more than 100% of full cost, and outlines the considerations that might influence the jurisdiction's pricing decision.

The Matrix Consulting Group strongly recommends that the Council adopt a formalized, individual cost recovery policy for each service area included in this Study. Whenever a cost recovery policy is established at less than 100% of the full cost of providing services, a known gap in funding is recognized and may then potentially be recovered through other revenue sources. The Matrix Consulting Group considers a formalized cost recovery policy for various fees for service an industry Best Management Practice.

ADOPT AN ANNUAL FEE UPDATE / INCREASE MECHANISM

GFOA best practices for *Establishing Government Charges and Fees* states that governmental entities should review, and update charges and fees periodically based on factors such as the impact of inflation, other cost increases, adequacy of cost recovery, use of services, and the competitiveness of current rates to avoid large infrequent fee increases.

The purpose of a comprehensive update is to completely revisit the analytical structure, service level estimates and assumptions, and to account for any major shifts in cost components or organizational structures that have occurred since the City's previous analysis. It's recommended the City continue the practice of conducting comprehensive analyses every five to seven years as this practice captures any changes to organizational structure, processes, as well as any new service areas.

In between comprehensive updates, the City should continue to utilize published industry economic factors such as Consumer Price Index (CPI) or other regional factors to update the cost calculations established in the Study on an annual basis.

LEGAL FRAMEWORK

This section of the report is intended to provide an overview of the legal rules and regulations that govern what is considered a fee for service, how those fees can be calculated, general principles, philosophies, and general policy considerations for setting fees for service.

LEGAL FRAMEWORK

A "user fee" is a charge for service provided by a governmental agency to a public citizen or group. California has several Government Codes and Propositions that regulate fees for service, with the purpose of ensuring that fees are reasonable and justified. The most prominent and relevant of these includes:

- **Proposition 26:** Passed in 2010, specifically outlined the difference between a fee and a tax and dictates that fees must be directly related to a service and cannot exceed the reasonable cost of that service.
- **Government Code § 50076:** clarifies that fees for service costs are not special taxes and do not need voter approval.
- **Government Code § 65104:** gives local governments the authority to charge planning and zoning fees to recover processing costs.

When determining fees for service it is important to ensure there is a **direct benefit** – the service is provided directly to the payer, and that it is **cost based**, and does not exceed the reasonable cost of providing the service.

EXCEPTIONS TO THE RULE

While Proposition 26 defines what constitutes a user fee, and how those fees can be determined, it also provides a key exception for fees charged for facility or property rentals. This exception outlines that fees for use of government property (e.g., renting public buildings, parks, or event spaces) are voluntary transactions. Therefore, governments can charge **market-based** rental fees for these services.

GENERAL PRINCIPLES AND PHILOSOPHIES REGARDING USER FEES

Local governments are providers of many types of general services to their communities. While all services provided by local government are beneficial to constituents, some services can be classified as globally beneficial to all citizens, while others provide more of a direct benefit to a specific group or individual. The following table provides examples of services provided by local government within a continuum of the degree of community benefit received:

TABLE 3: SERVICES IN RELATION TO BENEFIT RECEIVED

"Global" Community Benefit	"Global" Benefit and an Individual or Group Benefit	Individual or Group Benefit
•Police •Park Maintenance •Fire Suppression	•Recreation / Community Services •Fire Prevention	•Building Permits •Planning and Zoning Approval •Engineering Development Review

Funding for local government is obtained from myriad revenue sources such as taxes, fines, grants, special charges, user fees, etc. In recent years, alternative tax revenues, which typically offset subsidies for services provided to the community, have become increasingly limited. These limitations have caused increased attention on user fee activities as a revenue source that can offset costs otherwise subsidized (usually) by the general fund. In Table 3, services in the "global community benefit" section tend to be funded primarily through voter-approved tax revenues. In the middle of the table, one typically finds a mixture of taxes, user fees, and other funding sources. Finally, in the "individual / group benefit" section of the table are the services provided by local government that are typically funded almost entirely by user fee revenue.

The following are two central concepts regarding the establishment of user fees:

- **Fees should be assessed according to the degree of individual or private benefit gained from services.** For example, the processing and approval of a land use or building permit will generally result in monetary gain to the applicant, whereas Police services and Fire Suppression are examples of services that are essential to the safety of the community at large.
- **A profit-making objective should not be included in the assessment of user fees.** In fact, California laws require that the charges for service be in direct proportion to the costs associated with providing those services. Once a charge for service is assessed at a level higher than the actual cost of providing a service, the term "user fee" no longer applies. The charge then becomes a tax subject to voter approval.

Therefore, it is commonly accepted that user fees are established at a level that will recover up to, and not more than, the cost of providing a particular service.

GENERAL POLICY CONSIDERATIONS REGARDING USER FEES

Undoubtedly, there are programs, circumstances, and services that justify a subsidy from a tax-based or alternative revenue source. However, it is essential that jurisdictions prioritize the use of revenue sources for the provision of services based on the continuum of benefit received.

Within the services that are typically funded by user fees, the Matrix Consulting Group recognizes several reasons why City staff or City Council may not advocate the full cost recovery of services. The following factors are key policy considerations in setting fees at less than 100 percent of cost recovery:

- **Limitations posed by an external agency.** The State or an outside agency will occasionally set a maximum, minimum, or limit on the jurisdiction's ability to charge a fee. Examples includes time spent copying and retrieving public documents and / or transportation permits.
- **Encouragement of desired behaviors.** Keeping fees for certain services below full cost recovery may provide better compliance from the community. For example, if the cost of a permit for changing a water heater in residential home is higher than the cost of the water heater itself, many citizens will avoid pulling the permit.
- **Benefit received by user of the service and the community at large is mutual.** Many services that directly benefit a group or individual equally benefit the community. Examples include Planning Design Review, historical dedications, and certain types of special events.

The Matrix Consulting Group recognizes the need for policies that intentionally subsidize certain activities. The primary goals of a User Fee Study are to provide a fair and equitable basis for determining the costs of providing services and ensure that the City complies with State law.

SUMMARY OF LEGAL RESTRICTIONS AND POLICY CONSIDERATIONS

Once the full cost of providing services is known, the next step is to determine the "rate" or "price" for services at a level which is up to, and not more than, the full cost amount. The City Council is responsible for this decision, which often becomes a question of balancing service levels and funding sources. The placement of a service or activity within the continuum of benefit received may require extensive discussion and at times fall into a "grey area." However, with the resulting cost of services information from a User Fee Study, the City Council can be assured that the adopted fee for service is reasonable, fair, and legal. Overall, city staff has reviewed all fees for service in this analysis and where subsidies were identified, they recommended increases where appropriate to reduce the deficit; and where over-recoveries were identified, reduced the fee to comply with the law.

USER FEE STUDY METHODOLOGY

The Matrix Consulting Group utilizes a cost allocation methodology commonly known and accepted as the "bottom-up" approach to establishing User Fees. The term means that several cost components are calculated for each fee or service. These components then build upon each other to comprise the total cost for providing the service. The following chart describes the components of a full cost calculation:



The following subsections discuss the two components of the basis of the full cost.

TIME ESTIMATION

Utilization of time estimates is a reasonable and defensible approach, especially since experienced staff members who understand service levels and processes unique to the City developed these estimates. The project team worked closely with City staff in developing time estimates with the following criteria:

- Estimates are representative of **average times** for providing services. Extremely difficult or abnormally simple projects are not factored in the analysis.
- Estimates reflect the time associated with the **position or positions** that typically perform a service.
- Estimates are reviewed by the project team for "**reasonableness**" against their experience with other agencies.
- Estimates were not based on time in motion studies, as they are not practical for the scope of services and time frame for this project.
- Estimates match the current or proposed staffing levels to ensure there is no over-allocation of staff resources to fee and non-fee related activities.

The Matrix Consulting Group agrees that while the use of time estimates is not perfect, it is the best alternative available for setting a standard level of service on which to base a jurisdiction's fees for service and meets the requirements of California law.

The alternative to time estimating is actual time tracking, often referred to billing on a "time and materials" basis. Except in the case of anomalous or very large and complex projects, Matrix Consulting Group believes this approach to not be cost effective or reasonable for the following reasons:

- Accuracy in time tracking is compromised by the additional administrative burden required to track, bill, and collect for services in this manner.
- Additional costs are associated with administrative staff's billing, refunding, and monitoring deposit accounts.
- Customers often prefer to know the fees for services in advance of applying for permits or participating in programs.
- Departments can better predict revenue streams and staff needs using standardized time estimates and anticipated permit volumes.

Situations arise where the size and complexity of a given project warrants time tracking and billing on a "time and materials" basis. The Matrix Consulting Group has recommended taking a deposit and charging Actual Costs for such fees as appropriate and itemized within the current fee schedule.

FULLY BURDENED HOURLY RATES

The fully burdened hourly rates calculated through this study include the following components:

- **Salaries**: FY24-25 Budgeted salaries were utilized and consolidated at the positional level.
- **Benefits:** FY24-25 Budgeted benefits were utilized and consolidated at the positional level.
- **Productive Hours:** Based on East Palo Altos' current personnel system rules, working or productive hours were calculated. This means taking the starting total working hours and reducing the hours by vacation, sick, holidays, trainings, and administrative leave based on each bargaining unit
- **Departmental / Divisional Overhead:** This captures any internal service charges or operating supply costs such as vehicles, supplies, etc. Additionally, this component includes the cost associated with support from Director, Administrative and Analytical staff that do not directly work on fees.
- **Citywide Overhead:** This captures support provided by the City Council, City Manager, City Clerk, City Attorney, Finance, and Human Resources. The costs are based on the Citywide Cost Allocation Plan (provided under separate cover).

Together these components result in the generation of fully burdened hourly rates by position / classification and / or department / division. These rates were multiplied against the time assumptions to calculate the full cost of services noted in this report.

RESULTS OVERVIEW

The motivation behind a cost of services (User Fee) analysis is for City Council and Departmental staff to maintain services at a level that is both accepted and effective for the community and to maintain control over the policy and management of these services.

It should be noted that the results presented in this report are not a precise measurement. In general, a cost-of-service analysis takes a "snapshot in time," where a fiscal year of financial and operational information is utilized. Changes to the structure of fee names, along with the use of time estimates, allow only for a reasonable projection of subsidies and revenue. Consequently, City Council and Department staff should rely conservatively upon these estimates to gauge the impact of implementation going forward.

Discussion of results in the following chapters is intended as a summary of extensive and voluminous cost allocation documentation produced during the Study. Each chapter will include detailed cost calculation results for each fee including the following:

- **Modifications:** discussions regarding any proposed revisions to the current fee schedule, including elimination or addition of fees.
- **"Per Unit" Results:** comparison of the full cost of providing each unit of service to the current fee for each unit of service (where applicable).
- **Annualized Results:** utilizing volume of activity estimates annual subsidies and revenue impacts were projected.

The full analytical results were provided to City staff under separate cover from this summary report.

BUILDING SERVICES

The Building Services Division is part of the Community and Economic Development Department. The Building Division ensures that new developments are in compliance with the California Building codes and regulations, by providing customer assistance to residents, property owners, contracts, professions, etc. The following subsections discuss fee schedule modifications, detailed per unit results, and annual revenue impacts for the fee-related services provided by the Building Division.

FEE SCHEDULE MODIFICATIONS

In discussions with City staff, the following modifications were proposed to the current fee schedule:

- **Eliminated Fees:** Staff proposed eliminating fees associated with Building's review of Planning or Engineering Services, as those are captured on their respective fee schedules. It was also discussed to eliminate the 'Processing Fee' as that is captured in the base permit fees.
- **New Fees:** Staff proposed the addition of the following fees, to capture services already provided but not codified:
    - 'Processing Fee – MEP'
    - 'Reproduction of Plans'
    - 'ADU Building Permit Resource Center Fee'
- **Condensed Fees:** Staff proposed the removal of the per kw fee for solar residential projects to better capture the level of effort associated with solar residential.
- **Expanded Fees:** Due to variability in how the fees are administered, staff proposed expanding the following fee categories into separate fee categories:
    - Single Family Dwelling Remodels (No modifications to walls) into 'kitchen' and 'bathroom' remodels.
    - Receptacles and Outlets into '1-20 devices' and 'Each additional 20 devices'
    - Residential appliances into '1-5 Devices' and 'Each additional 5 devices'
    - Appeals into 'Appeal to Building Official' and 'Appeal to City Council'
- **Valuation-Based Fees:** The valuation structure was expanded to capture higher dollar valuation projects, both for single-family residential and multi-family / commercial projects.

The modifications noted ensure that the proposed fee schedule more accurately reflects the services being provided by Building staff.

DETAILED RESULTS

The Building Division collects fees for Building Plan Check and Inspection, Flat Rate Permits, Mechanical, Plumbing, and Electrical Permits. The total cost calculated for each service includes direct staff costs,

Divisional, Departmental, and Citywide overhead. The following table details the fee name, current fee, total cost, and difference associated with each service offered.

TABLE 4: TOTAL COST PER UNIT RESULTS – BUILDING SERVICES

Fee Name	Current Fee	Total Cost	Difference
Building Permit and Plan Check			
Building Plan Check - Single Family Residential			
Base fee up to $5,000	$218.00	$246.45	($28.45)
Base fee at $5,000	$218.00	$246.45	($28.45)
Each additional $1,000 or fraction thereof	$21.77	$30.81	($9.04)
Base fee at $25,000	$653.00	$862.58	($209.58)
Each additional $1,000 or fraction thereof	$8.71	$24.65	($15.94)
Base fee at $50,000	$871.00	$1,478.70	($607.70)
Each additional $1,000 or fraction thereof	$8.71	$49.29	($40.58)
Base fee at $100,000	$1,307.00	$3,943.20	($2,636.20)
Each additional $1,000 or fraction thereof	$3.27	$14.79	($11.52)
Base fee at $500,000	$2,612.00	$9,858.00	($7,246.00)
Each additional $1,000 or fraction thereof	$2.06	$7.39	($5.33)
Base fee at $1,000,000	$3,647.00	$13,554.75	($9,907.75)
Each additional $1,000 or fraction thereof	$2.06	$1.23	$0.83
Base fee at $5,000,000	$11,887.00	$18,483.75	($6,596.75)
Each additional $1,000 or fraction thereof	$2.06	$2.46	($0.40)
Base fee at $10,000,000	$22,187.00	$30,806.25	($8,619.25)
Each additional $1,000 or fraction thereof	$2.06	$1.23	$0.83
Building Permit/Inspection - Single Family Residential			
Base fee up to $5,000	$218.00	$796.45	($578.45)
Base fee at $5,000	$218.00	$796.45	($578.45)
Each additional $1,000 or fraction thereof	$21.77	$59.73	($37.96)
Base fee at $25,000	$653.00	$1,991.11	($1,338.11)
Each additional $1,000 or fraction thereof	$8.71	$55.75	($47.04)
Base fee at $50,000	$653.00	$3,384.90	($2,731.90)
Each additional $1,000 or fraction thereof	$17.42	$51.77	($34.35)
Base fee at $100,000	$1,525.00	$5,973.34	($4,448.34)
Each additional $1,000 or fraction thereof	$7.08	$9.96	($2.88)
Base fee at $500,000	$4,355.00	$9,955.57	($5,600.57)
Each additional $1,000 or fraction thereof	$5.66	$9.96	($4.30)
Base fee at $1,000,000	$7,185.00	$14,933.36	($7,748.36)
Each additional $1,000 or fraction thereof	$5.66	$6.22	($0.56)
Base fee at $5,000,000	$29,825.00	$39,822.30	($9,997.30)
Each additional $1,000 or fraction thereof	$5.66	$3.98	$1.68
Base fee at $10,000,000	$58,125.00	$59,733.44	($1,608.44)
Each additional $1,000 or fraction thereof	$5.66	$1.99	$3.67
Building Plan Check - Commercial/Multi-Family/Industrial			
Base fee up to $5,000	$218.00	$246.45	($28.45)
Base fee at $5,000	$218.00	$246.45	($28.45)
Each additional $1,000 or fraction thereof	$24.20	$16.43	$7.77
Base fee at $50,000	$1,307.00	$985.80	$321.20
Each additional $1,000 or fraction thereof	$60.98	$29.57	$31.41

Fee Name	Current Fee	Total Cost	Difference
Base fee at $100,000	$4,355.00	$2,464.50	$1,890.50
Each additional $1,000 or fraction thereof	$16.33	$24.65	($8.32)
Base fee at $500,000	$10,887.00	$12,322.50	($1,435.50)
Each additional $1,000 or fraction thereof	$108.87	$5.91	$102.96
Base fee at $1,000,000	$16,332.00	$15,279.90	$1,052.10
Each additional $10,000 or fraction thereof	$33.63	$40.53	($6.90)
Base fee at $10,000,000	$46,597.00	$51,754.50	($5,157.50)
Each additional $10,000 or fraction thereof	$33.63	$61.61	($27.98)
Base fee at $20,000,000	$56,686.00	$113,367.00	($56,681.00)
Each additional $10,000 or fraction thereof	$33.63	$68.51	($34.88)
Base fee at $50,000,000	$157,576.00	$318,906.30	($161,330.30)
Each additional $10,000 or fraction thereof	$33.63	$59.44	($25.81)
Base fee at $100,000,000	$325,726.00	$616,125.00	($290,399.00)
Each additional $10,000 or fraction thereof	$33.63	$9.24	$24.39
Base fee at $500,000,000	$1,670,926.00	$985,800.00	$685,126.00
Each additional $10,000 or fraction thereof	$33.63	$4.62	$29.01
Building Permit/Inspection - Commercial/Multi-Family/Industrial			
Base fee up to $5,000	$218.00	$298.67	($80.67)
Base fee at $5,000	$218.00	$298.67	($80.67)
Each additional $1,000 or fraction thereof	$14.52	$46.46	($31.94)
Base fee at $50,000	$871.00	$2,389.34	($1,518.34)
Each additional $1,000 or fraction thereof	$13.07	$51.77	($38.70)
Base fee at $100,000	$1,525.00	$4,977.79	($3,452.79)
Each additional $1,000 or fraction thereof	$15.79	$11.45	$4.34
Base fee at $500,000	$7,839.00	$9,557.35	($1,718.35)
Each additional $1,000 or fraction thereof	$156.78	$10.75	$146.03
Base fee at $1,000,000	$15,678.00	$14,933.36	$744.64
Each additional $10,000 or fraction thereof	$90.25	$98.45	($8.20)
Base fee at $10,000,000	$96,897.00	$103,537.97	($6,640.97)
Each additional $10,000 or fraction thereof	$90.25	$103.54	($13.29)
Base fee at $20,000,000	$123,972.00	$207,075.93	($83,103.93)
Each additional $10,000 or fraction thereof	$90.25	$69.03	$21.22
Base fee at $50,000,000	$394,722.00	$414,151.87	($19,429.87)
Each additional $10,000 or fraction thereof	$90.25	$124.25	($34.00)
Base fee at $100,000,000	$845,972.00	$1,035,379.67	($189,407.67)
Each additional $10,000 or fraction thereof	$90.25	$25.88	$64.37
Base fee at $500,000,000	$4,455,972.00	$2,070,759.35	$2,385,212.65
Each additional $10,000 or fraction thereof	$90.25	$12.94	$77.31
Miscellaneous Fees - Flat Rate Permits			
Demolition Minor	$545	$406	$139
Commercial Demolition	Refer to Valuation Table		
ADU Building Permit Resource Center Fee	New	$1,700	N/A
Single Family Dwelling Remodels (No Modifications to Walls):			
Kitchen Remodel	Modified	$1,042	N/A
Bathroom Remodel	Modified	$43	N/A
Door/Window Replacements (up to 20 Windows):			
Up to 4 Windows	$435	$497	($62)

Fee Name	Current Fee	Total Cost	Difference
More than 4 and up to 20 Windows	$545	$696	($151)
Greater than 20 Windows	Based on Valuation		
Fences:			
Over 7 ft - 64 l.f.	$327	$398	($71)
Over 7 ft - Each additional 16 l.f. over 64 l.f.	$54	$66	($12)
Non-Wood Fence	Based on Valuation		
Photovoltaic Systems (Solar Systems):			
Solar - Residential	$435	$445	($10)
Solar - Commercial			
Up to 50 kW	$871	$1,336	($465)
51kW - 250kW	Modified	$3,071	N/A
Above 250kW	Modified	$6,446	N/A
Property Research/Site Inspection for Business License	$545	$199	$346
Re-roof:			
Up to 10,000 sq. ft. (No structural modification)	$435	$597	($162)
Structural or Non-structural greater than 10,000 sq. ft.	Based on Valuation		
Electric Vehicle Charging Station			
Residential	$197	$398	($201)
Commercial	Based on Valuation		
Mechanical, Plumbing, Electrical Permit Fees			
Processing Fee - MEP	New	40%	N/A
MEP Inspections & Plan Check			
Water Heaters	$144	$199	($55)
Residential/Simple Standalone MPE Permit:			
Simple Mechanical Items:			
Addition to Each heating appliance, refrigeration unit, cooling unit, absorption unit, or Each heating, cooling, absorption, or evaporative cooling system.	$202	$199	$3
HVAC change out - existing dwelling	$202	$199	$3
Air-handling unit over 10,000 CFM	$202	$398	($196)
Evaporative cooler	$202	$398	($196)
Ventilation fan connected to a single duct	$202	$199	$3
Hood and duct system	$202	$398	($196)
Duct systems	$202	$199	$3
Miscellaneous mechanical (wall furnace, condensing units, gas outlet/gas test, etc.)	$202	$199	$3
Other simple mechanical	$202	$199	$3
Simple Electrical Items:			
Receptacle, switch, and lighting outlets and fixtures			
1-20 devices	$202	$398	($196)
Each Additional 20 Devices	$202	$199	$3
Pole or platform-mounted lighting fixtures	$202	$199	$3
Residential appliances			
1-5 devices	$202	$199	$3
Each Additional 5 Devices	$202	$199	$3

Fee Name	Current Fee	Total Cost	Difference
Appliances not exceeding one horsepower (HP), kilowatt (KW), or kilovolt-ampere (KVA), in rating	$202	$199	$3
Busways	$202	$199	$3
Trolley and plug-in-type busways - Each 100 feet or fraction thereof	$202	$199	$3
Signs, outline lighting, and marquees	$202	$199	$3
Signs, outline lighting, or marquees supplied from one branch circuit	$202	$199	$3
Services of 600 volts or less and not over 400 amperes in rating	$202	$199	$3
Miscellaneous apparatus, conduits, and conductors	$202	$199	$3
Residential swimming pools	$202	$298	($96)
Portable generators less than 10,000 W	$202	$199	$3
Temporary power panel/service	$202	$199	$3
Temporary power pole	$202	$199	$3
Other simple electrical	$202	$199	$3
Simple Plumbing Items:			
Plumbing fixtures	$202	$199	$3
Building sewer	$202	$398	($196)
Rainwater systems	$202	$199	$3
Industrial waste pretreatment interceptor	$202	$398	($196)
Water piping system and/or water treating equipment	$202	$199	$3
Repair or alteration of drainage or vent piping system	$202	$199	$3
Lawn sprinkler systems	$202	$199	$3
Backflow devices	$202	$199	$3
Atmospheric-type vacuum breakers	$202	$199	$3
Gas test	$202	$199	$3
Gas outlets			
1-4 fixtures	$202	$199	$3
Each Additional 4 Fixtures	$202	$199	$3
Solar water systems	$202	$199	$3
Other simple plumbing	$202	$199	$3
Additional Plan Review / Inspection Services			
Complex/Commercial Standalone MEP Permits	Based on Valuation		
Alternative Means and Methods	$218	$222	($4)
Extension Requests for Building Permits	$218	$184	$34
Replacement of Job Card (Building Permit Card)	$109	$84	$25
Deferred Submittals	$218	$238	($20)
Inspection Supplemental Fee (Projects that require more inspections than average, the Building Official may charge additional inspection fees)	$218	$196	$22
Accessibility Hardship Exemption	$218	$227	($9)

Fee Name	Current Fee	Total Cost	Difference
Additional Plan Check required by changes, additions, or revisions to plans	$218	$238	($20)
Plan Check for Planning Entitlement Projects	$218	$238	($20)
Appeals:			
Appeal to Building Official	$575	$629	($54)
Appeal to City Council	$575	$1,049	($474)
Certificate of Occupancy / Temporary Certificate of Occupancy	$435	$204	$231
Fire Damage Inspection	$692	$196	$496
Inspections outside of normal business hours (overtime inspection)	$247	$234	$13
Pre-Site Inspection / Re-inspection - SFD	$218	$196	$22
Pre-Site Inspection / Re-inspection - Other than SFD	$327	$196	$131
Records Research	$109	$91	$18
Reproduction of Plans	New	$168	N/A
Written Interpretation of Building Code	$435	$205	$230
Temporary Use Permit			
Normal Business Hours	$327	$196	$131
After Hours	$327	$230	$97
Address Assignment	$664	$337	$327

The fees administered by the Building Division have a mix of over and under-recoveries. The largest variances are in the valuation-related fees, which are expected as those fees are reviewed and updated to reflect updated costs as well as staff level and effort associated with activities. As it relates to the MEP fees, the per unit variance is minimal and due to the change in structure from covering up to 3 fixtures to be more standalone-based.

ANNUAL RESULTS

Based on the prior year's workload information, Building has a deficit of roughly $185,000. The following table shows the revenue at the current fee, total projected annual cost, and the resulting difference by major fee category.

TABLE 5: ANNUAL RESULTS – BUILDING

Fee Category	Revenue at Current Fee	Annual Cost	Difference
Valuation-Based Fees	$2,093,811	$2,254,072	($160,261)
Misc. Flat Rate Fees	$161,207	$183,259	($22,051)
Mechanical, Electrical, Plumbing	$44,318	$47,658	($3,340)
Additional Services	$664	$337	$327
Total	**$2,300,000**	**$2,485,326**	**($185,326)**

Building Services has an annual cost recovery of 93%. The largest under-recovery is in relation to the valuation-based fees, specifically on the lower dollar valuation projects. Right-sizing those fees will help ensure that the City continues to achieve full cost recovery for Building Services.

GENERAL PLAN MAINTENANCE FEE

A common surcharge assessed as part of the Building fee process supports long-range planning. The General Plan Maintenance fee is meant to account for updates to the general plan, zoning ordinance, housing elements, and other long-range planning activities that are part of the larger General Plan. The City already assesses this fee.

The General Plan Maintenance fee is governed by Government Code Section 66014(b) which states that fees "may include the costs reasonably necessary to prepare and revise the plans and policies that a local agency is required to adopt before it can make any necessary findings and recommendations." This code states that fees can be charged against zoning changes, zoning variances, use permits, building inspections, and filing applications.

Typically, the fee is charged during the building permit phase to ensure any development project that gets to that phase makes enough of an impact to require the need for an update to the Zoning Code or the General Plan. This fee should only be applied to major building permits (i.e., new or remodel / tenant improvements) rather than standalone permits for water heaters or electrical outlets.

The project team divided the estimated cost associated with updating the General Plan and related elements by the years between updates to calculate an annualized cost. In addition to consultant costs, City staff spend time annually working on these activities. The following table breaks out the components that comprise the total annual cost calculation.

TABLE 6: GENERAL PLAN MAINTENANCE FEE – ANNUAL COSTS

Task	Estimated Cost	Years	Annualized Cost
General Plan Update	$2,404,559	15	$160,304
Staff Support	$515,307	1	$515,307
Total Annual Cost			**$675,611**

The annual cost to the City for their long-range activities is approximately $676,000. The City currently assesses this fee as a percentage of different planning applications and building projects. However, to streamline the process and make it more consistent with general industry standards, the project team is proposing that the City consider converting the fee to be assessed as a percentage of the building permit fees. The project team used the annual building permit fee revenue as a base to calculate the General Plan Maintenance Fee. The following table shows this calculation.

TABLE 7: GENERAL PLAN MAINTENANCE FEE CALCULATION

Category	Amount
Total Annual Cost	$675,974
Base	$2,486,326
General Plan Maintenance Fee	**27.2%**

The calculated General Plan Maintenance Fee is 27.2% of the Building Permit Fee. The following table compares the City's current fee to its full cost and presents the resulting difference.

TABLE 8: GENERAL PLAN MAINTENANCE FEE COMPARISON

Current Fee	Full Cost	Difference
25.3%	27.2%	(1.9%)

The City's calculated full cost is approximately 2% points lower.

As part of this analysis, the project team conducted a comparative survey of other local jurisdictions and their assessment of a General Plan Maintenance Fee. Like other comparative efforts, the survey below simply shows the fees charged by the jurisdiction and does not include the basis upon which the other jurisdictions calculated or developed their fee. The following table shows the results of this comparative analysis:

TABLE 9: GENERAL PLAN MAINTENANCE FEE – COMPARATIVE SURVEY

Jurisdiction	Fee Amount
Belmont	0.75% of Building Valuation
Burlingame	0.2% of Building Valuation
Foster City	0.50% of the Application Value above $500
Menlo Park	3% of All Planning and Building Fees
Millbrae	0.39% of Project Valuation

As the table indicates, the comparative jurisdictions largely charge their General Plan Maintenance Fees based on valuation; as a result, their fees are not directly comparable to the City of East Palo Alto's fee. Menlo Park is the only jurisdiction that assesses their fee as a percentage of all Planning and Building fees, rather than only Building fees; because this is also a different basis than EPA's fee, a direct comparison is not possible.

The City collects and accounts for the General Plan surcharge in a separate account or subaccount, as doing so ensures compliance with funding requirements, enables appropriate allocation of funds to long-term planning and technology-related activities, and mitigates any potential issues with the comingling of funds. The City should continue to implement this best practice.

RAVENSWOOD BUSINESS DISTRICT (RBD) SPECIFIC PLAN MAINTENANCE FEE

The City is looking to charge a Specific Plan Maintenance Fee for development projects within the Ravenswood Business District (RBD). In 2013, the RBD Specific Plan was adopted by Council, since then a Subsequent Environmental Impact Report (SEIR) outlined two scenarios which propose net new square footage of development that exceeds initial projections in the 2013 plan.

The project team used the information from the SEIR as well as the City's most recent nexus study to calculate Specific Plan Maintenance Fee rates. The net new commercial square footage is estimated at 3,998,970. The nexus study provided information regarding the expected units. The nexus study anticipates that there will only be multi-family units totaling 1,600 new units. To arrive at the total square footage for residential, each unit was then multiplied by the average square footage for each unit type. The table below shows this calculation:

TABLE 10: NET NEW SQUARE FOOTAGE – MULTI-FAMILY & SINGLE-FAMILY

Type	Average Square Feet[1]	Net New (Sq. Ft.)
Multi-Family	875	1,400,000

The total net new square footage was divided by the annual specific plan cost to the City for the RBD Specific Plan, resulting in a cost per square foot. The following table shows this calculation.

TABLE 11: RBD SPECIFIC PLAN MAINTENANCE FEE CALCULATION

Category	Scenario Two
Specific Plan Cost	$1,405,219
Total Net New Sq. Ft.	5,398,970
Cost Per Sq. Ft.	**$0.26**

The calculated RBD Specific Plan Maintenance Fee is $0.26 per square foot, dependent on the level of development.

[1] Average square footage was taken from the 2025 Development Impact Fee Nexus Study Update, page 19.

CODE ENFORCEMENT

The City of East Palo Alto's Code Enforcement program, which is part of the City's Building Services Division, is responsible for ensuring compliance with the City's municipal code. The following sections discuss fee schedule modifications and detailed per unit results for the fee-related services associated with Code Enforcement.

FEE SCHEDULE MODIFICATIONS

In discussions with City staff, staff proposed the addition of 'Code Enforcement Investigation' and 'Recording & Removal of Liens' to more accurately reflects the services being provided by Code Enforcement staff.

DETAILED RESULTS

The Code Enforcement Division collects fees for Investigations and the Recording & Removal of Liens. The total cost calculated for each service includes direct staff costs and Division and Citywide overhead. The following table details the fee name, current fee, total cost, and difference associated with each service offered.

TABLE 12: TOTAL COST PER UNIT RESULTS – CODE ENFORCEMENT

Fee Name	Current Fee	Total Cost	Difference
Code Enforcement Investigation	New	$185	N/A
Recording & Removal of Liens	New	$600	N/A
Notary[2]	$15	$15	$0

Due to the majority of code enforcement's fees being new, there is no comparison between the current fee and the total cost. The notary fee is set by state so there is no difference there.

ANNUAL REVENUE IMPACT

The Code Enforcement Division does not keep records of the number of investigations and liens recorded and removed; therefore, annual revenue impacts were not calculated.

[2] GOV § 8223 (b)

COMMUNITY SERVICES

The Community Services Department is responsible for recreation opportunities through people, parks, and programs. The following subsections discuss fee schedule modifications, detailed per unit results, and annual revenue impacts as appropriate for the fee-related services provided by the Community Services.

FEE SCHEDULE MODIFICATIONS

In discussions with City staff, the following modifications were made to the current fee schedule:

- **Eliminated Fees:** Staff proposed eliminating 'Category 1 Events' as those are covered under general facility and park rentals, and 'Senior Center' hourly fees, as those are operated by a non-profit.
- **New Fees:** Staff proposed the addition of the following fees as they highlight services already offered but not codified on the fee schedule:
    - 'Security Guard'
    - 'Non-Profit' category of building facility rentals
    - Equipment rentals such as projectors, TVs, and table covers
    - 'YMCA City Room'
- **Expanded Fees**: Due to variability in how the fees are administered, staff proposed expanding the 'Community Services' fee to include an 'Overtime / Holiday Rate'.
- **Modified Fees:** To clarify the fee schedule, the 'Category 2 Events' fee was renamed 'Community Event' to better reflect the service offered. Additionally, the 'Category 3 Events' fee was renamed 'Parade/Street Closure' to better reflect the service offered.

The modifications noted ensure that the proposed fee schedule more accurately reflects the services being provided by Community Services staff.

DETAILED RESULTS

The Community Services Department collects fees for Special Events & Building and Park Facility Rentals. The total cost calculated for each service includes direct staff costs and Departmental and Citywide overhead. The following table details the fee name, current fee, total cost, and difference associated with each service offered.

TABLE 13: TOTAL COST PER UNIT RESULTS – COMMUNITY SERVICES

Fee Name	Current Fee	Total Cost	Difference
Special Event Permit - Application Processing			
Community Event	$182	$1,038	($856)

Fee Name	Current Fee	Total Cost	Difference
Parade/Street Closure	$489	$1,922	($1,433)
Police - Alcohol Distribution	$65	$61	$4
Special Event Permit - On-Site Event Support			
Community Services			
Business Hours	$236	$106	$130
After Business Hours	$255	$112	$143
Overtime / Holiday Rate	New	$119	N/A
Security Guard	$60	$65	($5)
Building Facility Rental Fees			
Residents of East Palo Alto			
Community Room (at City Hall)			
Non Peak Day Rental (Mon-Fri)	$17	$118	($101)
Peak Day Rental (Sat-Sun)	$17	$118	($101)
Cooley Landing Education Center			
Non Peak Day Rental (Mon-Fri)	$87	$209	($122)
Peak Day Rental (Sat-Sun)	$87	$209	($122)
YMCA City Room			
Non Peak Day Rental (Mon-Fri)	$17	$80	($63)
Peak Day Rental (Sat-Sun)	$17	$80	($63)
Non-Residents of East Palo Alto			
Community Room (at City Hall)			
Non Peak Day Rental (Mon-Fri)	$41	$118	($77)
Peak Day Rental (Sat-Sun)	$41	$118	($77)
Cooley Landing			
Non Peak Day Rental (Mon-Fri)	$154	$209	($55)
Peak Day Rental (Sat-Sun)	$154	$209	($55)
YMCA City Room			
Non Peak Day Rental (Mon-Fri)	New	$80	N/A
Peak Day Rental (Sat-Sun)	New	$80	N/A
Non-Profit			
Community Room (at City Hall)			
Non Peak Day Rental (Mon-Fri)	New	$118	N/A
Peak Day Rental (Sat-Sun)	New	$118	N/A
Cooley Landing			
Non Peak Day Rental (Mon-Fri)	New	$209	N/A
Peak Day Rental (Sat-Sun)	New	$209	N/A
YMCA City Room			
Non Peak Day Rental (Mon-Fri)	New	$80	N/A
Peak Day Rental (Sat-Sun)	New	$80	N/A
Park Facility Rental Fees			
All Locations - rental of park, pavilion, or barbeque areas for special events	$17	$112	($95)
Equipment Rentals			
Community Room			
Projector	New	$15	N/A
Table Covers	New	$0.75	N/A
City Room			
Television	New	$12	N/A

Fee Name	Current Fee	Total Cost	Difference
Cooley Landing			
Projector	New	$15	N/A
Table Covers	New	$0.75	N/A

The fees administered by the Community Services Department generally under-recover for its services. The largest deficit is in relation to Parade / Street Closures at $1,643 with the smallest under recovery for the Security Guard at $5. There is a handful of over-recovery associated with on-site support per hour for the Community Services fees.

ANNUAL REVENUE IMPACT

Based on the prior year's workload information, Community Services has a deficit of roughly $87,000. The following table shows the revenue at the current fee, total projected annual cost, and the resulting difference by major fee category.

TABLE 14: ANNUAL RESULTS – COMMUNITY SERVICES

Fee Category	Revenue at Current Fee	Annual Cost	Difference
Special Event Permit - Application Processing	$1,467	$6,396	($4,929)
Building Facility Rental Fees	$41,852	$122,337	($80,485)
Park Facility Rental Fees	$357	$2,352	($1,995)
Total	**$43,676**	**$131,085**	**($87,409)**

Community Services has an annual cost recovery of roughly 33%. The largest under-recovery is in relation to the Building Facility Rental fees, specifically the 'Peak Day Rental (Sat-Sun)' for the Cooley Landing Education Center. The per unit deficit for this fee is $122 and it was rented approximately 292 hours resulting in the large deficit amount. The department should review these results and adjust fees appropriately.

ENGINEERING

Engineering is a Division under the Public Works Department. Engineering is responsible for issuing permits and reviews as well as overseeing the design, development & construction, including streets, roadways, water supply, & storm drain, for the city. The following subsections discuss fee schedule modifications, detailed per unit results, and annual results for the fee-related services provided by Engineering.

FEE SCHEDULE MODIFICATIONS

In discussions with City staff, the following modifications were made to the current fee schedule:

- **New Fees:** Staff proposed the addition of the following fees as they highlight services already offered but not codified on the fee schedule:
    - 'Administration and Coordination of Water Meter'
    - 'Hauling'
    - 'Parking Restriction in the Right of Way'
    - 'Staff Augmentation / Technical Review'
- **Eliminated Fees:** Staff proposed eliminating the following fees, as these services are no longer offered by City staff, covered under other fees, or are now offered by other departments within the City:
    - 'Job Card Replacement'
    - 'Design Review – Administrative'
    - 'Architectural Supervision'
    - 'General Plan Amendment'
    - 'Zone Change / Text Amendment'
    - 'Tree Removal Permit'
    - 'Zoning Relief'
    - 'Initial Study'
    - 'EIR'
    - 'Mitigation Monitoring'
    - 'Encroachment Permit – Fence'
- **Modifications:** Final Parcel Map / Tract Map was renamed to include 'City Admin Cost (consultant costs are passed through to applicant)' to better reflect the services offered.

The modifications noted ensure that the proposed fee schedule more accurately reflects the services being provided by Engineering staff.

DETAILED RESULTS

The Engineering Division collects fees for Grading Permits, Public Improvements, Planning Applications, Building Plan Reviews, Parcel Maps, ROW Compliance, and transportation permits. The total cost calculated for each service includes direct staff costs and Division and Citywide overhead. The following table details the fee name, current fee, total cost, and difference associated with each service offered.

TABLE 15: TOTAL COST PER UNIT RESULTS – ENGINEERING

Fee Name	Current Fee	Total Cost	Difference
Grading - Plan Review			
< 50 Cubic Yards	$2,888	$4,335	($1,447)
50 - 100 Cubic Yards	$2,888	$4,335	($1,447)
101-500 Cubic Yards	$5,776	$6,098	($322)
> 501 Cubic Yards	$17,328	$17,357	($29)
Grading - Inspection			
< 50 Cubic Yards	$2,888	$5,586	($2,698)
50 - 100 Cubic Yards	$4,333	$8,594	($4,261)
101-500 Cubic Yards	$17,328	$21,485	($4,157)
> 501 Cubic Yards	$23,050	$25,782	($2,732)
Public Improvements - Plan Review			
Base fee up to $10,000	$2,888	$3,271	($383)
Base fee at $10,000	$2,888	$3,271	($383)
Each add'l $10,000 or fraction thereof	$2,888	$3,066	($178)
Base fee at $50,000	$14,439	$15,535	($1,096)
Each add'l $10,000 or fraction thereof	$1,732	$2,174	($442)
Base fee at $100,000	$23,103	$26,404	($3,301)
Each add'l $10,000 or fraction thereof	$289	$1,087	($798)
Base fee above $500,000	$34,654	$37,169	($2,515)
Public Improvements - Inspection			
Base fee up to $10,000	$1,444	$2,149	($705)
Base fee at $10,000	$1,444	$2,149	($705)
Each add'l $10,000 or fraction thereof	$721	$1,074	($353)
Base fee at $50,000	$4,333	$6,446	($2,113)
Each add'l $10,000 or fraction thereof	$2,021	$2,578	($557)
Base fee at $100,000	$14,439	$19,337	($4,898)
Each add'l $10,000 or fraction thereof	$506	$1,289	($783)
Base fee above $500,000	$34,654	$38,674	($4,020)
Encroachment Permit			
Minor Frontage Improvements such as sidewalk, curb, gutter, driveway	$520	$721	($201)
Utility connections, excavations, potholing	$867	$1,033	($166)
Temporary closure of sidewalk, bike/vehicle lane(s), street	$867	$1,033	($166)

Fee Name	Current Fee	Total Cost	Difference
Any other work encroaching into the public right-of-way	$867	$1,033	($166)
Street Cut Fee	$867	$1,033	($166)
Encroachment Permit - Other			
Administration and Coordination of Water Meter	New	$402	N/A
Debris Box / Temporary Storage	$1,155	$1,234	($79)
Traffic Control Plan Review	$1,155	$1,192	($37)
Traffic Control Field Inspection/Monitoring	$1,155	$537	$618
Hauling	New	$617	N/A
Parking Restriction in the Right of Way	New	$506	N/A
Final Parcel Map / Tract Map: City Admin Cost (consultant costs are passed through to applicant)			
Parcel Map (4 Lots Less)	$4,333	$4,545	($212)
Tract Map (5 or More Lots)	$5,776	$6,061	($285)
Certificate of Compliance / Street Right-of-Way (ROW) Vacation			
Certificate of Compliance	$4,333	$4,545	($212)
Street ROW Vacation	$4,333	$4,545	($212)
Transportation Permit[3]			
Single Trip	$18	$16	$2
Annual	$103	$90	$13
Administrative Fees			
Request for Letter (e.g.- Flood Hazard Letter)	$289	$750	($461)
Bond Administration and Release	$289	$375	($86)
4th and Subsequent Plan Review Fee	$867	$937	($70)
Re-inspection Fee	$867	$1,074	($207)
After-Hours Inspection (minimum 4 hours)	$326	$253	$73
Staff Augmentation / Technical Review	New	$252	N/A
Planning Application Review / Support			
Tentative Maps (4 lots or less)	$2,888	$5,811	($2,923)
Tentative Maps (5 lots or more)	$4,333	$5,811	($1,478)
Tentative Map Extension / Modification	$1,444	$3,915	($2,471)
Second Unit Permit	$577	$750	($173)
Use Permit (all types)	$577	$750	($173)
Zoning Relief (all types)	$577	$0	$577
Hourly Pre-Application	$289	$473	($184)
Lot Line Adjustment	$4,333	$4,545	($212)
Lot Line Merger	$4,333	$4,545	($212)
Building Plan Review / Support			
Minor Residential Improvement	$347	$375	($28)
TI (Tenant Improvement) or Addition of square feet	$577	$750	($173)
New SFD (Single Family/ Dwelling)	$1,155	$1,500	($345)

[3] Cal. Code Regs. tit. 21 § 1411.3 (a)

Fee Name	Current Fee	Total Cost	Difference
New Multifamily or Commercial	$2,311	$3,000	($689)

Nearly all of the fees administered by the Engineering Division are under-recovering for their associated costs. The largest under-recovery is $4,898 for a 'Base Fee at $100,000' for Public Improvement Inspections. The smallest undercharge is in the Grading - Plan Review category of '> 501 Cubic Yards' at $29. The only over-recoveries are for the State permits and the after-hours inspections.

ANNUAL REVENUE IMPACT

Based on the prior year's workload information, Engineering has a deficit of roughly $20,000. The following table shows the revenue at the current fee, total projected annual cost, and the resulting difference by major fee category.

TABLE 16: ANNUAL RESULTS – ENGINEERING

Fee Category	Revenue at Current Fee	Annual Cost	Difference
Encroachment Permits	$103,173	$122,927	($19,754)
Total	**$103,173**	**$122,927**	**($19,754)**

Engineering has an annual cost recovery of roughly 84%. The largest under-recovery is in relation to the Encroachment Permits, specifically the 'Utility connections, excavations, potholing'. The per unit deficit for this fee is $166 and it was permitted approximately 88 times resulting in the large deficit amount. Changing just that one fee can have a large impact on the Division's revenue. The division should review these results and adjust fees appropriately.

ENVIRONMENTAL SERVICES

The Environmental Services Division is part of the Public Works Department. Environmental Services is responsible for managing environmental contracts which include street sweeping, tree services, and public education. The following sections discuss fee schedule modifications, detailed per unit results, and annual results for the fee-related services provided by Environmental Services staff.

FEE SCHEDULE MODIFICATIONS

In discussions with City staff, the following modifications were proposed to the current fee schedule:

- **Eliminated Fees**: Staff proposed eliminating the following fees as these services are no longer offered by City staff, covered under other fees, or are now offered by other departments within the City:
    - 'Grading Inspection for Construction BMPs'
    - 'Support to Planning Fees'
    - 'Single Family'
    - 'Support to Building Fees'
    - 'Stormwater Design Review'
- **Collapsed Fees:** The Solid Waste Enclosure Design Review was consolidated from all of its categories to two categories – 'Less than 1 acre or low concern projects' and '1+ acre or high concern projects'.
- **Modified Fees:** The Each additional acre over 5 was changed to '5+ acres' to better clarify the fee name under Stormwater Design Review.

The modifications noted ensure that the proposed fee schedule more accurately reflects the services being provided by Environmental Services staff.

DETAILED RESULTS

The Environmental Services Division collects fees for NPEDS, Stormwater Design Reviews, Solid Waste Design Reviews and Impact Studies. The total cost calculated for each service includes direct staff costs and Division and Citywide overhead. The following table details the fee name, current fee, total cost, and difference associated with each service offered.

TABLE 17: TOTAL COST PER UNIT RESULTS – ENVIRONMENTAL SERVICES

Fee Name	Current Fee	Total Cost	Difference
NPDES			
BMP Inspection:	$310	$364	($54)
2,500 to 10,000 square feet	$777	$547	$230

Fee Name	Current Fee	Total Cost	Difference
10,001 square feet to 1 acre	$2,329	$729	$1,600
1 acre to 5 acres	Modified	$1,094	N/A
5+ acres	$310	$364	($54)
C.4 Inspection:			
Low Priority	$156	$547	($391)
High Priority	$388	$547	($159)
Discharge Inspection:			
Initial Inspection (3 Hours)	$465	$547	($82)
Each Additional Hour	$156	$182	($26)
Monitoring, Sampling or Testing, Lab analysis, cost, and rental equipment charges	Actual Cost	Actual Cost	N/A
Illicit Discharge Clean-Up in the Public Right-of-Way:			
Initial Inspection (3 Hours)	$465	$547	($82)
Each Additional Hour	$156	$182	($26)
Vacant Property Inspections, Illegal Dumping, Encampments, etc.	$310	$319	($9)
Other Services Not Listed	$156	$182	($26)
Stormwater Design Review			
Single Family	$40	$729	($689)
Other:			
2,500 to 10,000 square feet	$310	$364	($54)
10,001 square feet to 1 acre	$777	$547	$230
1 acre to 5 acres	$2,329	$729	$1,600
5+ acres	$545	$1,094	($549)
Water Efficiency Landscape Ordinance Plan Review			
80% or more low-to-no water use	$232	$1,459	($1,227)
80% or less low-to-no water use	$933	$1,459	($526)
Solid Waste Enclosure Design Review			
Less than 1 acre or low concern projects	Modified	$364	N/A
1 acre or high concern projects	Modified	$729	N/A
Misc. Fees			
Each Additional Plan Review after first three reviews	$156	$182	($26)
Environmental Impact Studies (EIR)	$777	$912	($135)

Nearly half of the fees administered by the Environmental Services Division under-recover for their associated costs. The largest under-recovery is $1,227 for '80% or more low-to-no water use' under the Water Efficiency Landscape Ordinance Plan Review. The smallest undercharge is in the NPEDS category of 'Vacant Property Inspections, Illegal Dumping, Encampments, etc.' at $9.

ANNUAL REVENUE IMPACT

The Environmental Services Division does not keep records of the number of NPDES, Stormwater Design Reviews, Water Efficiency Landscape Ordinance Plan Review, Solid Waste Enclosure Design Review, & Misc. Fees; therefore, annual revenue impacts were not calculated.

FINANCE

The Finance Department is responsible for providing monitoring and developing the city's budget and forecasting. The following subsections discuss fee schedule modifications and detailed per unit results for the fee-related services provided by Finance.

FEE SCHEDULE MODIFICATIONS

In discussions with City staff, staff proposed eliminating the 'Business License – First Time License Application Fee' as this is now outsourced and moving the 'Ellis Act Withdrawn Property Administrative Fee' to rent stabilization, as those staff now perform this service.

DETAILED RESULTS

The Finance Department collects fees for photocopies, returned checks, and overdue invoices. The total cost calculated for each service includes direct staff costs and Departmental and Citywide overhead. The following table details the fee name, current fee, total cost, and difference associated with each service offered.

TABLE 18: TOTAL COST PER UNIT RESULTS – FINANCE

Fee Name	Current Fee	Total Cost	Difference
Photocopy[4]:			
8.5" x 11" (black & white single side)	$0.10	$0.10	$0.00
8.5" x 11" (color single side)	$0.25	$0.25	$0.00
Checks Returned by Bank or Financial Institution Due to Insufficient Funds[5]			
First Returned Check	$25	$25	$0
Each Additional Check	$35	$35	$0

All Fees provided by the Finance Department are state set and do not show any under or over-recoveries.

ANNUAL REVENUE IMPACT

The Finance Department does not keep records of photocopies, returned checks, and overdue invoices; therefore, annual revenue impacts were not calculated.

[4] GOV § 7922.530
[5] CIV § 1719(a)

HOUSING

The Housing Division is part of the Community and Economic Development Department. The Housing Division is responsible for overseeing the city's affordable housing development and economic development programs. The following subsections discuss fee schedule modifications, detailed per unit results, and annual revenue impacts for the fee-related services provided by the Housing Division.

FEE SCHEDULE MODIFICATIONS

The City passed Ordinance No. 425 in 2019 and codified the Inclusionary Housing as part of its Municipal Code Chapter 18.37. Both of these items allow the City to charge fees for Housing, as long as there is a fee schedule to support these fees. Through this study, the City proposes to establish a fee schedule for assessing these services.

DETAILED RESULTS

The Housing Division is proposing to collect fees for inclusionary housing agreements, housing applications, monitoring, household occupancy eligibility reviews, waiver reviews, annual monitoring compliance fees, and residential inspection fees. The total cost calculated for each service includes direct staff costs and Division and Citywide overhead. The following table details the fee name and total cost associated with each service offered.

TABLE 19: TOTAL COST PER UNIT RESULTS – HOUSING

Fee Name	Total Cost
Inclusionary Housing Agreement Recordation (Resale Restriction, Deed of Trust, Regulatory Agreement)	$616
Below Market Rate (BMR) Fees	
Monthly Monitoring Fee (Contracted Out)	$126
Sale or Resale (Contracted Out)	3%
Compliance Fee	$411
Monthly Loan Servicing - Amortized Loan (Contracted Out)	Actual Cost
Monthly Loan Servicing - Deferred Loan (Contracted Out)	Actual Cost
Loan Set-Up (Contracted Out)	Actual Cost
Loan Foreclosure (Contracted Out)	Actual Cost
Affordable Housing Compliance Plan (Not Recorded)	
Application:	
Application Process	$532
Alternative Compliance Application Approval	
4 Unit or Less	$1,671
5 Units or More	$3,343
Application Modification / Amendment	$266
Review of Household Occupancy Eligibility (Initial Lease-Up / Change of Occupancy)	$205
Review of Waiver, Adjustment or Reduction Request	$272

Fee Name	Total Cost
Rent Registry	
Residential Inspection Upon Change in Occupancy	$330
Annual Monitoring Compliance Fee - Just Cause Units	$53
Annual Monitoring Compliance Fee - Fully Exempt Units	$37

All of the fees administered by the Housing Division are newly proposed. The cost for these services ranges from a low of $37 for 'Annual Monitoring Compliance Fee - Just Cause Units' to a high of $3,343 for 'Alternative Compliance Application Approval – 5 Units or More'.

ANNUAL REVENUE IMPACT

Currently housing does not charge fees any of its services and therefore no annual revenue impact was calculated.

PLANNING

The Planning Division is part of the Community and Economic Development Department. The Planning Division is responsible for current and long-range planning within the city. The division maintains and updates the city's General Plan and interprets and enforces the city's Zoning Regulations. The division provides support to the Planning Commission. The following subsections discuss fee schedule modifications, detailed per unit results, and annual revenue impacts for the fee-related services provided by Planning.

FEE SCHEDULE MODIFICATIONS

In discussions with City staff, the following modifications were proposed to the current fee schedule:

- **Eliminated Fees:** Staff proposed eliminating the following fees, as these services are no longer offered by City staff or are now offered by other departments within the City:
    - 'Zoning Review for Business License'
    - 'Public Utility Tower'
    - 'Research / Document Review'
    - 'Address Assignment'
- **New Fees:** Staff proposed the addition of Permit Adjustment fees based on major or minor projects.
- **Condensed Fees:** To streamline the fee schedule, staff proposed condensing the following fees:
    - The 'Temporary Use Permit' section was condensed into a 'Minor', 'Administrative', and 'Major' fee to streamline the fee schedule.
    - The 'Parking Exception' fee was condensed into a singular per hour fee.
    - The 'Variance' fees were condensed into a singular fee.
    - The 'Staff Management & Review' was removed from all Environmental related fees.
    - The 'Zoning Clearance' was consolidated into a singular fee.
    - 'Minor Modification to Conditions' and 'Modifications to Conditions' are captured within the Renewal / Modifications to Conditions section under the respective fee category that aligns with the type of application being modified.
    - 'Zoning Text Amendment' and 'Zone Change' were combined into a single fee.
    - 'Initial Study - Negative Declaration' is captured under 'Initial Study - Mitigated Negative Declaration/ Negative Declaration'.
    - 'Noticing Fee' is captured under 'Noticing/Special Noticing'.
- **Modified Fees:** The following fee modifications were proposed to better clarify the services being provided.

- The 'Hourly SB 35 Pre-Application (5 hr. minimum)' was renamed the 'Preliminary Ministerial Review Hourly (2 hr. minimum)' to accurately reflect the service offered.
- 'Condominium Conversion' was switched to a deposit fee.
- The 'Garage Conversions / Minor ADR (120 s-f. or less)' was renamed the 'Garage Conversions / Minor ADR (400 s-f. or less)' to accurately reflect the service offered.
- The 'Permanent Sign' fee's wording was modified.
- The '1 Year Approval Renewal' was renamed the 'Major TUP Annual Renewal' to accurately reflect the service offered.
- The '3 or more Trees' was modified from a flat fee to a base plus per tree fee.

The modifications noted ensure that the proposed fee schedule more accurately reflects the services being provided by Planning staff.

DETAILED RESULTS

The Planning Division collects fees for pre-application fee, appeals, design reviews, tree removals, zoning relief, environmental, zoning clearance, and other administrative reviews. The total cost calculated for each service includes direct staff costs and Division and Citywide overhead. The following table details the fee name, current fee, total cost, and difference associated with each service offered.

TABLE 20: TOTAL COST PER UNIT RESULTS – PLANNING

Fee Name	Current Fee	Total Cost	Difference
Pre-Application Fees			
Hourly Pre-Application (1 hr. minimum)	$332	$337	($5)
Pre-Application Services for Projects Subject to City's Pre-Application Ordinance	$11,624	$8,312	$3,312
Preliminary Ministerial Review Hourly (2 hr. minimum)	$332	$337	($5)
Appeals			
Appeals to City Council (if initiated by City Council - no charge)	$9,051	$9,361	($310)
Appeals to Planning Commission	$9,051	$9,361	($310)
Subdivision			
Certificate of Compliance	$5,148	$2,147	$3,001
Condominium Conversion	$40,523	$41,000	($477)
Final Maps Planning Review of Engineering Application			
4 lots or less	$4,982	$1,682	$3,300
5 - 25 lots	$5,646	$2,020	$3,626
>25 lots	$6,311	$2,357	$3,954
Lot Line Adjustment	$5,315	$2,695	$2,620
Lot Line Merger	$5,315	$2,695	$2,620
Tentative Map			
4 lots or less	$16,607	$8,354	$8,253
5 - 25 lots	$23,251	$10,042	$13,209

Fee Name	Current Fee	Total Cost	Difference
>25 lots	$45,172	$11,730	$33,442
Tentative Map Extension	$9,965	$2,731	$7,234
Tentative Map Modification	$10,628	$3,744	$6,884
Design Review			
Administrative	$4,651	$4,715	($64)
Planning Commission Review	$14,947	$14,866	$81
Garage Conversions / Minor ADR (400-s-f. or less)	$332	$337	($5)
Permit Adjustment Minor	New	$693	N/A
Permit Adjustment Major	New	$1,345	N/A
Legislative Actions			
General Plan Amendment	$21,590	$22,000	($410)
Planned Unit Development	$21,590	$15,000	$6,590
Zone Change/Text Amendment	$21,590	$12,000	$9,590
Tree Removal			
1-2 trees – Base	$404	$506	($102)
3 or more - per tree	$288[6]	$29	$259
Signage			
Master/Common Sign Program	$3,985	$8,154	($4,169)
Permanent Sign	$865	$1,048	($183)
Temporary Sign	$230	$494	($264)
Use Permit			
Administrative Use Permit (AUP) / Special Use Permit (SUP)	$3,985	$4,715	($730)
Conditional Use Permits (CUP)	$12,372	$14,866	($2,494)
Public Convenience/Necessity Application - Filing Fees	$12,372	$1,775	$10,597
Renewal /Modification to Conditions			
AUP / SUP	$2,882	$2,900	($18)
CUP	$9,383	$7,269	$2,114
Temporary Use Permit			
Minor	Modified	$337	N/A
Administrative	Modified	$2,734	N/A
Major	Modified	$4,715	N/A
Major TUP Annual Renewal	$1,728	$1,386	$342
Zoning Relief			
Parking Exception	$332	$337	($5)
Variance	Modified	$3,406	N/A
Environmental			
Categorical Exemption			
Standard	$1,661	$1,386	$275
Infill/Other			
Staff Led	$1,661	$3,412	($1,751)
Environmental Impact Studies (EIR)			
Mitigation Monitoring - one-time	$3,886	$3,749	$137
Zoning Clearance (Administrative Review)			
Other Accessory	$332	$337	($5)

[6] Converted to a per tree fee based on the current fee of $865 divided by 3 trees.

Fee Name	Current Fee	Total Cost	Difference
Other Administrative Fees			
Building Permit Review			
Minor Res- Improvement	$697	$337	$360
Tenant Improvements	$2,823	$1,012	$1,811
Addition of s. f.	$2,259	$337	$1,922
New SFD	$1,496	$337	$1,159
New Multifamily	$6,145	$1,350	$4,795
New Commercial	$6,145	$1,350	$4,795
Miscellaneous Planning			
Noticing/Special Noticing (each mailing)	$664	$675	($11)
Newspaper Ad Publication	$400	$400	$0
Written Determination by City Planning Manager	$1,661	$1,422	$239
Planning Hourly Fee (1 hr. minimum)	$332	$337	($5)

The fees charged by the Planning Division are a mix of under and over-recoveries. The largest under-recovery is $4,166 for 'Master/Common Sign Program'. The largest over-recovery is in relation to the 'Tentative Maps'. In discussion with staff, changes in processes and increased efficiencies are resulting in a reduced level of staff effort needed to process these entitlements. For example, final maps are primarily a Public Works / Engineering function, and therefore, the cost has shifted from Planning to Engineering for those services.

ANNUAL REVENUE IMPACT

Based on the prior year's workload information, Planning has a surplus of roughly $63,000. The following table shows the revenue at the current fee, total projected annual cost, and the resulting difference by major fee category.

TABLE 21: ANNUAL RESULTS – PLANNING

Fee Category	Revenue at Current Fee	Annual Cost	Difference
Pre-Application Fees	$23,240	$23,590	($350)
Subdivision	$98,984	$40,366	$58,618
Design Review	$39,532	$40,079	($547)
Tree Removal	$8,714	$9,253	($539)
Signage	$2,595	$3,144	($549)
Use Permit	$3,985	$4,715	($730)
Temporary Use Permit	$30,937	$23,021	$7,916
Zoning Clearance (Administrative Review)	$38,512	$39,092	($580)
Other Administrative Fees	$19,256	$19,546	($290)
Total	**$265,755**	**$202,806**	**$62,949**

Planning has an annual cost recovery of roughly 131%. The largest over-recovery is in relation to the Subdivision fees, specifically the '5-25 lots' for the Tentative Map. Through this analysis staff worked with the project team to right size fees within this category, ensuring the time to administer these services reflected the current process needed to conduct these reviews. The per unit surplus for this fee is $13,209 and it was administered 2 times resulting in the large surplus amount. The division should review these results and adjust fees appropriately.

POLICE

The Police Department is responsible for law enforcement to ensure safety within the community. There are several divisions within the Police Department: Administration, Operations, & Investigations that are involved with charging fees for services. The following subsections discuss fee schedule modifications, detailed per unit results, and annual revenue impacts for the fee-related services provided by the Police Department.

FEE SCHEDULE MODIFICATIONS

In discussions with Police staff, the following modifications were made to the current fee schedule:

- **Eliminated Fees:** Staff proposed eliminating the 'Redaction Services - Body Worn Camera Video (City Staff)' as this service is no longer offered and is covered through the contractor category.
- **New Fees:** Staff proposed the addition of the following fees as they highlight services already offered but not codified on the fee schedule:
    - 'Permit Review - Private Security Company - CSO Review'
    - 'Assistance to Planning Division Security Plan Review for New Business'
- **Expanded Fees:** Due to large variability in how the fees are administered, staff proposed expanding 'Officer Support of City Special Events' to include multiple classifications.

The modifications noted ensure that the proposed fee schedule more accurately reflects the services being provided by Police Department.

DETAILED RESULTS

The Police Department collects fees for Fingerprints, Vehicle Releases, Repossessions, Permit Reviews, and Security Plan Reviews. The total cost calculated for each service includes direct staff costs and Departmental and Citywide overhead. The following table details the fee name, current fee, total cost, and difference associated with each service offered.

TABLE 22: TOTAL COST PER UNIT RESULTS – POLICE

Fee Name	Current Fee	Total Cost	Difference
Fingerprinting (Livescan)	$25	$170	($145)
Vehicle Release:			
During Regular Business Hours	$25	$49	($24)
During Nights or Weekends or Holidays	$145	$193	($48)
Tow Company Cost	Actual Cost	Actual Cost	N/A
Repossession - Verification Fee[7]	$15	$15	$0

[7] GOV § 26751

Fee Name	Current Fee	Total Cost	Difference
Proof of Correction Citation - Sign-off[8]	$25	$25	$0
Clearance Letter	$15	$127	($112)
Permit Review - Private Security Company - CSO Review:			
CSO Review	$359	$137	$222
Executive Review	$359	$250	$109
Assistance to Planning Division Security Plan Review for New Business:			
CSO Review	$462	$137	$325
Executive Review	$462	$250	$212
Redaction Services - Body Worn Camera Video (Contractor):			
City Processing	$128	$186	($58)
Consultant Cost	Actual Cost	Actual Cost	N/A
Officer Support of City Special Events:			
Officer	$128	$223	($95)
Sgt	$128	$255	($127)
Captain	$128	$250	($122)
Community Service Officer	$128	$137	($9)

Nearly all the fees administered by the Police Department show an under-recovery for the associated costs. The largest under-recovery is for a 'Fingerprinting (Livescan)' at $145. The smallest undercharge is for a 'Community Service Officer' at $9.

ANNUAL REVENUE IMPACT

The Police Department does not keep records of Fingerprints, Vehicle Releases, Repossessions, Permit Reviews, and Security Plan Reviews; therefore, annual revenue impacts were not calculated.

[8] VEH § 40611

RENT STABILIZATION

The Rent Stabilization Program is part of the Housing and Economic Development Department. The Rent Stabilization Program is responsible for the administration and enforcement of the City's Rent Stabilization and Eviction for Just Cause Ordinance. The following subsections discuss fee schedule modifications, detailed per unit results, and annual revenue impacts for the fee-related services provided by Rent Stabilization.

FEE SCHEDULE MODIFICATIONS

In discussions with Rent Stabilization staff, the only modification proposed was the moving of the 'Ellis Act Withdrawn Property Administrative fee' from Finance to Rent Stabilization. The fees under this section are governed by Ordinance No. 330 and Chapter 14.04 of the Municipal Code.

DETAILED RESULTS

The Rent Stabilization Program collects fees for Annual Registrations, Ellis Act Withdrawn Property Administrative Fees, Processing Fees, Appeals, and Landlord Petitions. The total cost calculated for each service includes direct staff costs and Program and Citywide overhead. The following table details the fee name, current fee, total cost, and difference associated with each service offered.

TABLE 23: TOTAL COST PER UNIT RESULTS – RENT STABILIZATION

Fee Name	Current Fee	Total Cost	Difference
Annual Registration	$234	$369	($135)
Cloud-Storage	$20	$20	$0
Ellis Act Withdrawn Property Administrative Fee	$405	$312	$93
Appeal to the Board:			
Filing of Appeal	$100	$1,175	($1,075)
Each Additional Unit	$5	$587	($582)
Landlord Petition:			
First Installment			
First Unit	$75	$83	($8)
Each Additional Unit in the Same Building	$35	$41	($6)
Second Installment			
First Unit	$35	$55	($20)
Each Additional Unit in the Same Building	$25	$27	($2)
Tenant Petition:			
First Installment			
First Unit	$25	$35	($10)
Each Additional Unit in the Same Building	$15	$17	($2)
Second Installment			
First Unit	$25	$23	$2
Each Additional Unit in the Same Building	$10	$11	($1)

The majority of the fees administered by the Rent Stabilization Program under-recover for their associated costs. The largest under-recovery at $1,075 is for a 'Filing of Appeal'. The smallest undercharge is in the Tenant Petition category for 'Second Installment - Each Additional Unit in the Same Building' at $1.

ANNUAL REVENUE IMPACT

Based on the prior year's workload information, Rent Stabilization has a deficit of roughly $317,000. The following table shows the revenue at the current fee, total projected annual cost, and the resulting difference by major fee category.

TABLE 24: ANNUAL RESULTS – RENT STABILIZATION

Fee Category	Revenue at Current Fee	Annual Cost	Difference
Annual Registration	$549,900	$867,150	($317,250)
Total	**$549,900**	**$867,150**	**($317,250)**

Rent Stabilization has an annual cost recovery of roughly 63%. This under-recovery is in relation to the Annual Registration. The per-unit deficit for this fee is $135, and approximately 2,350 units were permitted, resulting in the large annual deficit. While the program is meant to be self-sustaining the difference in costs is due to the overhead component that is currently not factored into these fees. The program should review these results and adjust fees appropriately.

EAST PALO ALTO SANITATION DISTRICT

The East Palo Alto Sanitation District has recently been absorbed by the City and is overseen by the Public Works Department. The District is responsible for the collection, processing, and disposal of solid waste and recyclable materials within the district. The following subsections discuss fee schedule modifications, detailed per unit results, and annual revenue impacts for the fee-related services provided by the Sanitation District.

FEE SCHEDULE MODIFICATIONS

In discussions with Sanitation District staff, only the 'Main Line Extension Permit' fee was proposed on an hourly basis to capture the services provided but not currently captured.

DETAILED RESULTS

The Sanitation District collects fees for Plan Checks, Inspections, Permit Applications, & Main Line Extensions. The total cost calculated for each service includes direct staff costs and District and Citywide overhead. The following table details the fee name, current fee, total cost, and difference associated with each service offered.

TABLE 25: TOTAL COST PER UNIT RESULTS – SANITATION DISTRICT

Fee Name	Current Fee	Total Cost	Difference
Plan Check			
Additional Plan Review	$236	$236	$0
Plan Check - New			
House	$800	$708	$92
ADU (Detached)	$800	$708	$92
MFR	$800	$944	($144)
COM	$800	$944	($144)
IND	$800	$944	($144)
Plan Check - Remodeling / Existing			
SFR	$400	$472	($72)
ADU	$400	$472	($72)
MFR	$400	$472	($72)
COM	$400	$472	($72)
IND	$400	$472	($72)
Inspections			
Lateral	$200	$992	($792)
Additional Inspections	$496	$496	$0
Permit Application (T1, T2, T3)			
SFR (T1)	$100	$149	($49)
ADU (T1)	$100	$149	($49)
MFR (T2)	$100	$149	($49)
COM (T3)	$100	$149	($49)

Fee Name	Current Fee	Total Cost	Difference
IND (T3)	$100	$149	($49)
Main Line Extension			
Main Line Extension Permit	New	$236	N/A

Nearly all the fees administered by the Sanitation District show an under-recovery for the associated costs. The largest under-recovery is for a 'Lateral' at $792. The smallest undercharges are for Permit Application (T1, T2, T3) Category at $49.

ANNUAL REVENUE IMPACT

The Sanitation District does not keep records for Plan Checks, Inspections, Permit Applications, & Main Line Extensions; therefore, annual revenue impacts were not calculated.

COST RECOVERY CONSIDERATIONS

The following sections provide guidance regarding how and where to increase fees, determine annual update factors, and develop cost recovery policies and procedures.

FEE ADJUSTMENTS

This study has documented and outlined on a fee-by-fee basis where the City is under- and over-collecting for its fee-related services. City and Department management will now need to review the study results and adjust fees per Departmental and City philosophies and policies. The following points outline the major options the City has in adjusting its fees:

- **Over-Collection:** Upon review of the fees that were shown to be over-collecting for costs of services provided, the City should reduce the current fee to be in line with the full cost of providing the service.
- **Full Cost Recovery:** For fees that show an under-collection for costs of services provided, the City may decide to increase the fee to full cost recovery immediately.
- **Phased Increase:** For fees with significantly low-cost recovery levels, or which would have a significant impact on the community, the City could choose to increase fees gradually over a set period.

The City will need to review the results of the fee study and associated cost recovery levels and determine how best to adjust fees. While decisions regarding fees that currently show an over-recovery are straightforward, the following subsections provide further detail on why and how the City should consider either implementing Full Cost Recovery or a Phased Increase approach to adjusting its fees.

FULL COST RECOVERY

Based on the permit or review type, the City may wish to increase the fee to cover the full cost of providing services. Certain permits may be close to cost recovery already, and an increase to full cost may not be significant. Other permits may have a more significant increase associated with full cost recovery.

Increasing fees associated with permits and services that are already close to full cost recovery can potentially bring a Department's overall cost recovery level higher. Often, these minimal increases can provide necessary revenue to counterbalance fees that cannot be increased.

The City should consider increasing fees for permits for which services are rarely engaged to full cost recovery. These services often require specific expertise and can involve more complex research and review due to their infrequent nature. As such, setting these fees at full cost recovery will ensure that when the permit or review is requested, the City is recovering the full cost of its services.

PHASED INCREASES

Depending on current cost recovery levels, some current fees may need to be increased significantly to comply with established or proposed cost recovery policies. Due to the type of permit or review or the amount by which a fee needs to be increased, it may be best for the City to use a phased approach to reaching its cost recovery goals.

As an example, you may have a current fee of $200 with a full cost of $1,000, representing 20% cost recovery. If the current policy is 80% cost recovery, the current fee would need to increase by $600, bringing the fee to $800, to comply with proposed recovery levels. Assuming this service is something the City provides quite often and affects various members of the community, an instant increase of $600 may not be feasible. Therefore, the City could take a phased approach, whereby it increases the fee annually over a set period until cost recovery is achieved.

Raising fees over a set period not only allows the City to monitor and control the impact to applicants but also ensure that applicants have time to adjust to significant increases. Continuing with the example above, the City could increase the fee by $150 per year for the next four years, spreading out the increase. Depending on the desired overall increase and the impact to applicants, the City could choose to vary the number of years by which it chooses to increase fees. However, the project team recommends that the City not phase increases for periods greater than five years, as that is the maximum window after which a comprehensive fee assessment should be completed.

ANNUAL ADJUSTMENTS

Conducting a comprehensive analysis of fee-related services and costs annually would be quite cumbersome and costly. The general recommendation is that a comprehensive fee analysis should be conducted every three to five years. This allows jurisdictions to ensure they account for organizational changes, such as staffing levels and merit increases, and process efficiencies, code or rule changes, or technology improvements. Developing annual update mechanisms allow jurisdictions to maintain current levels of cost recovery, while accounting for increases in staffing or expenditures related to permit services. The two most common types of update mechanisms are Consumer Price Index (CPI) and Cost of Living Adjustment (COLA) factors. The following points provide further detail on each of these mechanisms:

- **COLA / Personnel Cost Factor:** Jurisdictions often provide their staff with annual salary adjustments to account for increases in local cost of living. These increases are not tied to merit or seniority but rather meant to offset rising costs associated with housing, gas, and other livability factors. Sometimes these factors vary depending on the bargaining group of a specific employee. Generally, these factors are around two or three percent annually.
- **CPI / ECI Factor:** A common method of increasing fees or cost is to look at regional cost indicators, such as the Consumer Price Index or Employment Cost Index. These factors are calculated by the Bureau of Labor Statistics, are put out at various intervals within a year, and are specific to states and regions.

The City of East Palo Alto already utilizes a CPI factor and it should continue to do so to ensure that fees are increased in alignment with cost increases.

POLICIES AND PROCEDURES

This study has identified areas where the City is under-collecting the costs associated with providing services. This known funding gap is therefore being subsidized by other City revenue sources.

Development of cost recovery policies and procedures will ensure that current and future decision makers understand how and why fees were determined and set, as well as provide a road map for ensuring consistency when moving forward. The following subsections outline typical cost recovery levels and discuss the benefits of developing target cost recovery goals and procedures for achieving and increasing cost recovery.

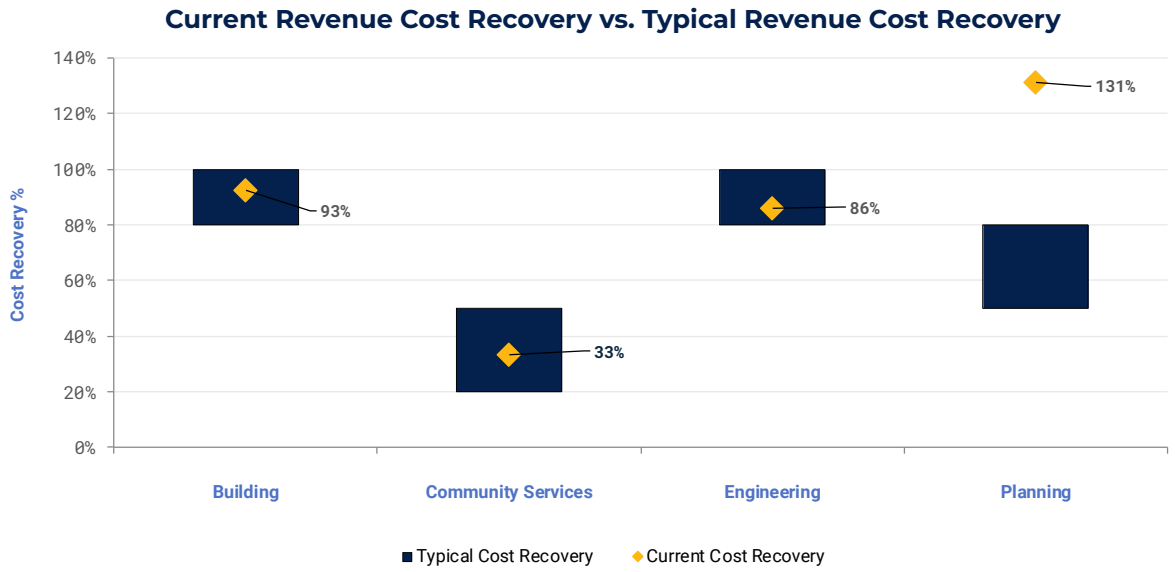
TYPICAL COST RECOVERY

The Matrix Consulting Group has extensive experience in analyzing local government operations across the United States and has calculated typical cost recovery ranges. The following table outlines cost recovery ranges by major service area.

TABLE 26: TYPICAL COST RECOVERY RANGES BY MAJOR SERVICE AREA

Service Areas	Typical Cost Recovery Ranges
Building	80-100%
Community Services	20-50%
Planning	50-80%
Engineering	70-100%

The following graph depicts how East Palo Alto compares to industry cost recovery range standards.



Building, Community Services, and Engineering are within the typical cost recovery range, while Planning is above the typical cost recovery range.

DEVELOPMENT OF COST RECOVERY POLICIES AND PROCEDURES

The City should review the current cost recovery levels and adopt a formal policy regarding cost recovery. This policy can be general in nature and can apply broadly to the City as a whole or to each department and division specifically. A department-specific cost recovery policy would allow the City to better control the cost recovery associated with different types of services being provided and the community benefit received.

APPENDIX – COMPARATIVE SURVEY

As part of the Cost of Services (User Fee) study for the City of East Palo Alto, Matrix Consulting Group conducted a comparative survey of user fees. The City identified five municipalities to be included in the comparative survey: Menlo Park, Millbrae, Burlingame, Belmont, and Foster City. The project team then reviewed public documents (i.e., agenda items, staff reports, budgets, fee schedules, and ordinances) and or contacted jurisdictions to get comparative information.

While this full report provides the City with a reasonable estimate and understanding of the true costs of providing services, many jurisdictions also wish to benchmark themselves against other comparable jurisdictions to understand the local "rates" for comparable services. This type of comparative analysis allows for the City to assess what types of changes in fee levels their community can bear. However, benchmarking does not provide adequate information regarding the relationship of other jurisdictions' costs to their fees (i.e., policy decisions to subsidize, cost recovery goals, etc.). To contextualize this portion of the analysis, the project team provided economic and recency factors for the comparable jurisdictions.

The following sections detail various factors to consider when reviewing comparative survey results, as well as graphical comparisons of current fees and total calculated costs for various permits issued or services provided by the City.

ECONOMIC FACTORS

To provide additional context to the comparative survey information, the project team collected economic factors for the jurisdictions included. Three important economic factors to consider when comparing fees across multiple jurisdictions are: population, budget, and workforce size. These factors can impact how and when fees are administered, as a jurisdiction with a smaller population may choose to not charge a fee, or a smaller workforce size may inhibit their ability to administer a fee.

The following tables rank each jurisdiction from smallest to largest for each of these economic factors:

TABLE 27: RANKING OF JURISDICTIONS BY POPULATION

Jurisdiction	Population[9]
Millbrae	23,093
Belmont	26,931
East Palo Alto	29,078
Burlingame	30,513
Foster City	32,581
Menlo Park	33,140

[9] California Finance estimates as of 1/1/2024 were used to determine each jurisdiction's population.

TABLE 28: RANKING OF JURISDICTIONS BY CITYWIDE TOTAL BUDGET

Jurisdiction	FY24-25 Budget[10]
East Palo Alto	$68,928,000
Belmont	$77,085,466
Burlingame	$93,561,987
Millbrae	$101,406,000
Foster City	$142,860,115
Menlo Park	$140,146,863

TABLE 29: RANKING OF JURISDICTIONS BY FTE

Jurisdiction	FY24-25 Authorized FTE
Millbrae	97.75
East Palo Alto	140.00
Belmont	144.25
Foster City	179.00
Burlingame	231.40
Menlo Park	288.00

When compared to the surveyed jurisdictions, the City of East Palo Alto ranks near the middle in terms of population, but on the lower end for budget and staffing.

RECENCY FACTOR

While the above comparative information can provide some perspective when paralleling East Palo Alto's fees with surveyed jurisdictions, other key factors to consider are when a jurisdiction's fee schedule was last updated and when the last comprehensive analysis was undertaken. It is important to note that even though jurisdictions may have conducted recent fee studies, their fees are not always adopted at full cost recovery. The comparative results only show the adopted fee for the surveyed jurisdiction, not necessarily the full cost associated with the comparable service.

The following tables detail when each surveyed jurisdiction last conducted a fee analysis and when they last updated their fee schedule:

TABLE 30: LAST FEE SCHEDULE UPDATE

Jurisdiction	Response
Menlo Park	2024
Millbrae	2024
Burlingame	2024
Belmont	2024
Foster City	2024

[10] To ensure appropriate comparisons, full operating budget (all funds) has been used for all jurisdictions.

TABLE 31: LAST FEE STUDY CONDUCTED

Jurisdiction	Response
Menlo Park	Over 10 years ago
Millbrae	2019
Burlingame	2024
Belmont	2015
Foster City	2023

All surveyed jurisdictions have published an updated fee schedule within the last year. Additionally, all the jurisdictions except for Millbrae and Belmont have conducted a fee study within the last five years.

ADDITIONAL FACTORS

Along with keeping the statistics outlined in the previous sections in mind, the following issues should also be noted regarding the use of market surveys in the setting of fees for service:

- **Cost Recovery Factors:** Each jurisdiction and its fees are different, and many are not based on the actual cost of providing services as various policy decisions may subsidize services.
- **Fee Variance Factors:** A fee with the same name may encompass different types of services or activities across jurisdictions. Variability may stem from differences in service delivery models (e.g., in-house vs. contracted), the scope of work included under the fee, and staffing configurations, all of which can influence how indirect and overhead costs are allocated.

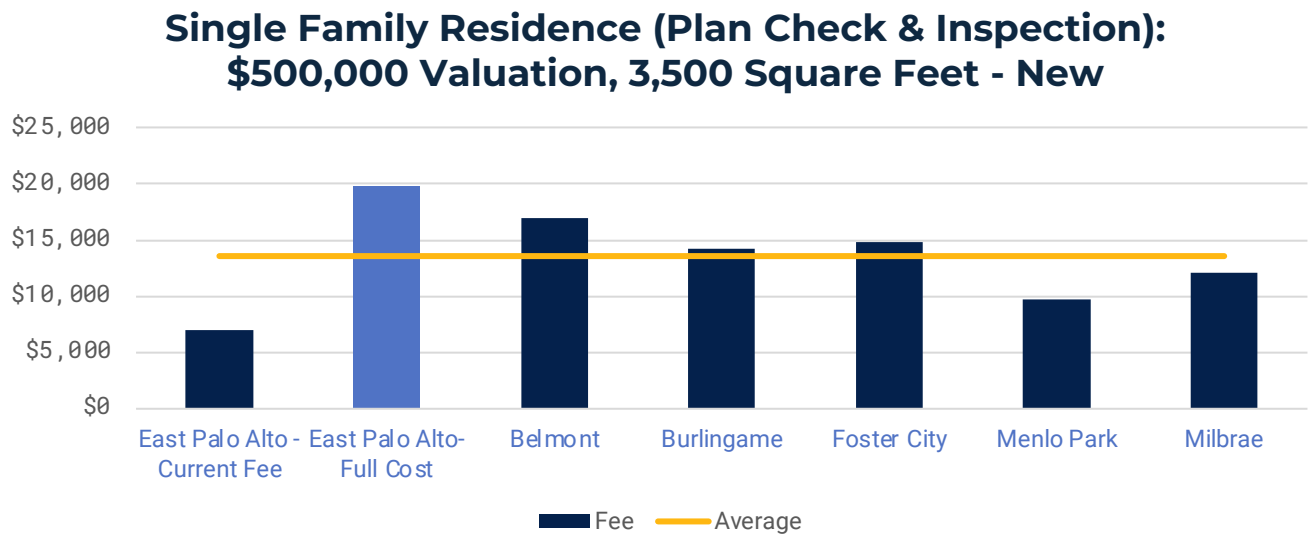
In addition to the issues noted, market surveys can also run the risk of creating a confusing excess of data that will obscure rather than clarify policy issues. Because each jurisdiction is different, the Matrix Consulting Group recommends that the information contained in the market comparison of fees be used as a secondary decision-making tool, rather than the primary method for determining an acceptable price point for services.

COMPARATIVE SURVEY RESULTS

As part of this study, the project team conducted a survey of how the City's current user fees and calculated full cost compare to other identified jurisdictions. The following subsections provide a comparative look at several fee-related services provided by the City versus the surveyed jurisdictions.

1 SINGLE FAMILY RESIDENCE (PLAN CHECK & INSPECTION): $500,000 VALUATION, 3,500 SQUARE FEET - NEW

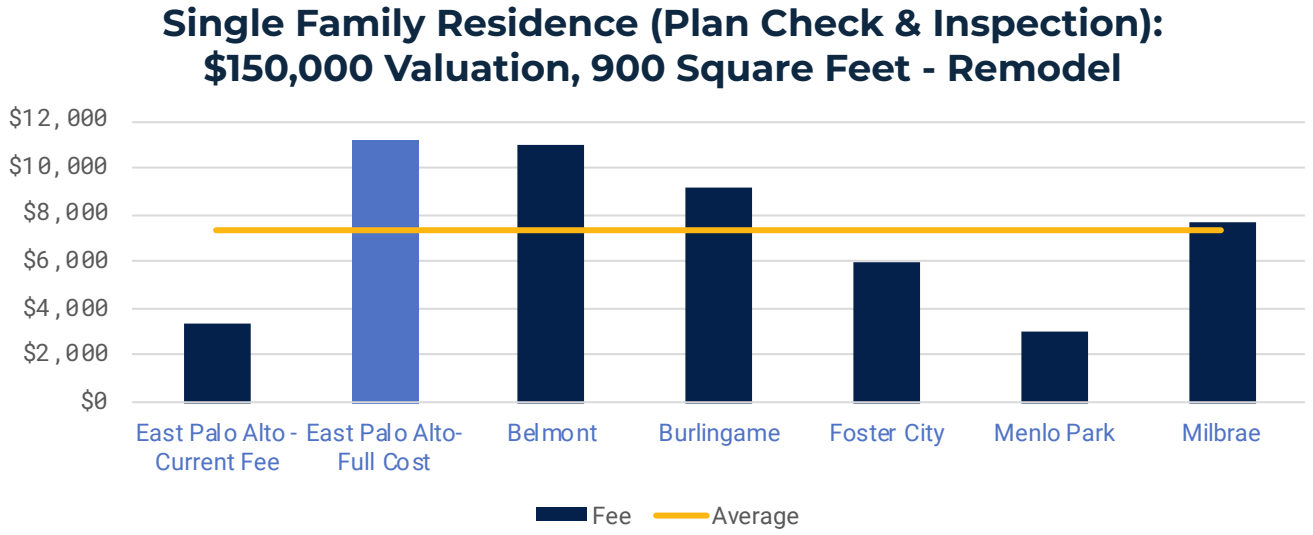
Building currently charges a fee of $6,967 for building plan check and inspection of a new Single-Family Residence valued at $500,000 and 3,500 sq. ft. Through this study, the project team calculated the full cost of this service to be $19,814. The following graph shows how East Palo Alto's current fee and full cost compares to surveyed jurisdictions.



East Palo Alto's current fee is the lowest among the jurisdictions at $6,967. However, its full cost of $19,825 is above the jurisdictional average of $13,599. The City's current fee is most similar to Menlo Park's fee of $9,687, while the calculated full cost is most comparable to Belmont's fee at $17,023.

2 SINGLE FAMILY RESIDENCE (PLAN CHECK & INSPECTION): $150,000 VALUATION, 900 SQUARE FEET - REMODEL

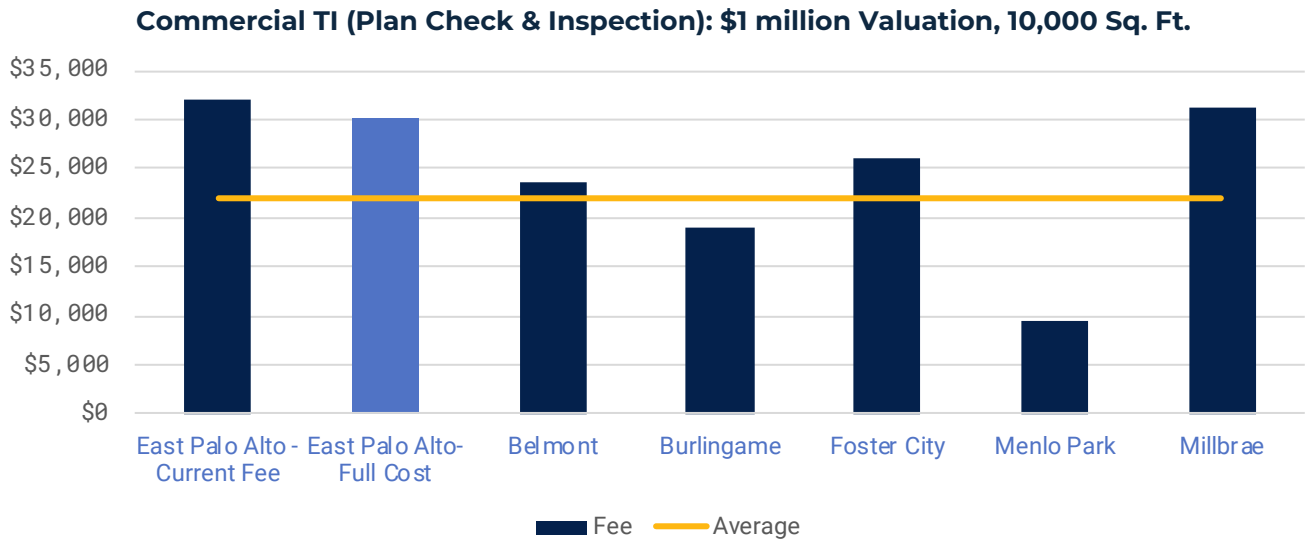
Building currently charges a fee of $3,350 for plan check and inspection of Remodel of a Single-Family Residence valued at $150,000 Valuation at 900 sq. ft. Through this study, the project team calculated the full cost of this service to be $11,154. The following graph shows how East Palo Alto's current fee and full cost compares to surveyed jurisdictions.



East Palo Alto's current fee is the lowest among the rest of the jurisdictions at $2,832. However, their full cost of $11,917 is above the jurisdictional average of $8,196. The City's current fee is most similar to Menlo Park's fee of $3,029, while the calculated full cost is most comparable to Belmont's fee at $11,003.

3 COMMERCIAL (PLAN CHECK & INSPECTION): $1 MILLION VALUATION, 10,000 SQUARE FEET - TI

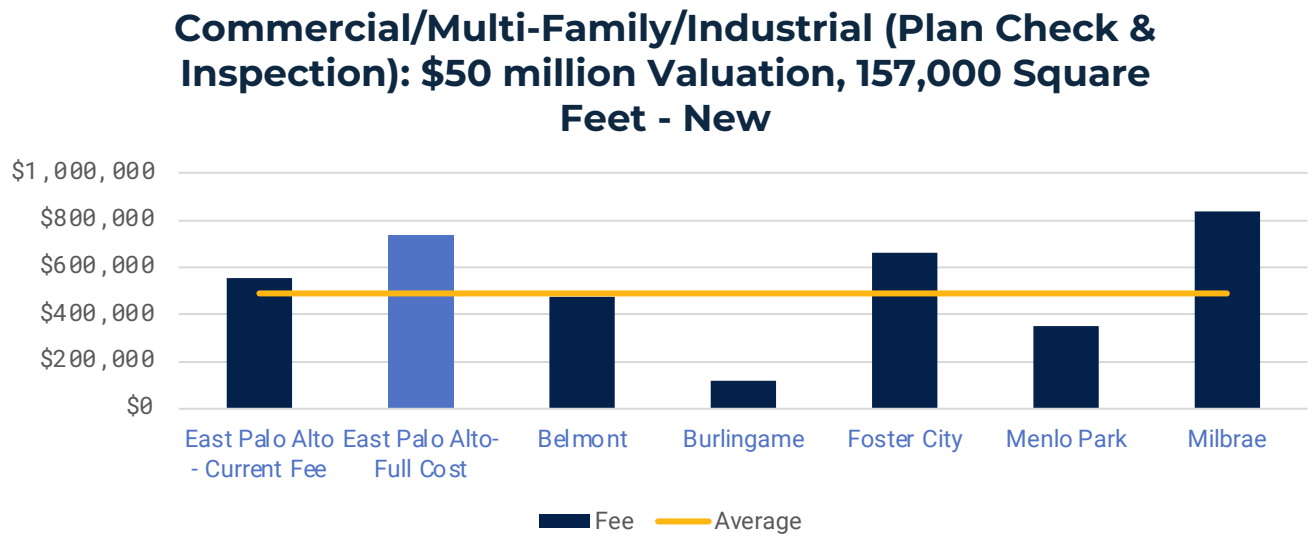
Building currently charges a fee of $32,010 for plan checking and inspecting a tenant improvement (TI) on Commercial projected at $1 million at 10,000 sq. ft. Through this study, the project team calculated the full cost of this service to be $30,213. The following graph shows how East Palo Alto's current fee and full cost compares to surveyed jurisdictions.



East Palo Alto's current fee is the highest among the rest of the jurisdictions at $32,010. Their full cost of $30,230 is above the jurisdictional average of $21,976. The City's current fee and Full Cost is most similar to Millbrae's fee of $31,349.

4 COMMERCIAL/MULTI-FAMILY/INDUSTRIAL (PLAN CHECK & INSPECTION): $50 MILLION VALUATION, 157,000 SQUARE FEET - NEW

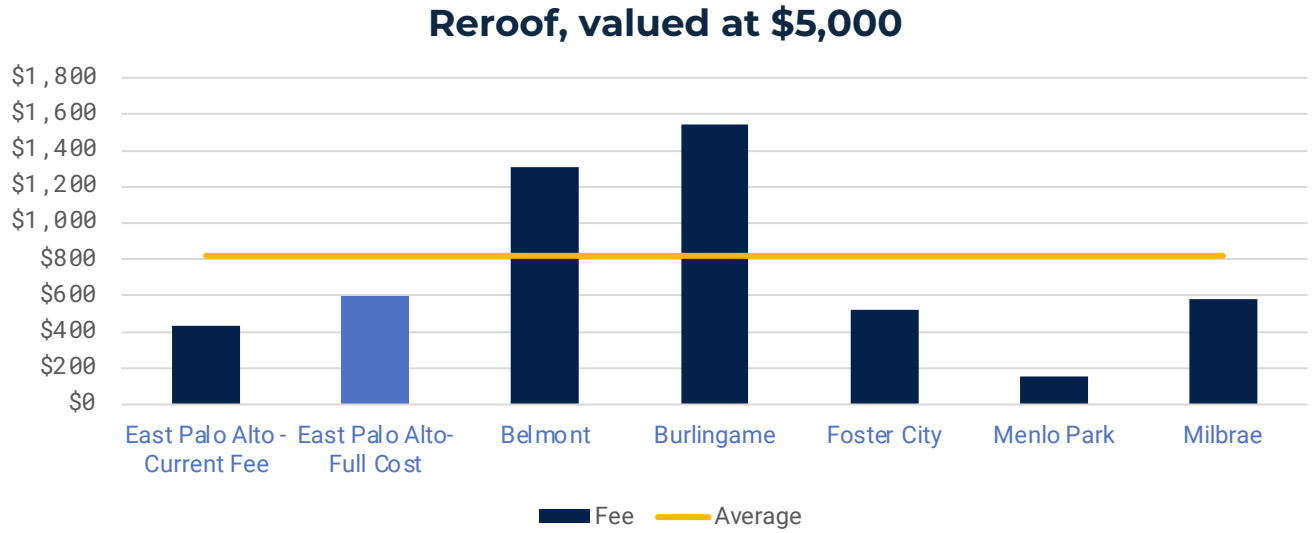
Building currently charges a fee of $552,298 for a Commercial/Multi-Family/Industrial (Plan Check & Inspection): $50 million Valuation, 157,000 Square Feet - New. Through this study, the project team calculated the full cost of this service to be $733,058. The following graph shows how East Palo Alto's current fee and full cost compares to surveyed jurisdictions.



East Palo Alto's current fee is the middle among the rest of the jurisdictions at $552,298. Their full cost of $733,526 is above the jurisdictional average of $489,507. The City's current fee is most similar to Belmont's fee of $474,879, while the calculated full cost is most comparable to Foster City's fee at $664,358.

5 REROOF VALUED AT $5,000

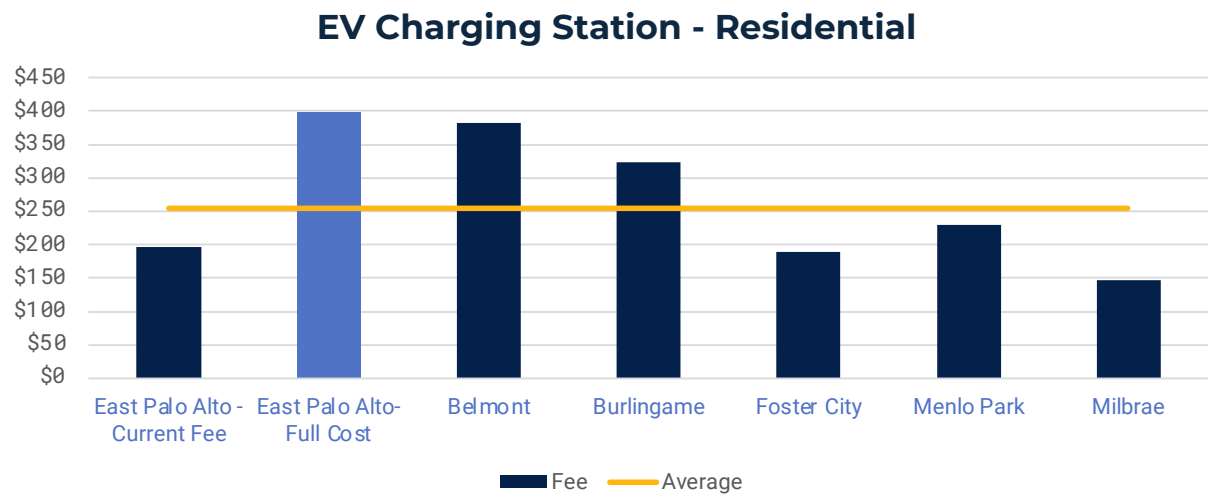
Building currently charges a fee of $435 for plan check and inspection of a Reroof, valued at $5,000. Through this study, the project team calculated the full cost of this service to be $597. The following graph shows how East Palo Alto's current fee and full cost compares to surveyed jurisdictions.



East Palo Alto's current fee is the middle among the rest of the jurisdictions at $435. Their full cost of $598 is below the jurisdictional average of $822. The City's current fee is most similar to Foster City's fee of $524, while the calculated full cost is most comparable to Millbrae's fee at $584.

6 EV CHARGING STATION - RESIDENTIAL

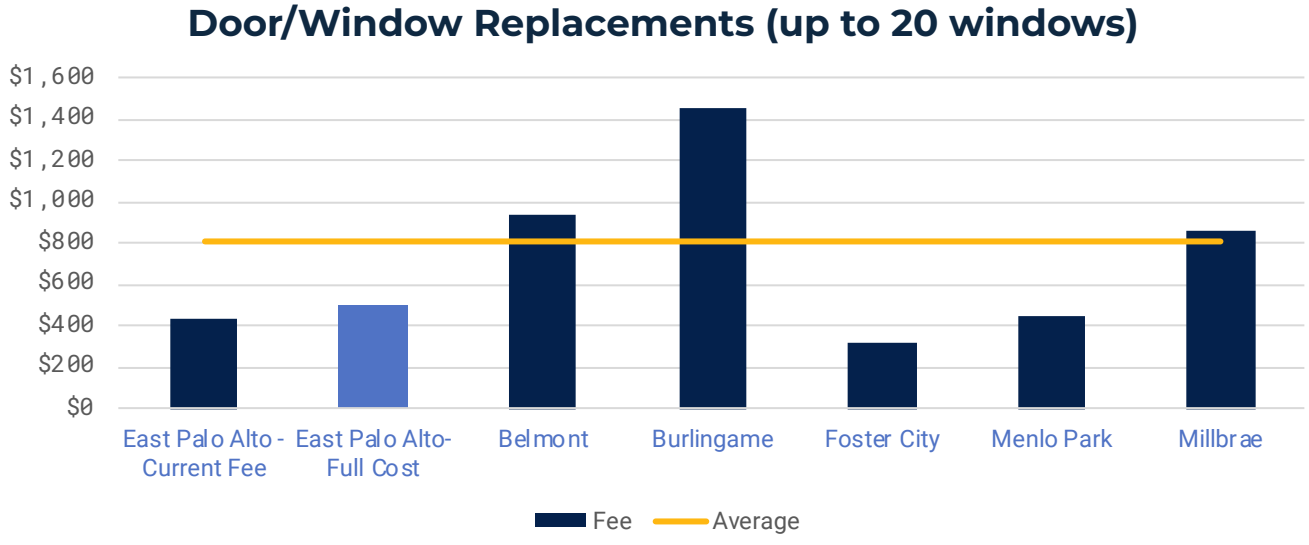
Building currently charges a fee of $197 for an EV Charging Station - Residential. Through this study, the project team calculated the full cost of this service to be $398. The following graph shows how East Palo Alto's current fee and full cost compares to surveyed jurisdictions.



East Palo Alto's current fee is the middle among the rest of the jurisdictions at $197. Their full cost of $398 is above the jurisdictional average of $254. The City's current fee is most similar to Foster City's fee of $189, while the calculated full cost is most comparable to Belmont's fee at $383.

7 DOOR/WINDOW REPLACEMENTS (UP TO 20 WINDOWS)

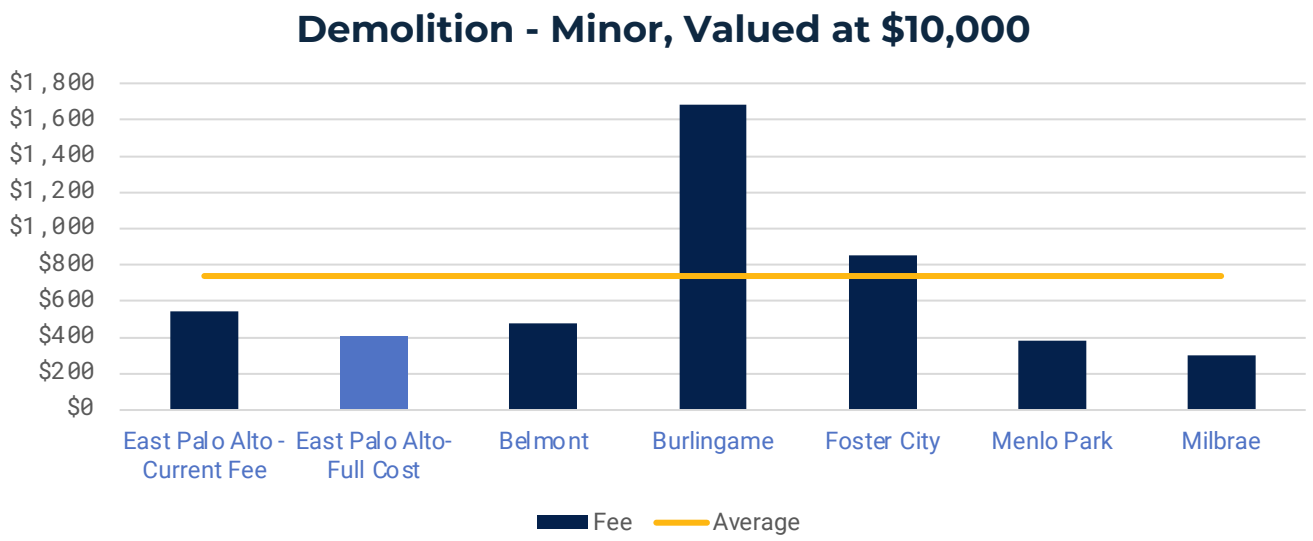
Building currently charges a fee of $435 for a Door/Window Replacements (up to 20 Windows). For this scenario, we considered 4 windows, valued at $2,000. Through this study, the project team calculated the full cost of this service to be $497. The following graph shows how East Palo Alto's current fee and full cost compares to surveyed jurisdictions.



East Palo Alto's current fee is the middle among the rest of the jurisdictions at $435. Their full cost of $498 is below the jurisdictional average of $803. The City's current fee and full cost is most similar to Menlo City's fee of $445.

8 DEMOLITION MINOR, VALUED AT $10,000

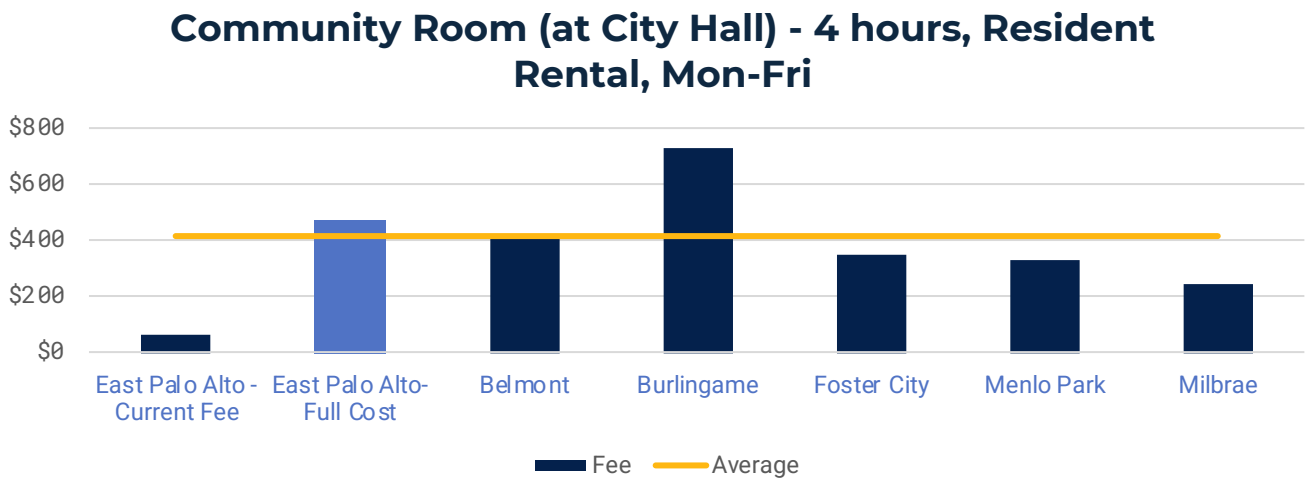
Building currently charges a fee of $545 for a Demolition Minor, Valued at $10,000. Through this study, the project team calculated the full cost of this service to be $406. The following graph shows how East Palo Alto's current fee and full cost compares to surveyed jurisdictions.



East Palo Alto's current fee is the middle among the rest of the jurisdictions at $545. Their full cost of $407 is below the jurisdictional average of $739. The City's current fee is most similar to Belmont's fee of $478, while the calculated full cost is most comparable to Menlo's fee at $384.

9 COMMUNITY ROOM (AT CITY HALL) - 4 HOURS, RESIDENT RENTAL, MON-FRI

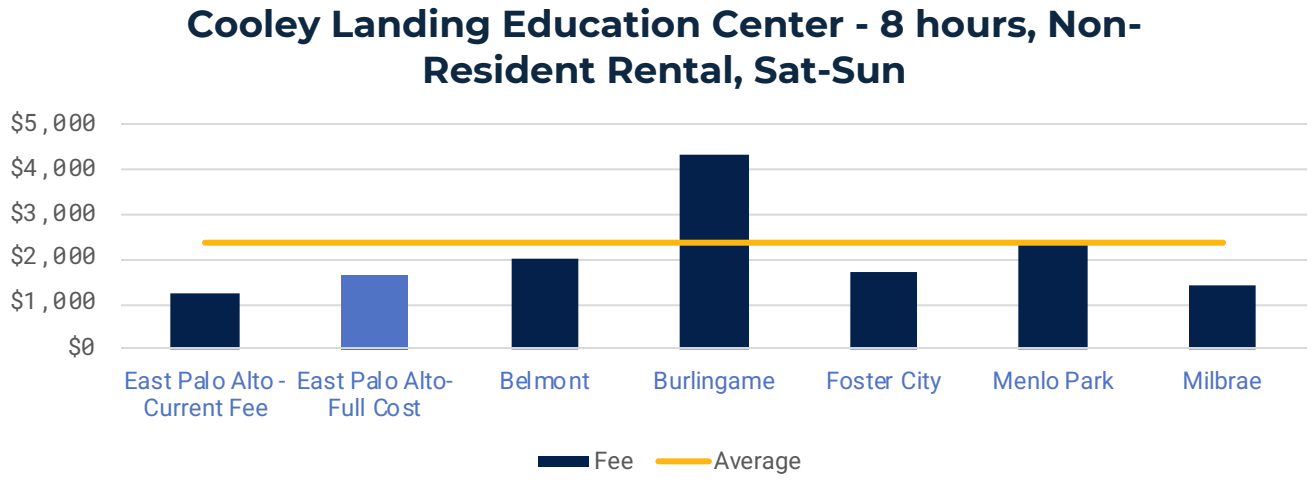
Community Services currently charges a fee of $68 for a Community Room (at City Hall) - 4 hours, Resident Rental, Mon-Fri. Through this study, the project team calculated the full cost of this service to be $472. The following graph shows how East Palo Alto's current fee and full cost compares to surveyed jurisdictions.



East Palo Alto's current fee is the lower among the rest of the jurisdictions at $68. Their full cost of $472 is above the jurisdictional average of $415. The City's current fee is most similar to Millbrae's fee of $244, while the calculated full cost is most comparable to Belmont's fee at $409.

10 COOLEY LANDING EDUCATION CENTER - 8 HOURS, NON-RESIDENT RENTAL, SAT-SUN

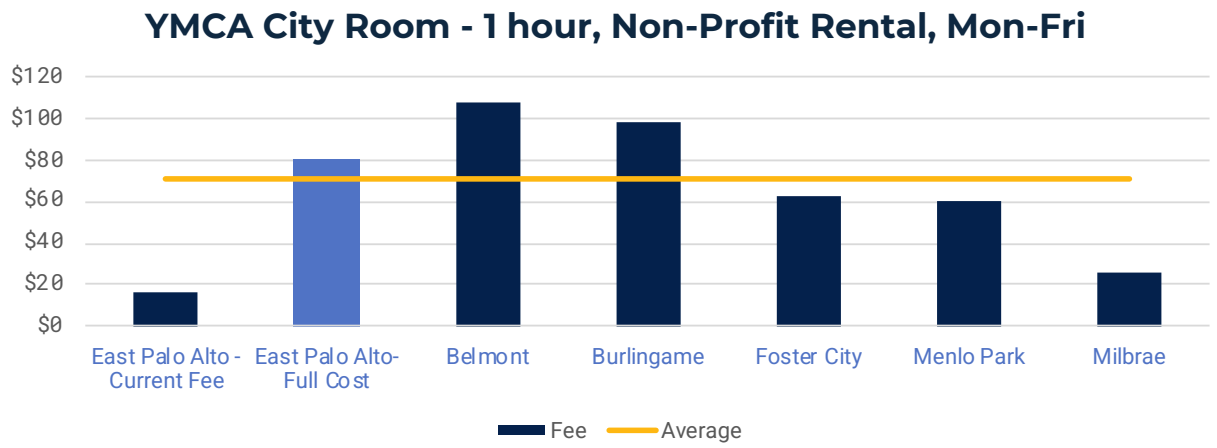
Community Services currently charges a fee of $1,232 for a Cooley Landing Education Center - 8 hours, Non-Resident Rental, Sat-Sun. Through this study, the project team calculated the full cost of this service to be $1,672. The following graph shows how East Palo Alto's current fee and full cost compares to surveyed jurisdictions.



East Palo Alto's current fee is the lower among the rest of the jurisdictions at $1,232. Their full cost of $1,672 is below the jurisdictional average of $2,373. The City's current fee is most similar to Millbrae's fee of $1,410, while the calculated full cost is most comparable to Foster City's fee at $1,690.

11 YMCA CITY ROOM - 1 HOUR, NON-PROFIT RENTAL, MON-FRI

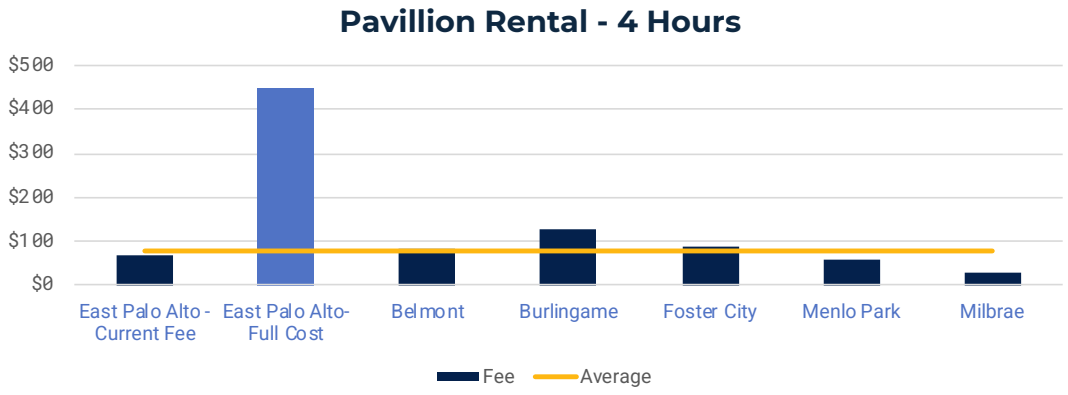
Community Services currently charges a fee of $17 for a YMCA City Room - 1 hour, Non-Profit Rental, Mon-Fri. Through this study, the project team calculated the full cost of this service to be $80. The following graph shows how East Palo Alto's current fee and full cost compares to surveyed jurisdictions.



East Palo Alto's current fee is the lower among the rest of the jurisdictions at $17. Their full cost of $80 is above the jurisdictional average of $71. The City's current fee is most similar to Millbrae's fee of $26, while the calculated full cost is most comparable to Burlingame's fee at $98.

12 PAVILLION RENTAL - 4 HOURS

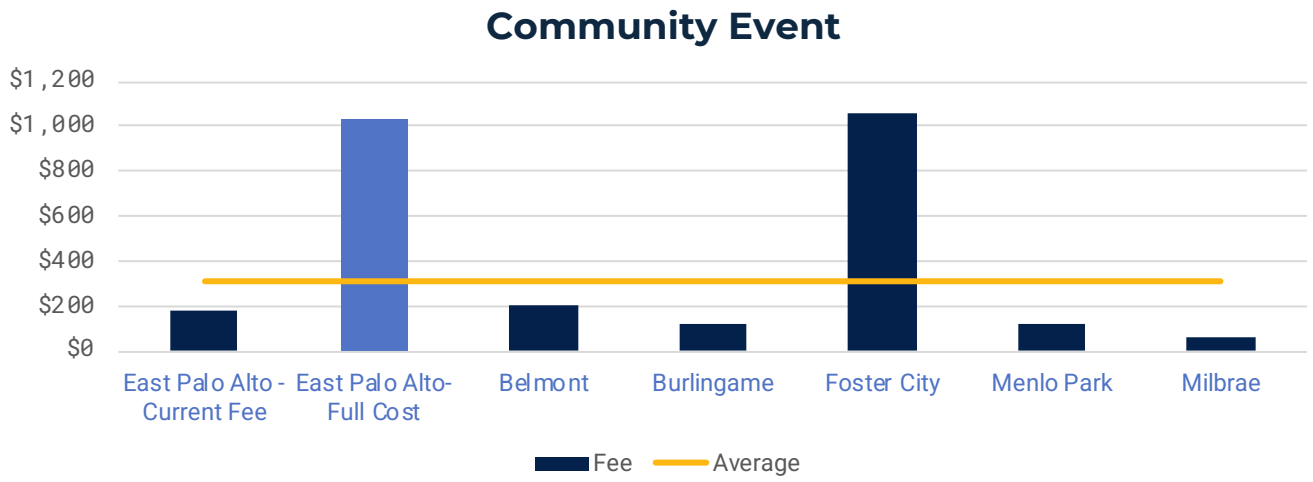
Community Services currently charges a fee of $68 for a Pavillion Rental - 4 hours. Through this study, the project team calculated the full cost of this service to be $448. The following graph shows how East Palo Alto's current fee and full cost compares to surveyed jurisdictions.



East Palo Alto's current fee is in the middle among the rest of the jurisdictions at $68. Their full cost of $448 is above the jurisdictional average of $78. The City's current fee is most similar to Menlo Park's fee of $60, while the calculated full cost is most comparable to Burlingame's fee of $130.

13 COMMUNITY EVENT

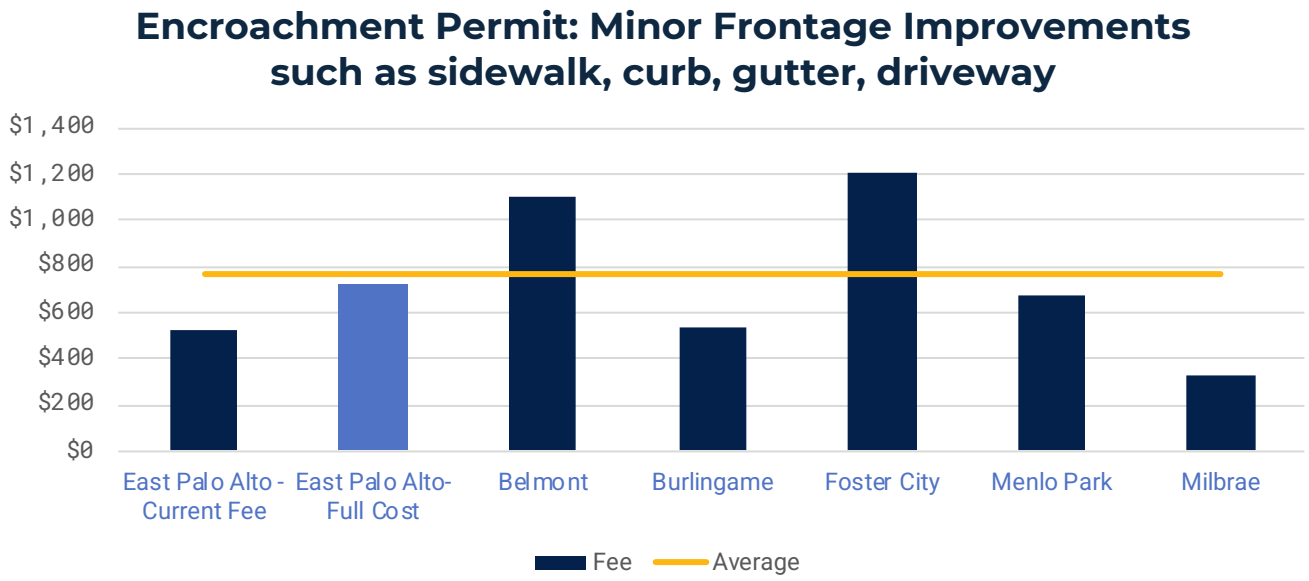
Community Services currently charges a fee of $182 for a Community Event. Through this study, the project team calculated the full cost of this service to be $1,038. The following graph shows how East Palo Alto's current fee and full cost compares to surveyed jurisdictions.



East Palo Alto's current fee is in the middle among the rest of the jurisdictions at $182. Their full cost of $1,038 is above the jurisdictional average of $314. The City's current fee is most similar to Menlo Park's fee of $125, while the calculated full cost is most comparable to Foster City's fee of $1,061.

14 ENCROACHMENT PERMIT: MINOR FRONTAGE IMPROVEMENTS SUCH AS SIDEWALK, CURB, GUTTER, DRIVEWAY

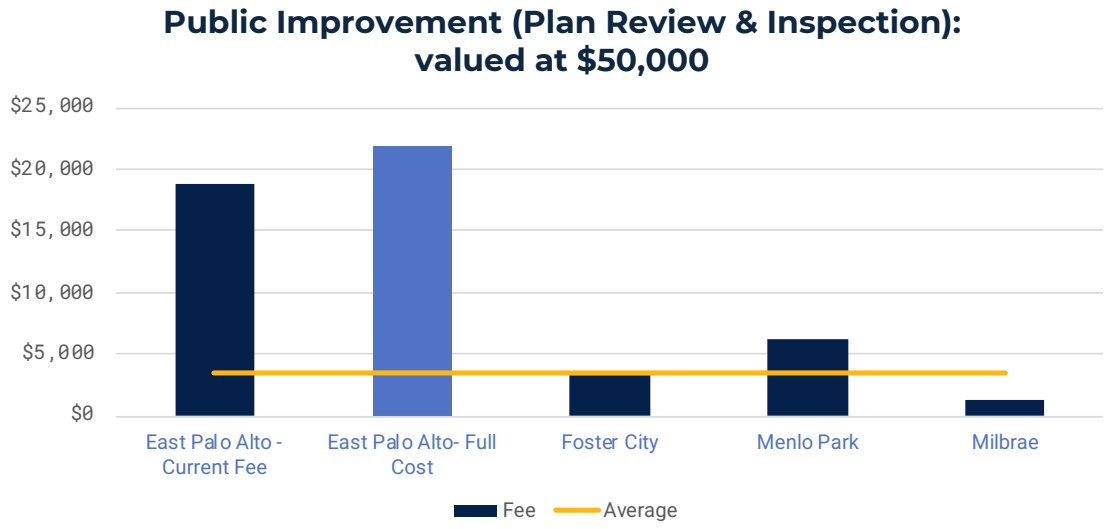
Engineering currently charges a fee of $520 for Encroachment Permit: Minor Frontage Improvements such as sidewalk, curb, gutter, driveway. Through this study, the project team calculated the full cost of this service to be $721. The following graph shows how East Palo Alto's current fee and full cost compares to surveyed jurisdictions.



East Palo Alto's current fee is in the middle when compared to the rest of the jurisdictions at $520. Their full cost of $721 is below the jurisdictional average of $770. The City's current fee is most similar to Burlingame's fee of $540, while the calculated full cost is most comparable to Menlo Park's fee of $670.

15 PUBLIC IMPROVEMENT (PLAN REVIEW & INSPECTION): VALUED AT $50,000

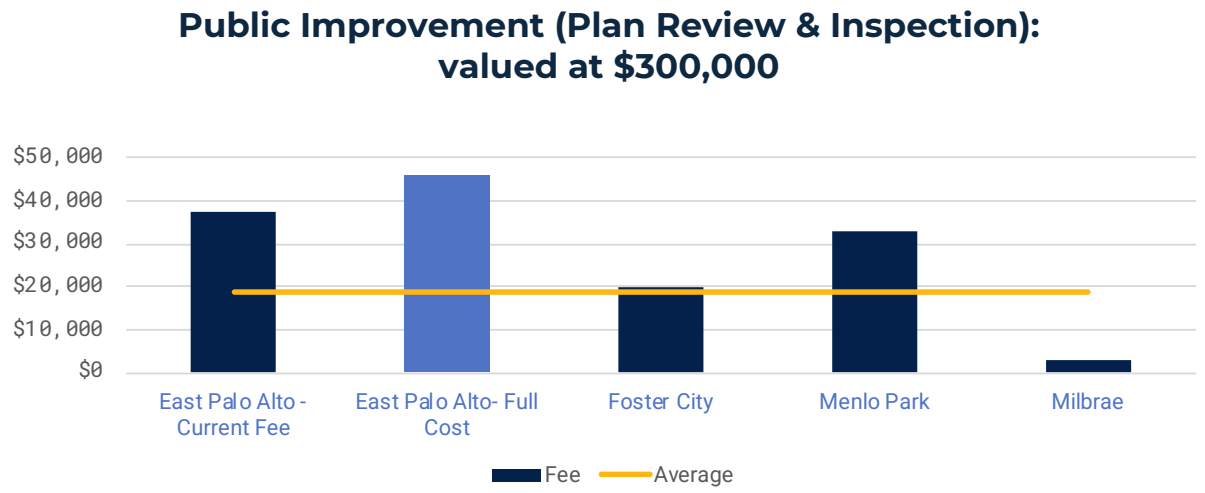
Engineering currently charges a fee of $18,772 for Public Improvement (Plan Review & Inspection): valued at $50,000. Through this study, the project team calculated the full cost of this service to be $21,981. The following graph shows how East Palo Alto's current fee and full cost compares to surveyed jurisdictions.



East Palo Alto's current fee is higher when compared to the rest of the jurisdictions at $18,772. Their full cost of $21,981 is above the jurisdictional average of $3,567. The City's current fee and full cost is most similar to Menlo Park's fee of $6,160.

16 PUBLIC IMPROVEMENT (PLAN REVIEW & INSPECTION): VALUED AT $300,000

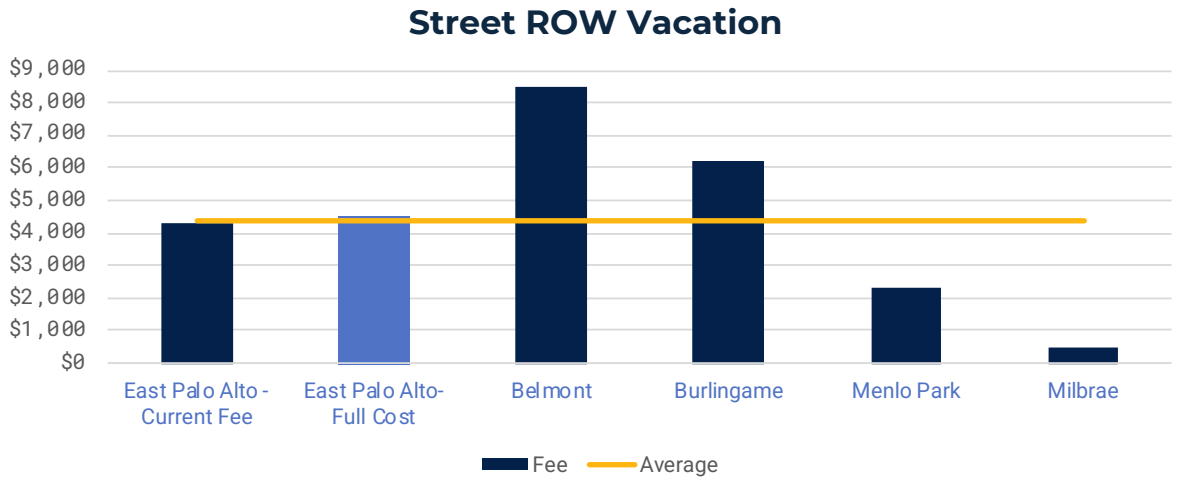
Engineering currently charges a fee of $37,542 for Public Improvement (Plan Review & Inspection): valued at $300,000. Through this study, the project team calculated the full cost of this service to be $45,742. The following graph shows how East Palo Alto's current fee and full cost compares to surveyed jurisdictions.



East Palo Alto's current fee is higher when compared to the rest of the jurisdictions at $37,542. Their full cost of $45,742 is below the jurisdictional average of $18,484. The City's current fee and full cost is most similar to Menlo Park's fee of $32,910.

17 STREET ROW VACATION

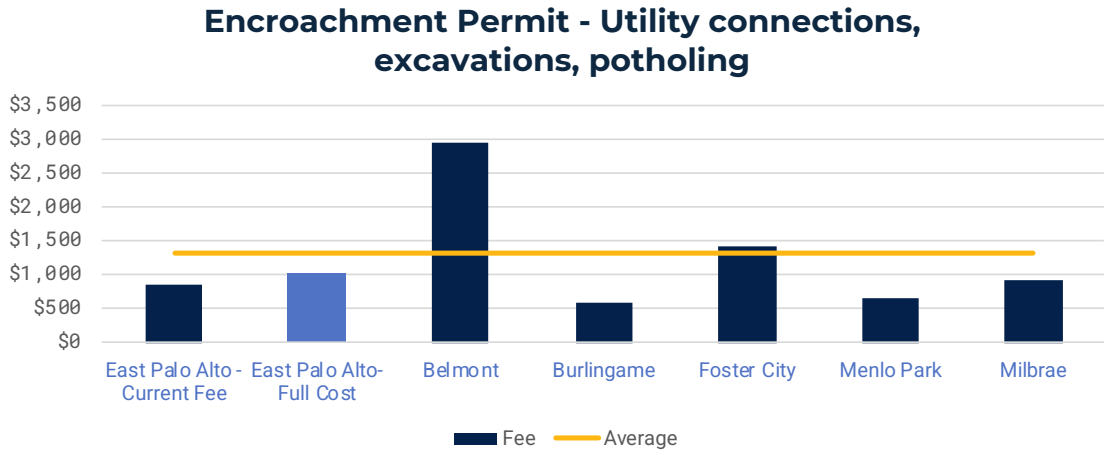
Engineering currently charges a fee of $4,333 for Street ROW Vacation. Through this study, the project team calculated the full cost of this service to be $4,545. The following graph shows how East Palo Alto's current fee and full cost compares to surveyed jurisdictions.



East Palo Alto's current fee is in the middle when compared to the rest of the jurisdictions at $4,333. Their full cost of $4,545 is above the jurisdictional average of $4,375. The City's current fee and full cost is most similar to Burlingame's fee of $6,239.

18 ENCROACHMENT PERMIT - UTILITY CONNECTIONS, EXCAVATIONS, POTHOLING

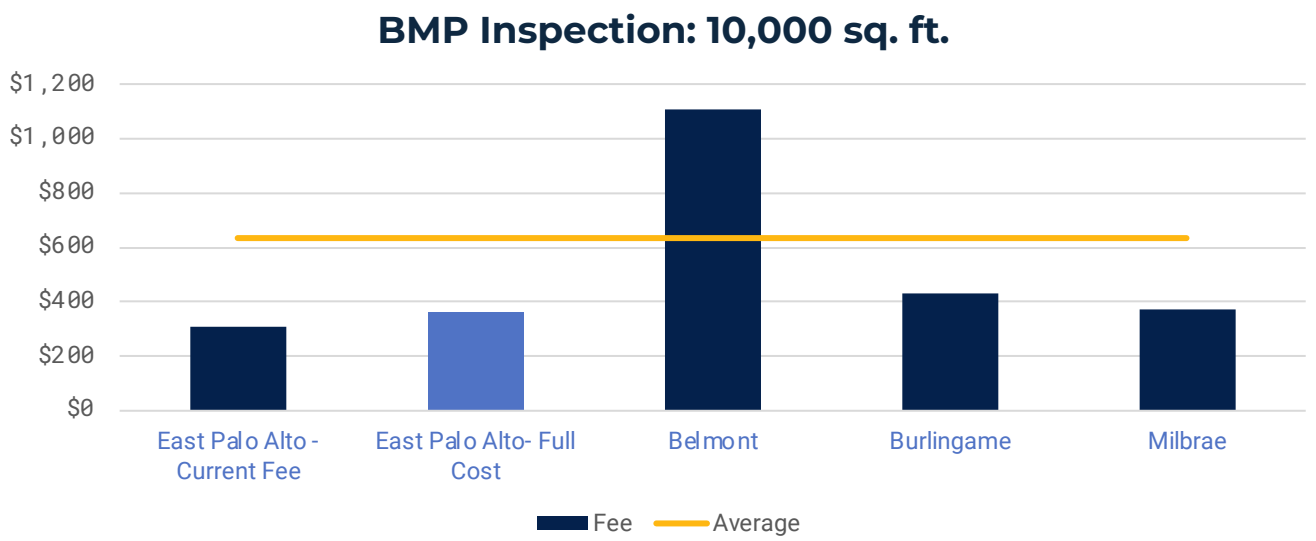
Engineering currently charges a fee of $867 for Encroachment Permit - Utility connections, excavations, potholing. Through this study, the project team calculated the full cost of this service to be $1,033. The following graph shows how East Palo Alto's current fee and full cost compares to surveyed jurisdictions.



East Palo Alto's current fee is in the middle when compared to the rest of the jurisdictions at $867. Their full cost of $1,033 is below the jurisdictional average of $1,310. The City's current fee and full cost is most similar to Millbrae's fee of $933.

19 BMP INSPECTION: 10,000 SQ. FT.

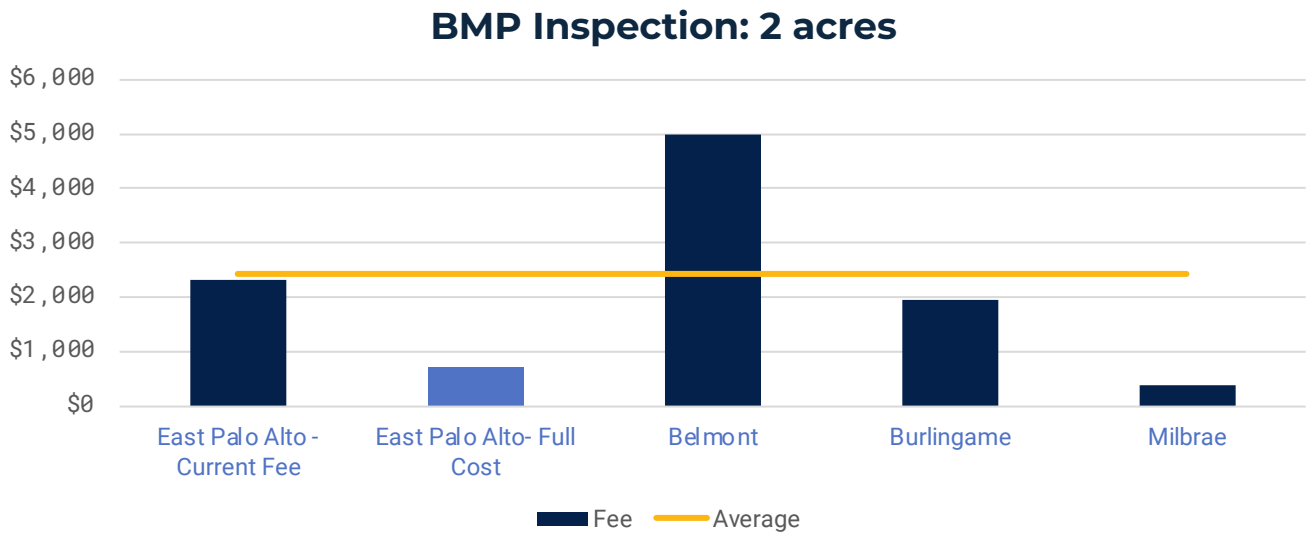
Environmental Services currently charges a fee of $310 for a BMP Inspection: 10,000 sq. ft. Through this study, the project team calculated the full cost of this service to be $364. The following graph shows how East Palo Alto's current fee and full cost compares to surveyed jurisdictions.



East Palo Alto's current fee is lower among the rest of the jurisdictions at $310. Their full cost of $364 is below the jurisdictional average of $635. The City's current fee and full cost is most similar to Millbrae's fee of $370.

20 BMP INSPECTION: 2 ACRES

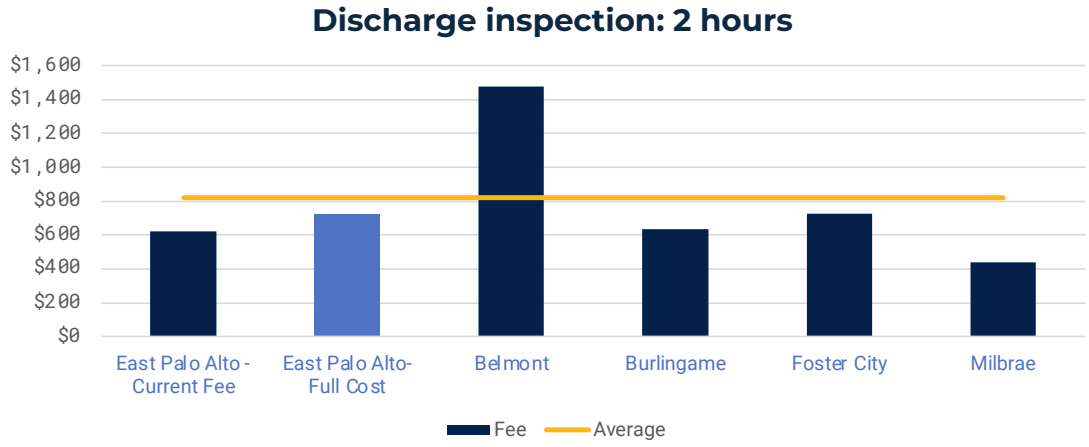
Environmental Services currently charges a fee of $2,329 for a BMP Inspection: 2 acres. Through this study, the project team calculated the full cost of this service to be $729. The following graph shows how East Palo Alto's current fee and full cost compares to surveyed jurisdictions.



East Palo Alto's current fee is higher than most of the rest of the jurisdictions at $2,329. Their full cost of $729 is below the jurisdictional average of $2,435. The City's current fee is most similar to Burlingame's fee of $1,959, while the calculated full cost is most comparable to Millbrae's fee of $370.

21 DISCHARGE INSPECTION: 4 HOURS

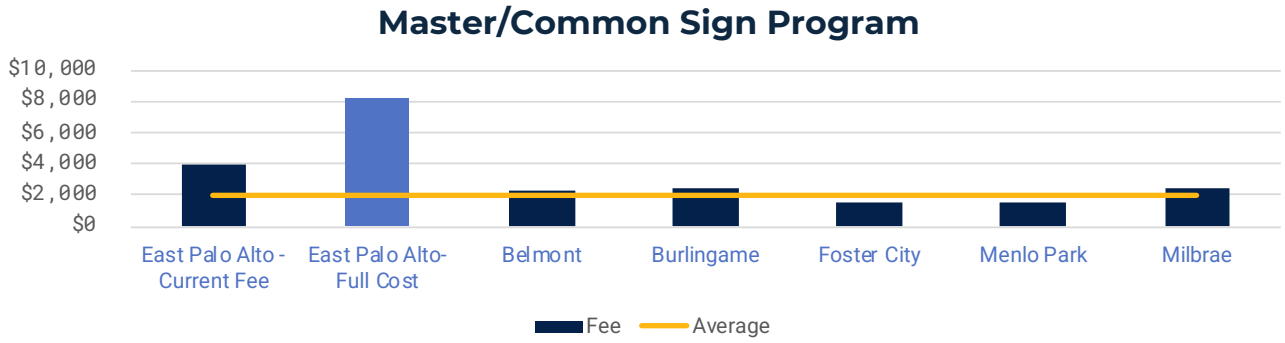
Environmental Services currently charges a fee of $621 for a Discharge inspection: 4 hours. Through this study, the project team calculated the full cost of this service to be $729. The following graph shows how East Palo Alto's current fee and full cost compares to surveyed jurisdictions.



East Palo Alto's current fee is in the middle when compared to the rest of the jurisdictions at $2,329. Their full cost of $729 is below the jurisdictional average of $820. The City's current fee is most similar to Burlingame's fee of $638, while the calculated full cost is most comparable to Foster City's fee of $728.

22 MASTER/COMMON SIGN PROGRAM

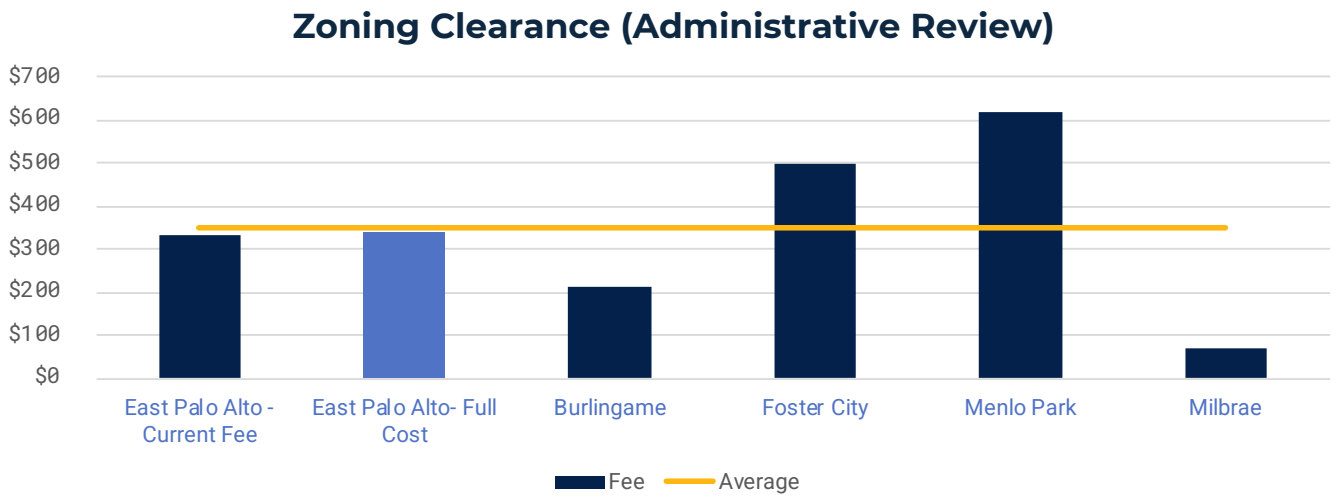
Planning currently charges a fee of $3,985 for a Master/Common Sign Program. Through this study, the project team calculated the full cost of this service to be $8,154. The following graph shows how East Palo Alto's current fee and full cost compares to surveyed jurisdictions.



East Palo Alto's current fee is higher than most of the rest of the jurisdictions at $3,985. Their full cost of $8,151 is above the jurisdictional average of $2,025. The City's current fee and full cost is most similar to Burlingame's fee of $2,379.

23 ZONING CLEARANCE (ADMINISTRATIVE REVIEW)

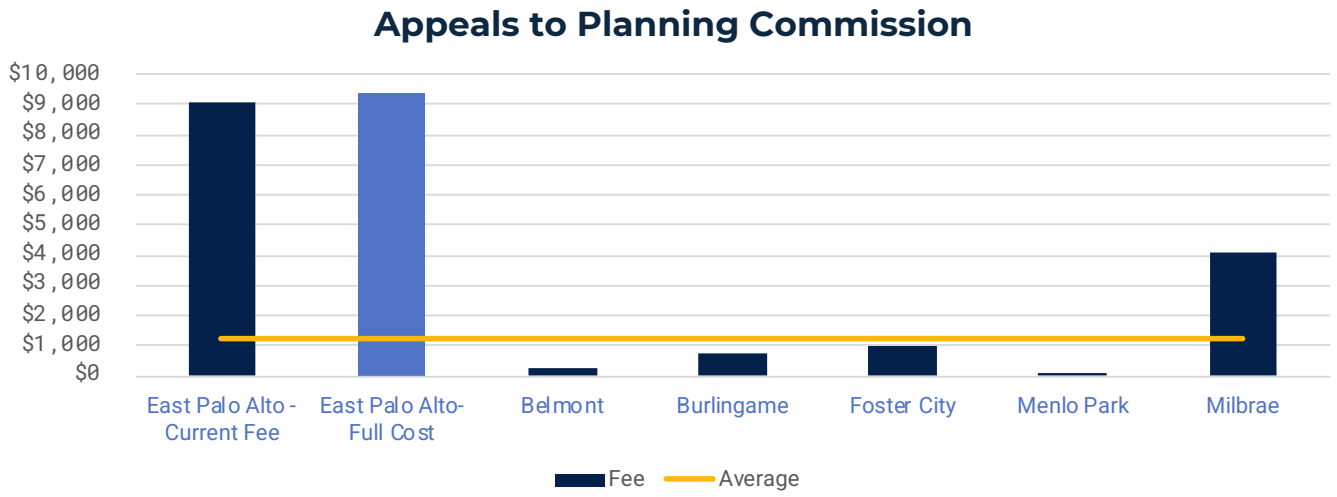
Planning currently charges a fee of $332 for a Zoning Clearance (Administrative Review). Through this study, the project team calculated the full cost of this service to be $337. The following graph shows how East Palo Alto's current fee and full cost compares to surveyed jurisdictions.



East Palo Alto's current fee is in the middle when compared to the rest of the jurisdictions at $332. Their full cost of $337 is below the jurisdictional average of $350. The City's current fee and full cost is most similar to Burlingame's fee of $212.

24 APPEALS TO PLANNING COMMISSION

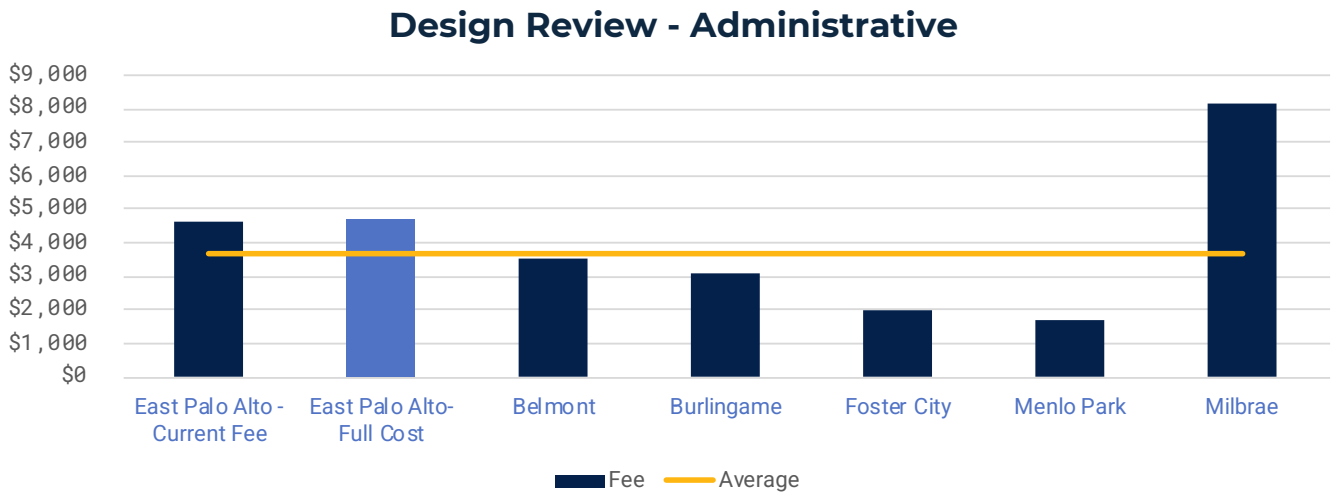
Planning currently charges a fee of $9,051 for an Appeals to Planning Commission. Through this study, the project team calculated the full cost of this service to be $9,361. The following graph shows how East Palo Alto's current fee and full cost compares to surveyed jurisdictions.



East Palo Alto's current fee and full cost calculated are than the jurisdictional average of $1,244. The City's current fee and full cost is most similar to Millbrae's fee of $4,106.

25 DESIGN REVIEW - ADMINISTRATIVE

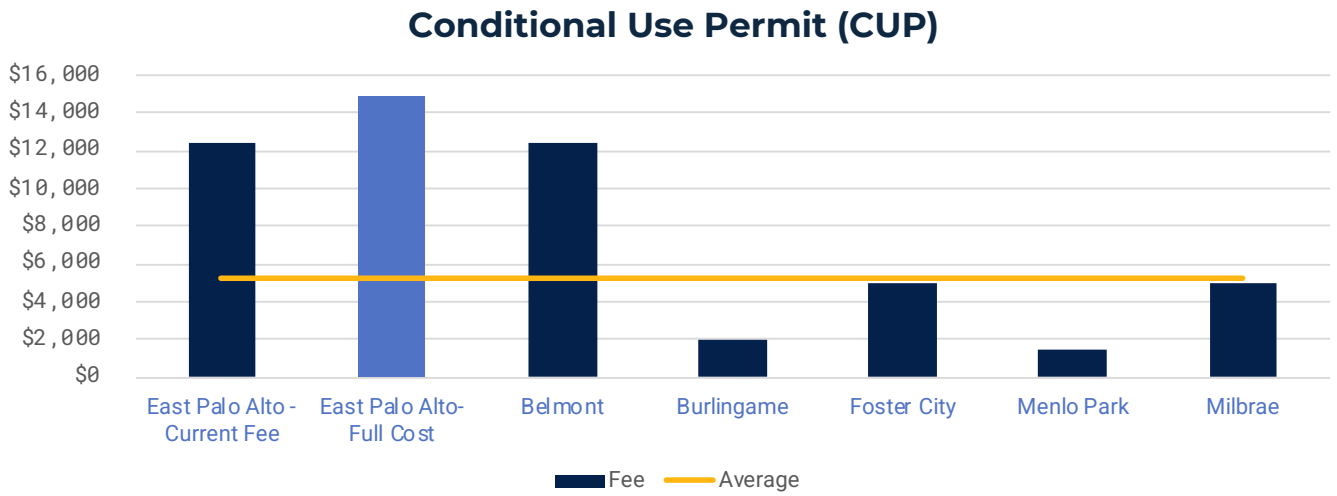
Planning currently charges a fee of $4,651 for a Design Review - Administrative. Through this study, the project team calculated the full cost of this service to be $4,715. The following graph shows how East Palo Alto's current fee and full cost compares to surveyed jurisdictions.



East Palo Alto's current fee is higher than most of the rest of the jurisdictions at $4,651. Their full cost of $4,713 is above the jurisdictional average of $3,693. The City's current fee and full cost is most similar to Belmont's fee of $3,559.

26 CONDITIONAL USE PERMITS (CUP)

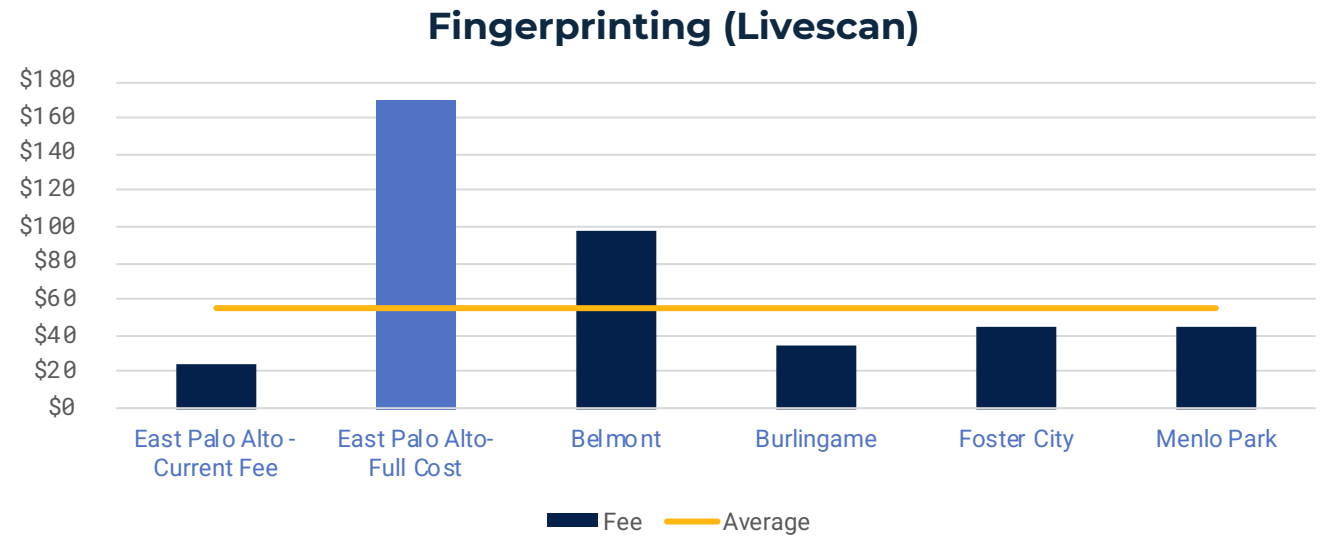
Planning currently charges a fee of $12,372 for Conditional Use Permits (CUP). Through this study, the project team calculated the full cost of this service to be $14,866. The following graph shows how East Palo Alto's current fee and full cost compares to surveyed jurisdictions.



With the exception of Belmont at $12,456, East Palo Alto's current fee is higher than all other surveyed jurisdictions. The City's full cost of $14,860 is significantly above the jurisdictional average of $5,17

27 FINGERPRINTING (LIVESCAN)

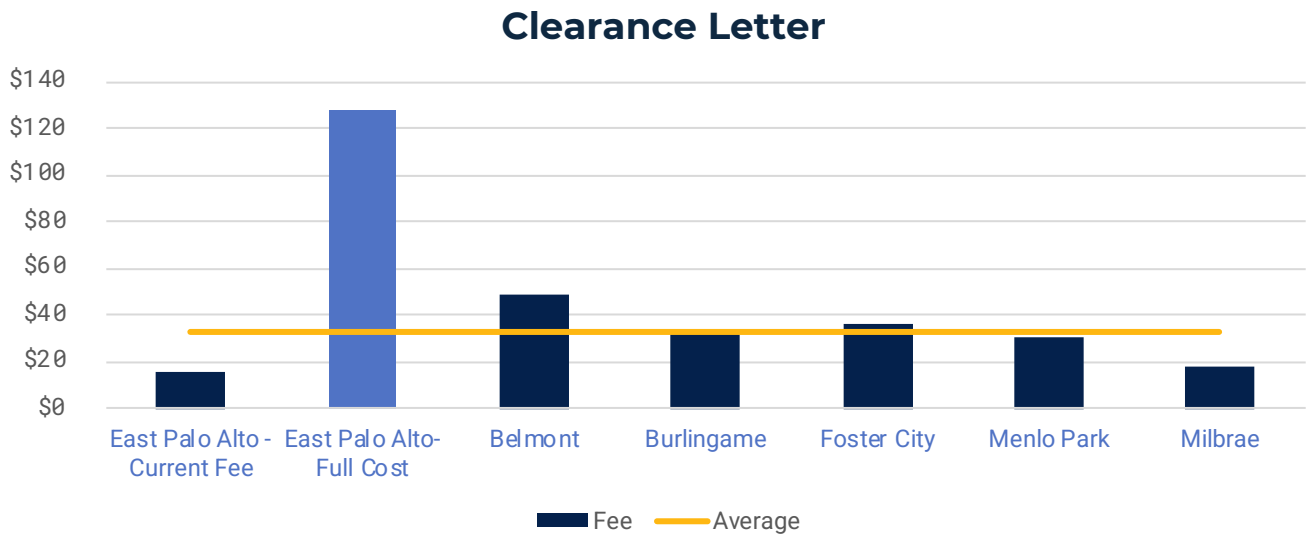
Police currently charges a fee of $25 for Fingerprinting (Livescan). Through this study, the project team calculated the full cost of this service to be $170. The following graph shows how East Palo Alto's current fee and full cost compares to surveyed jurisdictions.



East Palo Alto's current fee is lower than most of the rest of the jurisdictions at $25. Their full cost of $170 is above the jurisdictional average of $56. The City's current fee is most similar to Burlingame's fee of $35, whereas the full cost is most similar to Belmont's fee of $98.

28 CLEARANCE LETTER

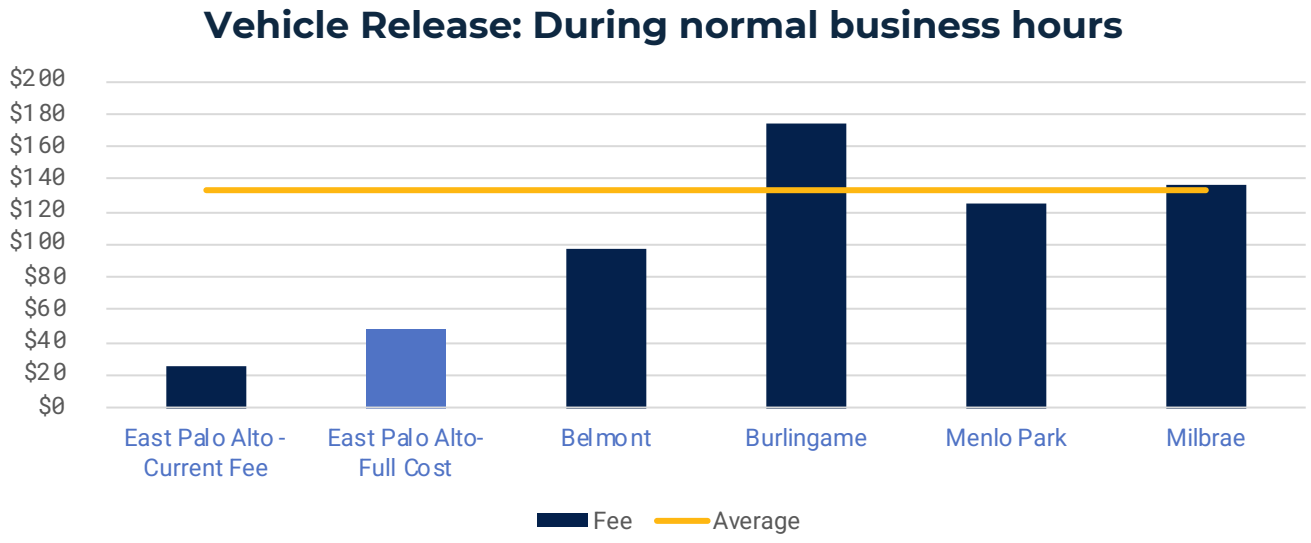
Police currently charges a fee of $15 for a Clearance Letter. Through this study, the project team calculated the full cost of this service to be $127. The following graph shows how East Palo Alto's current fee and full cost compares to surveyed jurisdictions.



East Palo Alto's current fee is lower than most of the rest of the jurisdictions at $15. Their full cost of $127 is above the jurisdictional average of $33. The City's current fee is most similar to Millbrae's fee of $17, whereas the full cost is most similar to Belmont's fee of $49.

29 VEHICLE RELEASE: DURING NORMAL BUSINESS HOURS

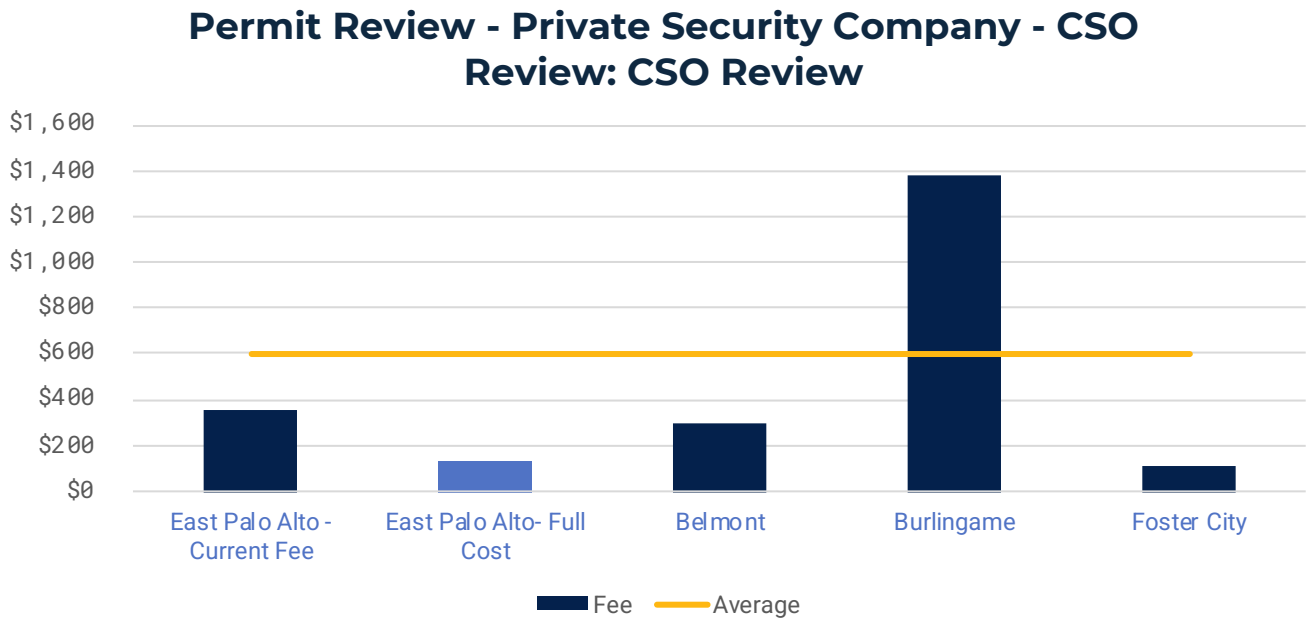
Police currently charges a fee of $25 for Vehicle Release: during normal business hours. Through this study, the project team calculated the full cost of this service to be $49. The following graph shows how East Palo Alto's current fee and full cost compares to surveyed jurisdictions.



East Palo Alto's current fee is lower than most of the rest of the jurisdictions at $25. Their full cost of $49 is below the jurisdictional average of $133. The City's current fee and full cost is most similar to Belmont's fee of $98.

30 PERMIT REVIEW - PRIVATE SECURITY COMPANY - CSO REVIEW

Police currently charges a fee of $359 for Permit Review – Private Security Company – CSO Review. Through this study, the project team calculated the full cost of this service to be $137. The following graph shows how East Palo Alto's current fee and full cost compares to surveyed jurisdictions.



East Palo Alto's current fee is higher than most of the rest of the jurisdictions at $359. Their full cost of $137 is below the jurisdictional average of $594. The City's current fee is most similar to Belmont's fee of $293, whereas the full cost is most similar to Foster City's fee of $106.

SUMMARY

Overall, East Palo Alto generally has current fees that are lower, or in the middle when compared to the fees of the other surveyed jurisdictions. Of the surveyed jurisdictions, East Palo Alto's current fees are most comparable with Burlingame, Menlo, & Millbrae, while the City's full cost calculated is most comparable to fees charged by Belmont, Burlingame, & Millbrae. It is important to note that the results of this survey only show the fees adopted by the council, not the cost recovery policy decisions for departments or a jurisdiction. As such, the results of this survey should be used as a secondary decision-making tool.

Fee Name	Unit	Current Fee	Total Cost	Proposed Fee
Miscellaneous Fees				
Photocopy:				
8.5" x 11" (black & white single side)	Each	$0.10	$0.10	$0.10
8.5" x 11" (color single side)	Each	$0.25	$0.25	$0.25
Finance Department				
Checks Returned by Bank or Financial Institution Due to Insufficient Funds				
First Returned Check	Per Check	$25	$25	$25
Each Additional Check	Per Check	$35	$35	$35
Overdue Invoices	Per Annum	$10 or 10% whichever is greater		$10 or 10% whichever is greater
Credit Card Surcharge	% of Transaction	New		3.50%
Planning				
Pre-Application Fees				
Hourly Pre-Application (1 hr. minimum)	Per Hour	$332	$337	$337
Pre-Application Services for Projects Subject to City's Pre-Application Ordinance	Deposit	$11,624	$8,312	$8,312
Preliminary Ministerial Review Hourly (2 hr. minimum)	Per Hour	$332	$337	$337
Appeals				
Appeals to City Council (if initiated by City Council - no charge)	Each	$9,051	$9,361	$9,361
Appeals to Planning Commission	Each	$9,051	$9,361	$9,361
Subdivision				
Certificate of Compliance	Each	$5,148	$2,147	$2,147
Condominium Conversion	Deposit	$40,523	$41,000	$41,000
Final Maps Planning Review of Engineering Application				
4 lots or less	Each	$4,982	$1,682	$1,682
5 - 25 lots	Each	$5,646	$2,020	$2,020
>25 lots	Each	$6,311	$2,357	$2,357
Lot Line Adjustment	Each	$5,315	$2,695	$2,695
Lot Line Merger	Each	$5,315	$2,695	$2,695
Tentative Map				
4 lots or less	Each	$16,607	$8,354	$8,354
5 - 25 lots	Each	$23,251	$10,042	$10,042
>25 lots	Deposit	$45,172	$11,730	$11,730
Tentative Map Extension	Each	$9,965	$2,731	$2,731
Tentative Map Modification	Each	$10,628	$3,744	$3,744
Design Review*				
Administrative	Each	$4,651	$4,715	$4,715
Planning Commission Review	Each	$14,947	$14,866	$14,866
Garage Conversions / Minor ADR (400-s-f. or less)	Per Hour	$332	$337	$337
Permit Adjustment Minor	Each	New	$693	$693
Permit Adjustment Major	Each	New	$1,345	$1,345
Legislative Actions				
General Plan Amendment	Deposit	$21,590	$22,000	$22,000
Planned Unit Development	Deposit	$21,590	$15,000	$15,000
Zone Change/Text Amendment	Deposit	$21,590	$12,000	$12,000
Tree Removal*				
1-2 trees	Base	$404	$506	$506
3 or more	Per Tree	$288	$29	$29
Signage*				
Master/Common Sign Program	Each	$3,985	$8,154	$8,154
Permanent Sign	Per Sign	$865	$1,048	$1,048
Temporary Sign	Per Sign	$230	$494	$494
Use Permit*				
Administrative Use Permit (AUP) / Special Use Permit (SUP)	Each	$3,985	$4,715	$4,715
Conditional Use Permits (CUP)	Each	$12,372	$14,866	$14,866
Public Convenience/Necessity Application - Filing Fees	Each	$12,372	$1,775	$1,775
Renewal /Modification to Conditions				
AUP / SUP	Each	$2,882	$2,900	$2,900
CUP	Each	$9,383	$7,269	$7,269
Temporary Use Permit				
Minor	Each	Modified	$337	$337
Administrative	Each	Modified	$2,734	$2,734
Major	Each	Modified	$4,715	$4,715
Major TUP Annual Renewal	Each	$1,728	$1,386	$1,386
Zoning Relief				
Parking Exception	Per Hour	$332	$337	$337
Variance	Each	Modified	$3,406	$3,406
Environmental				
Categorical Exemption				
Standard	Each	$1,661	$1,386	$1,386
Infill/Other				
Staff Led	Each		$3,412	$3,412
Consultant Cost	Deposit	Actual Cost	Actual Cost	Actual Cost
Initial Study				
Consultant Cost	Deposit	Actual Cost	Actual Cost	Actual Cost
Initial Study - Mitigated Negative Declaration/ Negative Declaration				

Fee Name	Unit	Current Fee	Total Cost	Proposed Fee
Consultant Cost (Will include a 15% staff management fee)	Deposit	Actual Cost	Actual Cost	Actual Cost
Environmental Impact Studies (EIR)				
EIR Report - Consultant Cost (Will include a 15% staff management fee)	Deposit	Actual Cost	Actual Cost	Actual Cost
Mitigation Monitoring - one-time	Each	$3,886	$3,749	$3,749
Notice of Determination (NOD) - CEQA Filing	Each	Per State	Per State	Per State
Zoning Clearance (Administrative Review)				
Other Accessory	Per Hour	$332	$337	$337
Other Administrative Fees				
Building Permit Review				
Minor Res- Improvement	Each	$697	$337	$337
Tenant Improvements	Each	$2,823	$1,012	$1,012
Addition of s. f.	Each	$2,259	$337	$337
New SFD	Each	$1,496	$337	$337
New Multifamily	Each	$6,145	$1,350	$1,350
New Commercial	Each	$6,145	$1,350	$1,350
Miscellaneous Planning				
Noticing/Special Noticing (each mailing)	Each	$664	$675	$675
Newspaper Ad Publication	Deposit	$400	$400	$400
Written Determination by City Planning Manager	Each	$1,661	$1,422	$1,422
Planning Hourly Fee (1 hr. minimum)	Per Hour	$332	$337	$337
Refund Administrative Fee	Each	Per Policy	Per Policy	Per Policy
*Note: Time extensions will be charged at 10% of base Permit fee				
Code Enforcement				
Code Enforcement Investigation	Per Hour	New	$185	$185
Recording & Removal of Liens	Each	New	$600	$600
Notary	Each	$15	$15	$15
Engineering				
Grading - Plan Review				
< 50 Cubic Yards	Each	$2,888	$4,335	$4,335
50 - 100 Cubic Yards	Each	$2,888	$4,335	$4,335
101-500 Cubic Yards	Each	$5,776	$6,098	$6,098
> 501 Cubic Yards	Deposit	$17,328	$17,357	$17,357
Grading - Inspection				
< 50 Cubic Yards	Each	$2,888	$5,586	$5,586
50 - 100 Cubic Yards	Each	$4,333	$8,594	$8,594
101-500 Cubic Yards	Each	$17,328	$21,485	$21,485
> 501 Cubic Yards	Deposit	$23,050	$25,782	$25,782
Public Improvements - Plan Review				
Base fee up to $10,000	Base	$2,888	$3,271	$3,271
Base fee at $10,000	Base	$2,888	$3,271	$3,271
Each add'l $10,000 or fraction thereof	Each add'l $10,000 or fraction thereof	$2,888	$3,066	$3,066
Base fee at $50,000	Base	$14,439	$15,535	$15,535
Each add'l $10,000 or fraction thereof	Each add'l $10,000 or fraction thereof	$1,732	$2,174	$2,174
Base fee at $100,000	Base	$23,103	$26,404	$26,404
Each add'l $10,000 or fraction thereof	Each add'l $10,000 or fraction thereof	$289	$1,087	$1,087
Base fee above $500,000	Deposit	$34,654	$37,169	$37,169
Public Improvements - Inspection				
Base fee up to $10,000	Base	$1,444	$2,149	$2,149
Base fee at $10,000	Base	$1,444	$2,149	$2,149
Each add'l $10,000 or fraction thereof	Each add'l $10,000 or fraction thereof	$721	$1,074	$1,074
Base fee at $50,000	Base	$4,333	$6,446	$6,446
Each add'l $10,000 or fraction thereof	Each add'l $10,000 or fraction thereof	$2,021	$2,578	$2,578
Base fee at $100,000	Base	$14,439	$19,337	$19,337
Each add'l $10,000 or fraction thereof	Each add'l $10,000 or fraction thereof	$506	$1,289	$1,289
Base fee above $500,000	Deposit	$34,654	$38,674	$38,674
Encroachment Permit				
Minor Frontage Improvements such as sidewalk, curb, gutter, driveway	Each	$520	$721	$721
Utility connections, excavations, potholing	Each	$867	$1,033	$1,033
Temporary closure of sidewalk, bike/vehicle lane(s), street	Each	$867	$1,033	$1,033
Any other work encroaching into the public right-of-way	Each	$867	$1,033	$1,033
Street Cut Fee	Each	$867	$1,033	$1,033
Encroachment Permit - Other				
Administration and Coordination of Water Meter	Each	New	$402	$402
Debris Box / Temporary Storage	Per Week	$1,155	$1,234	$1,234
Traffic Control Plan Review	Per Street	$1,155	$1,192	$1,192
Traffic Control Field Inspection/Monitoring	Per Day	$1,155	$537	$537
Hauling	Per Week	New	$617	$617
Parking Restriction in the Right of Way	Each	New	$506	$506
Final Parcel Map / Tract Map: City Admin Cost (consultant costs are passed through to applicant)				
Parcel Map (4 Lots Less)	Each	$4,333	$4,545	$4,545

Fee Name	Unit	Current Fee	Total Cost	Proposed Fee
Tract Map (5 or More Lots)	Each	$5,776	$6,061	$6,061
Certificate of Compliance / Street Right-of-Way (ROW) Vacation				
Certificate of Compliance	Each	$4,333	$4,545	$4,545
Street ROW Vacation	Each	$4,333	$4,545	$4,545
Transportation Permit				
Single Trip	Per Trip	$18	$16	$16
Annual	Yearly	$103	$90	$90
Administrative Fees				
Request for Letter (e.g.- Flood Hazard Letter)	Each	$289	$750	$750
Bond Administration and Release	Each	$289	$375	$375
4th and Subsequent Plan Review Fee	Each	$867	$937	$937
Re-inspection Fee	Each	$867	$1,074	$1,074
After-Hours Inspection (minimum 4 hours)	Hourly	$326	$253	$253
Staff Augmentation / Technical Review	Houlr	New	$252	$252
Planning Application Review / Support				
Tentative Maps (4 lots or less)	Each	$2,888	$5,811	$5,811
Tentative Maps (5 lots or more)	Each	$4,333	$5,811	$5,811
Tentative Map Extension / Modification	Each	$1,444	$3,915	$3,915
Second Unit Permit	Each	$577	$750	$750
Use Permit (all types)	Each	$577	$750	$750
Hourly Pre-Application	Each	$289	$473	$473
Lot Line Adjustment	Each	$4,333	$4,545	$4,545
Lot Line Merger	Each	$4,333	$4,545	$4,545
Building Plan Review / Support				
Minor Residential Improvement	Each	$347	$375	$375
TI (Tenant Improvement) or Addition of square feet	Each	$577	$750	$750
New SFD (Single Family/ Dwelling)	Each	$1,155	$1,500	$1,500
New Multifamily or Commercial	Each	$2,311	$3,000	$3,000
Environmental Services Programs				
NPDES				
BMP Inspection:				
2,500 to 10,000 square feet	Each	$310	$364	$364
10,001 square feet to 1 acre	Each	$777	$547	$547
1 acre to 5 acres	Each	$2,329	$729	$729
5+ acres	Each	Modified	$1,094	$1,094
C.4 Inspection:				
Low Priority	Each	$156	$547	$547
High Priority	Each	$388	$547	$547
Discharge Inspection:				
Initial Inspection (3 Hours)	Each	$465	$547	$547
Each Additional Hour	Hourly	$156	$182	$182
Monitoring, Sampling or Testing, Lab analysis, cost, and rental equipment charges	Deposit	Actual Cost	Actual Cost	Actual Cost
Illicit Discharge Clean-Up in the Public Right-of-Way:				
Initial Inspection (3 Hours)	Each	$465	$547	$547
Each Additional Hour	Hourly	$156	$182	$182
Vacant Property Inspections, Illegal Dumping, Encampments, etc.	Per Inspection	$310	$319	$319
Administrative Citation				
Minor Discarge (inert substance)	Each	$116		$116
Major Discharge (non-inert substance, per storm drain impact)	Each	$1,153		$1,153
Other Services Not Listed	Hourly	$156	$182	$182
Stormwater Design Review				
Single Family	Each	$40	$729	$729
Other:				
2,500 to 10,000 square feet	Each	$310	$364	$364
10,001 square feet to 1 acre	Each	$777	$547	$547
1 acre to 5 acres	Each	$2,329	$729	$729
5+ acres	Each	$545	$1,094	$1,094
Water Efficiency Landscape Ordinance Plan Review				
80% or more low-to-no water use	Per Acre	$232	$1,459	$1,459
80% or less low-to-no water use	Per Acre	$933	$1,459	$1,459
Solid Waste Enclosure Design Review				
Less than 1 acre or low concern projects	Each	Modified	$364	$364
1 acre or high concern projects	Each	Modified	$729	$729
Misc. Fees				
Each Additional Plan Review after first three reviews	Hourly	$156	$182	$182
Environmental Impact Studies (EIR)	Each	$777	$912	$912
Building				
Building Permit and Plan Check				
Building Plan Check - Single Family Residential				
Base fee up to $5,000	Base	$218	$246.45	$246.45
Base fee at $5,000	Base	$218	$246.45	$246.45
Each additional $1,000 or fraction thereof	Each additional $1,000	$21.77	$30.81	$30.81
Base fee at $25,000	Base	$653	$862.58	$862.58
Each additional $1,000 or fraction thereof	Each additional $1,000	$8.71	$24.65	$24.65
Base fee at $50,000	Base	$871	$1,478.70	$1,478.70

Fee Name	Unit	Current Fee	Total Cost	Proposed Fee
Each additional $1,000 or fraction thereof	Each additional $1,000	$8.71	$49.29	$49.29
Base fee at $100,000	Base	$1,307	$3,943.20	$3,943.20
Each additional $1,000 or fraction thereof	Each additional $1,000	$3.27	$14.79	$14.79
Base fee at $500,000	Base	$2,612	$9,858.00	$9,858.00
Each additional $1,000 or fraction thereof	Each additional $1,000	$2.06	$7.39	$7.39
Base fee at $1,000,000	Base	$3,647	$13,554.75	$13,554.75
Each additional $1,000 or fraction thereof	Each additional $1,000	$2.06	$1.23	$1.23
Base fee at $5,000,000	Base	$11,887	$18,483.75	$18,483.75
Each additional $1,000 or fraction thereof	Each additional $1,000	$2.06	$2.46	$2.46
Base fee at $10,000,000	Base	$22,187	$30,806.25	$30,806.25
Each additional $1,000 or fraction thereof	Each additional $1,000	$2.06	$1.23	$1.23
Building Permit/Inspection - Single Family Residential				
Base fee up to $5,000	Base	$218	$796.45	$796.45
Base fee at $5,000	Base	$218	$796.45	$796.45
Each additional $1,000 or fraction thereof	Each additional $1,000	$21.77	$59.73	$59.73
Base fee at $25,000	Base	$653	$1,991.11	$1,991.11
Each additional $1,000 or fraction thereof	Each additional $1,000	$8.71	$55.75	$55.75
Base fee at $50,000	Base	$653	$3,384.90	$3,384.90
Each additional $1,000 or fraction thereof	Each additional $1,000	$17.42	$51.77	$51.77
Base fee at $100,000	Base	$1,525	$5,973.34	$5,973.34
Each additional $1,000 or fraction thereof	Each additional $1,000	$7.08	$9.96	$9.96
Base fee at $500,000	Base	$4,355	$9,955.57	$9,955.57
Each additional $1,000 or fraction thereof	Each additional $1,000	$5.66	$9.96	$9.96
Base fee at $1,000,000	Base	$7,185	$14,933.36	$14,933.36
Each additional $1,000 or fraction thereof	Each additional $1,000	$5.66	$6.22	$6.22
Base fee at $5,000,000	Base	$29,825	$39,822.30	$39,822.30
Each additional $1,000 or fraction thereof	Each additional $1,000	$5.66	$3.98	$3.98
Base fee at $10,000,000	Base	$58,125	$59,733.44	$59,733.44
Each additional $1,000 or fraction thereof	Each additional $1,000	$5.66	$1.99	$1.99
Building Plan Check - Commercial/Multi-Family/Industrial				
Base fee up to $5,000	Base	$218	$246.45	$246.45
Base fee at $5,000	Base	$218	$246.45	$246.45
Each additional $1,000 or fraction thereof	Each add'l $1,000	$24.20	$16.43	$16.43
Base fee at $50,000	Base	$1,307	$985.80	$985.80
Each additional $1,000 or fraction thereof	Each add'l $1,000	$60.98	$29.57	$29.57
Base fee at $100,000	Base	$4,355	$2,464.50	$2,464.50
Each additional $1,000 or fraction thereof	Each add'l $1,000	$16.33	$24.65	$24.65
Base fee at $500,000	Base	$10,887	$12,322.50	$12,322.50
Each additional $1,000 or fraction thereof	Each add'l $1,000	$108.87	$5.91	$5.91
Base fee at $1,000,000	Base	$16,332	$15,279.90	$15,279.90
Each additional $10,000 or fraction thereof	Each add'l $10,000	$33.63	$40.53	$40.53
Base fee at $10,000,000	Base	$46,597	$51,754.50	$51,754.50
Each additional $10,000 or fraction thereof	Each add'l $10,000	$33.63	$61.61	$61.61
Base fee at $20,000,000	Base	$56,686	$113,367.00	$113,367.00
Each additional $10,000 or fraction thereof	Each add'l $10,000	$33.63	$68.51	$68.51
Base fee at $50,000,000	Base	$157,576	$318,906.30	$318,906.30
Each additional $10,000 or fraction thereof	Each add'l $10,000	$33.63	$59.44	$59.44
Base fee at $100,000,000	Base	$325,726	$616,125.00	$616,125.00
Each additional $10,000 or fraction thereof	Each add'l $10,000	$33.63	$9.24	$9.24
Base fee at $500,000,000	Base	$1,670,926	$985,800.00	$985,800.00
Each additional $10,000 or fraction thereof	Each add'l $10,000	$33.63	$4.62	$4.62
Building Permit/Inspection - Commercial/Multi-Family/Industrial				
Base fee up to $5,000	Base	$218	$298.67	$298.67
Base fee at $5,000	Base	$218	$298.67	$298.67
Each additional $1,000 or fraction thereof	Each add'l $1,000	$14.52	$46.46	$46.46
Base fee at $50,000	Base	$871	$2,389.34	$2,389.34
Each additional $1,000 or fraction thereof	Each add'l $1,000	$13.07	$51.77	$51.77
Base fee at $100,000	Base	$1,525	$4,977.79	$4,977.79
Each additional $1,000 or fraction thereof	Each add'l $1,000	$15.79	$11.45	$11.45
Base fee at $500,000	Base	$7,839	$9,557.35	$9,557.35
Each additional $1,000 or fraction thereof	Each add'l $1,000	$156.78	$10.75	$10.75
Base fee at $1,000,000	Base	$15,678	$14,933.36	$14,933.36
Each additional $10,000 or fraction thereof	Each add'l $10,000	$90.25	$98.45	$98.45
Base fee at $10,000,000	Base	$96,897	$103,537.97	$103,537.97
Each additional $10,000 or fraction thereof	Each add'l $10,000	$90.25	$103.54	$103.54
Base fee at $20,000,000	Base	$123,972	$207,075.93	$207,075.93
Each additional $10,000 or fraction thereof	Each add'l $10,000	$90.25	$69.03	$69.03
Base fee at $50,000,000	Base	$394,722	$414,151.87	$414,151.87
Each additional $10,000 or fraction thereof	Each add'l $10,000	$90.25	$124.25	$124.25
Base fee at $100,000,000	Base	$845,972	$1,035,379.67	$1,035,379.67
Each additional $10,000 or fraction thereof	Each add'l $10,000	$90.25	$25.88	$25.88
Base fee at $500,000,000	Base	$4,455,972	$2,070,759.35	$2,070,759.35
Each additional $10,000 or fraction thereof	Each add'l $10,000	$90.25	$12.94	$12.94
Miscellaneous Fees - Flat Rate Permits				
Demolition Minor	Flat	$545	$406	$406

Fee Name	Unit	Current Fee	Total Cost	Proposed Fee
Commercial Demoliton		Refer to Valuation Table	Refer to Valuation Table	Refer to Valuation Table
ADU Building Permit Resource Center Fee	Each	New	$1,700	$1,700
Single Family Dwelling Remodels (No Modifications to Walls):				
Kitchen Remodel	Flat	Modified	$1,042	$1,042
Bathroom Remodel	Flat	Modified	$843	$843
Door/Window Replacements (up to 20 Windows):				
Up to 4 Windows	Flat	$435	$497	$497
More than 4 and up to 20 Windows	Flat	$545	$696	$696
Greater than 20 Windows		Refer to Valuation Table	Refer to Valuation Table	Refer to Valuation Table
Fences:				
Over 7 ft - 64 l.f.	Flat	$327	$398	$398
Over 7 ft - Each additional 16 l.f. over 64 l.f.	Each Addl. 16 l.f.	$54	$66	$66
Non-Wood Fence CMU fence		Refer to Valuation Table	Refer to Valuation Table	Refer to Valuation Table
Photovoltaic Systems (Solar Systems):				
Solar - Residential	Each	$435	$445	$445
Solar - Commercial	Each			
Up to 50 kW	Each	$871	$1,336	$1,336
51kW - 250kW	Each	Modified	$3,071	$3,071
250+kW	Each	Modified	$6,446	$6,446
Property Research/Site Inspection for Business License	Each	$545	$199	$199
Re-roof: - Residential				
Up to 10,000 sq. ft. (No structural modification)	Flat	$435	$597	$597
Structural or Non-structural greater than 10,000 sq. ft.		Refer to Valuation Table	Refer to Valuation Table	Refer to Valuation Table
Electric Vehicle Charging Station (Residential)				
Residential	Flat	$197	$398	$398
Commercial		Refer to Valuation Table	Refer to Valuation Table	Refer to Valuation Table
Mechanical, Plumbing, Electrical Permit Fees				
Processing Fee - MEP	% of Permit Fee	New	40%	40%
MEP Inspections & Plan Check				
Water Heaters and Residential Commodes	Each	$144	$199	$199
Residential/Simple Standalone MPE Permit: (fee includes up to 3 from the list below)				
Simple Mechanical Items:				
Addition to Each heating appliance, refrigeration unit, cooling unit, absorption unit, or Each heating, cooling, absorption, or evaporative cooling system.	Each	$202	$199	$199
HVAC change out - existing dwelling	Each	$202	$199	$199
Air-handling unit over 10,000 CFM	Each	$202	$398	$398
Evaporative cooler	Each	$202	$398	$398
Ventilation fan connected to a single duct	Each	$202	$199	$199
Hood and duct system	Each	$202	$398	$398
Duct systems	Each	$202	$199	$199
Miscellaneous mechanical (wall furnace, condensing units, gas outlet/gas test, etc.)	Each	$202	$199	$199
Other simple mechanical	Each	$202	$199	$199
Simple Electrical Items:				
Receptacle, switch, and lighting outlets and fixtures				
1-20 devices	Each	$202	$398	$398
Each Additional 20 Devices	Each Add'l 20 Devices	$202	$199	$199
Pole or platform-mounted lighting fixtures	Each	$202	$199	$199
Residential appliances				
1-5 devices	Each	$202	$199	$199
Each Additional 5 Devices	Each Add'l 5 Devices	$202	$199	$199
Appliances not exceeding one horsepower (HP), kilowatt (KW), or kilovolt-ampere (KVA), in rating	Each	$202	$199	$199
Busways	Each	$202	$199	$199
Trolley and plug-in-type busways - Each 100 feet or fraction thereof	Each	$202	$199	$199
Signs, outline lighting, and marquees	Each	$202	$199	$199
Signs, outline lighting, or marquees supplied from one branch circuit	Each	$202	$199	$199
Services of 600 volts or less and not over 400 amperes in rating	Each	$202	$199	$199
Miscellaneous apparatus, conduits, and conductors	Each	$202	$199	$199
Residential swimming pools	Each	$202	$298	$298
Portable generators less than 10,000 W	Each	$202	$199	$199
Temporary power panel/service	Each	$202	$199	$199
Temporary power pole	Each	$202	$199	$199
Other simple electrical	Each	$202	$199	$199

Fee Name	Unit	Current Fee	Total Cost	Proposed Fee
Simple Plumbing Items:				
Plumbing fixtures	Per 3 Fixtures	$202	$199	$199
Building sewer	Each	$202	$398	$398
Rainwater systems	Each	$202	$199	$199
Industrial waste pretreatment interceptor	Each	$202	$398	$398
Water piping system and/or water treating equipment	Each	$202	$199	$199
Repair or alteration of drainage or vent piping system	Each	$202	$199	$199
Lawn sprinkler systems	Each	$202	$199	$199
Backflow devices	Each	$202	$199	$199
Atmospheric-type vacuum breakers	Each	$202	$199	$199
Gas test	Each	$202	$199	$199
Gas outlets				
1-4 fixtures	Each	$202	$199	$199
Each Additional 4 Fixtures	Each Add'l 4 Fixtures	$202	$199	$199
Solar water systems	Each	$202	$199	$199
Other simple plumbing	Each	$202	$199	$199
Additional Plan Review / Inspection Services				
Complex/Commercial Standalone MEP Permits		Based on Valuation	Based on Valuation	Based on Valuation
Alternative Means and Methods	Hourly	$218	$222	$222
Extension Requests for Building Permits	Hourly	$218	$184	$184
Replacement of Job Card (Building Permit Card)	Each Hourly	$109	$84	$84
Deferred Submittals	Hourly	$218	$238	$238
Inspection Supplemental Fee (Projects that require more inspections than average, the Building Official may charge additional inspection fees)	Hourly	$218	$196	$196
Accessibility Hardship Exemption	Hourly	$218	$227	$227
Additional Plan Check required by changes, additions, or revisions to plans	Hourly	$218	$238	$238
Plan Check for Planning Entitlement Projects	Hourly	$218	$238	$238
Appeals:				
Appeal to Building Official	Each	$575	$629	$629
Appeal to City Council	Each	$575	$1,049	$1,049
Certificate of Occupancy / Temporary Certificate of Occupancy	Hourly Each	$435	$204	$204
Fire Damage Inspection	Each	$692	$196	$196
Inspections outside of normal business hours	Hourly	$247	$234	$234
Pre-Site Inspection / Re-inspection - SFD	Hourly Each	$218	$196	$196
Pre-Site Inspection / Re-inspection - Other than SFD	Hourly Each	$327	$196	$196
Records Research	Per 30 Minutes	$109	$91	$91
Reproduction of Plans	Per Page	New	$168	$168
Written Interpretation of Building Code	Hourly Each	$435	$205	$205
Temporary Use Permit				
Normal Business Hours	Hourly Each	$327	$196	$196
After Hours	Hourly Each	$327	$230	$230
Address Assignment	Each	$664	$337	$337
Surcharges				
General Plan Maintenance Fee	% of Building Permit	25.30%	27.40%	27.40%
Ravenswood Business District (RBD) Specific Plan Maintenance Fee	Per Sq. Ft.	New	$0.26	$0.26
Housing				
Inclusionary Housing Agreement Recordation (Resale Restriction, Deed of Trust, Regulatory Agreement)[1]*	Each	New	$616	$616
Below Market Rate (BMR) Fees				
Monthly Monitoring Fee (Contracted Out)[2]	Per Unit	New	$126	$126
Sale or Resale (Contracted Out)	% of Loan	New	3%	3%
Compliance Fee[3]	Per Incident	New	$411	$411
Monthly Loan Servicing - Amortized Loan (Contracted Out)	Per Unit	New	Actual Cost	Actual Cost
Monthly Loan Servicing - Deferred Loan (Contracted Out)	Per Unit	New	Actual Cost	Actual Cost
Loan Set-Up (Contracted Out)	Each	New	Actual Cost	Actual Cost
Loan Foreclosure (Contracted Out)	Each	New	Actual Cost	Actual Cost
Affordable Housing Compliance Plan (Not Recorded)				
Application:				
Application Process	Each	New	$532	$532
Alternative Compliance Application Review				
4 units or less	Each	New	$1,671	$1,671
5 units or more	Each	New	$3,343	$3,343
Application Modification / Amendment	Each	New	$266	$266
Review of Household Occupancy Eligibility (Initial Lease-Up / Change of Occupancy)	Per Unit	New	$205	$205
Review of Waiver, Adjustment or Reduction Request	Per Unit	New	$272	$272
Rent Registry[4]				
Residential Inspection Upon Change in Occupancy	Per Unit	New	$330	$330
Annual Monitoring Compliance Fee - Just Cause Units	Per Unit	New	$53	$53
Annual Monitoring Compliance Fee - Fully Exempt Units	Per Unit	New	$37	$37
[1] 100% Affordable Housing is exempt				$0
[2] Monthly fee for the term of affordability for units of affordable housing development agreements starting 7/1/2025				$0

Fee Name	Unit	Current Fee	Total Cost	Proposed Fee
[3] Per non-compliance incident				$0
[4] Any Housing not under rent stablization ordinance				$0
*County Fees may apply				$0
Rent Stablizations				
Annual Registration	Per Year Per Unit	$234	$369	$369
Cloud-Storage	Per Unit Registered	$20	$20	$20
Ellis Act Withdrawn Property Administrative Fee	Per Unit Application	$405	$309	$309
Late Processing Fee:				
Failure to File before Jan. 31st	Each	$25		$25
Failure to Submit Statement Withing 30 Days After Receipt of the Notice	Each	$50		$50
Appeal to the Board:				
Filing of Appeal	Base	$100	$1,175	$1,175
Each Additional Unit	Each Addl Unit	$5	$587	$587
Landlord Petition:				
First Installment				
First Unit	Base	$75	$83	$83
Each Additional Unit in the Same Building	Each Addl Unit	$35	$41	$41
Second Installment				
First Unit	Base	$35	$55	$55
Each Additional Unit in the Same Building	Each Addl Unit	$25	$27	$27
Tenant Petition:				
First Installment				
First Unit	Base	$25	$35	$35
Each Additional Unit in the Same Building	Each Addl Unit	$15	$17	$17
Second Installment				
First Unit	Base	$25	$23	$23
Each Additional Unit in the Same Building	Each Addl Unit	$10	$11	$11
Police				
Fingerprinting (Livescan)	Each	$25	$170	$170
Vehicle Release:				
During Regular Business Hours	Each	$25	$49	$49
During Nights or Weekends or Holidays	Each	$145	$193	$193
Tow Company Cost	Each	Actual Cost	Actual Cost	Actual Cost
Repossession - Verification Fee	Each	$15	$15	$15
Proof of Correction Citation - Sign-off	Each	$25	$25	$25
Clearance Letter	Each	$15	$127	$127
Permit Review - Private Security Company - CSO Review:				
CSO Review	Per Hour Each	$359	$137	$137
Executive Review	Per Hour Each	$359	$250	$250
False Alarm Response - (charge is per response after first two responses within a single calendar year)	Per Officer	$65		$65
Loud Party Response	Per Minute / Per Officer / Per Dispatcher	Actual Cost	Actual Cost	Actual Cost
Assistance to Planning Division Security Plan Review for New Business:				
CSO Review	Per Hour Each	$462	$137	$137
Executive Review	Per Hour Each	$462	$250	$250
Redaction Services - Body Worn Camera Video (Contractor):				
City Processing	Per Hour Each	$128	$186	$186
Consultant Cost	Each	Actual Cost	Actual Cost	Actual Cost
Officer Support of City Special Events:				
Officer	Hourly - Per Officer	$128	$223	$223
Sgt	Hourly - Per Officer	$128	$255	$255
Captain	Hourly - Per Officer	$128	$250	$250
Community Service Officer	Hourly - Per Officer	$128	$137	$137
Community Services				
Special Event Permit - Application Processing				
Community Event Category 2 Events	Each	$182	$1,038	$500
Parade/Street Closure Category 3 Events	Each	$489	$2,132	$500
Police - Alcohol Distribution	Per Event	$65	$61	$61
Special Event Permit - On-Site Event Support				
Community Services				
Business Hours	Hourly	$236	$106	$106
After Business Hours	Hourly	$255	$112	$112
Overtime / Holiday Rate	Hourly	New	$119	$119
Security Guard	Hourly	$60	$65	$65
Building Facility Rental Fees				
Residents of East Palo Alto				
Community Room (at City Hall)				
Non Peak Day Rental (Mon-Fri)	Hourly	$17	$118	$47
Peak Day Rental (Sat-Sun)	Hourly	$17	$118	$59
Cooley Landing Education Center				
Non Peak Day Rental (Mon-Fri)	Hourly	$87	$209	$84
Peak Day Rental (Sat-Sun)	Hourly	$87	$209	$105
YMCA City Room				
Non Peak Day Rental (Mon-Fri)	Hourly	$17	$80	$32
Peak Day Rental (Sat-Sun)	Hourly	$17	$80	$40

Fee Name	Unit	Current Fee	Total Cost	Proposed Fee
Non-Residents of East Palo Alto				
Community Room (at City Hall)				
Non Peak Day Rental (Mon-Fri)	Hourly	$41	$118	$118
Peak Day Rental (Sat-Sun)	Hourly	$41	$118	$118
Cooley Landing				
Non Peak Day Rental (Mon-Fri)	Hourly	$154	$209	$209
Peak Day Rental (Sat-Sun)	Hourly	$154	$209	$209
YMCA City Room				
Non Peak Day Rental (Mon-Fri)	Hourly	New	$80	$80
Peak Day Rental (Sat-Sun)	Hourly	New	$80	$80
Non-Profit				
Community Room (at City Hall)				
Non Peak Day Rental (Mon-Fri)	Hourly	New	$118	$30
Peak Day Rental (Sat-Sun)	Hourly	New	$118	$30
Cooley Landing				
Non Peak Day Rental (Mon-Fri)	Hourly	New	$209	$52
Peak Day Rental (Sat-Sun)	Hourly	New	$209	$52
YMCA City Room				
Non Peak Day Rental (Mon-Fri)	Hourly	New	$80	$20
Peak Day Rental (Sat-Sun)	Hourly	New	$80	$20
Park Facility Rental Fees				
All Locations - rental of park, pavilion, or barbeque areas for special events	Hourly	$17	$112	$50
Equipment Rentals				
Community Room				
Projector	Each	New	$15	$15
Table Covers	Per Table Per Day	New	$0.75	$10
City Room				
Television	Each	New	$12	$20
Cooley Landing				
Projector	Each	New	$15	$15
Table Covers	Per Table Per Day	New	$0.75	$10
East Palo Alto Sanitary District				
Connection Fees				
SFR	Each	$10,621		$10,621
ADU	Each	$10,621		$10,621
MFR	Each	$10,621		$10,621
COM	Each	$10,621		$10,621
IND	Each	$10,621		$10,621
Plan Check				
Additional Plan Review	Per Hour	$236	$236	$236
Plan Check - New				
House	Each	$800	$708	$708
ADU (Detahced)	Each	$800	$708	$708
MFR	Each	$800	$944	$944
COM	Each	$800	$944	$944
IND	Each	$800	$944	$944
Plan Check - Remodeling / Existing				
SFR	Each	$400	$472	$472
ADU	Each	$400	$472	$472
MFR	Each	$400	$472	$472
COM	Each	$400	$472	$472
IND	Each	$400	$472	$472
Inspections				
Lateral	Each	$200	$992	$992
Additional Inspections	Per Hour	$496	$496	$496
Permit Application (T1, T2, T3)				
SFR (T1)	Each	$100	$149	$149
ADU (T1)	Each	$100	$149	$149
MFR (T2)	Each	$100	$149	$149
COM (T3)	Each	$100	$149	$149
IND (T3)	Each	$100	$149	$149
Main Line Extension				
Main Line Extension Permit	Per Hour	New	$236	$236