AGENDA

CITY COUNCIL - SPECIAL MEETING (WORKSHOP)
CITY OF BANNING, CALIFORNIA

May 12, 2026
4:00 p.m.
In Chambers

Council Chambers
99 E. Ramsey Street
Banning, CA 92220

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

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

To observe and participate in the online video portion of the meeting through your personal computer or device, follow this link:
https://us02web.zoom.us/j/82012644588?pwd=GwdLNir0X6fHkhlgVjAjRUQf1C6yoz.1

Dial in: +1 669 900 9128

Meeting ID: 820 1264 4588
Password: 1913-92220

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

1. CALL TO ORDER

2. WORKSHOP

2.1 Parks and Recreation Commission Interviews for Position 1
Recommendation: Conduct interviews to fill Parks and Recreation Commission vacancy for Position 1, term ending January 31, 2029.

2.2 Discussion of the City of Banning Electric Utility's Electric System Master Plan
Recommendation: Receive the presentation regarding the Electric System Master Plan

3. PUBLIC COMMENTS - *Agenda Items Only*

4. ADJOURNMENT

Zoom Community Standards for Public Meetings

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

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

Estándares comunitarios de Zoom para Reuniones Públicas

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

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

AFFIDAVIT • DECLARACIÓN JURADA

IT IS HEREBY CERTIFIED under the laws of the State of California that the above agenda was posted on the City's website (www.banningca.gov) as well as the Bulletin Board at Banning City Hall, located at 99 E Ramsey Street, Banning, CA 92220, at least 24 hours in advance of the meeting.

Vickie Sellers

Vickie Sellers, Elected City Clerk
Secretaria Municipal Electa

PUBLIC NOTICE • NOTICIA PÚBLICA

Meeting Agendas and Notices

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

Public Comment

Agenda Items

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

Non-Agenda Items

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

Special Assistance/Accessibility Requests

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

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

CONTACT • CONTACTO

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

CITY OF BANNING
STAFF REPORT

TO:	**CITY COUNCIL**
FROM:	**Elizabeth Gibbs, City Manager**
PREPARED BY:	**Sandra Calderon, Deputy City Clerk**
MEETING DATE:	**May 12, 2026**
SUBJECT:	**Parks and Recreation Commission Interviews for Position 1**

RECOMMENDATION:

Conduct interviews to fill Parks and Recreation Commission vacancy for Position 1, term ending January 31, 2029.

BACKGROUND:

The Parks and Recreation Commission's rules and responsibilities are governed by Chapter 2.40 of the Municipal Code. The Commission's main function is to serve as an advisory board to the City Council and the Parks and Recreation Director for the purpose of the formulation of rules, regulations and policies for all parks and recreation programs, activities, and fees.

The Banning Municipal Code Section 2.40.030 requires applications be made available and vacancies announced at least two months prior to the vacancy. The Parks and Recreation vacancy was advertised on the City's website and across social media platforms starting on March 25, 2026. Public Notice was published in the Record Gazette on March 27, 2026. The deadline to submit an application was Thursday, April 30, 2026.

JUSTIFICATION:

Two applications were received for the Parks and Recreation Commission vacancy and are up for consideration:

- Monette Hamilton
- Cheryce Cobbs

Staff recommend asking the applicant the following question:
1. Tell us briefly about yourself (qualities/experience/expertise) and why you are interested on being on the City's Parks & Recreation Commission.

2. Explain your knowledge of the Parks & Recreation Commission's roles and responsibilities for City services and how it contributes to creating a quality of life for the residents and people who visit the community.

FISCAL IMPACT:

N/A

ATTACHMENTS:

1. Monette Hamilton_Application_Redacted.pdf

2. Cheryce Cobbs_Application_Redacted.pdf
3. Banning__CA_Code_of_Ordinances_2.40.pdf
4. Parks & Rec_Proof of Publication.pdf

APPLICATION TO SERVE ON PARKS AND RECREATION COMMISSION

This application is to fill **one immediate vacancy** on the Parks and Recreation Commission. The term of office for both positions will begin immediately and will expire on January 31, 2029. The Parks and Recreation Commission meets monthly on the **Third Wednesday** of each month, except July and August, beginning at 6:00 p.m. **Applications are due to the Office of the City Clerk no later than Thursday, April 30, 2026 at 5:00 p.m.**

Name Monette Hamilton

Phone [redacted]

Email Address [redacted]

Address [redacted]

Are you currently employed? ☒ Yes ☐ No

Position Program Director Company Hamilton Essentials

Length of Residency in Banning 3

Are you a registered voter? ☒ Yes ☐ No

Are you able to commit to attend commission meetings on the regular meeting date? ☒ Yes ☐ No

Information requested below will be used by the City Council as a screening process to determine which applicants will be interviewed for the Parks & Recreation Commission. ***Please do not submit supplemental materials.***

1. Tell us about your background, including education, work, and volunteer experience, civic involvement, and other experience relevant to this appointment.

I am a community-based leader, program director, and advocate with a strong commitment to youth development, public service, and community engagement. I currently serve as the Program Director of The Hamilton Essentials Foundation, Inc., where I design and lead initiatives that support transitional-aged youth through leadership development, creative expression, and community-based programming.

My work includes leading the Youth Leader Entrepreneurs & Philanthropy (YLEAP) Initiative, where young people develop skills ito address community needs and increase access to safe, enriching spaces. I also bring experience in grant-aligned programming and funding strategy,

2. What unique skills and traits would you bring to the commission?

I bring a unique combination of community-centered leadership, strategic program development, and hands-on experience with grants, policy, and advisory processes. My background in designing youth leadership and community engagement programs has equipped me with skills in collaboration, creative problem-solving, and inclusive decision-making. I excel at connecting diverse stakeholders —youth, families, schools, and local organizations—to achieve shared goals, while ensuring programs are sustainable and aligned with funding and policy priorities. My focus on mentorship and empowering youth also brings a fresh perspective to the Commission, ensuring that community spaces and programs serve residents of all ages equitably and meaningfully.

3. Why are you interested in serving on the Parks & Recreation Commission? What do you hope to achieve during your term of service?

I am interested in serving on the Parks & Recreation Commission because I am deeply committed to creating safe, inclusive, and engaging community spaces that serve residents of all ages. As a long-time member of the Banning community and as someone who works directly with youth and families through The Hamilton Essentials Foundation, Inc., I understand the transformative power of parks and recreation programs—not just for physical wellness, but for community connection, creativity, and leadership development. I see this commission as an opportunity to bring my experience in program design, community engagement, and collaborative leadership to ensure that our parks and recreational offerings meet the diverse needs of our community.

During my term of service, I hope to achieve several goals, like strengthen programs that promote accessibility, equity, and wellness across all community demographics and Increase youth engagement and mentorship opportunities in recreational programming, ensuring young people

In accordance with Banning's City Council Resolution 2012-67, if selected you will be required to submit to a criminal background investigation, including LiveScan fingerprinting prior to your formal appointment.

Please return to: City of Banning
City Clerk's Office
99 E. Ramsey Street
PO Box 998
Banning, CA 92220

Return by: **Thursday, April 30, 2026**
5:00 p.m.

Or email to: cityclerks@banningca.gov

Remember to sign your application.

Signature

April 8, 2026
Date

APPLICATION TO SERVE ON PARKS AND RECREATION COMMISSION

This application is to fill **one immediate vacancy** on the Parks and Recreation Commission. The term of office for both positions will begin immediately and will expire on January 31, 2029. The Parks and Recreation Commission meets monthly on the **Third Wednesday** of each month, except July and August, beginning at 6:00 p.m. **Applications are due to the Office of the City Clerk no later than Thursday, April 30, 2026 at 5:00 p.m.**

Name Cheryce Cobbs

Phone [redacted]

Email Address

Address

Are you currently employed? ☐ Yes ☒ No

Position Disabled Company

Length of Residency in Banning 9 years

Are you a registered voter? ☒ Yes ☐ No

Are you able to commit to attend commission meetings on the regular meeting date? ☒ Yes ☐ No

Information requested below will be used by the City Council as a screening process to determine which applicants will be interviewed for the Parks & Recreation Commission. ***Please do not submit supplemental materials.***

1. Tell us about your background, including education, work, and volunteer experience, civic involvement, and other experience relevant to this appointment.

I have been a resident of Banning for 9 years, coming from the City of Riverside, California. I am almost 10 years from addiction. Currently a member for 3.5 years at Sunrise Church here in Banning, where I volunteer as a Greeter, Children's Check-in, and also a member of the choir. I am a volunteer with the Banning Unified School District, where I have served as a parent volunteer for 4 years, assisting wherever and whenever I can. I am also the School Site Council secretary for Central Elementary School. As it shows, I have grown as a person capable of taking on responsibilities despite my past. I love being a part of society and my community. Working with children, families at church, and school helps me understand the community's needs and wants. My role as secretary of the SSC demonstrates that I am organized and capable of working with different groups, which is our community build-up.

2. What unique skills and traits would you bring to the commission?

As part of the commission, I believe I bring many ideas and energy to the table. I am also a mother of 2 boys, who also add to my energetic personality. I can see where some improvements can be made as a member of this community. As a mother, I would like to propose ideas like splash pads for families to connect and cool down during the summer months, more movie nights in the park, talent shows, art shows, etc., for family activities, and even days for community games like kids-versus-adults tag or something that doesn't always require funds to be a part of. I believe it is important to listen to other families and community members, and I am committed to being a voice for them on the commission.

3. Why are you interested in serving on the Parks & Recreation Commission? What do you hope to achieve during your term of service?

I want to make parks and programs better for everyone, especially families. Drawing on my personal experience, I hope to increase friendly activities and make sure that our community's input is heard.

In accordance with Banning's City Council Resolution 2012-67, if selected you will be required to submit to a criminal background investigation, including LiveScan fingerprinting prior to your formal appointment.

Please return to: City of Banning
City Clerk's Office
99 E. Ramsey Street
PO Box 998
Banning, CA 92220

Return by: **Thursday, April 30, 2026 5:00 p.m.**

Or email to: cityclerks@banningca.gov

Remember to sign your application.

Cheryce Cobbs — April 21, 2026

Signature — Date

Chapter 2.40 - PARKS AND RECREATION COMMISSION

2.40.010 - Established—Purpose.

There is hereby established a parks and recreation commission of the city for the purpose of facilitating the integration of the parks and recreation activities for the city.

(Code 1965, § 15-1; Ord. No. 1438, § 1.A., 6-14-11)

2.40.020 - Advisory agency designated—Powers and duties.

The city parks and recreation commission shall serve as an advisory agency to the city council and the director of community services for the purpose of the formulation of rules, regulations and policies for all parks and recreation programs, activities, and fees. Parks and recreation commission members shall be registered voters of the City of Banning.

(Code 1965, § 15-2; Ord. No. 1438, § 1.A., 6-14-11)

2.40.030 - Appointment of members.

A. The parks and recreation commission shall consist of five members.

B. The parks and recreation commission shall serve four-year terms, which shall be staggered every two years concurrent with the city elections. Appointments shall be made by the city council. Applications shall be made available and the closing date announced at least two months prior to the expiration of the commissioner's term to be filled.

C. Members shall serve at the pleasure of the council and may be removed at any time by a majority vote of the entire council.

D. Any member who is absent from two regular meetings of the Commission within a twelve-month period whether the absence is excused or not, will be deemed to have resigned their office and the City Council may appoint a new member to serve in the resigned commissioner's place for the remainder of the existing term.

(Code 1965, § 15-3; Ord. No. 1438, § 1.A., B., 6-14-11; Ord. No. 1579, § 2, 11-9-21)

2.40.040 - Conduct of meetings.

A. The commission shall meet at 6:00 P.M. on the third Wednesday of the following months: January, February, March, April, May, June, September, October and November.

B. Additional meeting may occur if deemed necessary by the city council or commission chairperson.

C. A majority of the voting members of the commission shall constitute a quorum.

(Code 1965, § 15-4; Ord. No. 1438, § 1.A., 6-14-11)

Column

OFFICIAL AD PROOF

This is the proof of your ad scheduled to run in **Record Gazette** on the dates indicated below. If changes are needed, please contact us prior to deadline at **(951) 849-4586**.

Notice ID: yl5yIuVT5WEhReX5YsBP | **Proof Updated: Mar. 25, 2026 at 11:54am PDT**
Notice Name: City of Banning Public Notices PRC Vacancy

This is not an invoice. Below is an estimated price, and it is subject to change. You will receive an invoice with the final price upon invoice creation by the publisher.

FILER	FILING FOR
SANDRA CALDERON	Record Gazette
scalderon@banningca.gov	
(951) 922-3125	

Columns Wide:	1	**Ad Class:**	Legals
Total Column Inches:	1.25		
Number of Lines:	n/a		

03/27/2026: Display Ad Notice	265.72
Subtotal	$265.72
Tax	$0.00
Processing Fee	$0.00
Total	**$265.72**

See Proof on Next Page

Expected print dimensions of advertisement:

Width: 1.25 in., Height: 1.25 in.

Newspaper page size: Width: 9.75 in., Height: 10.88 in.

Publisher may wrap or break notice between pages.



PUBLIC NOTICE
CITY OF BANNING
PARKS & RECREATION COMMISSION

The City of Banning is accepting applications to fill **one immediate vacancy** on the City of Banning Parks & Recreation Commission. The term of office will begin immediately and run through January 31, 2029.

This is a volunteer position on a Commission that meets on the **third Wednesday of each month beginning at 6:00 P.M**. You must be a registered voter in the City of Banning to qualify. All applicants must successfully complete a background investigation with Hyperion*mg before appointment. The application for this position is available on the City's website at http://banning.ca.us/837/Parks-Recreation-Commission

The deadline to submit your application to the City Clerk's Office is **Thursday, April 30, 2026 at 5:00 P.M.** Submit to the City Clerk's Office, PO Box 998, Banning, CA 92220 or by emailing your signed application to cityclerk@banningca.gov

/s/Sandra Calderon, Deputy City Clerk
City of Banning, California

Dated: March 25, 2026
Publish: March 27, 2026

CITY OF BANNING
STAFF REPORT

TO:	**CITY COUNCIL**
FROM:	**Elizabeth Gibbs, City Manager**
PREPARED BY:	**Fred Lyn, Deputy Director of Electric** **Art Vela, Director of Public Works**
MEETING DATE:	**May 12, 2026**
SUBJECT:	**Discussion of the City of Banning Electric Utility's Electric System Master Plan**

RECOMMENDATION:

Receive the presentation regarding the Electric System Master Plan

BACKGROUND:

The purpose of this workshop is to provide the City Council with an overview of the recently completed Electric System Master Plan ("ESMP") by Finley Engineering Company. The ESMP provides a high-level guide for planning, operating, and maintaining the electric distribution system for the Banning Electric Utility (BEU) over the next two decades. The plan also identifies the long-term outlook of the electric utility, assesses its current conditions, and provides both a 5-year and a 15-year long-term capital improvement plan to address current and future challenges all designed to increase reliability, safety, and address future load growth. The long-term approach of the 20-year timeline will allow BEU to plan how to address these issues in a way as to allow for flexibility in budget while concurrently maintaining reliability in a steady fashion.

JUSTIFICATION:

The City of Banning Electric Utility's (BEU's) overall electricity consumption has increased by approximately 10 percent over the past three years, and the City must ensure that BEU's electric transmission and distribution facilities are adequate in order to accommodate future load growth and address aging infrastructure.

The ESMP is a blueprint guide for planning, operating and maintaining BEU for the next 20 years. The ESMP consists of the following:

- an initial system assessment;
- review of BEU's practices and performance;
- regulatory impacts;
- condition of the electric infrastructure;
- system distribution modeling and planning criteria;
- performing a load forecast that considered multiple growth cases;
- a load flow analysis of the electric system in regards to overall system voltage profile and reliability;
- development of a capital improvement plan to address findings of the assessments and analysis, and addressing aging infrastructure

FISCAL IMPACT:

There is no immediate fiscal impact associated with this workshop.

ATTACHMENTS:

1. City of Banning Electric System Master Plan

CITY OF BANNING, CALIFORNIA

2026-2045 ELECTRIC SERVICE MASTER PLAN

APRIL 2026

Prepared by:

Finley Engineering Company, Inc.

On behalf of:

Banning Electric Utility

BANNING ELECTRIC UTILITY

PROVIDING POWER TO THE COMMUNITY OF BANNING SINCE 1922

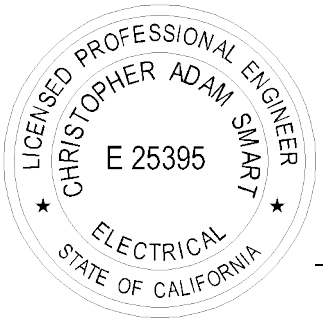
Contact Information:

Finley Engineering Company, Inc.
PO Box 148, 104 E. 11th Street
Lamar, MO 64795
(417) 682-5531
www.finleyusa.com

City of Banning
99 E. Ramsey Street
Banning, CA 92220
951.922.3100
www.banningca.gov

ENGINEERS CERTIFICATION

I, Christopher Adam Smart, P.E., herby certify that this *2026-2045 Electric Service Master Plan* was prepared by me or under my direct Supervision and that I am a duly Licensed Professional Engineer under the laws of the state of California, license number E 25395.



Christopher A. Smart, P.E.

Digitally signed by Christopher A. Smart, P.E.
Date: 2026.04.29 14:47:47 -05'00'

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1.0 - EXECUTIVE SUMMARY

1.1 - Introduction

The City of Banning owns the utility that provides electric service to Banning, California and the electric utility is maintained by Banning Electric Utility (BEU). Originally established in 1913 as a private utility, the City of Banning purchased the electric utility in 1922 and has been providing electric service to its residents since that time. Banning's energy resource base includes portions of nuclear, geothermal, solar, landfill gas-to-energy, and hydro generating plants, that provide the majority of electricity required to meet the system peak demand.

Through an agreement with Southern California Edison Company (SCE), the BEU system utilizes SCE's transmission system in bringing power from the California Independent System Operator ("CAISO") controlled high voltage transmission grid to the BEU distribution system at the Banning Substation.

The City of Banning supports clean-energy and is committed to additional renewable energy resources to its already diverse portfolio. BEU has met and/or exceeded the renewable energy requirements of Compliance Period #1, Compliance Period #2, and Compliance Period #3 of the State's Renewable Portfolio Standard (RPS) program. The Utility was 81 percent renewable in 2022, already exceeding the current State mandate of 60 percent by 2030.

BEU is a member of the Southern California Public Power Authority (SCPPA) enjoying the benefits of joint action through cost effective planning, construction, management, and operations of electrical energy resources.

1.2 - Purpose of Study

This Electric Service Master Plan (ESMP) is a report prepared by Finley Engineering Company, Inc. (FEC) based on an analysis and review of the historical system growth and operation to determine projections of future growth, recommendations for capital improvements, and scheduled system maintenance that will insure the continued economical and reliable operation of the system over the ensuing 20-year period.

The analysis was completed in two parts. The first 5-year analysis was completed as the Capital Improvement Plan (CIP) and includes projects and recommendations determined from the analysis, Capital Improvements specified by BEU, and Capital Maintenance also specified by BEU. This CIP will be presented to the City Council as the actual construction plan for the next 5 years. The 15 year ESMP analysis was completed as a guideline for determining the future system performance and improving system capacity for expansion.

1.3 – Existing System Review

BEU maintains three, 34.5 kV sub-transmission circuits totaling approximately eighteen miles which feed six distribution substations.

These six distribution substations have approximately 27 circuits feeding 147 miles of overhead and underground distribution line with an operating voltage of 7.2/12.5 kV. An estimated 47% of the total distribution line is underground.

Along these distribution lines, BEU serves approximately 15,570 consumer meters. In 2024, the BEU system experienced a coincident summer peak demand of 55.1 MW and a winter peak demand of 22.3 MW. Historically, the BEU system is a summer peaking system with the summer peak more than double the winter peak. Also in 2024, BEU purchased approximately 157,000 MWH's through its portfolio of long-term power purchase agreements as well as purchases from the CAISO wholesale markets, distributed among the membership of Residential, Small Commercial, Medium Commercial, Industrial, Security Lighting, Street Lighting, and Well Service customers.

1.4 – Total ESMP Cost Estimate

Table 1.4-1 – Total ESMP Cost Estimate

2026-2045 Electric Service Master Plan

	5-year CIP	15-Year ESMP	Totals
OH Maintenance Program			
Total Cost	$4,058,438	$23,968,742	$28,027,180
CIAC	$0	$0	$0
BEU Funding Cost	$4,058,438	$23,968,742	$28,027,180
Capital-Maintenance Projects			
Total Cost	$20,784,500	$8,350,000	$29,134,500
CIAC	$9,293,750	$3,000,000	$12,293,750
BEU Funding Cost	$11,490,750	$5,350,000	$16,840,750
System Improvement Projects			
Total Cost	$2,805,700	$11,539,300	$14,345,000
CIAC	$0	$0	$0
BEU Funding Cost	$2,805,700	$11,539,300	$14,345,000
Total ESMP Cost			
Total Cost	$27,648,638	$43,858,042	$71,506,680
CIAC	$9,293,750	$3,000,000	$12,293,750
BEU Funding Cost	$18,354,888	$40,858,042	$59,212,930

Of the total cost, 47% is for the OH Maintenance Program, 28% is for Capital Maintenance Projects, and 24% is for System Improvement Projects.

2.0 – SYSTEM PLANNING CRITERIA

2.1 - Distribution System Planning Criteria

The distribution projects contained in this ESMP are recommended based upon the following planning criteria.

a. With an assumed delivered voltage of 125 volts (1.041 per unit on a 120 volt base) during peak load conditions, the design minimum allowable voltage at the primary terminals of any distribution transformer shall be 118 volts (0.98 per unit on a 120 volt base).

b. Voltage regulators and step transformers will be upgraded when projected peak loads exceed 85% of the device's rating.

c. Sectionalizing devices will be upgraded when projected peak loads exceed 70% of the device's continuous current rating.

d. Primary conductors on the 7.2/12.5 kV and below distribution system will be upgraded when projected peak loads exceed 60% of the conductor's thermal rating and may be subject to upgrade before this time if anticipated load growth may potentially exceed 60% of the conductor's thermal rating

e. Primary conductors on the 34.5 kV sub-transmission system will be upgraded when projected peak loads exceed 90% of the conductor's thermal rating and may be subject to upgrade before this time if anticipated load growth may potentially exceed 90% of the conductor's thermal rating

f. Single-phase primary voltage lines will be limited to 35 amps maximum loading.

g. The power factor at the delivery point under peak loading conditions is desired to be no less than 95%. The off-peak power factor should preferably be maintained between 95% lagging and 95% leading. This criterion is subject to the cost of the installation of capacitors, switches, and controls vs. the cost of kilowatt (kW) loss reduction.

2.1.1 - Distribution System Design Criteria

The following design criteria was considered when determining projects contained in this ESMP.

a. Feeder current balance will be maintained at plus or minus 20% of the average per phase loading during peak conditions. This criterion may be relaxed in areas where it could impose unnecessary or premature costs.

b. Conductor sizes will be economically sized but may be modified to conform to BEU's standard conductor sizes.

c. Load switching and backfeeding will be considered to defer unnecessary or premature costs to correct any load voltage or high conductor loading.

d. Load switching and backfeeding will be considered to defer unnecessary or premature costs to correct any high single-phase loading. For areas where there is no backfeed or load switch solution, additional conductors will be added to allow for phase balancing.

e. Relocation of existing line sections will be considered where inaccessibility impedes the maintenance of line sections or jeopardizes the service or reliability of line sections.

2.2 – Substation Planning Criteria

The substation projects contained in this ESMP are recommended based upon the following planning criteria.

a. Substation transformers will limited to 95% of the max kVA rating of the transformer. The following improvements will be considered in the event the load exceeds 95% of the max kVA rating:

a. Load switching to adjacent substations
b. Upgrade of existing transformer
c. Installation of an additional transformer in the existing substation
d. Construction of a new substation

2.3 – Basis of Cost Estimates

The following tables for material and labor costs were used to determine system improvement project costs. The costs were taken from actual prices provided by BEU as well as prices received by FEC from other sources.

Table 2.3-1 Conductor Material Cost

Conductor (price per foot)				
OH Conductor			**UG Conductor**	
#2 Copper	$1.31		1/0 AL, 15 kV	$2.03
#2 ACSR	$0.26		1/0 CU, 15 kV	$10.98
#4 ACSR	$0.15		1/0 CU, 35 kV	$8.47
1/0 ACSR	$0.30		4/0 CU	$6.95
4/0 Copper	$3.11		4/0 AL	$4.97
4/0 ACSR	$0.80		350 CU	$7.53
336 ACSR	$1.62		750 AL	$13.38

Table 2.3-2 Pole Material Cost

Pole	Price per unit	Pole	Price per unit
35' Douglas Fir, H2	$1,269.30	35’ Wood, Class 2	$1,067.38
		40’ Wood, Class 2	$766.35
45' Douglas Fir, H2	$1,771.08	45’ Wood, Class 2	$953.80
		50’ Wood, Class 2	$1,135.73
55' Douglas Fir, H2	$2,889.48	55’ Wood, Class 2	$918.72
60' Douglas Fir, H2	$2,945.89	60’ Wood, Class 2	$1,362.29

Table 2.3-3 Transformer Material Cost

Transformer	Price per unit
10 kVA O.H. Transformer S-Type 7,200	$500.00
15 kVA 7,200, 120/240 DV S-Type	$645.42
25 kVA 7,200, 120/240 DV S-Type	$919.16
37 kVA 7,200, 120/240 DV S-Type	$1,496.65
50 kVA 7,200 120/240	$3,992.05
75 kVA 3Ø 12,470/7,200 120/208	$6,023.22
300 kVA DV	$8,583.61
750 kVA 3Ø 12,470/7,200	$14,626.30
1,000 kVA 3Ø 12,470/7,200 DV	$10,809.48
2,500 kVA 3Ø 12,470/7,200 277/480	$34,539.92
25 kVA 1Ø 12,470/7,200 120/240 Pdmnt	$3,685.34
37.5 kVA 1Ø 12,400/7,200 DV Pdmnt	$1,988.01
75 kVA 1Ø 12,470/7,200 120/240 Pdmnt	$7,110.42
300 kVA 3Ø 12,470/4,160 DV Pdmnt 208/120	$13,547.15
500 kVA 3Ø Pdmnt	$10,442.65
1,500 kVA DV 3Ø Pdmnt 277/480	$31,037.04

Table 2.3-4 Framing Units Material Cost

Framing Unit	Price per unit
A1.3P	$75.32
A1.11P	$493.46
A5.2G	$286.41
A3.1	$78.74
A6.21	$1,080.29
G1.2	$317.41
G1.2	$1,318.96
A5.1	$195.12
A5.21	$888.35
(A4.1)	$255.90
G1.3	$433.79
G1.3	$1,127.02
C1.11	$628.33
C1.81G	$1,592.53
C1.11,A5.21	$1,516.68
C5.82G	$3,472.80
C3.1	$208.96
C3.1,A5.1	$404.08
C3.1,A5.21	$1,097.31
C3.1, C5.1	$376.78
C5.1	$167.82
C5.1,A5.1	$362.94
C5.1,A5.21	$1,056.17

Table 2.3-5 Underground Material Cost

Material	Price per unit
Light Duty Secondary Box	$78.42
Light Duty Secondary Lid	$83.43
4" PVC SCH 40 (per foot)	$1.69
1/0 AL U/G (per foot)	$4.75
Service Entrance Sleeve	$0.45
Deadend Shoe Small	$8.58
Power Solve (Pulling Lube)	$58.98

Table 2.3-6 Overhead Construction Labor and Fleet Cost

	Units (hr.)	Unit Cost (per hr.)
Utility Bed P/U 1 ton (Foreman) (2 hrs. per connection)	4	$27.78
2 Person Lift (Bucket Truck) 55' (2 hrs. per connection)	2	$51.68
4 Person Crew	4	$466.73
3 Person Crew (2 hours per connection)	4	$352.02
2 Person Crew	2	$237.31
Electrical Engineering Supervisor (0.5 hrs. per connection)	1	$125.98
Electric Service Planning Supervisor (0.5 hrs. per connection)	1	$127.97
GIS Technician (1 hr. per connection)	2	$59.21

For overhead line, project cost estimates are based on an average of construction 1 mile of line per month with average span lengths at 150’.

Table 2.3-7 Underground Construction Labor and Fleet Cost

Labor	Price per hr.
4 Person Line Crew	$466.73
Powerline Crew Superintendent	$135.93
Fleet	**Price per hr.**
Dump Truck	$55.98
Utility Bed P/U 1 ton (Foreman) (3)	$27.78
Digger Derrick	$48.77
Wire Puller	$24.98
Reel Trailer	$24.98
Backhoe	$23.95

For underground line, project estimates are based on an average construction of 1 month to trench, lay conduit, pull wire and terminate, and backfill 300’.

Engineering (10%) and contingency (5%) were also added for each cost estimate.

3.0 LOAD FORECAST

The demand forecast was prepared to project the summer and winter kW demand per substation area as well as the total system demand for the City of Banning for the 2026-2045 ESMP period. The historical non-coincident substation demands as well as the historical coincident system demands were provided by BEU and used as the basis for the forecast. BEU also provided insight into new load additions that are in some sort of application or planning process and were used in the conceptual forecast.

Additional factors that were considered when reviewing the historical peaks include temporary load switching between substations, construction of new substations with permanent load switching, and removal and/or replacement of existing substations.

Along with new load additions, considerations were also made for the addition of EV chargers at new subdivision locations.

This forecast was used to run voltage drop and load flow analysis to determine system improvements required to reliably serve the City of Banning's existing consumers and allow for future consumer growth.

It is projected that the BEU system will reach a non-coincident peak of 110,556 kW in the summer of 2045 and 81,410 kW in the winter of 2045. It is also projected that the BEU system will reach a coincident peak of 90,738 kW in the summer of 2045 and 75,580 kW in the winter of 2045.

A separate conceptual forecast was created to include new load additions that are in some state of application or planning process. It is projected that the BEU system will reach a conceptual non-coincident peak of 176,165 kW in the summer of 2045 and 161,007 kW in the winter of 2045.

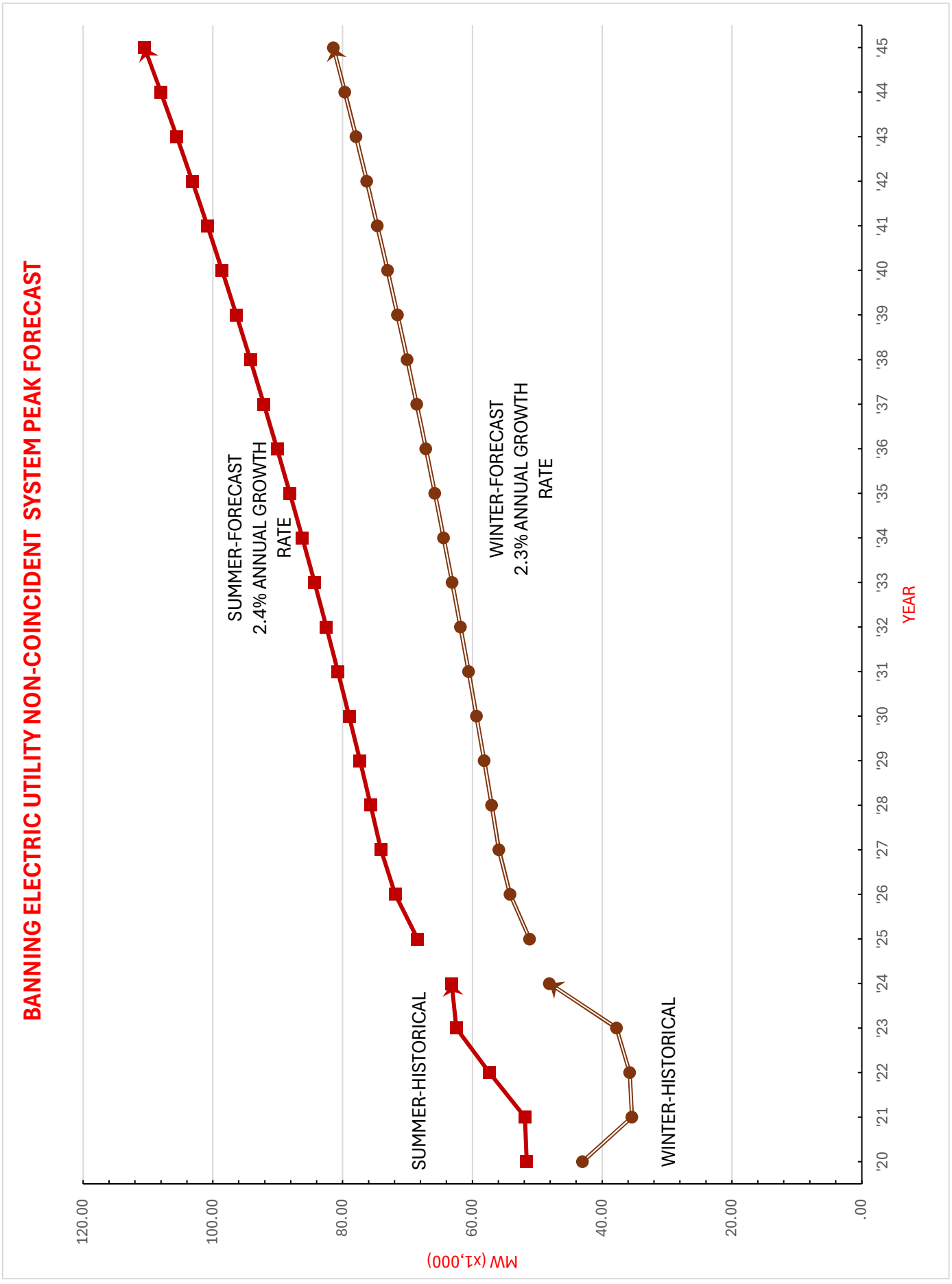
As part of the historical review, MWH purchases were also reviewed and a forecast was determined. It is projected that the BEU system will have an annual coincident purchase of 272,571 MWH's by 2045.

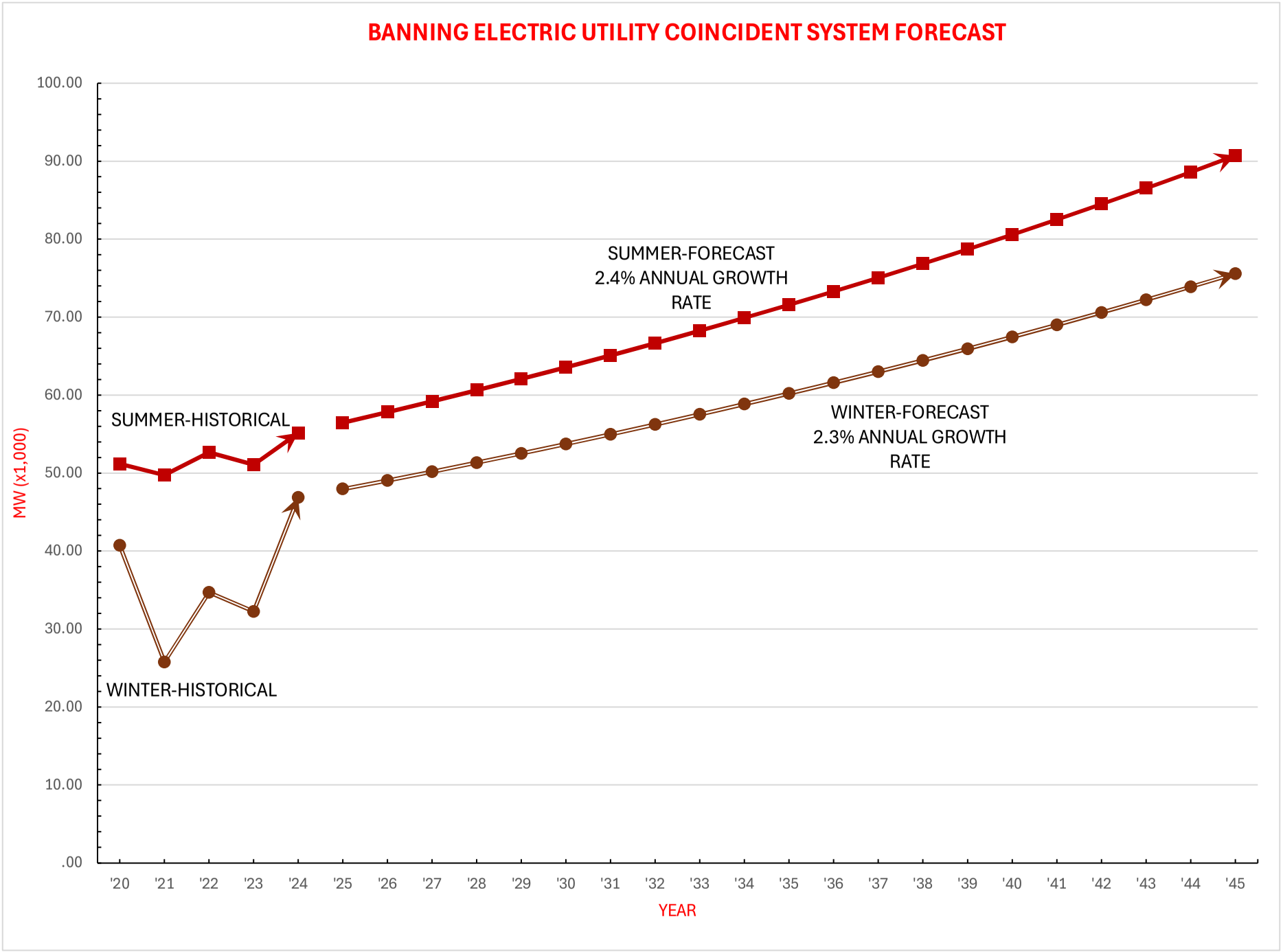
A graphical representation of the individual substation demand forecast as well as the total system coincident demand, non-coincident demand, conceptual non-coincident demand and MWH purchases is included following this page.

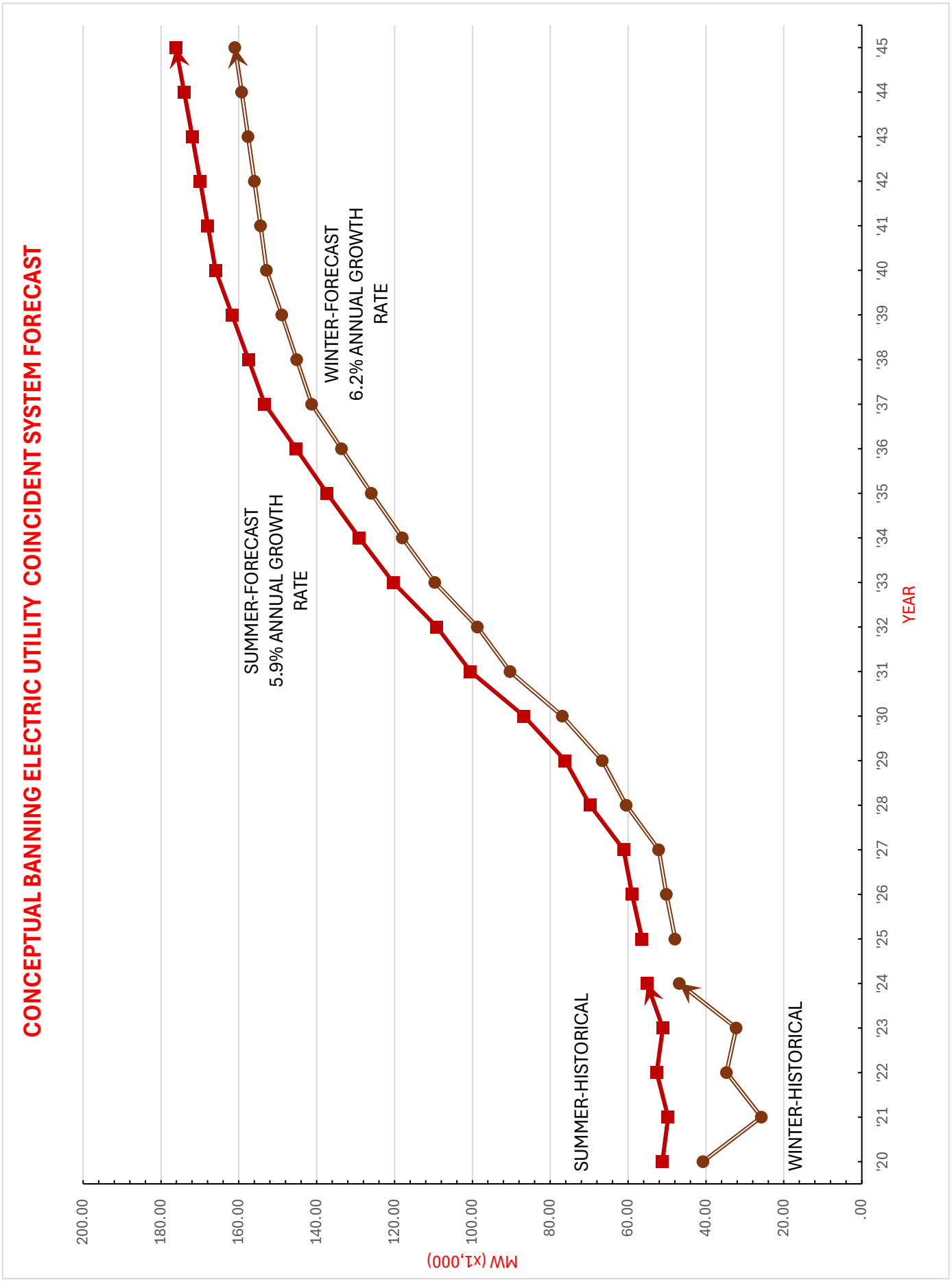
BANNING ELECTRIC UTILTIY
2026-2045 ESMP SYSTEM FORECAST

Peak kW Demand

		Historical					Forecast																					2025-2045 Annual Growth Rate
		2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	
San Gorgonio Total																												
	S	16,425	17,079	16,472	9,131	4,958	16,500	16,830	17,167	17,510	17,860	18,217	18,582	18,953	19,332	19,719	20,113	20,516	20,926	21,345	21,771	22,207	22,651	23,104	23,566	24,037	24,518	2.0%
	W	15,022	12,746	11,267	7,193	3,739	15,000	15,300	15,606	15,918	16,236	16,561	16,892	17,230	17,575	17,926	18,285	18,651	19,024	19,404	19,792	20,188	20,592	21,004	21,424	21,852	22,289	2.0%
					Cannabis Cultivation		3,159	3,159	3,159	3,159	3,159	3,159	3,159	3,159	3,159	3,159	3,159	3,159	3,159	3,159	3,159	3,159	3,159	3,159	3,159	3,159	3,159	
					Yoshinoya		89	89	89	89	89	89	89	89	89	89	89	89	89	89	89	89	89	89	89	89	89	
	S	16,425	17,079	16,472	9,131	4,958	19,748	20,078	20,415	20,758	21,108	21,465	21,830	22,201	22,580	22,967	23,361	23,764	24,174	24,593	25,019	25,455	25,899	26,352	26,814	27,285	27,766	1.7%
	W	15,022	12,746	11,267	7,193	3,739	18,248	18,548	18,854	19,166	19,484	19,809	20,140	20,478	20,823	21,174	21,533	21,899	22,272	22,652	23,040	23,436	23,840	24,252	24,672	25,100	25,537	1.7%
Midway Total																												
	S	13,541	13,649	14,272	17,082	15,786	15,052	15,458	15,876	16,304	16,745	17,197	17,661	18,138	18,628	19,131	19,647	20,178	20,722	21,282	21,856	22,447	23,053	23,675	24,314	24,971	25,645	2.7%
	W	10,384	9,247	7,788	6,868	10,715	9,663	9,924	10,192	10,467	10,750	11,040	11,338	11,644	11,958	12,281	12,613	12,953	13,303	13,662	14,031	14,410	14,799	15,199	15,609	16,031	16,463	2.7%
Airport																												
	S	365	370	360	32	30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
	W	389	389	280	23	22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
22nd Street																												
	S	10,233	10,319	9,736	10,585	11,240	10,670	10,787	10,906	11,026	11,147	11,270	11,394	11,519	11,646	11,774	11,904	12,034	12,167	12,301	12,436	12,573	12,711	12,851	12,992	13,135	13,280	1.1%
	W	8,140	6,529	6,105	6,567	8,018	8,210	8,300	8,392	8,484	8,577	8,672	8,767	8,863	8,961	9,059	9,159	9,260	9,362	9,465	9,569	9,674	9,781	9,888	9,997	10,107	10,218	1.1%
Stagecoach																												
	S	0	0	0	6,634	8,040	6,700	6,834	6,971	7,110	7,252	7,397	7,545	7,696	7,850	8,007	8,167	8,331	8,497	8,667	8,841	9,017	9,198	9,382	9,569	9,761	9,956	2.0%
	W	0	0	0	3,616	7,955	3,800	3,876	3,954	4,033	4,113	4,196	4,279	4,365	4,452	4,541	4,632	4,725	4,819	4,916	5,014	5,114	5,217	5,321	5,427	5,536	5,647	2.0%
Ivy																												
	S	0	0	5,308	7,206	8,333	5,400	5,508	5,618	5,731	5,845	5,962	6,081	6,203	6,327	6,453	6,583	6,714	6,849	6,985	7,125	7,268	7,413	7,561	7,713	7,867	8,024	2.0%
	W	0	0	4,493	4,890	6,235	4,500	4,590	4,682	4,775	4,871	4,968	5,068	5,169	5,272	5,378	5,485	5,595	5,707	5,821	5,938	6,056	6,178	6,301	6,427	6,556	6,687	2.0%
					Morongo Health Clinic		0	0	636	636	636	636	636	636	636	636	636	636	636	636	636	636	636	636	636	636	636	
	S	0	0	5,308	7,206	8,333	5,400	5,508	6,254	6,367	6,481	6,598	6,717	6,839	6,963	7,089	7,219	7,350	7,485	7,621	7,761	7,904	8,049	8,197	8,349	8,503	8,660	2.4%
	W	0	0	4,493	4,890	6,235	4,500	4,590	5,318	5,411	5,507	5,604	5,704	5,805	5,908	6,014	6,121	6,231	6,343	6,457	6,574	6,692	6,814	6,937	7,063	7,192	7,323	2.5%
Sunset																												
	S	8,140	8,099	9,586	11,441	14,821	10,439	10,857	11,291	11,742	12,212	12,701	13,209	13,737	14,286	14,858	15,452	16,070	16,713	17,382	18,077	18,800	19,552	20,334	21,147	21,993	22,873	4.0%
	W	6,716	5,803	5,037	8,299	11,443	6,319	6,572	6,835	7,108	7,392	7,688	7,996	8,315	8,648	8,994	9,354	9,728	10,117	10,522	10,942	11,380	11,835	12,309	12,801	13,313	13,846	4.0%
					Crestwood Communities		432	864	864	864	864	864	864	864	864	864	864	864	864	864	864	864	864	864	864	864	864	
					Vista Robles KB homes		0	1,512	1,512	1,512	1,512	1,512	1,512	1,512	1,512	1,512	1,512	1,512	1,512	1,512	1,512	1,512	1,512	1,512	1,512	1,512	1,512	
	S	8,140	8,099	9,586	11,441	14,821	10,871	13,233	13,667	14,118	14,588	15,077	15,585	16,113	16,662	17,234	17,828	18,446	19,089	19,758	20,453	21,176	21,928	22,710	23,523	24,369	25,249	4.3%
	W	6,716	5,803	5,037	8,299	11,443	6,751	8,948	9,211	9,484	9,768	10,064	10,372	10,691	11,024	11,370	11,730	12,104	12,493	12,898	13,318	13,756	14,211	14,685	15,177	15,689	16,222	4.5%
Alola																												
	S	2,929	2,370	1,646	372	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
	W	2,377	708	782	336	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
Banning Electric Utility Non-Coincident System Peak Forecast																												
	S	51,632	51,885	57,380	62,482	63,207	68,441	71,898	74,088	75,683	77,322	79,004	80,732	82,507	84,330	86,202	88,126	90,103	92,134	94,221	96,367	98,571	100,837	103,167	105,562	108,024	110,556	2.4%
	W	43,029	35,422	35,752	37,792	48,126	51,172	54,186	55,919	57,045	58,200	59,385	60,600	61,847	63,127	64,440	65,788	67,172	68,592	70,050	71,546	73,083	74,661	76,281	77,945	79,654	81,410	2.3%
Banning Electric Utility System Coincident Forecast																												
	S	51,197	49,751	52,667	51,096	55,143	56,467	57,822	59,210	60,631	62,086	63,576	65,102	66,664	68,264	69,902	71,580	73,298	75,057	76,858	78,703	80,592	82,526	84,507	86,535	88,612	90,738	2.4%
	W	40,752	25,776	34,719	32,262	46,883	47,962	49,065	50,193	51,348	52,529	53,737	54,973	56,237	57,530	58,854	60,207	61,592	63,009	64,458	65,940	67,457	69,009	70,596	72,219	73,881	75,580	2.3%
Conceptual Banning Electric Utility System Coincident Forecast																												
	S	51,197	49,751	52,667	51,096	55,143	56,467	58,962	61,201	69,810	76,184	86,777	100,472	109,135	120,377	129,082	137,336	145,321	153,347	157,527	161,751	166,019	167,953	169,934	171,962	174,039	176,165	5.9%
	W	40,752	25,776	34,719	32,262	46,883	47,962	50,205	52,185	60,527	66,627	76,938	90,343	98,708	109,643	118,034	125,963	133,615	141,299	145,127	148,988	152,884	154,436	156,023	157,646	159,308	161,007	6.2%
					Bridge-Morongo Logistics		0	0	0	0	1,031	1,991	2,858	3,344	3,641	3,641	3,641	3,641	3,641	3,641	3,641	3,641	3,641	3,641	3,641	3,641	3,641	
					Sunset Crossroads		0	0	0	2,712	2,712	6,967	10,213	10,561	13,639	14,439	14,748	14,748	14,748	14,748	14,748	14,748	14,748	14,748	14,748	14,748	14,748	
					Rancho San Gorgonio		0	0	0	3,888	7,776	11,664	15,552	19,440	23,328	27,216	31,104	34,992	38,880	38,880	38,880	38,880	38,880	38,880	38,880	38,880	38,880	
					Mission Heights		0	0	0	0	0	0	2,379	4,758	7,137	9,516	11,895	14,274	16,653	19,032	21,411	23,790	23,790	23,790	23,790	23,790	23,790	
					First Hathaway Logistics		0	0	0	0	0	0	471	471	471	471	471	471	471	471	471	471	471	471	471	471	471	
					Banning Commerce Center		0	0	0	0	0	0	438	438	438	438	438	438	438	438	438	438	438	438	438	438	438	
					WEKA		0	0	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	
					Charles St. CDRE		0	0	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	
					KCB Towers		0	0	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	
					Pallet Yard		0	0	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	
					First Lincoln Logistics		0	0	186	186	186	186	186	186	186	186	186	186	186	186	186	186	186	186	186	186	186	
					Brown Strauss		0	390	390	390	390	390	390	390	390	390	390	390	390	390	390	390	390	390	390	390	390	
					Wyndam Micro Hotel		0	750	750	750	750	750	750	750	750	750	750	750	750	750	750	750	750	750	750	750	750	
					DR Horton		0	0	588	1,175	1,175	1,175	1,175	1,175	1,175	1,175	1,175	1,175	1,175	1,175	1,175	1,175	1,175	1,175	1,175	1,175	1,175	
					Atwell Large Retail		0	0	0	0	0	0	880	880	880	880	880	880	880	880	880	880	880	880	880	880	880	


BANNING ELECTRIC UTILITY NON-COINCIDENT SYSTEM PEAK FORECAST
SUMMER-FORECAST
2.4% ANNUAL GROWTH
RATE
WINTER-FORECAST
2.3% ANNUAL GROWTH
RATE
SUMMER-HISTORICAL
WINTER-HISTORICAL
MW (x1,000)
YEAR
120.00
100.00
80.00
60.00
40.00
20.00
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BANNING ELECTRIC UTILITY COINCIDENT SYSTEM FORECAST
100.00
90.00
80.00
70.00
60.00
50.00
40.00
30.00
20.00
10.00
.00
MW (x1,000)
SUMMER-HISTORICAL
WINTER-HISTORICAL
SUMMER-FORECAST
2.4% ANNUAL GROWTH
RATE
WINTER-FORECAST
2.3% ANNUAL GROWTH
RATE
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YEAR


CONCEPTUAL BANNING ELECTRIC UTILITY COINCIDENT SYSTEM FORECAST
SUMMER-FORECAST
5.9% ANNUAL GROWTH
RATE
WINTER-FORECAST
6.2% ANNUAL GROWTH
RATE
SUMMER-HISTORICAL
WINTER-HISTORICAL
MW (x1,000)
YEAR
200.00
180.00
160.00
140.00
120.00
100.00
80.00
60.00
40.00
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BANNING ELECTRIC UTILITY
2026-2045 ESMP NON-COINCIDENT SYSTEM FORECAST

Projected Load Data 2025 - 2031

	2025		2026		2027		2028		2029		2030		2031	
	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW
Jan	11,577	21.27	12,259	22.52	12,651	23.24	12,906	23.71	13,167	24.19	13,435	24.68	13,710	25.19
Feb	10,470	21.33	11,086	22.58	11,441	23.31	11,671	23.78	11,907	24.26	12,150	24.75	12,399	25.26
Mar	10,870	20.69	11,511	21.91	11,879	22.61	12,118	23.07	12,363	23.54	12,615	24.01	12,873	24.51
Apr	13,733	32.53	14,427	34.18	14,867	35.22	15,187	35.98	15,515	36.76	15,853	37.56	16,200	38.38
May	15,631	37.92	16,420	39.84	16,920	41.05	17,285	41.94	17,659	42.85	18,043	43.78	18,438	44.74
Jun	18,497	56.73	19,432	59.59	20,023	61.41	20,455	62.73	20,897	64.09	21,352	65.48	21,819	66.92
Jul	25,788	65.86	27,090	69.19	27,915	71.29	28,517	72.83	29,134	74.40	29,768	76.02	30,419	77.69
Aug	26,719	68.44	28,069	71.90	28,923	74.09	29,546	75.68	30,186	77.32	30,843	79.00	31,517	80.73
Sep	21,335	64.10	22,413	67.34	23,096	69.39	23,593	70.88	24,104	72.42	24,628	73.99	25,167	75.61
Oct	19,525	51.17	20,675	54.19	21,336	55.92	21,766	57.05	22,206	58.20	22,658	59.38	23,122	60.60
Nov	10,787	21.08	11,423	22.32	11,788	23.04	12,025	23.50	12,269	23.98	12,518	24.46	12,775	24.97
Dec	12,073	22.02	12,784	23.31	13,193	24.06	13,458	24.54	13,731	25.04	14,010	25.55	14,297	26.07
TOTAL:	197,005		207,588		214,032		218,526		223,138		227,873		232,734	
Summer Peak (MW)		*68.44*		*71.90*		*74.09*		*75.68*		*77.32*		*79.00*		*80.73*
Winter Peak (MW)		*51.17*		*54.19*		*55.92*		*57.05*		*58.20*		*59.38*		*60.60*

Projected Load Data 2032-2038

	2032		2033		2034		2035		2036		2037		2038	
	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW
Jan	13,992	25.71	14,282	26.24	14,579	26.79	14,884	27.35	15,197	27.92	15,518	28.51	15,848	29.12
Feb	12,654	25.78	12,916	26.31	13,184	26.86	13,460	27.42	13,743	28.00	14,034	28.59	14,332	29.20
Mar	13,138	25.01	13,410	25.53	13,689	26.06	13,975	26.60	14,269	27.16	14,571	27.74	14,880	28.33
Apr	16,556	39.22	16,922	40.09	17,297	40.98	17,683	41.89	18,080	42.83	18,488	43.80	18,907	44.79
May	18,843	45.72	19,259	46.73	19,687	47.77	20,126	48.83	20,578	49.93	21,042	51.05	21,518	52.21
Jun	22,299	68.39	22,791	69.90	23,297	71.45	23,817	73.04	24,352	74.68	24,901	76.37	25,465	78.10
Jul	31,087	79.39	31,774	81.15	32,480	82.95	33,205	84.80	33,950	86.70	34,715	88.66	35,501	90.67
Aug	32,210	82.51	32,922	84.33	33,653	86.20	34,404	88.13	35,176	90.10	35,969	92.13	36,783	94.22
Sep	25,720	77.27	26,288	78.98	26,872	80.74	27,472	82.54	28,088	84.39	28,721	86.29	29,372	88.25
Oct	23,598	61.85	24,086	63.13	24,587	64.44	25,102	65.79	25,630	67.17	26,171	68.59	26,728	70.05
Nov	13,038	25.48	13,307	26.01	13,584	26.55	13,868	27.10	14,160	27.67	14,459	28.26	14,767	28.86
Dec	14,591	26.61	14,893	27.16	15,203	27.73	15,521	28.31	15,847	28.90	16,182	29.51	16,526	30.14
TOTAL:	237,725		242,850		248,113		253,518		259,069		264,770		270,627	
Summer Peak (MW)		*82.51*		*84.33*		*86.20*		*88.13*		*90.10*		*92.13*		*94.22*
Winter Peak (MW)		*61.85*		*63.13*		*64.44*		*65.79*		*67.17*		*68.59*		*70.05*

Projected Load Data 2039-2045

	2039		2040		2041		2042		2043		2044		2045	
	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW
Jan	16,187	29.74	16,534	30.38	16,891	31.03	17,258	31.71	17,634	32.40	18,021	33.11	18,418	33.84
Feb	14,638	29.82	14,953	30.46	15,275	31.12	15,607	31.79	15,947	32.49	16,297	33.20	16,656	33.93
Mar	15,198	28.93	15,525	29.55	15,860	30.19	16,204	30.85	16,558	31.52	16,921	32.21	17,294	32.92
Apr	19,337	45.81	19,779	46.86	20,234	47.93	20,702	49.04	21,182	50.18	21,676	51.35	22,184	52.55
May	22,008	53.40	22,512	54.62	23,029	55.88	23,561	57.17	24,108	58.49	24,671	59.86	25,249	61.26
Jun	26,044	79.88	26,640	81.70	27,253	83.58	27,882	85.51	28,530	87.50	29,195	89.54	29,879	91.64
Jul	36,310	92.73	37,140	94.85	37,994	97.03	38,872	99.27	39,774	101.58	40,702	103.95	41,656	106.38
Aug	37,621	96.37	38,482	98.57	39,366	100.84	40,276	103.17	41,211	105.56	42,172	108.02	43,160	110.56
Sep	30,041	90.26	30,728	92.32	31,434	94.44	32,161	96.63	32,907	98.87	33,675	101.17	34,464	103.55
Oct	27,299	71.55	27,885	73.08	28,487	74.66	29,105	76.28	29,740	77.95	30,392	79.65	31,062	81.41
Nov	15,082	29.47	15,406	30.11	15,739	30.76	16,080	31.43	16,431	32.11	16,791	32.82	17,161	33.54
Dec	16,879	30.78	17,242	31.44	17,614	32.12	17,996	32.82	18,389	33.54	18,792	34.27	19,206	35.03
TOTAL:	276,644		282,826		289,178		295,705		302,412		309,305		316,390	
Summer Peak (MW)		*96.37*		*98.57*		*100.84*		*103.17*		*105.56*		*108.02*		*110.56*
Winter Peak (MW)		*71.55*		*73.08*		*74.66*		*76.28*		*77.95*		*79.65*		*81.41*

BANNING ELECTRIC UTILITY
2026-2045 ESMP COINCIDENT SYSTEM FORECAST

Projected Load Data 2025 - 2031

	2025		2026		2027		2028		2029		2030		2031	
	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW
Jan	10,851	19.94	11,100	20.39	11,356	20.86	11,617	21.34	11,884	21.83	12,157	22.34	12,437	22.85
Feb	9,813	19.99	10,038	20.45	10,269	20.92	10,506	21.40	10,747	21.89	10,994	22.40	11,247	22.91
Mar	10,188	19.40	10,423	19.84	10,662	20.30	10,908	20.76	11,158	21.24	11,415	21.73	11,678	22.23
Apr	11,331	26.84	11,603	27.49	11,881	28.15	12,166	28.82	12,458	29.51	12,757	30.22	13,063	30.95
May	12,896	31.29	13,205	32.04	13,522	32.81	13,847	33.60	14,179	34.40	14,519	35.23	14,868	36.07
Jun	15,261	46.80	15,627	47.93	16,002	49.08	16,386	50.25	16,780	51.46	17,182	52.70	17,595	53.96
Jul	21,276	54.34	21,787	55.64	22,309	56.98	22,845	58.34	23,393	59.74	23,955	61.18	24,529	62.65
Aug	22,044	56.47	22,573	57.82	23,115	59.21	23,670	60.63	24,238	62.09	24,820	63.58	25,415	65.10
Sep	17,603	52.89	18,025	54.16	18,458	55.45	18,901	56.79	19,354	58.15	19,819	59.54	20,294	60.97
Oct	18,300	47.96	18,721	49.06	19,151	50.19	19,592	51.35	20,042	52.53	20,503	53.74	20,975	54.97
Nov	10,110	19.76	10,343	20.21	10,581	20.68	10,824	21.15	11,073	21.64	11,328	22.14	11,588	22.65
Dec	11,315	20.64	11,575	21.11	11,842	21.60	12,114	22.09	12,393	22.60	12,678	23.12	12,969	23.65
TOTAL:	170,987		175,020		179,149		183,374		187,700		192,127		196,659	
Summer Peak (MW)		*56.47*		*57.82*		*59.21*		*60.63*		*62.09*		*63.58*		*65.10*
Winter Peak (MW)		*47.96*		*49.06*		*50.19*		*51.35*		*52.53*		*53.74*		*54.97*

Projected Load Data 2032-2038

	2032		2033		2034		2035		2036		2037		2038	
	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW
Jan	12,723	23.38	13,016	23.91	13,315	24.46	13,621	25.03	13,935	25.60	14,255	26.19	14,583	26.79
Feb	11,506	23.44	11,771	23.98	12,041	24.53	12,318	25.09	12,602	25.67	12,891	26.26	13,188	26.86
Mar	11,946	22.74	12,221	23.26	12,502	23.80	12,790	24.35	13,084	24.91	13,385	25.48	13,693	26.07
Apr	13,377	31.69	13,698	32.45	14,027	33.23	14,363	34.03	14,708	34.84	15,061	35.68	15,422	36.54
May	15,225	36.94	15,590	37.83	15,964	38.73	16,347	39.66	16,740	40.62	17,142	41.59	17,553	42.59
Jun	18,017	55.26	18,449	56.58	18,892	57.94	19,346	59.33	19,810	60.75	20,285	62.21	20,772	63.71
Jul	25,118	64.15	25,721	65.69	26,338	67.27	26,970	68.88	27,618	70.53	28,281	72.23	28,959	73.96
Aug	26,025	66.66	26,650	68.26	27,289	69.90	27,944	71.58	28,615	73.30	29,302	75.06	30,005	76.86
Sep	20,781	62.44	21,280	63.94	21,791	65.47	22,314	67.04	22,849	68.65	23,398	70.30	23,959	71.98
Oct	21,457	56.24	21,951	57.53	22,456	58.85	22,972	60.21	23,501	61.59	24,041	63.01	24,594	64.46
Nov	11,855	23.17	12,128	23.70	12,406	24.25	12,692	24.80	12,984	25.37	13,282	25.96	13,588	26.55
Dec	13,268	24.20	13,573	24.75	13,885	25.32	14,204	25.90	14,531	26.50	14,865	27.11	15,207	27.73
TOTAL:	201,298		206,047		210,907		215,882		220,975		226,188		231,523	
Summer Peak (MW)		*66.66*		*68.26*		*69.90*		*71.58*		*73.30*		*75.06*		*76.86*
Winter Peak (MW)		*56.24*		*57.53*		*58.85*		*60.21*		*61.59*		*63.01*		*64.46*

Projected Load Data 2039-2045

	2039		2040		2041		2042		2043		2044		2045	
	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW
Jan	14,918	27.41	15,261	28.04	15,612	28.68	15,971	29.34	16,339	30.02	16,715	30.71	17,099	31.42
Feb	13,491	27.48	13,801	28.11	14,119	28.76	14,444	29.42	14,776	30.10	15,116	30.79	15,463	31.50
Mar	14,007	26.67	14,330	27.28	14,659	27.91	14,996	28.55	15,341	29.20	15,694	29.88	16,055	30.56
Apr	15,793	37.41	16,172	38.31	16,560	39.23	16,957	40.17	17,364	41.14	17,781	42.12	18,208	43.13
May	17,974	43.61	18,406	44.66	18,847	45.73	19,300	46.83	19,763	47.95	20,237	49.10	20,723	50.28
Jun	21,271	65.23	21,781	66.80	22,304	68.40	22,839	70.04	23,387	71.73	23,949	73.45	24,523	75.21
Jul	29,654	75.73	30,366	77.55	31,095	79.41	31,841	81.32	32,605	83.27	33,388	85.27	34,189	87.32
Aug	30,725	78.70	31,462	80.59	32,218	82.53	32,991	84.51	33,783	86.53	34,593	88.61	35,424	90.74
Sep	24,534	73.71	25,123	75.48	25,726	77.29	26,344	79.15	26,976	81.05	27,623	82.99	28,286	84.98
Oct	25,160	65.94	25,738	67.46	26,330	69.01	26,936	70.60	27,555	72.22	28,189	73.88	28,838	75.58
Nov	13,900	27.17	14,220	27.79	14,547	28.43	14,882	29.08	15,224	29.75	15,574	30.44	15,932	31.14
Dec	15,557	28.37	15,915	29.02	16,281	29.69	16,655	30.37	17,038	31.07	17,430	31.79	17,831	32.52
TOTAL:	236,985		242,576		248,298		254,156		260,152		266,289		272,571	
Summer Peak (MW)		*78.70*		*80.59*		*82.53*		*84.51*		*86.53*		*88.61*		*90.74*
Winter Peak (MW)		*65.94*		*67.46*		*69.01*		*70.60*		*72.22*		*73.88*		*75.58*

BANNING ELECTRIC UTILITY
2026-2045 ESMP CONCEPTUAL COINCIDENT SYSTEM FORECAST

Projected Load Data 2025 - 2031

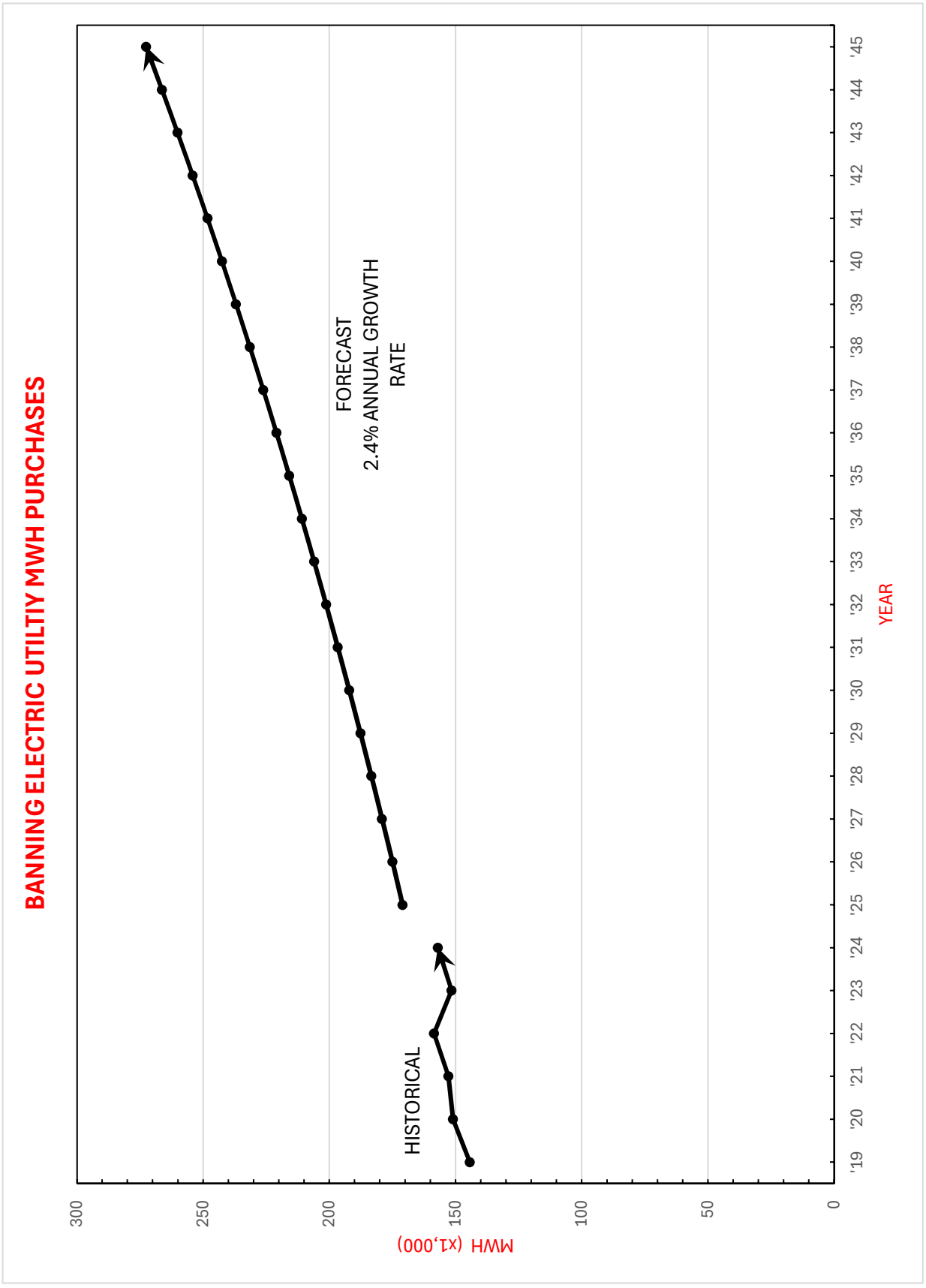
	2025		2026		2027		2028		2029		2030		2031	
	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW
Jan	10,851	19.94	11,358	20.87	11,806	21.69	13,693	25.16	15,074	27.69	17,406	31.98	20,439	37.55
Feb	9,813	19.99	10,272	20.92	10,677	21.75	12,384	25.23	13,632	27.77	15,741	32.07	18,484	37.65
Mar	10,188	19.40	10,665	20.30	11,085	21.10	12,857	24.48	14,153	26.94	16,344	31.11	19,191	36.53
Apr	11,331	26.84	11,831	28.03	12,281	29.09	14,008	33.19	15,287	36.22	17,413	41.25	20,161	47.76
May	12,896	31.29	13,466	32.67	13,977	33.91	15,943	38.68	17,399	42.22	19,818	48.08	22,946	55.67
Jun	15,261	46.80	15,935	48.87	16,540	50.73	18,867	57.86	20,590	63.15	23,453	71.93	27,154	83.28
Jul	21,276	54.34	22,216	56.74	23,060	58.89	26,303	67.18	28,705	73.31	32,696	83.50	37,856	96.68
Aug	22,044	56.47	23,018	58.96	23,892	61.20	27,253	69.81	29,742	76.18	33,877	86.78	39,223	100.47
Sep	17,603	52.89	18,380	55.22	19,078	57.32	21,762	65.38	23,749	71.35	27,051	81.27	31,320	94.10
Oct	18,300	47.96	19,156	50.20	19,911	52.18	23,094	60.53	25,421	66.63	29,356	76.94	34,470	90.34
Nov	10,110	19.76	10,583	20.68	11,001	21.50	12,759	24.94	14,045	27.45	16,219	31.70	19,044	37.22
Dec	11,315	20.64	11,844	21.60	12,312	22.45	14,280	26.04	15,719	28.67	18,151	33.10	21,314	38.87
TOTAL:	170,987		178,725		185,621		213,204		233,515		267,525		311,603	
Summer Peak (MW)		*56.47*		*58.96*		*61.20*		*69.81*		*76.18*		*86.78*		*100.47*
Winter Peak (MW)		*47.96*		*50.20*		*52.18*		*60.53*		*66.63*		*76.94*		*90.34*

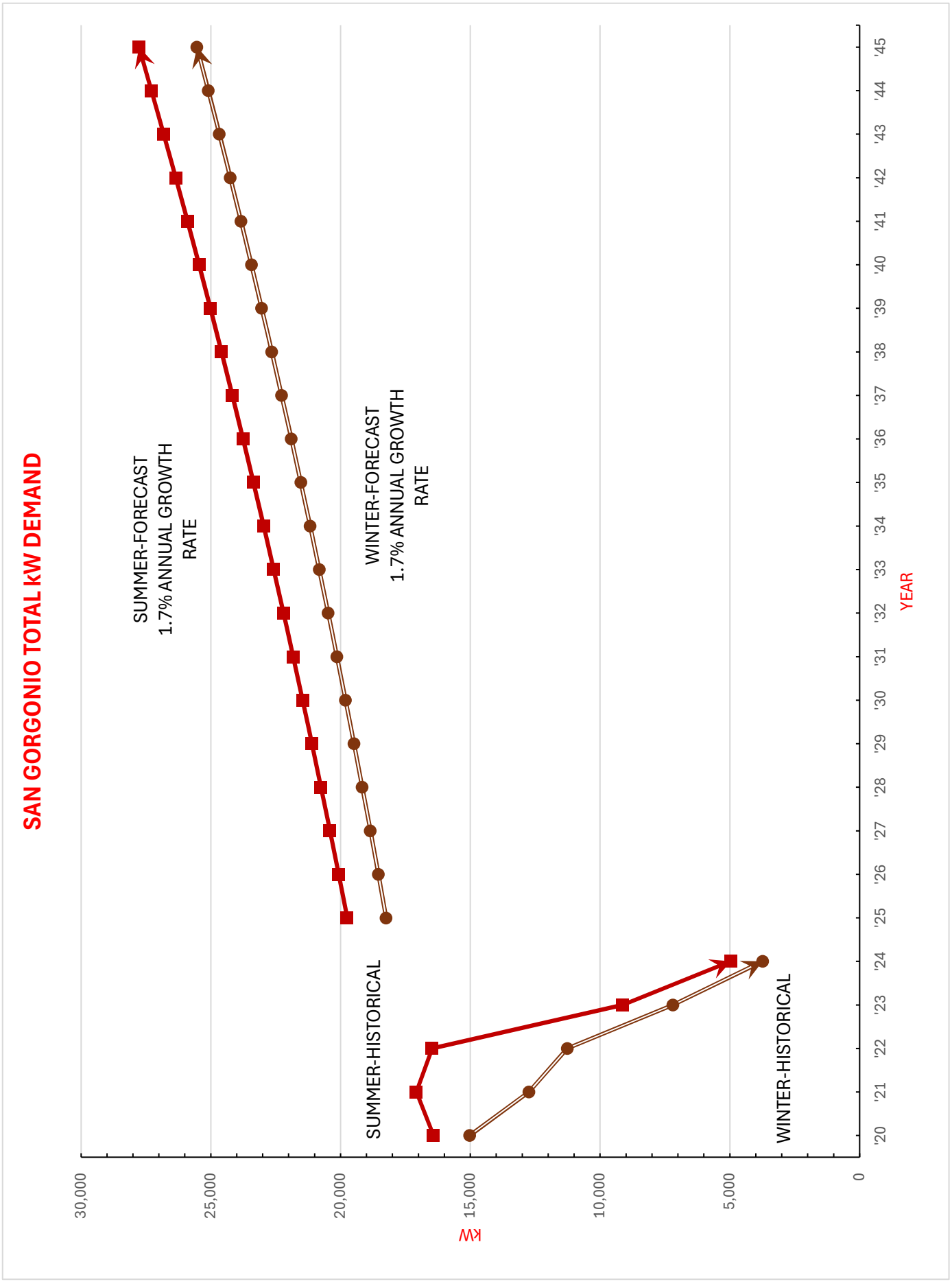
Projected Load Data 2032-2038

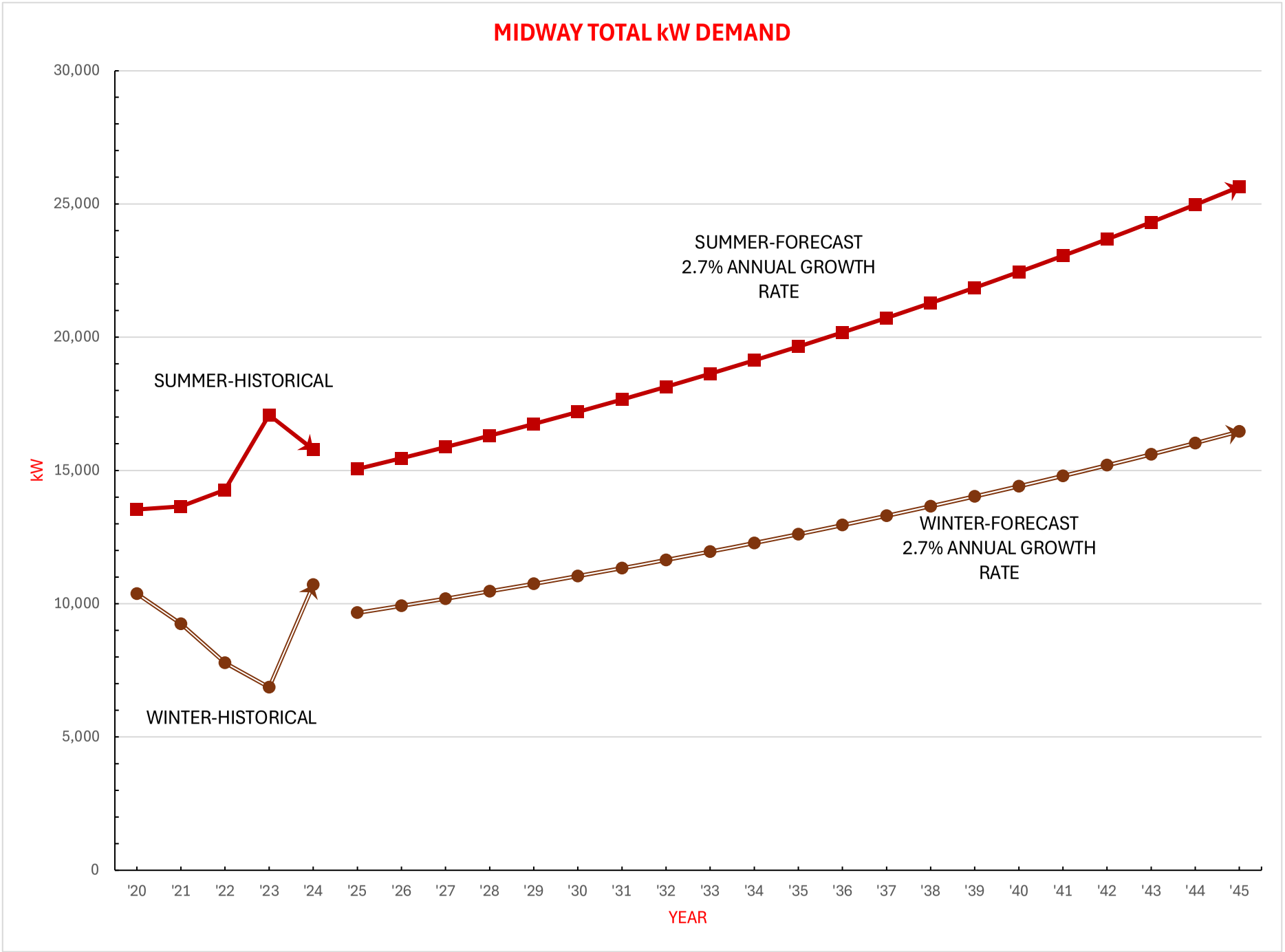
	2032		2033		2034		2035		2036		2037		2038	
	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW
Jan	22,332	41.03	24,806	45.58	26,704	49.06	28,498	52.36	30,229	55.54	31,967	58.73	32,833	60.32
Feb	20,195	41.14	22,433	45.70	24,149	49.19	25,772	52.50	27,337	55.69	28,909	58.89	29,692	60.49
Mar	20,968	39.92	23,291	44.34	25,073	47.73	26,758	50.94	28,383	54.03	30,016	57.14	30,829	58.69
Apr	21,899	51.88	24,155	57.22	25,902	61.36	27,558	65.29	29,160	69.08	30,771	72.90	31,610	74.88
May	24,924	60.47	27,492	66.70	29,480	71.53	31,365	76.10	33,188	80.53	35,021	84.97	35,976	87.29
Jun	29,495	90.46	32,534	99.78	34,886	106.99	37,117	113.83	39,275	120.45	41,444	127.10	42,574	130.57
Jul	41,121	105.02	45,356	115.84	48,637	124.21	51,746	132.15	54,755	139.84	57,779	147.56	59,354	151.58
Aug	42,606	109.14	46,994	120.38	50,393	129.08	53,615	137.34	56,732	145.32	59,866	153.35	61,498	157.53
Sep	34,021	102.21	37,526	112.74	40,239	120.90	42,812	128.63	45,301	136.11	47,803	143.62	49,107	147.54
Oct	37,662	98.71	41,835	109.64	45,036	118.03	48,061	125.96	50,981	133.62	53,913	141.30	55,373	145.13
Nov	20,808	40.66	23,113	45.17	24,882	48.63	26,553	51.89	28,166	55.05	29,786	58.21	30,593	59.79
Dec	23,287	42.47	25,867	47.17	27,847	50.78	29,718	54.20	31,523	57.49	33,336	60.79	34,239	62.44
TOTAL:	339,319		375,401		403,228		429,573		455,032		480,611		493,678	
Summer Peak (MW)		*109.14*		*120.38*		*129.08*		*137.34*		*145.32*		*153.35*		*157.53*
Winter Peak (MW)		*98.71*		*109.64*		*118.03*		*125.96*		*133.62*		*141.30*		*145.13*

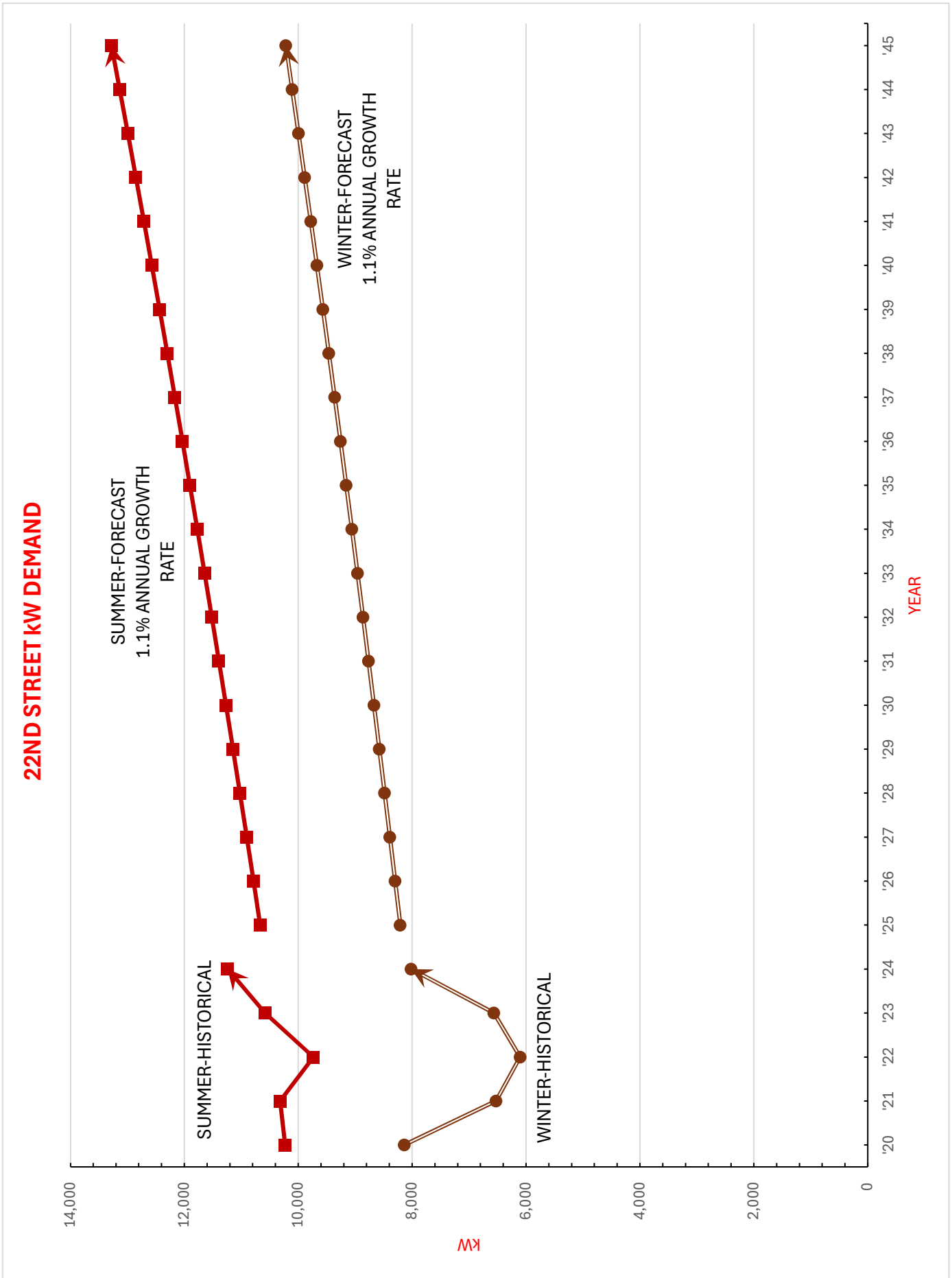
Projected Load Data 2039-2045

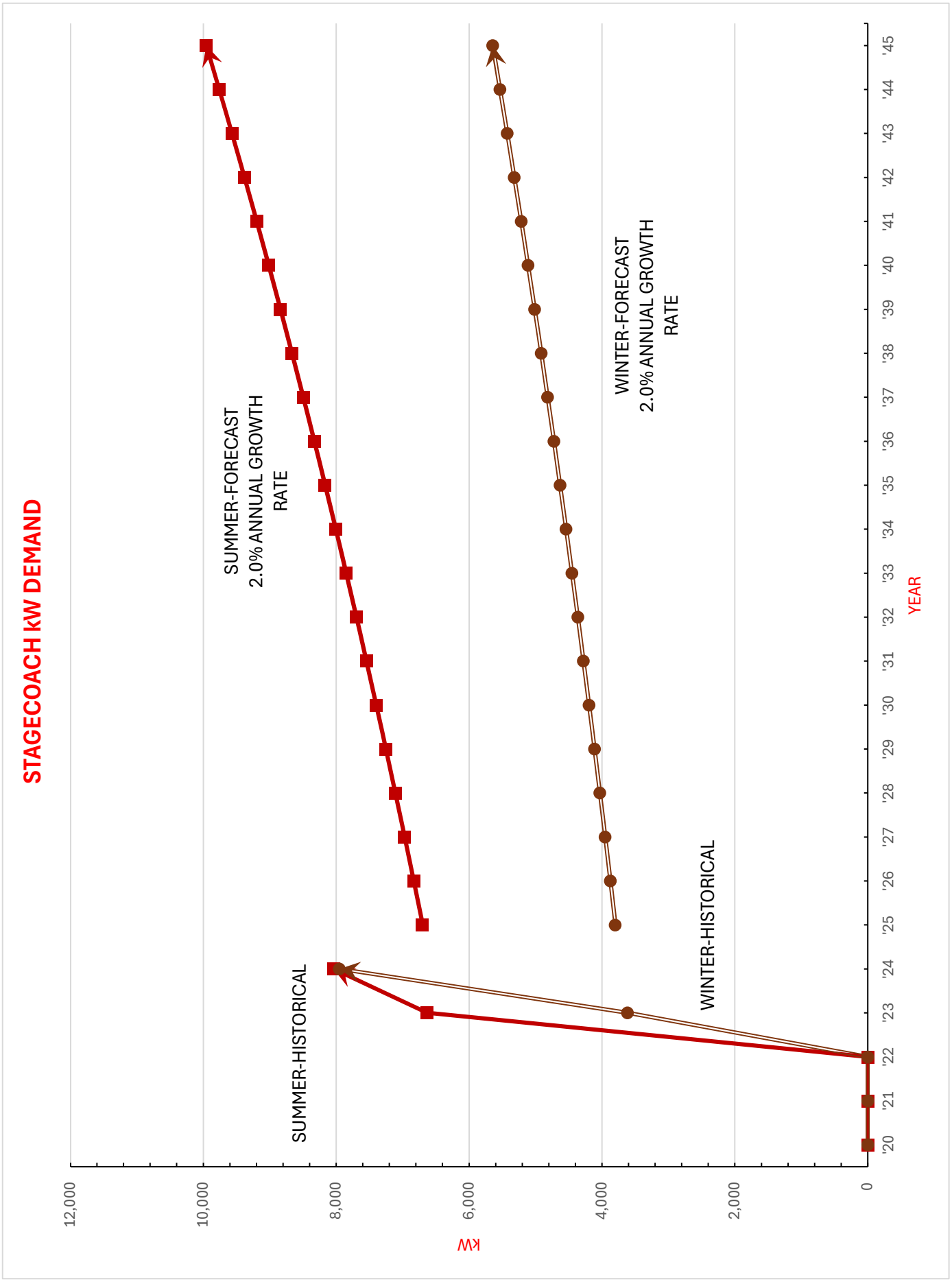
	2039		2040		2041		2042		2043		2044		2045	
	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW
Jan	33,707	61.93	34,588	63.55	34,939	64.19	35,298	64.85	35,666	65.53	36,042	66.22	36,426	66.93
Feb	30,483	62.10	31,280	63.72	31,597	64.37	31,922	65.03	32,254	65.70	32,594	66.40	32,941	67.10
Mar	31,649	60.25	32,477	61.82	32,806	62.45	33,143	63.09	33,488	63.75	33,841	64.42	34,202	65.11
Apr	32,457	76.89	33,314	78.92	33,702	79.84	34,099	80.78	34,506	81.75	34,923	82.73	35,350	83.74
May	36,941	89.63	37,915	91.99	38,357	93.07	38,810	94.16	39,273	95.29	39,747	96.44	40,233	97.62
Jun	43,716	134.07	44,869	137.61	45,392	139.21	45,927	140.85	46,475	142.53	47,037	144.25	47,611	146.02
Jul	60,946	155.65	62,554	159.76	63,283	161.62	64,029	163.52	64,793	165.47	65,575	167.47	66,377	169.52
Aug	63,146	161.75	64,813	166.02	65,568	167.95	66,341	169.93	67,133	171.96	67,943	174.04	68,774	176.17
Sep	50,423	151.49	51,754	155.49	52,357	157.30	52,974	159.16	53,606	161.06	54,254	163.00	54,917	164.99
Oct	56,847	148.99	58,333	152.88	58,925	154.44	59,531	156.02	60,150	157.65	60,784	159.31	61,432	161.01
Nov	31,407	61.38	32,228	62.98	32,555	63.62	32,890	64.28	33,232	64.95	33,582	65.63	33,941	66.33
Dec	35,150	64.10	36,069	65.78	36,435	66.45	36,809	67.13	37,192	67.83	37,584	68.54	37,985	69.27
TOTAL:	506,871		520,193		525,915		531,773		537,769		543,906		550,188	
Summer Peak (MW)		*161.75*		*166.02*		*167.95*		*169.93*		*171.96*		*174.04*		*176.17*
Winter Peak (MW)		*148.99*		*152.88*		*154.44*		*156.02*		*157.65*		*159.31*		*161.01*

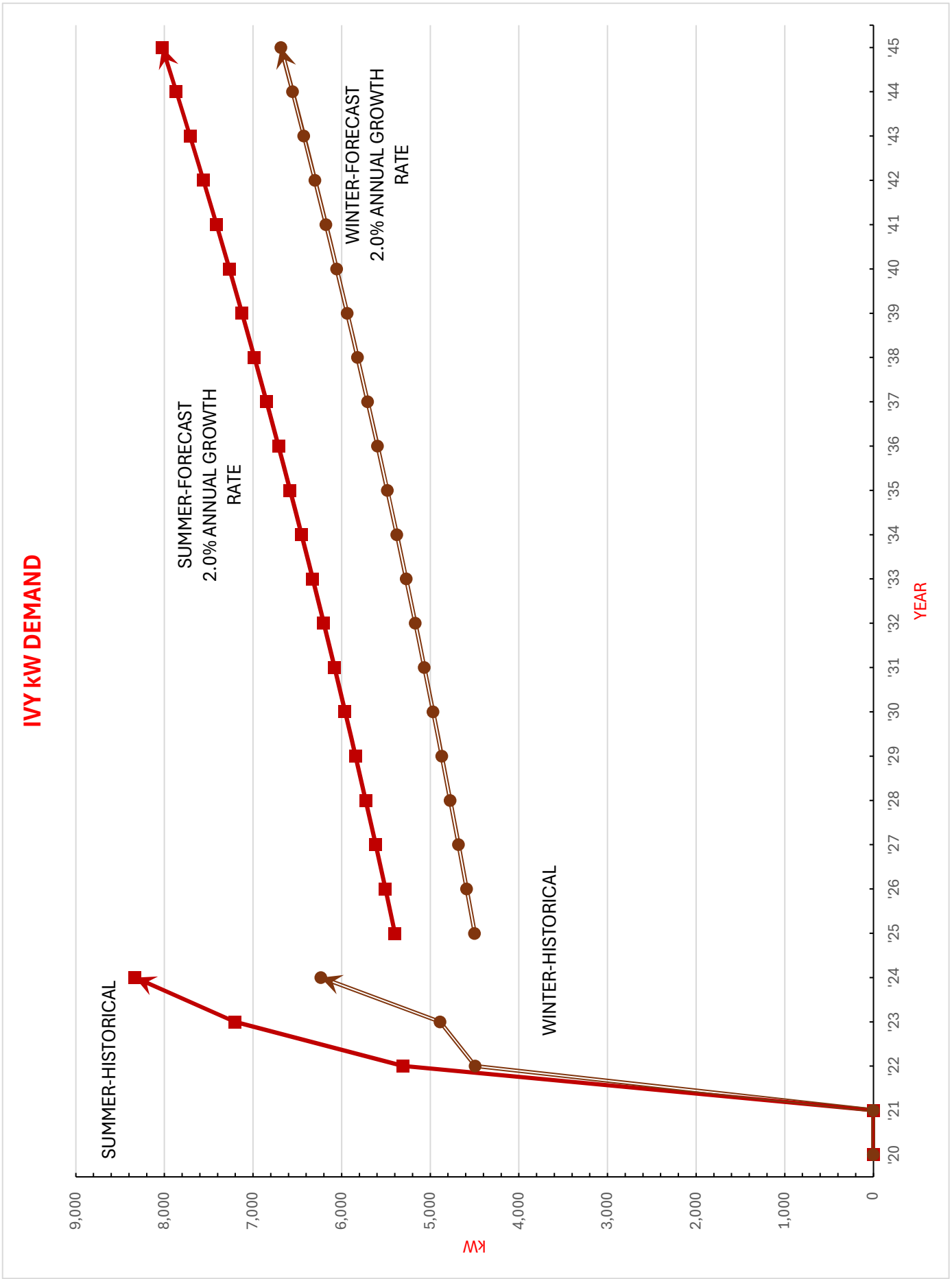

BANNING ELECTRIC UTILTIY MWH PURCHASES
FORECAST
2.4% ANNUAL GROWTH
RATE
HISTORICAL
MWH (x1,000)
YEAR
300
250
200
150
100
50
0
'19
'20
'21
'22
'23
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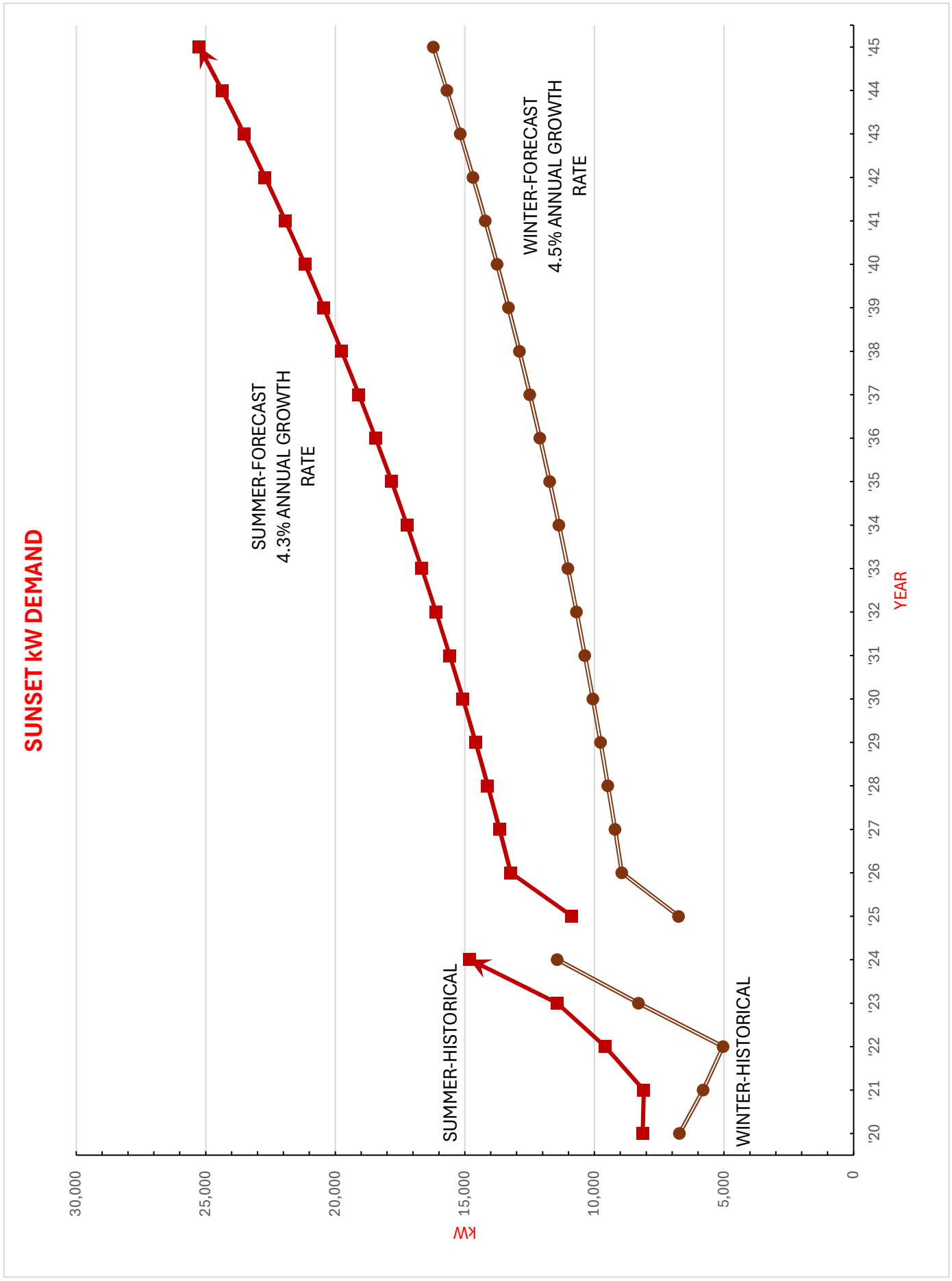

SAN GORGONIO TOTAL kW DEMAND
SUMMER-FORECAST
1.7% ANNUAL GROWTH
RATE
WINTER-FORECAST
1.7% ANNUAL GROWTH
RATE
SUMMER-HISTORICAL
WINTER-HISTORICAL
kW
YEAR
30,000
25,000
20,000
15,000
10,000
5,000
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MIDWAY TOTAL kW DEMAND
30,000
25,000
20,000
15,000
10,000
5,000
0
kW
SUMMER-FORECAST
2.7% ANNUAL GROWTH
RATE
SUMMER-HISTORICAL
WINTER-FORECAST
2.7% ANNUAL GROWTH
RATE
WINTER-HISTORICAL
'20
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'45
YEAR


22ND STREET kW DEMAND
SUMMER-FORECAST
1.1% ANNUAL GROWTH
RATE
WINTER-FORECAST
1.1% ANNUAL GROWTH
RATE
SUMMER-HISTORICAL
WINTER-HISTORICAL
kW
YEAR
14,000
12,000
10,000
8,000
6,000
4,000
2,000
0
'20
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STAGECOACH kW DEMAND
SUMMER-FORECAST
2.0% ANNUAL GROWTH
RATE
SUMMER-HISTORICAL
WINTER-FORECAST
2.0% ANNUAL GROWTH
RATE
WINTER-HISTORICAL
kW
YEAR
12,000
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8,000
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4,000
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IVY kW DEMAND
SUMMER-HISTORICAL
SUMMER-FORECAST
2.0% ANNUAL GROWTH
RATE
WINTER-HISTORICAL
WINTER-FORECAST
2.0% ANNUAL GROWTH
RATE
kW
YEAR
9,000
8,000
7,000
6,000
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SUNSET kW DEMAND
SUMMER-FORECAST
4.3% ANNUAL GROWTH
RATE
WINTER-FORECAST
4.5% ANNUAL GROWTH
RATE
SUMMER-HISTORICAL
WINTER-HISTORICAL
kW
YEAR
30,000
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4.0 – LAND USE AND POPULATION

The City of Banning is located in Riverside County and has a reported 2026 population of approximately 33,000 people which has increased by an estimated 10% since the most recent census in 2020. The annual growth rate is projected at 1.6%

The BEU service area for the most part is the same as the Banning City Boundary which covers approximately 23 square miles.

The following table shows current development whose load was included in the ESMP analysis.

Table 4.0-1 – Current Developments

Development	Classification	Land Area (acres)	Size
Atwell Subdivision	Residential	1,457	14,000 + lots
Cannabis Cultivation	Industrial	0.5	-
Yoshinoya	Commercial	-	-
Morongo Health Clinic	Commercial	-	-
Crestwood Communities	Residential	5.9	19 lots
Vista Robles Homes	Residential	72	140 lots

The following table shows future developments whose load was included in the ESMP analysis.

Table 4.0-2 – Future Developments

Development	Classification	Land Area (acres)	Size
Bridge-Morongo Logistics	Commercial/Industrial	509	5 buildings
Sunset Crossroads	Commercial/Industrial	559	6 buildings
Rancho San Gorgonio	Residential	710	3,600 lots
Mission Heights	Residential	-	2,200 lots
First Hathaway Logistics	Commercial/Industrial	88	-
Banning Commerce Center	Industrial	124	-
WEKA	Industrial	3.4	-
Charlles St. CDRE	Industrial	4.6	-
KCB Towers	Industrial	4.5	-
Pallet Yard	Industrial	0.3	-
First Lincoln Logistics	Commercial	6.2	-
Brown Strauss	Commercial	15.8	-
Wyndam Micro Hotel	Residential/Commercial	1.3	-
DR Horton	Residential	-	98 lots
Atwell Large Retail	Commercial	-	-

CITY OF BANNING, CALIFORNIA

2026-2030 5-YEAR CAPITAL IMPROVEMENT PLAN

April 2026

Prepared by:

Finley Engineering Company, Inc.

On behalf of:

Banning Electric Utility

BANNING ELECTRIC UTILITY
PROVIDING POWER TO THE COMMUNITY OF BANNING SINCE 1922

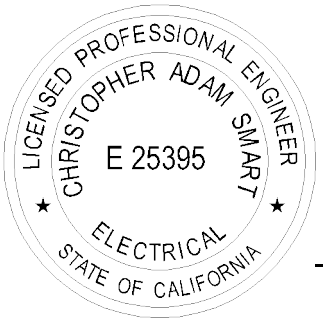
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City of Banning
99 E. Ramsey Street
Banning, CA 92220
951.922.3100
www.banningca.gov

ENGINEERS CERTIFICATION

I, Christopher Adam Smart, P.E., herby certify that this *2026-2030 5-Year Capital Improvement Plan* was prepared by me or under my direct Supervision and that I am a duly Licensed Professional Engineer under the laws of the state of California, license number E 25395.



X _____

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5.1 - EXECUTIVE SUMMARY

5.1.1 - Introduction

The City of Banning owns the utility that provides electric service to Banning, California and the electric utility is maintained by Banning Electric Utility (BEU). Originally established in 1913 as a private utility, the City of Banning purchased the electric utility in 1922 and has been providing electric service to its residents since that time. Banning's energy resource base includes portions of nuclear, geothermal, solar, landfill gas-to-energy, and hydro generating plants, that provide the majority of electricity required to meet the system peak demand.

Through an agreement with Southern California Edison Company (SCE), the BEU system utilizes SEC's transmission system in bringing power from the California Independent System Operator ("CAISO") controlled high voltage transmission grid to the BEU distribution system at the Banning Substation. BEU maintains three, 34.5kV sub-transmission circuits totaling approximately eighteen miles which feed six distribution substations.

These six distribution substations have approximately 27 circuits feeding 147 miles of overhead and underground distribution line with an operating voltage of 7.2/12.5 kV. An estimated 47% of the total distribution line is underground.

The City of Banning supports clean-energy and is committed to additional renewable energy resources to its already diverse portfolio. BEU has met and/or exceeded the renewable energy requirements of Compliance Period #1, Compliance Period #2, and Compliance Period #3 of the State's Renewables Portfolio Standard (RPS) program. The Utility was 81 percent renewable in 2022, already exceeding the current State mandate of 60 percent by 2030.

BEU is a member of the Southern California Public Power Authority (SCPPA) enjoying the benefits of joint action through cost effective planning, construction, management, and operations of electrical energy resources.

5.1.2 - Purpose of Study

This 5-year Capital Improvement Plan (CIP) is a study prepared by Finley Engineering Company, Inc. (Finley) based on an analysis and review of the historical system growth and operation to determine projections of future growth, recommendations for capital improvements, and scheduled system maintenance that will insure the continued economical and reliable operation of the system over the ensuing 5-year period.

5.1.3 – General Conclusions and Recommendations

The 5-Year CIP includes projects and estimated costs for Overhead Maintenance, Capital Maintenance, and Distribution System Improvements.

The Overhead Maintenance program include the inspection of 3,900 poles and the replacement of 350 pole at a total estimated cost of $4,058,438.

Capital Maintenance includes 18 various projects such as underground conductor replacement, fiber extensions, substation breaker upgrades, fire mitigation, line hardening, line re-routes and/or relocation, recloser installations for sectionalizing, etc. The total estimated cost for these projects

is $20,784,500. It is expected that BEU will receive $9,293,750 in cost in aid to construction (CIAC) bringing the total BEU funding cost to $11,490,750.

Analysis was run using Milsoft's Windmil software on the distribution system to determine system improvement projects to correct low voltage, decrease conductor and equipment loading, and reduce single phase line loading to aid in phase balancing. The analysis results include 14 projects to switch load to adjacent lines to reduce single-phase line loading at a total estimated cost of $41,700, 2 projects for new line construction of 600' totaling $336,400, 9 projects for single-phase to three-phase line rebuild of 10,107' totaling $2,142,100, and 2 projects for three-phase line rebuild using larger conductor of 2,130' totaling $285,500. The total estimated cost for distribution system improvements is $2,805,700.

The total estimated cost for the 5-Year CIP is $27,648,638 with an estimated $9,293,750 in CIAC reducing the BEU funding estimate to $18,354,888. For the BEU funding cost, 22% is for Overhead Maintenance, 63% is for Capital Maintenance, and 15% is for Distribution System improvements.

5.2 – Planning Criteria

5.2.1 - Distribution System

The distribution projects contained in this 5-Year CIP are recommended based upon the following planning criteria.

a. With an assumed delivered voltage of 125 volts (1.041 per unit on a 120 volt base) during peak load conditions, the design minimum allowable voltage at the primary terminals of any distribution transformer shall be 118 volts (0.98 per unit on a 120 volt base).

b. Voltage regulators and step transformers will be upgraded when projected peak loads exceed 85% of the device's rating.

c. Sectionalizing devices will be upgraded when projected peak loads exceed 70% of the device's continuous current rating.

d. Primary conductors on the 7.2/12.5 kV and below distribution system will be upgraded when projected peak loads exceed 60% of the conductor's thermal rating and may be subject to upgrade before this time if anticipated load growth may potentially exceed 60% of the conductor's thermal rating

e. Primary conductors on the 34.5 kV sub-transmission system will be upgraded when projected peak loads exceed 90% of the conductor's thermal rating and may be subject to upgrade before this time if anticipated load growth may potentially exceed 90% of the conductor's thermal rating

f. Single-phase primary voltage lines will be limited to 35 amps maximum loading.

g. The power factor at the delivery point under peak loading conditions is desired to be no less than 95%. The off-peak power factor should preferably be maintained between 95% lagging and 95% leading. This criterion is subject to the cost of the installation of capacitors, switches, and controls vs. the cost of kilowatt (kW) loss reduction.

5.2.1.1 - Distribution System Design Criteria

The following design criteria was considered when determining projects contained in this 5-year CIP.

a. Feeder current balance will be maintained at plus or minus 20% of the average per phase loading during peak conditions. This criterion may be relaxed in areas where it could impose unnecessary or premature costs.

b. Conductor sizes will be economically sized but may be modified to conform to BEU's standard conductor sizes.

c. Load switching and backfeeding will be considered to defer unnecessary or premature costs to correct any load voltage or high conductor loading.

d. Load switching and backfeeding will be considered to defer unnecessary or premature costs to correct any high single-phase loading. For areas where there is no backfeed or load switch solution, additional conductors will be added to allow for phase balancing.

e. Relocation of existing line sections will be considered where inaccessibility impedes the maintenance of line sections or jeopardizes the service or reliability of line sections.

5.2.2 – Substation

The substation projects contained in this 5-Year CIP are recommended based upon the following planning criteria.

a. Substation transformers will limited to 95% of the max kVA rating of the transformer. The following improvements will be considered in the event the load exceeds 95% of the max kVA rating:

a. Load switching to adjacent substations
b. Upgrade of existing transformer
c. Installation of an additional transformer in the existing substation
d. Construction of a new substation

5.2.3 – Basis of Cost Estimates

The following tables for material and labor costs were used to determine total project costs. The costs were taken from actual prices provided by BEU as well as prices received by FEC from other sources.

Table 5.2.3-1 Conductor Material Cost

Conductor (price per foot)				
OH Conductor			**UG Conductor**	
#2 Copper	$1.31		1/0 AL, 15 kV	$2.03
#2 ACSR	$0.26		1/0 CU, 15 kV	$10.98
#4 ACSR	$0.15		1/0 CU, 35 kV	$8.47
1/0 ACSR	$0.30		4/0 CU	$6.95
4/0 Copper	$3.11		4/0 AL	$4.97
4/0 ACSR	$0.80		350 CU	$7.53
336 ACSR	$1.62		750 AL	$13.38

Table 5.2.3-2 Pole Material Cost

Pole	Price per unit	Pole	Price per unit
35' Douglas Fir, H2	$1,269.30	35’ Wood, Class 2	$1,067.38
		40’ Wood, Class 2	$766.35
45' Douglas Fir, H2	$1,771.08	45’ Wood, Class 2	$953.80
		50’ Wood, Class 2	$1,135.73
55' Douglas Fir, H2	$2,889.48	55’ Wood, Class 2	$918.72
60' Douglas Fir, H2	$2,945.89	60’ Wood, Class 2	$1,362.29

Table 5.2.3-3 Transformer Material Cost

Transformer	Price per unit
10 kVA O.H. Transformer S-Type 7,200	$500.00
15 kVA 7,200, 120/240 DV S-Type	$645.42
25 kVA 7,200, 120/240 DV S-Type	$919.16
37 kVA 7,200, 120/240 DV S-Type	$1,496.65
50 kVA 7,200 120/240	$3,992.05
75 kVA 3Ø 12,470/7,200 120/208	$6,023.22
300 kVA DV	$8,583.61
750 kVA 3Ø 12,470/7,200	$14,626.30
1,000 kVA 3Ø 12,470/7,200 DV	$10,809.48
2,500 kVA 3Ø 12,470/7,200 277/480	$34,539.92
25 kVA 1Ø 12,470/7,200 120/240 Pdmnt	$3,685.34
37.5 kVA 1Ø 12,400/7,200 DV Pdmnt	$1,988.01
75 kVA 1Ø 12,470/7,200 120/240 Pdmnt	$7,110.42
300 kVA 3Ø 12,470/4,160 DV Pdmnt 208/120	$13,547.15
500 kVA 3Ø Pdmnt	$10,442.65
1,500 kVA DV 3Ø Pdmnt 277/480	$31,037.04

Table 5.2.3-4 Framing Units Material Cost

Framing Unit	Price per unit
A1.3P	$75.32
A1.11P	$493.46
A5.2G	$286.41
A3.1	$78.74
A6.21	$1,080.29
G1.2	$317.41
G1.2	$1,318.96
A5.1	$195.12
A5.21	$888.35
(A4.1)	$255.90
G1.3	$433.79
G1.3	$1,127.02
C1.11	$628.33
C1.81G	$1,592.53
C1.11,A5.21	$1,516.68
C5.82G	$3,472.80
C3.1	$208.96
C3.1,A5.1	$404.08
C3.1,A5.21	$1,097.31
C3.1, C5.1	$376.78
C5.1	$167.82
C5.1,A5.1	$362.94
C5.1,A5.21	$1,056.17

Table 5.2.3-5 Underground Material Cost

Material	Price per unit
Light Duty Secondary Box	$78.42
Light Duty Secondary Lid	$83.43
4" PVC SCH 40 (per foot)	$1.69
1/0 AL U/G (per foot)	$4.75
Service Entrance Sleeve	$0.45
Deadend Shoe Small	$8.58
Power Solve (Pulling Lube)	$58.98

Table 5.2.3-6 Overhead Construction Labor and Fleet Cost

	Units (hr.)	Unit Cost (per hr.)
Utility Bed P/U 1 ton (Foreman) (2 hrs. per connection)	4	$27.78
2 Person Lift (Bucket Truck) 55' (2 hrs. per connection)	2	$51.68
4 Person Crew	4	$466.73
3 Person Crew (2 hours per connection)	4	$352.02
2 Person Crew	2	$237.31
Electrical Engineering Supervisor (0.5 hrs. per connection)	1	$125.98
Electric Service Planning Supervisor (0.5 hrs. per connection)	1	$127.97
GIS Technician (1 hr. per connection)	2	$59.21

For overhead line, project cost estimates are based on an average of construction 1 mile of line per month with average span lengths at 150’.

Table 5.2.3-7 Underground Construction Labor and Fleet Cost

Labor	Price per hr.
4 Person Line Crew	$466.73
Powerline Crew Superintendent	$135.93
Fleet	**Price per hr.**
Dump Truck	$55.98
Utility Bed P/U 1 ton (Foreman) (3)	$27.78
Digger Derrick	$48.77
Wire Puller	$24.98
Reel Trailer	$24.98
Backhoe	$23.95

For underground line, project estimates are based on an average construction of 1 month to trench, lay conduit, pull wire and terminate, and backfill 300’.

Engineering (10%) and contingency (5%) were also added for each cost estimate.

5.3 – System Forecast

The 5-year CIP demand forecast was prepared to project the summer and winter kW demand per substation area as well as the total system demand for the City of Banning for the 2025-2030 CIP period. The historical non-coincident substation demands as well as the historical coincident system demands were provided by BEU and used as the basis for the forecast. BEU also provided insight into new load additions that are in some sort of application or planning process and were used in the conceptual forecast.

Additional factors that were considered when reviewing the historical peaks include temporary load switching between substations, construction of new substations with permanent load switching, and removal and/or replacement of existing substations.

Along with new load additions, considerations were also made for the addition of EV chargers at new subdivision locations.

This forecast will be used to run voltage drop and load flow analysis to determine system improvements required to reliably serve the City of Banning existing consumers and allow for future consumer growth.

It is projected that the BEU system will reach a non-coincident peak of 79,004 kW in the summer of 2030 and 59,385 kW in the winter of 2030. It is also projected that the BEU system will reach a coincident peak of 63,576 kW in the summer of 2030 and 53,737 kW in the winter of 2030.

A separate conceptual forecast was created to include new load additions that are in some state of application or planning process. It is projected that the BEU system will reach a conceptual non-coincident peak of 86,777 kW in the summer of 2030 and 76,938 kW in the winter of 2030.

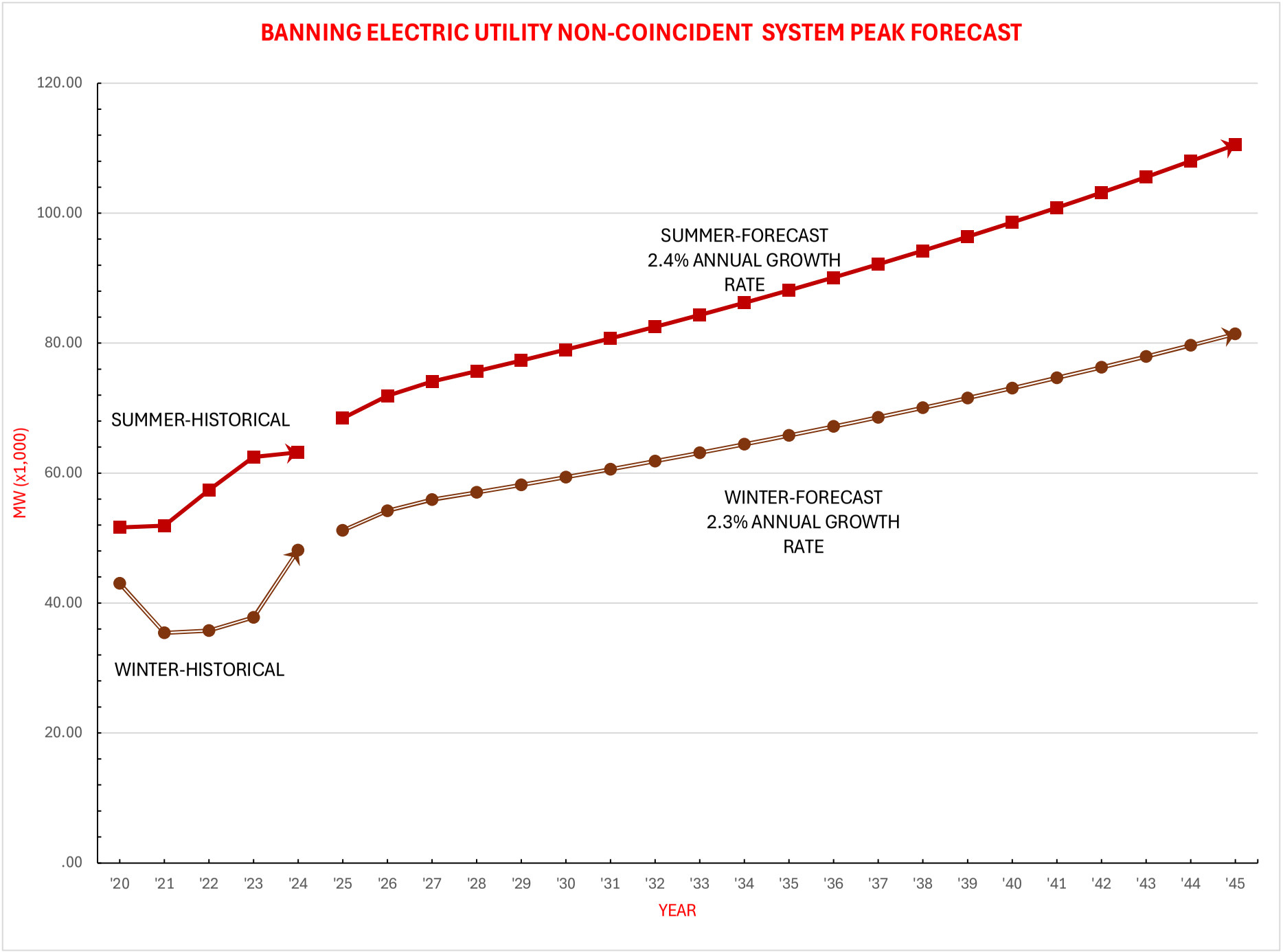
As part of the historical review, MWH purchases were also reviewed and a forecast was determined. It is projected that the BEU system will have an annual coincident purchase of 192,127 MWH's by 2030.

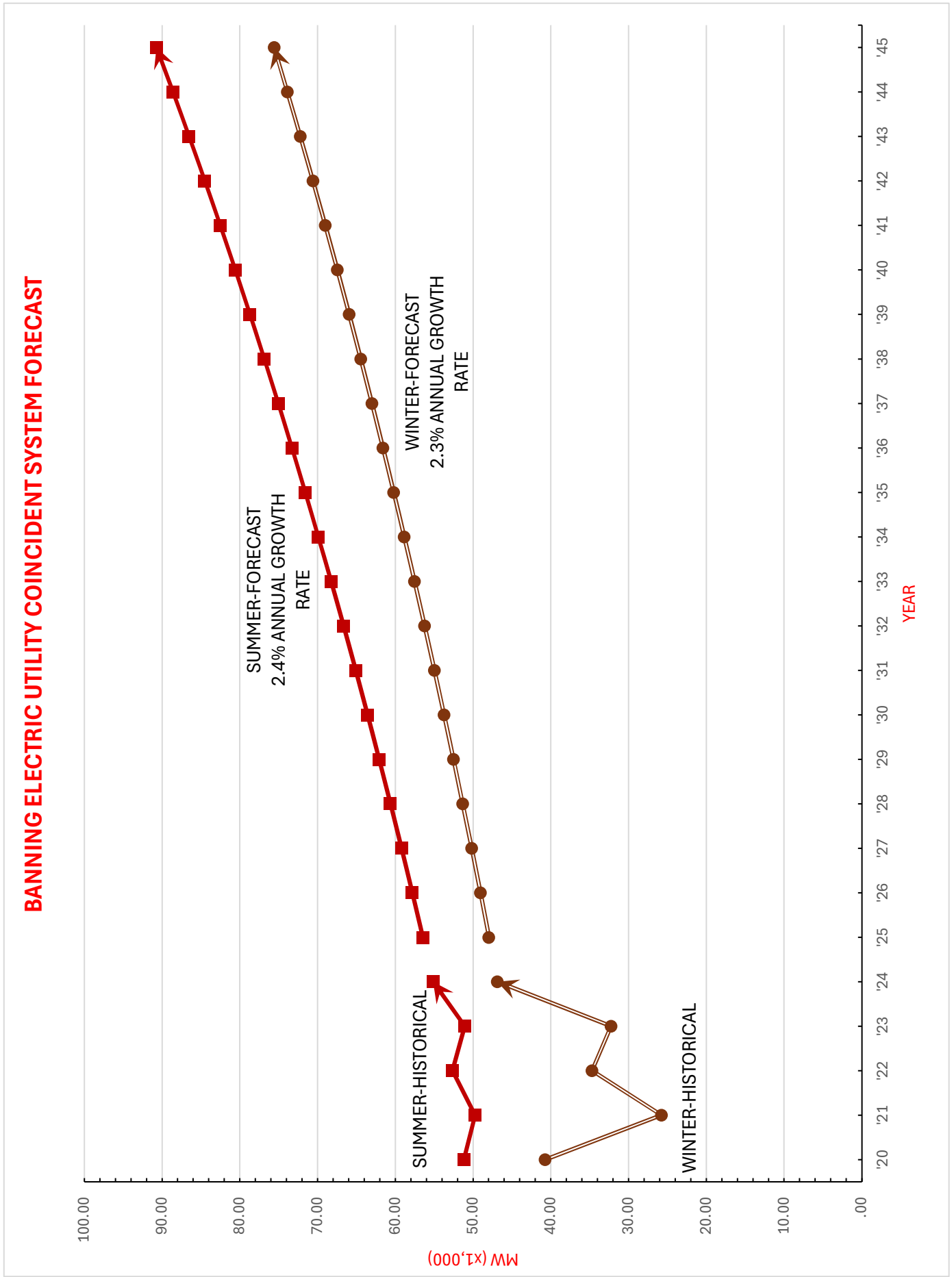
A graphical representation of the individual substation demand forecast as well as the total system coincident demand, non-coincident demand, conceptual non-coincident demand and MWH purchases is included following this page.

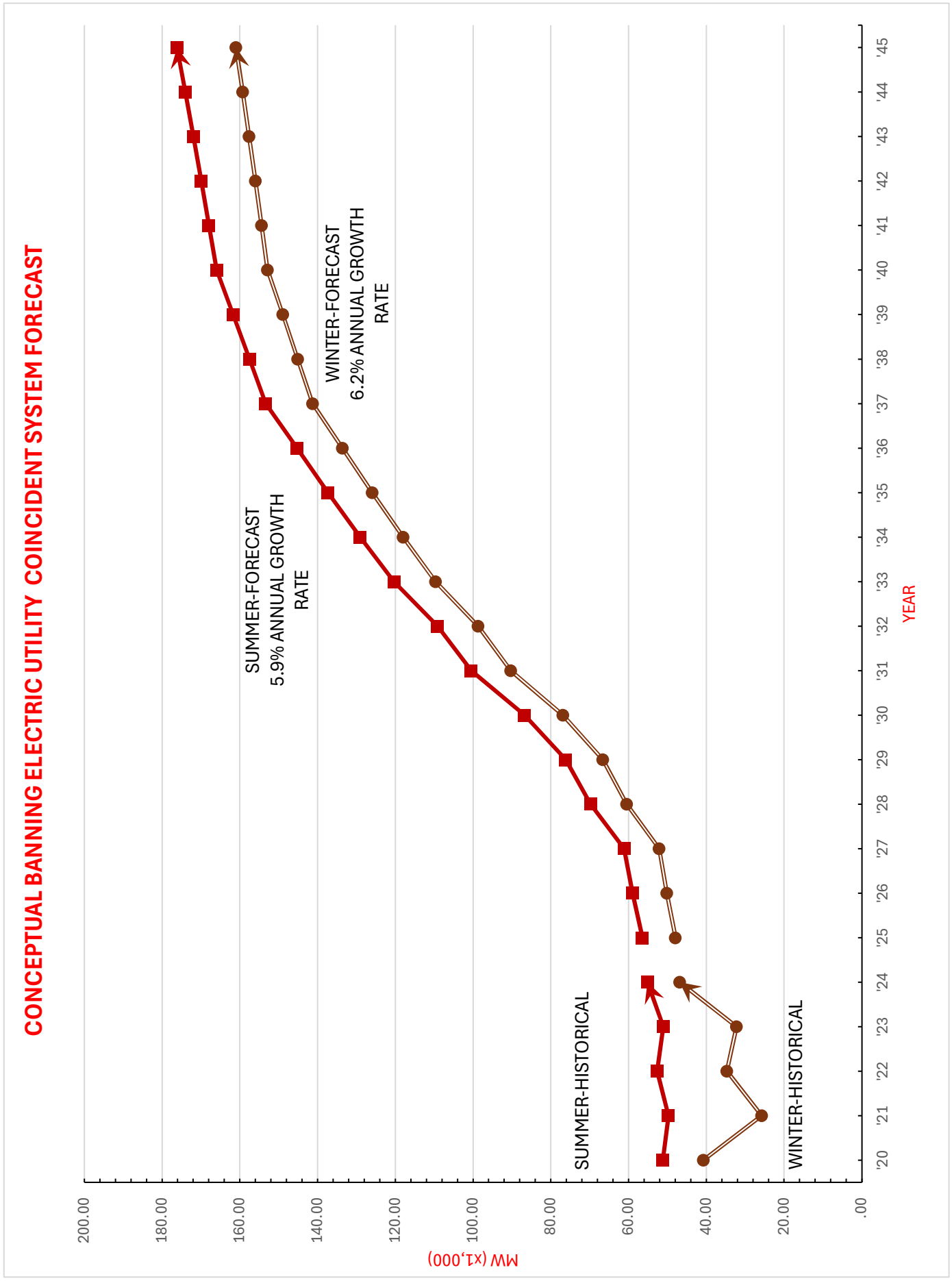
BANNING ELECTRIC UTILTIY
2026-2045 ESMP SYSTEM FORECAST

Peak kW Demand

	Historical					Forecast																					2025-2045 Annual Growth Rate
	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	
San Gorgonio Total																											
S	16,425	17,079	16,472	9,131	4,958	16,500	16,830	17,167	17,510	17,860	18,217	18,582	18,953	19,332	19,719	20,113	20,516	20,926	21,345	21,771	22,207	22,651	23,104	23,566	24,037	24,518	2.0%
W	15,022	12,746	11,267	7,193	3,739	15,000	15,300	15,606	15,918	16,236	16,561	16,892	17,230	17,575	17,926	18,285	18,651	19,024	19,404	19,792	20,188	20,592	21,004	21,424	21,852	22,289	2.0%
						3,159	3,159	3,159	3,159	3,159	3,159	3,159	3,159	3,159	3,159	3,159	3,159	3,159	3,159	3,159	3,159	3,159	3,159	3,159	3,159	3,159	
Cannabis Cultivation																											
Yoshinoya						89	89	89	89	89	89	89	89	89	89	89	89	89	89	89	89	89	89	89	89	89	
S	16,425	17,079	16,472	9,131	4,958	19,748	20,078	20,415	20,758	21,108	21,465	21,830	22,201	22,580	22,967	23,361	23,764	24,174	24,593	25,019	25,455	25,899	26,352	26,814	27,285	27,766	1.7%
W	15,022	12,746	11,267	7,193	3,739	18,248	18,548	18,854	19,166	19,484	19,809	20,140	20,478	20,823	21,174	21,533	21,899	22,272	22,652	23,040	23,436	23,840	24,252	24,672	25,100	25,537	1.7%
Midway Total																											
S	13,541	13,649	14,272	17,082	15,786	15,052	15,458	15,876	16,304	16,745	17,197	17,661	18,138	18,628	19,131	19,647	20,178	20,722	21,282	21,856	22,447	23,053	23,675	24,314	24,971	25,645	2.7%
W	10,384	9,247	7,788	6,868	10,715	9,663	9,924	10,192	10,467	10,750	11,040	11,338	11,644	11,958	12,281	12,613	12,953	13,303	13,662	14,031	14,410	14,799	15,199	15,609	16,031	16,463	2.7%
Airport																											
S	365	370	360	32	30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
W	389	389	280	23	22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
22nd Street																											
S	10,233	10,319	9,736	10,585	11,240	10,670	10,787	10,906	11,026	11,147	11,270	11,394	11,519	11,646	11,774	11,904	12,034	12,167	12,301	12,436	12,573	12,711	12,851	12,992	13,135	13,280	1.1%
W	8,140	6,529	6,105	6,567	8,018	8,210	8,300	8,392	8,484	8,577	8,672	8,767	8,863	8,961	9,059	9,159	9,260	9,362	9,465	9,569	9,674	9,781	9,888	9,997	10,107	10,218	1.1%
Stagecoach																											
S	0	0	0	6,634	8,040	6,700	6,834	6,971	7,110	7,252	7,397	7,545	7,696	7,850	8,007	8,167	8,331	8,497	8,667	8,841	9,017	9,198	9,382	9,569	9,761	9,956	2.0%
W	0	0	0	3,616	7,955	3,800	3,876	3,954	4,033	4,113	4,196	4,279	4,365	4,452	4,541	4,632	4,725	4,819	4,916	5,014	5,114	5,217	5,321	5,427	5,536	5,647	2.0%
Ivy																											
S	0	0	5,308	7,206	8,333	5,400	5,508	5,618	5,731	5,845	5,962	6,081	6,203	6,327	6,453	6,583	6,714	6,849	6,985	7,125	7,268	7,413	7,561	7,713	7,867	8,024	2.0%
W	0	0	4,493	4,890	6,235	4,500	4,590	4,682	4,775	4,871	4,968	5,068	5,169	5,272	5,378	5,485	5,595	5,707	5,821	5,938	6,056	6,178	6,301	6,427	6,556	6,687	2.0%
						0	0	636	636	636	636	636	636	636	636	636	636	636	636	636	636	636	636	636	636	636	
Morongo Health Clinic																											
S	0	0	5,308	7,206	8,333	5,400	5,508	6,254	6,367	6,481	6,598	6,717	6,839	6,963	7,089	7,219	7,350	7,485	7,621	7,761	7,904	8,049	8,197	8,349	8,503	8,660	2.4%
W	0	0	4,493	4,890	6,235	4,500	4,590	5,318	5,411	5,507	5,604	5,704	5,805	5,908	6,014	6,121	6,231	6,343	6,457	6,574	6,692	6,814	6,937	7,063	7,192	7,323	2.5%
Sunset																											
S	8,140	8,099	9,586	11,441	14,821	10,439	10,857	11,291	11,742	12,212	12,701	13,209	13,737	14,286	14,858	15,452	16,070	16,713	17,382	18,077	18,800	19,552	20,334	21,147	21,993	22,873	4.0%
W	6,716	5,803	5,037	8,299	11,443	6,319	6,572	6,835	7,108	7,392	7,688	7,996	8,315	8,648	8,994	9,354	9,728	10,117	10,522	10,942	11,380	11,835	12,309	12,801	13,313	13,846	4.0%
						432	864	864	864	864	864	864	864	864	864	864	864	864	864	864	864	864	864	864	864	864	
Crestwood Communities																											
Vista Robles KB homes						0	1,512	1,512	1,512	1,512	1,512	1,512	1,512	1,512	1,512	1,512	1,512	1,512	1,512	1,512	1,512	1,512	1,512	1,512	1,512	1,512	
S	8,140	8,099	9,586	11,441	14,821	10,871	13,233	13,667	14,118	14,588	15,077	15,585	16,113	16,662	17,234	17,828	18,446	19,089	19,758	20,453	21,176	21,928	22,710	23,523	24,369	25,249	4.3%
W	6,716	5,803	5,037	8,299	11,443	6,751	8,948	9,211	9,484	9,768	10,064	10,372	10,691	11,024	11,370	11,730	12,104	12,493	12,898	13,318	13,756	14,211	14,685	15,177	15,689	16,222	4.5%
Alola																											
S	2,929	2,370	1,646	372	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
W	2,377	708	782	336	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
Banning Electric Utility Non-Coincident System Peak Forecast																											
S	51,632	51,885	57,380	62,482	63,207	68,441	71,898	74,088	75,683	77,322	79,004	80,732	82,507	84,330	86,202	88,126	90,103	92,134	94,221	96,367	98,571	100,837	103,167	105,562	108,024	110,556	2.4%
W	43,029	35,422	35,752	37,792	48,126	51,172	54,186	55,919	57,045	58,200	59,385	60,600	61,847	63,127	64,440	65,788	67,172	68,592	70,050	71,546	73,083	74,661	76,281	77,945	79,654	81,410	2.3%
Banning Electric Utility System Coincident Forecast																											
S	51,197	49,751	52,667	51,096	55,143	56,467	57,822	59,210	60,631	62,086	63,576	65,102	66,664	68,264	69,902	71,580	73,298	75,057	76,858	78,703	80,592	82,526	84,507	86,535	88,612	90,738	2.4%
W	40,752	25,776	34,719	32,262	46,883	47,962	49,065	50,193	51,348	52,529	53,737	54,973	56,237	57,530	58,854	60,207	61,592	63,009	64,458	65,940	67,457	69,009	70,596	72,219	73,881	75,580	2.3%
Conceptual Banning Electric Utility System Coincident Forecast																											
S	51,197	49,751	52,667	51,096	55,143	56,467	58,962	61,201	69,810	76,184	86,777	100,472	109,135	120,377	129,082	137,336	145,321	153,347	157,527	161,751	166,019	167,953	169,934	171,962	174,039	176,165	5.9%
W	40,752	25,776	34,719	32,262	46,883	47,962	50,205	52,185	60,527	66,627	76,938	90,343	98,708	109,643	118,034	125,963	133,615	141,299	145,127	148,988	152,884	154,436	156,023	157,646	159,308	161,007	6.2%
Bridge-Morongo Logistics						0	0	0	0	1,031	1,991	2,858	3,344	3,641	3,641	3,641	3,641	3,641	3,641	3,641	3,641	3,641	3,641	3,641	3,641	3,641	
Sunset Crossroads						0	0	0	2,712	2,712	6,967	10,213	10,561	13,639	14,439	14,748	14,748	14,748	14,748	14,748	14,748	14,748	14,748	14,748	14,748	14,748	
Rancho San Gorgonio						0	0	0	3,888	7,776	11,664	15,552	19,440	23,328	27,216	31,104	34,992	38,880	38,880	38,880	38,880	38,880	38,880	38,880	38,880	38,880	
Mission Heights						0	0	0	0	0	0	2,379	4,758	7,137	9,516	11,895	14,274	16,653	19,032	21,411	23,790	23,790	23,790	23,790	23,790	23,790	
First Hathaway Logistics						0	0	0	0	0	0	471	471	471	471	471	471	471	471	471	471	471	471	471	471	471	
Banning Commerce Center						0	0	0	0	0	0	438	438	438	438	438	438	438	438	438	438	438	438	438	438	438	
WEKA						0	0	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	
Charles St. CDRE						0	0	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	
KCB Towers						0	0	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	
Pallet Yard						0	0	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	
First Lincoln Logistics						0	0	186	186	186	186	186	186	186	186	186	186	186	186	186	186	186	186	186	186	186	
Brown Strauss						0	390	390	390	390	390	390	390	390	390	390	390	390	390	390	390	390	390	390	390	390	
Wyndam Micro Hotel						0	750	750	750	750	750	750	750	750	750	750	750	750	750	750	750	750	750	750	750	750	
DR Horton						0	0	588	1,175	1,175	1,175	1,175	1,175	1,175	1,175	1,175	1,175	1,175	1,175	1,175	1,175	1,175	1,175	1,175	1,175	1,175	
Atwell Large Retail						0	0	0	0	0	0	880	880	880	880	880	880	880	880	880	880	880	880	880	880	880	


BANNING ELECTRIC UTILITY NON-COINCIDENT SYSTEM PEAK FORECAST
120.00
100.00
80.00
60.00
40.00
20.00
.00
MW (x1,000)
SUMMER-FORECAST
2.4% ANNUAL GROWTH
RATE
SUMMER-HISTORICAL
WINTER-FORECAST
2.3% ANNUAL GROWTH
RATE
WINTER-HISTORICAL
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YEAR


BANNING ELECTRIC UTILITY COINCIDENT SYSTEM FORECAST
SUMMER-FORECAST
2.4% ANNUAL GROWTH
RATE
WINTER-FORECAST
2.3% ANNUAL GROWTH
RATE
SUMMER-HISTORICAL
WINTER-HISTORICAL
MW (x1,000)
YEAR
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80.00
70.00
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CONCEPTUAL BANNING ELECTRIC UTILITY COINCIDENT SYSTEM FORECAST
SUMMER-FORECAST
5.9% ANNUAL GROWTH
RATE
WINTER-FORECAST
6.2% ANNUAL GROWTH
RATE
SUMMER-HISTORICAL
WINTER-HISTORICAL
MW (x1,000)
YEAR
200.00
180.00
160.00
140.00
120.00
100.00
80.00
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BANNING ELECTRIC UTILITY
2026-2045 ESMP NON-COINCIDENT SYSTEM FORECAST

Projected Load Data 2025 - 2031

	2025		2026		2027		2028		2029		2030		2031	
	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW
Jan	11,577	21.27	12,259	22.52	12,651	23.24	12,906	23.71	13,167	24.19	13,435	24.68	13,710	25.19
Feb	10,470	21.33	11,086	22.58	11,441	23.31	11,671	23.78	11,907	24.26	12,150	24.75	12,399	25.26
Mar	10,870	20.69	11,511	21.91	11,879	22.61	12,118	23.07	12,363	23.54	12,615	24.01	12,873	24.51
Apr	13,733	32.53	14,427	34.18	14,867	35.22	15,187	35.98	15,515	36.76	15,853	37.56	16,200	38.38
May	15,631	37.92	16,420	39.84	16,920	41.05	17,285	41.94	17,659	42.85	18,043	43.78	18,438	44.74
Jun	18,497	56.73	19,432	59.59	20,023	61.41	20,455	62.73	20,897	64.09	21,352	65.48	21,819	66.92
Jul	25,788	65.86	27,090	69.19	27,915	71.29	28,517	72.83	29,134	74.40	29,768	76.02	30,419	77.69
Aug	26,719	68.44	28,069	71.90	28,923	74.09	29,546	75.68	30,186	77.32	30,843	79.00	31,517	80.73
Sep	21,335	64.10	22,413	67.34	23,096	69.39	23,593	70.88	24,104	72.42	24,628	73.99	25,167	75.61
Oct	19,525	51.17	20,675	54.19	21,336	55.92	21,766	57.05	22,206	58.20	22,658	59.38	23,122	60.60
Nov	10,787	21.08	11,423	22.32	11,788	23.04	12,025	23.50	12,269	23.98	12,518	24.46	12,775	24.97
Dec	12,073	22.02	12,784	23.31	13,193	24.06	13,458	24.54	13,731	25.04	14,010	25.55	14,297	26.07
TOTAL:	197,005		207,588		214,032		218,526		223,138		227,873		232,734	
Summer Peak (MW)		*68.44*		*71.90*		*74.09*		*75.68*		*77.32*		*79.00*		*80.73*
Winter Peak (MW)		*51.17*		*54.19*		*55.92*		*57.05*		*58.20*		*59.38*		*60.60*

Projected Load Data 2032-2038

	2032		2033		2034		2035		2036		2037		2038	
	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW
Jan	13,992	25.71	14,282	26.24	14,579	26.79	14,884	27.35	15,197	27.92	15,518	28.51	15,848	29.12
Feb	12,654	25.78	12,916	26.31	13,184	26.86	13,460	27.42	13,743	28.00	14,034	28.59	14,332	29.20
Mar	13,138	25.01	13,410	25.53	13,689	26.06	13,975	26.60	14,269	27.16	14,571	27.74	14,880	28.33
Apr	16,556	39.22	16,922	40.09	17,297	40.98	17,683	41.89	18,080	42.83	18,488	43.80	18,907	44.79
May	18,843	45.72	19,259	46.73	19,687	47.77	20,126	48.83	20,578	49.93	21,042	51.05	21,518	52.21
Jun	22,299	68.39	22,791	69.90	23,297	71.45	23,817	73.04	24,352	74.68	24,901	76.37	25,465	78.10
Jul	31,087	79.39	31,774	81.15	32,480	82.95	33,205	84.80	33,950	86.70	34,715	88.66	35,501	90.67
Aug	32,210	82.51	32,922	84.33	33,653	86.20	34,404	88.13	35,176	90.10	35,969	92.13	36,783	94.22
Sep	25,720	77.27	26,288	78.98	26,872	80.74	27,472	82.54	28,088	84.39	28,721	86.29	29,372	88.25
Oct	23,598	61.85	24,086	63.13	24,587	64.44	25,102	65.79	25,630	67.17	26,171	68.59	26,728	70.05
Nov	13,038	25.48	13,307	26.01	13,584	26.55	13,868	27.10	14,160	27.67	14,459	28.26	14,767	28.86
Dec	14,591	26.61	14,893	27.16	15,203	27.73	15,521	28.31	15,847	28.90	16,182	29.51	16,526	30.14
TOTAL:	237,725		242,850		248,113		253,518		259,069		264,770		270,627	
Summer Peak (MW)		*82.51*		*84.33*		*86.20*		*88.13*		*90.10*		*92.13*		*94.22*
Winter Peak (MW)		*61.85*		*63.13*		*64.44*		*65.79*		*67.17*		*68.59*		*70.05*

Projected Load Data 2039-2045

	2039		2040		2041		2042		2043		2044		2045	
	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW
Jan	16,187	29.74	16,534	30.38	16,891	31.03	17,258	31.71	17,634	32.40	18,021	33.11	18,418	33.84
Feb	14,638	29.82	14,953	30.46	15,275	31.12	15,607	31.79	15,947	32.49	16,297	33.20	16,656	33.93
Mar	15,198	28.93	15,525	29.55	15,860	30.19	16,204	30.85	16,558	31.52	16,921	32.21	17,294	32.92
Apr	19,337	45.81	19,779	46.86	20,234	47.93	20,702	49.04	21,182	50.18	21,676	51.35	22,184	52.55
May	22,008	53.40	22,512	54.62	23,029	55.88	23,561	57.17	24,108	58.49	24,671	59.86	25,249	61.26
Jun	26,044	79.88	26,640	81.70	27,253	83.58	27,882	85.51	28,530	87.50	29,195	89.54	29,879	91.64
Jul	36,310	92.73	37,140	94.85	37,994	97.03	38,872	99.27	39,774	101.58	40,702	103.95	41,656	106.38
Aug	37,621	96.37	38,482	98.57	39,366	100.84	40,276	103.17	41,211	105.56	42,172	108.02	43,160	110.56
Sep	30,041	90.26	30,728	92.32	31,434	94.44	32,161	96.63	32,907	98.87	33,675	101.17	34,464	103.55
Oct	27,299	71.55	27,885	73.08	28,487	74.66	29,105	76.28	29,740	77.95	30,392	79.65	31,062	81.41
Nov	15,082	29.47	15,406	30.11	15,739	30.76	16,080	31.43	16,431	32.11	16,791	32.82	17,161	33.54
Dec	16,879	30.78	17,242	31.44	17,614	32.12	17,996	32.82	18,389	33.54	18,792	34.27	19,206	35.03
TOTAL:	276,644		282,826		289,178		295,705		302,412		309,305		316,390	
Summer Peak (MW)		*96.37*		*98.57*		*100.84*		*103.17*		*105.56*		*108.02*		*110.56*
Winter Peak (MW)		*71.55*		*73.08*		*74.66*		*76.28*		*77.95*		*79.65*		*81.41*

BANNING ELECTRIC UTILITY
2026-2045 ESMP COINCIDENT SYSTEM FORECAST

Projected Load Data 2025 - 2031

	2025		2026		2027		2028		2029		2030		2031	
	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW
Jan	10,851	19.94	11,100	20.39	11,356	20.86	11,617	21.34	11,884	21.83	12,157	22.34	12,437	22.85
Feb	9,813	19.99	10,038	20.45	10,269	20.92	10,506	21.40	10,747	21.89	10,994	22.40	11,247	22.91
Mar	10,188	19.40	10,423	19.84	10,662	20.30	10,908	20.76	11,158	21.24	11,415	21.73	11,678	22.23
Apr	11,331	26.84	11,603	27.49	11,881	28.15	12,166	28.82	12,458	29.51	12,757	30.22	13,063	30.95
May	12,896	31.29	13,205	32.04	13,522	32.81	13,847	33.60	14,179	34.40	14,519	35.23	14,868	36.07
Jun	15,261	46.80	15,627	47.93	16,002	49.08	16,386	50.25	16,780	51.46	17,182	52.70	17,595	53.96
Jul	21,276	54.34	21,787	55.64	22,309	56.98	22,845	58.34	23,393	59.74	23,955	61.18	24,529	62.65
Aug	22,044	56.47	22,573	57.82	23,115	59.21	23,670	60.63	24,238	62.09	24,820	63.58	25,415	65.10
Sep	17,603	52.89	18,025	54.16	18,458	55.45	18,901	56.79	19,354	58.15	19,819	59.54	20,294	60.97
Oct	18,300	47.96	18,721	49.06	19,151	50.19	19,592	51.35	20,042	52.53	20,503	53.74	20,975	54.97
Nov	10,110	19.76	10,343	20.21	10,581	20.68	10,824	21.15	11,073	21.64	11,328	22.14	11,588	22.65
Dec	11,315	20.64	11,575	21.11	11,842	21.60	12,114	22.09	12,393	22.60	12,678	23.12	12,969	23.65
TOTAL:	170,987		175,020		179,149		183,374		187,700		192,127		196,659	
Summer Peak (MW)		*56.47*		*57.82*		*59.21*		*60.63*		*62.09*		*63.58*		*65.10*
Winter Peak (MW)		*47.96*		*49.06*		*50.19*		*51.35*		*52.53*		*53.74*		*54.97*

Projected Load Data 2032-2038

	2032		2033		2034		2035		2036		2037		2038	
	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW
Jan	12,723	23.38	13,016	23.91	13,315	24.46	13,621	25.03	13,935	25.60	14,255	26.19	14,583	26.79
Feb	11,506	23.44	11,771	23.98	12,041	24.53	12,318	25.09	12,602	25.67	12,891	26.26	13,188	26.86
Mar	11,946	22.74	12,221	23.26	12,502	23.80	12,790	24.35	13,084	24.91	13,385	25.48	13,693	26.07
Apr	13,377	31.69	13,698	32.45	14,027	33.23	14,363	34.03	14,708	34.84	15,061	35.68	15,422	36.54
May	15,225	36.94	15,590	37.83	15,964	38.73	16,347	39.66	16,740	40.62	17,142	41.59	17,553	42.59
Jun	18,017	55.26	18,449	56.58	18,892	57.94	19,346	59.33	19,810	60.75	20,285	62.21	20,772	63.71
Jul	25,118	64.15	25,721	65.69	26,338	67.27	26,970	68.88	27,618	70.53	28,281	72.23	28,959	73.96
Aug	26,025	66.66	26,650	68.26	27,289	69.90	27,944	71.58	28,615	73.30	29,302	75.06	30,005	76.86
Sep	20,781	62.44	21,280	63.94	21,791	65.47	22,314	67.04	22,849	68.65	23,398	70.30	23,959	71.98
Oct	21,457	56.24	21,951	57.53	22,456	58.85	22,972	60.21	23,501	61.59	24,041	63.01	24,594	64.46
Nov	11,855	23.17	12,128	23.70	12,406	24.25	12,692	24.80	12,984	25.37	13,282	25.96	13,588	26.55
Dec	13,268	24.20	13,573	24.75	13,885	25.32	14,204	25.90	14,531	26.50	14,865	27.11	15,207	27.73
TOTAL:	201,298		206,047		210,907		215,882		220,975		226,188		231,523	
Summer Peak (MW)		*66.66*		*68.26*		*69.90*		*71.58*		*73.30*		*75.06*		*76.86*
Winter Peak (MW)		*56.24*		*57.53*		*58.85*		*60.21*		*61.59*		*63.01*		*64.46*

Projected Load Data 2039-2045

	2039		2040		2041		2042		2043		2044		2045	
	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW
Jan	14,918	27.41	15,261	28.04	15,612	28.68	15,971	29.34	16,339	30.02	16,715	30.71	17,099	31.42
Feb	13,491	27.48	13,801	28.11	14,119	28.76	14,444	29.42	14,776	30.10	15,116	30.79	15,463	31.50
Mar	14,007	26.67	14,330	27.28	14,659	27.91	14,996	28.55	15,341	29.20	15,694	29.88	16,055	30.56
Apr	15,793	37.41	16,172	38.31	16,560	39.23	16,957	40.17	17,364	41.14	17,781	42.12	18,208	43.13
May	17,974	43.61	18,406	44.66	18,847	45.73	19,300	46.83	19,763	47.95	20,237	49.10	20,723	50.28
Jun	21,271	65.23	21,781	66.80	22,304	68.40	22,839	70.04	23,387	71.73	23,949	73.45	24,523	75.21
Jul	29,654	75.73	30,366	77.55	31,095	79.41	31,841	81.32	32,605	83.27	33,388	85.27	34,189	87.32
Aug	30,725	78.70	31,462	80.59	32,218	82.53	32,991	84.51	33,783	86.53	34,593	88.61	35,424	90.74
Sep	24,534	73.71	25,123	75.48	25,726	77.29	26,344	79.15	26,976	81.05	27,623	82.99	28,286	84.98
Oct	25,160	65.94	25,738	67.46	26,330	69.01	26,936	70.60	27,555	72.22	28,189	73.88	28,838	75.58
Nov	13,900	27.17	14,220	27.79	14,547	28.43	14,882	29.08	15,224	29.75	15,574	30.44	15,932	31.14
Dec	15,557	28.37	15,915	29.02	16,281	29.69	16,655	30.37	17,038	31.07	17,430	31.79	17,831	32.52
TOTAL:	236,985		242,576		248,298		254,156		260,152		266,289		272,571	
Summer Peak (MW)		*78.70*		*80.59*		*82.53*		*84.51*		*86.53*		*88.61*		*90.74*
Winter Peak (MW)		*65.94*		*67.46*		*69.01*		*70.60*		*72.22*		*73.88*		*75.58*

BANNING ELECTRIC UTILITY
2026-2045 ESMP CONCEPTUAL COINCIDENT SYSTEM FORECAST

Projected Load Data 2025 - 2031

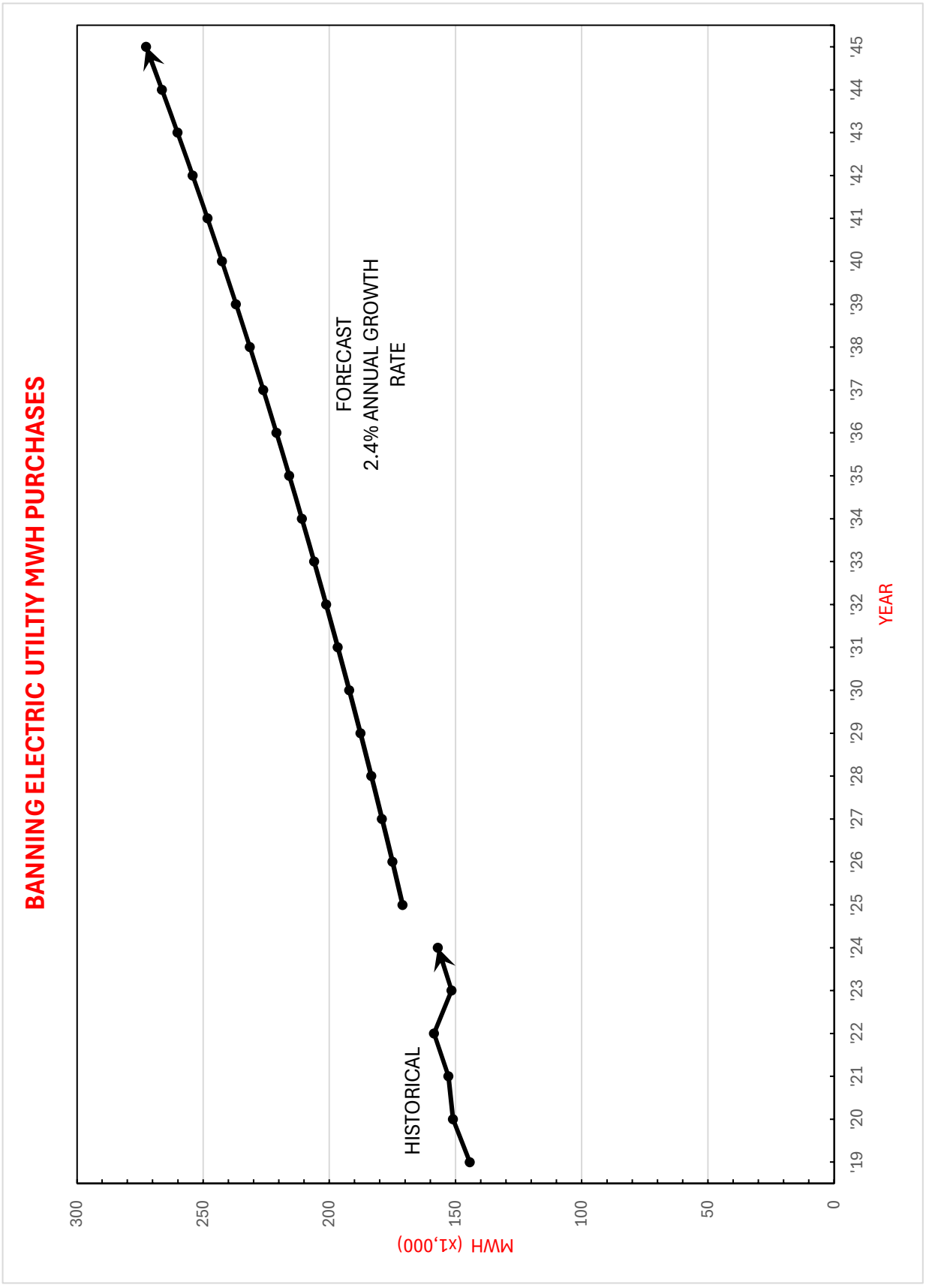
	2025		2026		2027		2028		2029		2030		2031	
	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW
Jan	10,851	19.94	11,358	20.87	11,806	21.69	13,693	25.16	15,074	27.69	17,406	31.98	20,439	37.55
Feb	9,813	19.99	10,272	20.92	10,677	21.75	12,384	25.23	13,632	27.77	15,741	32.07	18,484	37.65
Mar	10,188	19.40	10,665	20.30	11,085	21.10	12,857	24.48	14,153	26.94	16,344	31.11	19,191	36.53
Apr	11,331	26.84	11,831	28.03	12,281	29.09	14,008	33.19	15,287	36.22	17,413	41.25	20,161	47.76
May	12,896	31.29	13,466	32.67	13,977	33.91	15,943	38.68	17,399	42.22	19,818	48.08	22,946	55.67
Jun	15,261	46.80	15,935	48.87	16,540	50.73	18,867	57.86	20,590	63.15	23,453	71.93	27,154	83.28
Jul	21,276	54.34	22,216	56.74	23,060	58.89	26,303	67.18	28,705	73.31	32,696	83.50	37,856	96.68
Aug	22,044	56.47	23,018	58.96	23,892	61.20	27,253	69.81	29,742	76.18	33,877	86.78	39,223	100.47
Sep	17,603	52.89	18,380	55.22	19,078	57.32	21,762	65.38	23,749	71.35	27,051	81.27	31,320	94.10
Oct	18,300	47.96	19,156	50.20	19,911	52.18	23,094	60.53	25,421	66.63	29,356	76.94	34,470	90.34
Nov	10,110	19.76	10,583	20.68	11,001	21.50	12,759	24.94	14,045	27.45	16,219	31.70	19,044	37.22
Dec	11,315	20.64	11,844	21.60	12,312	22.45	14,280	26.04	15,719	28.67	18,151	33.10	21,314	38.87
TOTAL:	170,987		178,725		185,621		213,204		233,515		267,525		311,603	
Summer Peak (MW)	*56.47*		*58.96*		*61.20*		*69.81*		*76.18*		*86.78*		*100.47*	
Winter Peak (MW)	*47.96*		*50.20*		*52.18*		*60.53*		*66.63*		*76.94*		*90.34*	

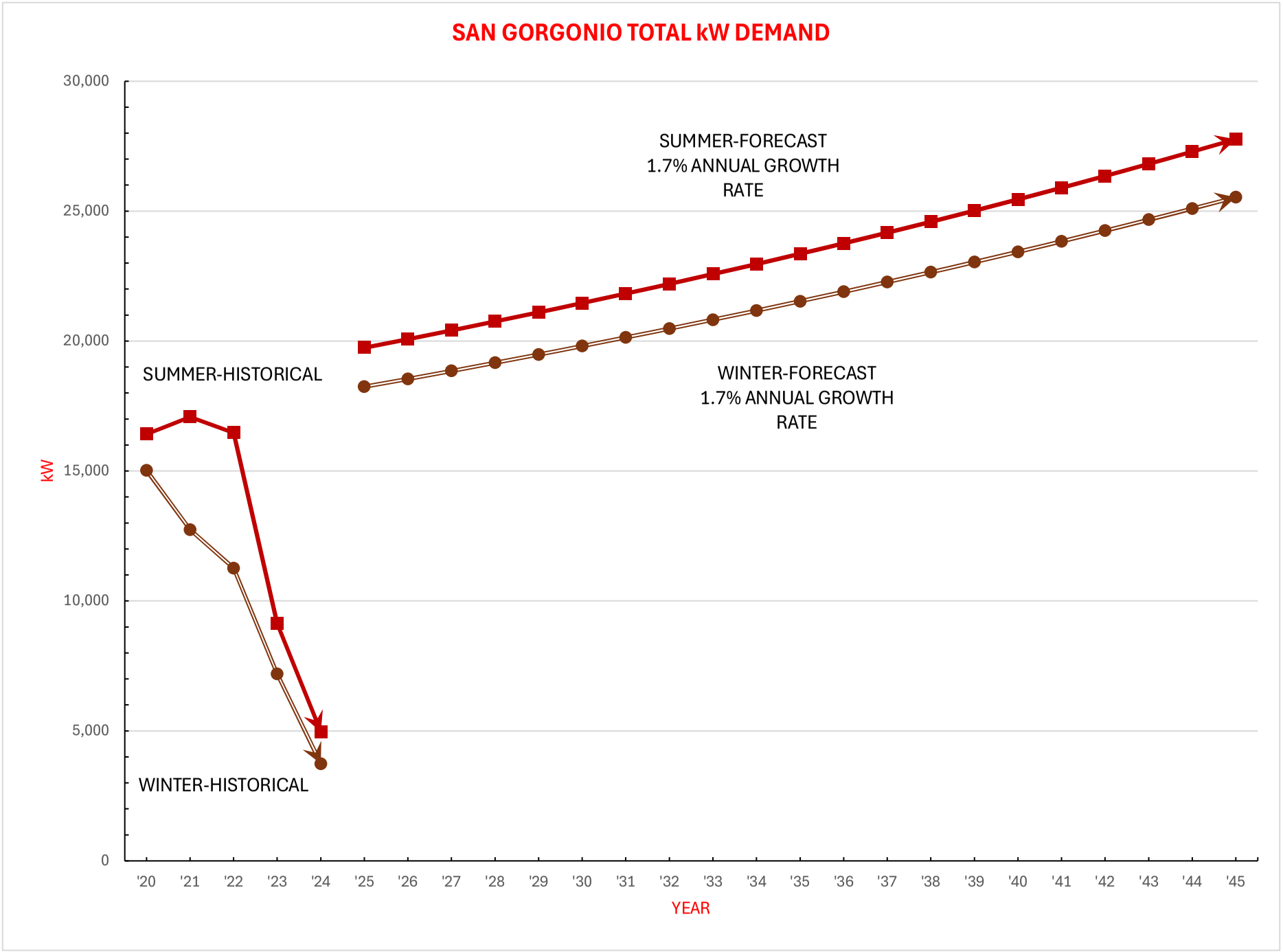
Projected Load Data 2032-2038

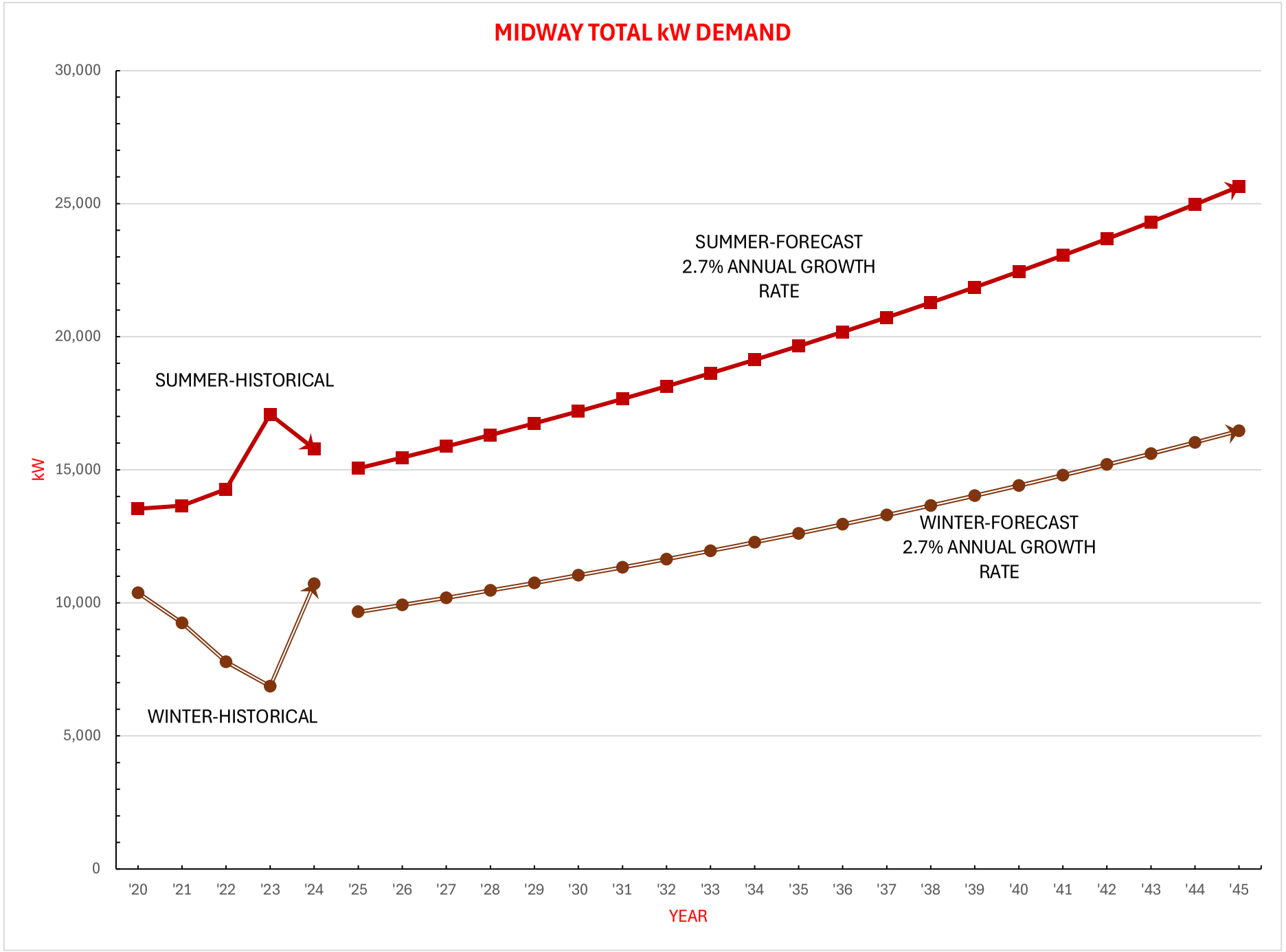
	2032		2033		2034		2035		2036		2037		2038	
	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW
Jan	22,332	41.03	24,806	45.58	26,704	49.06	28,498	52.36	30,229	55.54	31,967	58.73	32,833	60.32
Feb	20,195	41.14	22,433	45.70	24,149	49.19	25,772	52.50	27,337	55.69	28,909	58.89	29,692	60.49
Mar	20,968	39.92	23,291	44.34	25,073	47.73	26,758	50.94	28,383	54.03	30,016	57.14	30,829	58.69
Apr	21,899	51.88	24,155	57.22	25,902	61.36	27,558	65.29	29,160	69.08	30,771	72.90	31,610	74.88
May	24,924	60.47	27,492	66.70	29,480	71.53	31,365	76.10	33,188	80.53	35,021	84.97	35,976	87.29
Jun	29,495	90.46	32,534	99.78	34,886	106.99	37,117	113.83	39,275	120.45	41,444	127.10	42,574	130.57
Jul	41,121	105.02	45,356	115.84	48,637	124.21	51,746	132.15	54,755	139.84	57,779	147.56	59,354	151.58
Aug	42,606	109.14	46,994	120.38	50,393	129.08	53,615	137.34	56,732	145.32	59,866	153.35	61,498	157.53
Sep	34,021	102.21	37,526	112.74	40,239	120.90	42,812	128.63	45,301	136.11	47,803	143.62	49,107	147.54
Oct	37,662	98.71	41,835	109.64	45,036	118.03	48,061	125.96	50,981	133.62	53,913	141.30	55,373	145.13
Nov	20,808	40.66	23,113	45.17	24,882	48.63	26,553	51.89	28,166	55.05	29,786	58.21	30,593	59.79
Dec	23,287	42.47	25,867	47.17	27,847	50.78	29,718	54.20	31,523	57.49	33,336	60.79	34,239	62.44
TOTAL:	339,319		375,401		403,228		429,573		455,032		480,611		493,678	
Summer Peak (MW)	*109.14*		*120.38*		*129.08*		*137.34*		*145.32*		*153.35*		*157.53*	
Winter Peak (MW)	*98.71*		*109.64*		*118.03*		*125.96*		*133.62*		*141.30*		*145.13*	

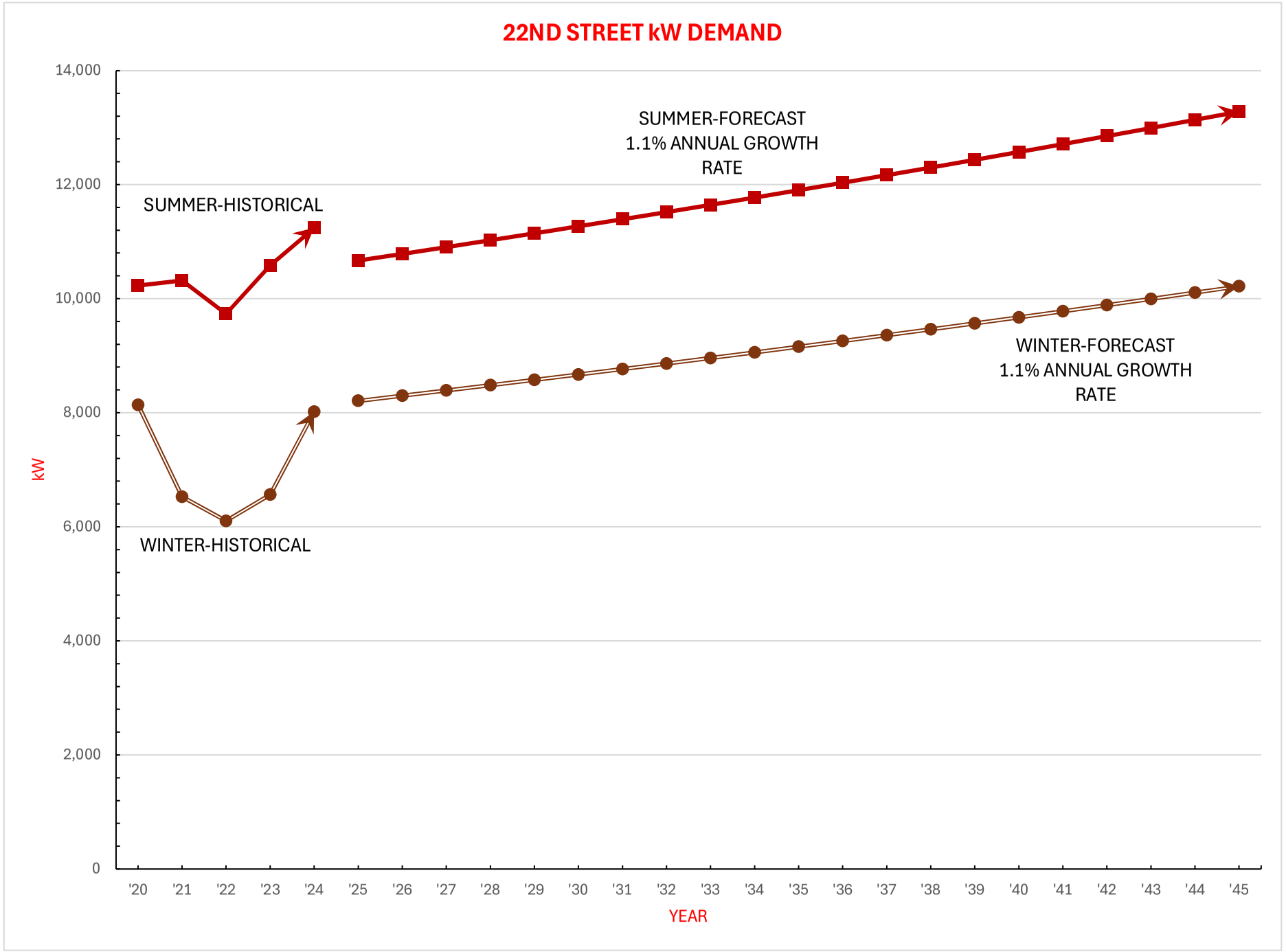
Projected Load Data 2039-2045

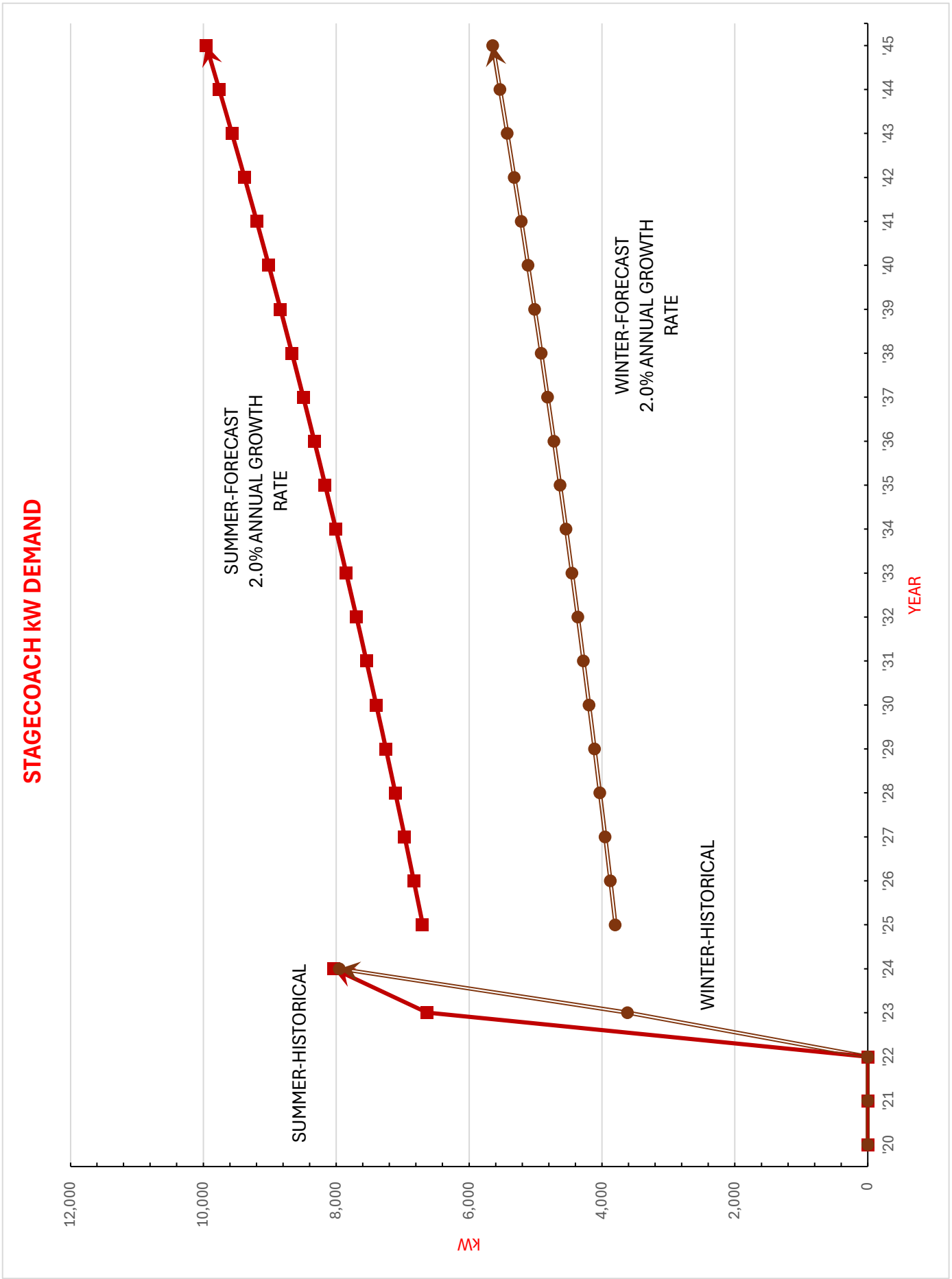
	2039		2040		2041		2042		2043		2044		2045	
	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW
Jan	33,707	61.93	34,588	63.55	34,939	64.19	35,298	64.85	35,666	65.53	36,042	66.22	36,426	66.93
Feb	30,483	62.10	31,280	63.72	31,597	64.37	31,922	65.03	32,254	65.70	32,594	66.40	32,941	67.10
Mar	31,649	60.25	32,477	61.82	32,806	62.45	33,143	63.09	33,488	63.75	33,841	64.42	34,202	65.11
Apr	32,457	76.89	33,314	78.92	33,702	79.84	34,099	80.78	34,506	81.75	34,923	82.73	35,350	83.74
May	36,941	89.63	37,915	91.99	38,357	93.07	38,810	94.16	39,273	95.29	39,747	96.44	40,233	97.62
Jun	43,716	134.07	44,869	137.61	45,392	139.21	45,927	140.85	46,475	142.53	47,037	144.25	47,611	146.02
Jul	60,946	155.65	62,554	159.76	63,283	161.62	64,029	163.52	64,793	165.47	65,575	167.47	66,377	169.52
Aug	63,146	161.75	64,813	166.02	65,568	167.95	66,341	169.93	67,133	171.96	67,943	174.04	68,774	176.17
Sep	50,423	151.49	51,754	155.49	52,357	157.30	52,974	159.16	53,606	161.06	54,254	163.00	54,917	164.99
Oct	56,847	148.99	58,333	152.88	58,925	154.44	59,531	156.02	60,150	157.65	60,784	159.31	61,432	161.01
Nov	31,407	61.38	32,228	62.98	32,555	63.62	32,890	64.28	33,232	64.95	33,582	65.63	33,941	66.33
Dec	35,150	64.10	36,069	65.78	36,435	66.45	36,809	67.13	37,192	67.83	37,584	68.54	37,985	69.27
TOTAL:	506,871		520,193		525,915		531,773		537,769		543,906		550,188	
Summer Peak (MW)	*161.75*		*166.02*		*167.95*		*169.93*		*171.96*		*174.04*		*176.17*	
Winter Peak (MW)	*148.99*		*152.88*		*154.44*		*156.02*		*157.65*		*159.31*		*161.01*	

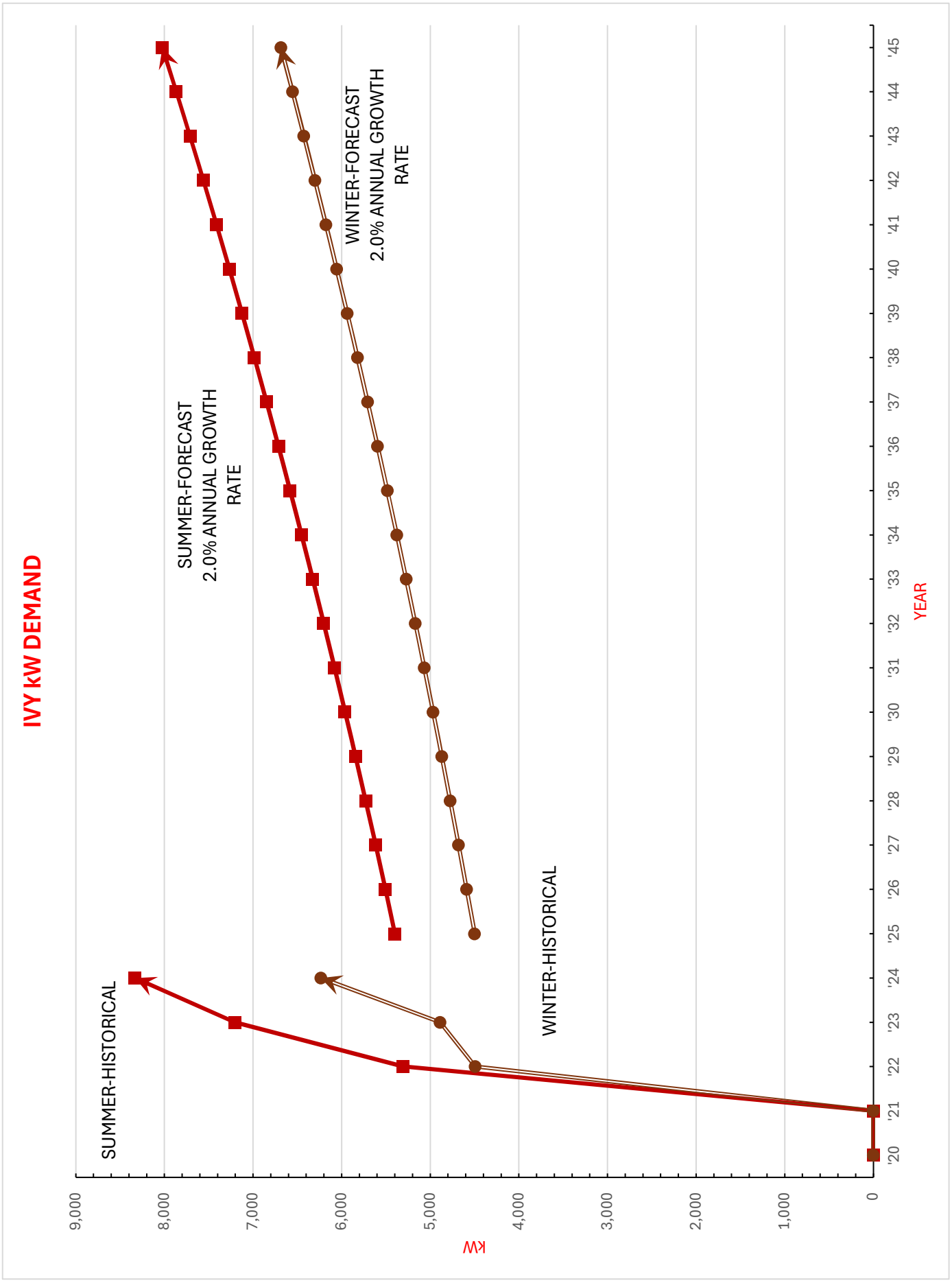

BANNING ELECTRIC UTILTIY MWH PURCHASES
FORECAST
2.4% ANNUAL GROWTH
RATE
HISTORICAL
MWH (x1,000)
YEAR
300
250
200
150
100
50
0
'19
'20
'21
'22
'23
'24
'25
'26
'27
'28
'29
'30
'31
'32
'33
'34
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'41
'42
'43
'44
'45

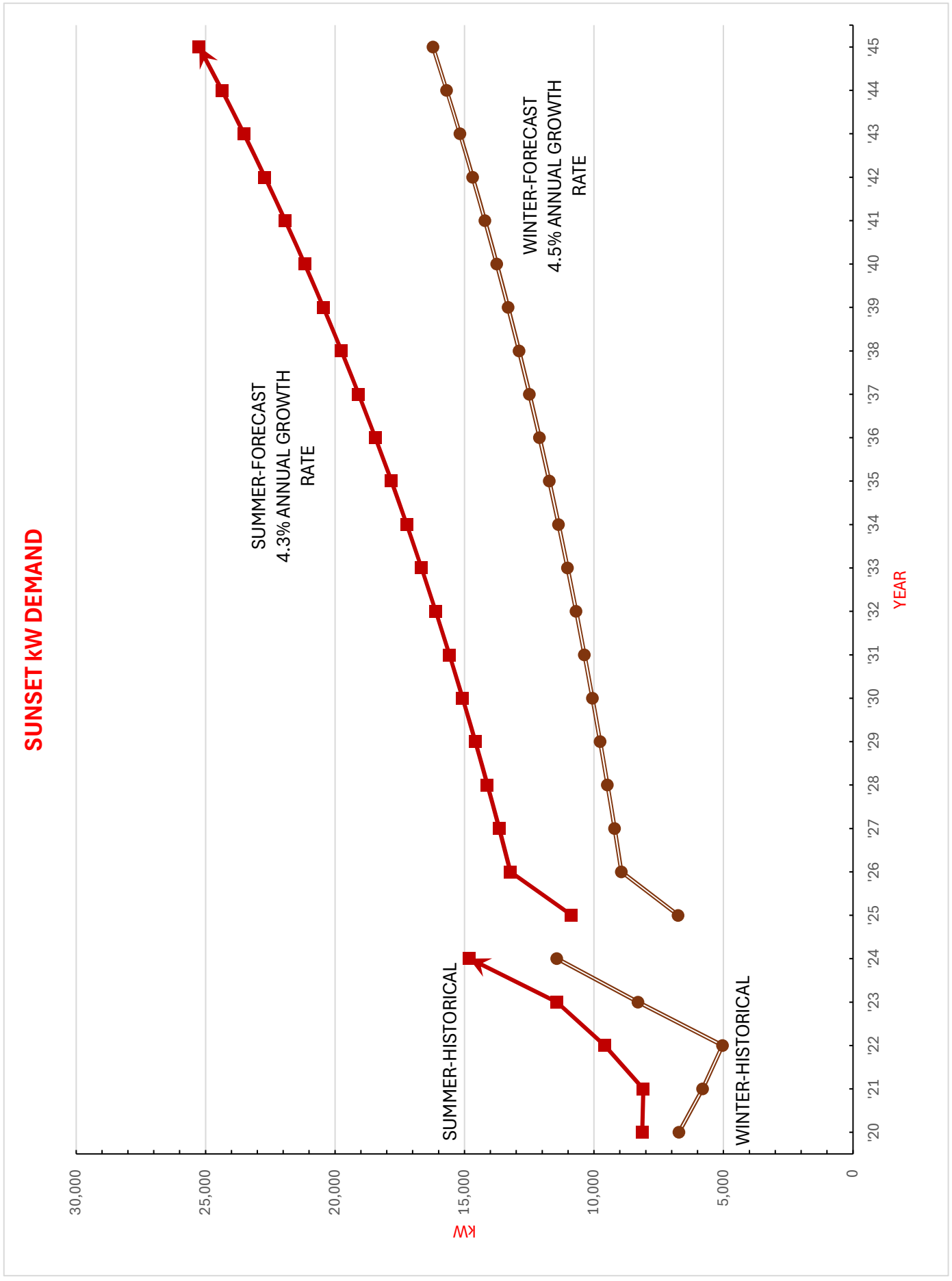

SAN GORGONIO TOTAL kW DEMAND
30,000
25,000
20,000
15,000
10,000
5,000
0
kW
SUMMER-FORECAST
1.7% ANNUAL GROWTH
RATE
SUMMER-HISTORICAL
WINTER-FORECAST
1.7% ANNUAL GROWTH
RATE
WINTER-HISTORICAL
'20
'21
'22
'23
'24
'25
'26
'27
'28
'29
'30
'31
'32
'33
'34
'35
'36
'37
'38
'39
'40
'41
'42
'43
'44
'45
YEAR


MIDWAY TOTAL kW DEMAND
30,000
25,000
20,000
15,000
10,000
5,000
0
kW
SUMMER-FORECAST
2.7% ANNUAL GROWTH
RATE
SUMMER-HISTORICAL
WINTER-FORECAST
2.7% ANNUAL GROWTH
RATE
WINTER-HISTORICAL
'20
'21
'22
'23
'24
'25
'26
'27
'28
'29
'30
'31
'32
'33
'34
'35
'36
'37
'38
'39
'40
'41
'42
'43
'44
'45
YEAR


22ND STREET kW DEMAND
14,000
12,000
10,000
8,000
6,000
4,000
2,000
0
kW
SUMMER-FORECAST
1.1% ANNUAL GROWTH
RATE
SUMMER-HISTORICAL
WINTER-FORECAST
1.1% ANNUAL GROWTH
RATE
WINTER-HISTORICAL
'20
'21
'22
'23
'24
'25
'26
'27
'28
'29
'30
'31
'32
'33
'34
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'36
'37
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'39
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'42
'43
'44
'45
YEAR


STAGECOACH kW DEMAND
SUMMER-FORECAST
2.0% ANNUAL GROWTH
RATE
SUMMER-HISTORICAL
WINTER-FORECAST
2.0% ANNUAL GROWTH
RATE
WINTER-HISTORICAL
kW
YEAR
12,000
10,000
8,000
6,000
4,000
2,000
0
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'41
'42
'43
'44
'45


IVY kW DEMAND
SUMMER-HISTORICAL
SUMMER-FORECAST
2.0% ANNUAL GROWTH
RATE
WINTER-HISTORICAL
WINTER-FORECAST
2.0% ANNUAL GROWTH
RATE
kW
YEAR
9,000
8,000
7,000
6,000
5,000
4,000
3,000
2,000
1,000
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'45


SUNSET kW DEMAND
SUMMER-FORECAST
4.3% ANNUAL GROWTH
RATE
WINTER-FORECAST
4.5% ANNUAL GROWTH
RATE
SUMMER-HISTORICAL
WINTER-HISTORICAL
kW
YEAR
30,000
25,000
20,000
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5.4 – Overhead Maintenance Program

The Overhead Maintenance Program include the routine inspection and replacement of poles on the sub-transmission and distribution circuits on the BEU system.

It is projected that BEU will inspect 15 poles per week for the years 2026 thru 2030. This totals to 780 poles inspected per year and 3,900 poles inspected for the duration of the 5-Year CIP. An estimated cost of $270 per pole inspection was used and a 3% inflation to this cost was assumed per year starting in 2027. The total estimated cost for pole inspections for the 5-Year CIP is $1,151,647.

It is projected that BEU will replace 50 poles per year for the years 2026 thru 2028 and 100 poles per year for the years 2029 and 2030. This totals to 350 poles replaced for the duration of the 5-Year CIP. An estimated cost of $7,520 per pole replacement was used and a 3% inflation to this cost was assumed per year starting in 2027. The total estimated cost for pole replacements for the 5-Year CIP is $2,906,791.

The total estimated cost for the Overhead Maintenance Program for the 5-year CIP is $4,058,438. The table below shows a breakdown of the Overhead Maintenance Program.

Table 5.4-1 – Overhead Maintenance Program Costs

	2026	2027	2028	2029	2030	Total
Number of Poles Inspected	780	780	780	780	780	3,900
Cost per Inspection	278	286	295	304	313	-
Total Cost of Inspection	$216,918	$223,426	$230,128	$237,032	$244,143	$1,151,647
Number of Poles Replaced	50	50	50	100	100	350
Cost per Replacement	$7,746	$7,978	$8,217	$8,422	$8,675	-
Total Cost of Replacement	$387,280	$398,898	$410,865	$842,240	$867,507	$2,906,791
Total Overhead Maintenance Program	**$604,198**	**$622,324**	**$640,994**	**$1,079,272**	**$1,111,650**	**$4,058,438**

5.5 – Capital Maintenance Projects

BEU has identified 18 Capital Maintenance projects to include in the 5-year CIP. The total estimated cost for these projects is $20,784,500. It is projected that BEU will receive $9,293,750 in contributions in aid to these projects bringing the total BEU funding cost to $11,490,750.

The following tables list the Capital Maintenance projects that have been identified for inclusion to the 5-year CIP.

Table 5.5-1 – Capital Maintenance Project Costs

Project Description	Year	Total Cost	CIAC	BEU Funding Cost
Underground Conversion Livingston to Hargrave (Backbone/Fiber loop at Ramsey/Livingston/Alola)	2027-2028	$149,500	$0	$149,500
Underground Conductor Replacement Barbour St E/O Hathaway	2027	$275,000	$0	$275,000
Underground Conductor Replacement at Mockingbird Lane and Hillside Dr	2027	$750,000	$0	$750,000
Underground Conductor Replacement at Westward Ave from 4th St to 8th St	2027	$625,000	$0	$625,000
Fiber Extension to Stagecoach Substation (UG and OH)	2027	$285,000	$0	$285,000
Midway Substation Upgrades (breaker replacement and SCADA-ready upgrades and future full replacement)	2027-2030	$6,125,000	$0	$6,125,000
34.5 kV/12.47 kV (Cir 77)/fiber UG and OH Extension to Sunset Ave	2029	$2,000,000[1]	$1,200,000	$800,000
SoCalGas Reimbursement for Feeder Circuits to Cottonwood Ave	2027	TBD	100%	$0

[1] Up to 60% contribution from WKJ Development

Table 5.5-1 – Capital Maintenance Project Costs (continued)

Project Description	Year	Total Cost	CIAC	BEU Funding Cost
Underground Conductor Replacement at Vista Serena Ave	2029	$350,000	$175,000[2]	$175,000
Fire Mitigation Tier 2/3 High Threat Area (Various)	2026-2028	$450,000	$0	$450,000
Mias Canyon Line Hardening	2027	$2,100,000	$2,100,000[3]	$0
34.5 kV/12.47 kV/fiber Underground Circuits Hathaway St from Williams St to Hoffer St	2029-2030	$2,000,000	$2,000,000[4]	$0
34.5 kV/12.47 kV/fiber Underground Circuits Lincoln St to John St	2027, 2029	$150,000	$0	$150,000
Install Two (2) Engineered base-plate pole at Sunset and Lincoln	2028-2029	$850,000	$0	$850,000
Install Reclosers on 34.5 kV and 12.47 kV system	2028	$250,000	$0	$250,000
Robertson's Ready Mix Circuit Re-route	2026-2028	$425,000	$318,750[5]	$106,250
Sun Lakes Blvd Extension - Electric Relocation	2026-2028	$3,500,000	$3,500,000[6]	$0

[2] Up to 50% contribution from Vista Serena Developer
[3] 100% grant funded
[4] 100% funded from Sansone Group and First Hathaway Industrial
[5] Up to 75% contribution from Robertson's Ready Mix
[6] 100% Public Works funded

Table 5.5-1 – Capital Maintenance Project Costs (continued)

Project Description	Year	Total Cost	CIAC	BEU Funding Cost
SCE Upfront Capital Costs	2028	$500,000	$0	$500,000
		$20,784,500	**$9,293,750**	**$11,490,750**

The following pages contain the CIP worksheets as provided by BEU.

CITY OF BANNING

5 YEAR CAPITAL IMPROVEMENT PROGRAM (FY 2027- 2031)

Project Title:	**Estimated Completion Date:**
Underground Conversion Livingston to Hargrave (Backbone/Fiber loop at Ramsey/Livingston/Alola)	**12/1/2027**

Project Description:

Complete distribution circuit ties between San Gorgonio Substation and Stagecoach Substation that will provide electric distribution to the area that had been previously served by the decommissioned Alola Substation. This project will include short distance line extensions, installation of PME switches, and fiber optic cable installation.

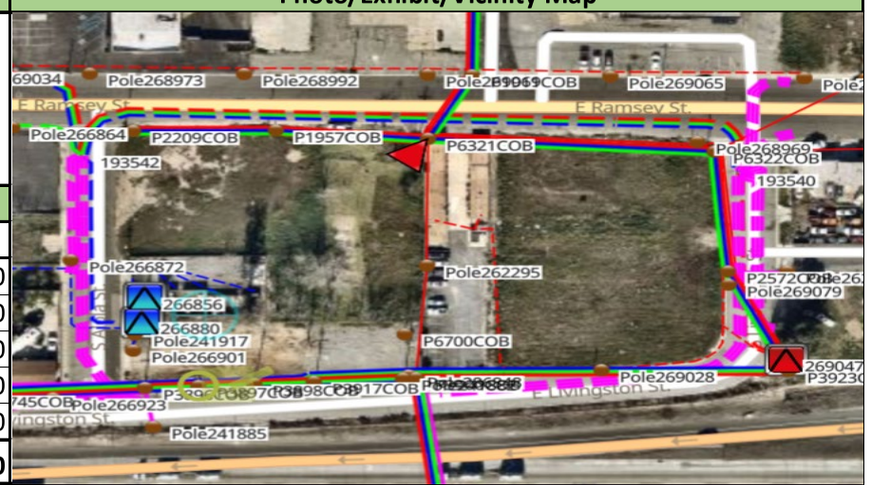
Project Benefit:

Provides added redundancy and resiliency to distribution service in the northeast section of BEU's service territory.

Project Status:

Currently in design; construction phase is tentatively scheduled to commence construction during FY 26/27 and will conclude in FY 27/28.

Photo/Exhibit/Vicinity Map



Project Budget:

Budget Distribution	Est. Amount
Design/Engineering/Enviro.	$9,500
Right of Way Acquisition	$0
Construction Support (e.g. survey, soils, etc.)	$0
Construction Management/Inspections	$5,000
Construction	$135,000
Total	**$149,500**

Funding Plan:

Funding Source	Funds	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	Funds	Total
Electric Revenue	$149,500	$9,500	$140,000					**$149,500**
								$0
								$0
Total	**$149,500**	**$9,500**	**$140,000**	**$0**	**$0**	**$0**	**$0**	**$149,500**

Department:	**Division:**	**Contacts:**
Electric	Engineering	Fred Lyn, Deputy Electric Utility Director Brandon Robinson, Electric Engineering Supervisor

CITY OF BANNING

5 YEAR CAPITAL IMPROVEMENT PROGRAM (FY 2027- 2031)

Project Title:	**Estimated Completion Date:**
Underground Conversion Barbour St (12kV Conversion at 700 S. Hathaway)	**12/1/2026**

Project Description:

Complete 12.47kV conversion for four service at 700 S. Hathaway St. Decommission Airport Substation.

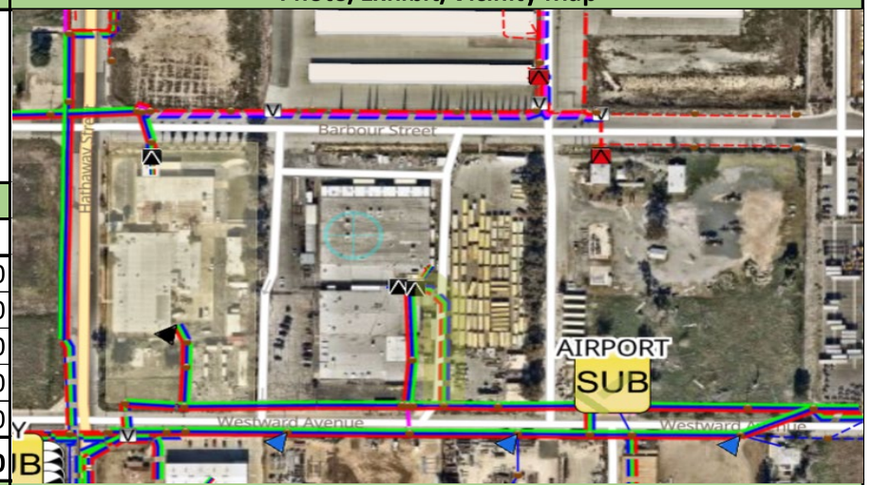
Project Benefit:

This project will conclude the 12kV Conversion project that has taken BEU nearly 50 years to complete. This will provide stable service reliability in the area.

Project Status:

Currently in design; construction phase is tentatively scheduled to commence construction during FY 26/27.

Photo/Exhibit/Vicinity Map



Project Budget:

Budget Distribution	Est. Amount
Design/Engineering/Enviro.	$20,000
Right of Way Acquisition	$0
Construction Support (e.g. survey, soils, etc.)	$0
Construction Management/Inspections	$5,000
Construction	$250,000
Total	**$275,000**

Funding Plan:

Funding Source	Funds	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	Funds	Total
Electric Revenue	$275,000	$275,000						**$275,000**
								$0
								$0
Total	**$275,000**	**$275,000**	**$0**	**$0**	**$0**	**$0**	**$0**	**$275,000**

Department:	**Division:**	**Contacts:**
Electric	Engineering	Fred Lyn, Deputy Electric Utility Director Brandon Robinson, Electric Engineering Supervisor

CITY OF BANNING

5 YEAR CAPITAL IMPROVEMENT PROGRAM (FY 2027- 2031)

Project Title:	**Estimated Completion Date:**
Underground Conductor Replacement - Mockingbird & Hillside	**12/1/2026**

Project Description:

Complete reconductoring on Hillside Dr and Mockingbird Ln.

Project Benefit:

This project will address replacement of antiquated unjacketed cable in BEU's system. The unjacketed cable has become obsolete and is prone to greater percentage of fault occurrence, which leads to longer customer outages.

Project Status:

The initial phase of this project was completed in 2023 due to the occurrence of a fault on an unjacketed primary distribution conductor within the project area; the final phase of construction phase is tentatively scheduled to commence during FY 26/27.

Photo/Exhibit/Vicinity Map



Project Budget:

Budget Distribution	Est. Amount
Design/Engineering/Enviro.	$55,000
Right of Way Acquisition	$0
Construction Support (e.g. survey, soils, etc.)	$0
Construction Management/Inspections	$18,000
Construction	$677,000
Total	**$750,000**

Funding Plan:

Funding Source	Funds	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	Funds	Total
Electric Revenue	$750,000	$750,000						**$750,000**
								$0
								$0
Total	**$750,000**	**$750,000**	**$0**	**$0**	**$0**	**$0**	**$0**	**$750,000**

Department:	**Division:**	**Contacts:**
Electric	Engineering	Fred Lyn, Deputy Electric Utility Director Brandon Robinson, Electric Engineering Supervisor

CITY OF BANNING

5 YEAR CAPITAL IMPROVEMENT PROGRAM (FY 2027- 2031)

Project Title:	**Estimated Completion Date:**
Underground Conductor Replacement - Westward Ave to Barbour St, 4th St to 8th St	**6/1/2026**

Project Description:

Complete reconductoring on between Westward Ave and Barbour St, from 4th St to 8th St.

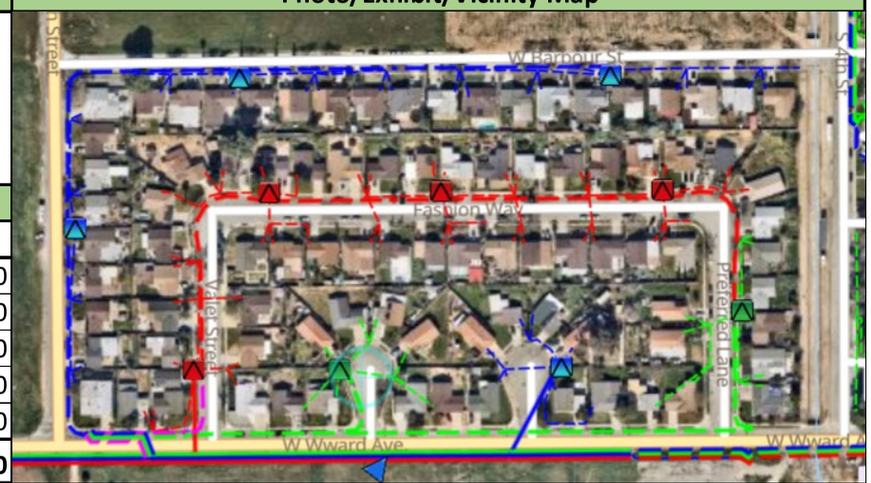
Project Benefit:

This project will address replacement of antiquated unjacketed cable in BEU's system. The unjacketed cable has become obsolete and is prone to greater percentage of fault occurrence, which leads to longer customer outages.

Project Status:

Some preliminary reconductoring occurred during a 2022 fault event involving unjacketed primary distribution conductor within the project area; construction of all improvements is tentatively scheduled to commence during FY 26/27.

Photo/Exhibit/Vicinity Map



Project Budget:

Budget Distribution	Est. Amount
Design/Engineering/Enviro.	$25,000
Right of Way Acquisition	$0
Construction Support (e.g. survey, soils, etc.)	$0
Construction Management/Inspections	$10,000
Construction	$590,000
Total	**$625,000**

Funding Plan:

Funding Source	Funds	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	Funds	Total
Electric Revenue	$625,000	$625,000						**$625,000**
								$0
								$0
Total	**$625,000**	**$625,000**	**$0**	**$0**	**$0**	**$0**	**$0**	**$625,000**

Department:	**Division:**	**Contacts:**
Electric	Engineering	Fred Lyn, Deputy Electric Utility Director Brandon Robinson, Electric Engineering Supervisor

CITY OF BANNING

5 YEAR CAPITAL IMPROVEMENT PROGRAM (FY 2027- 2031)

Project Title:	**Estimated Completion Date:**
Fiber Extension to Stagecoach	**12/30/2027**

Project Description:

Underground conversion of 34.5kV, 12.47kV and fiber optic circuits thru easement within Banning Airport property from Lincoln St to John St.

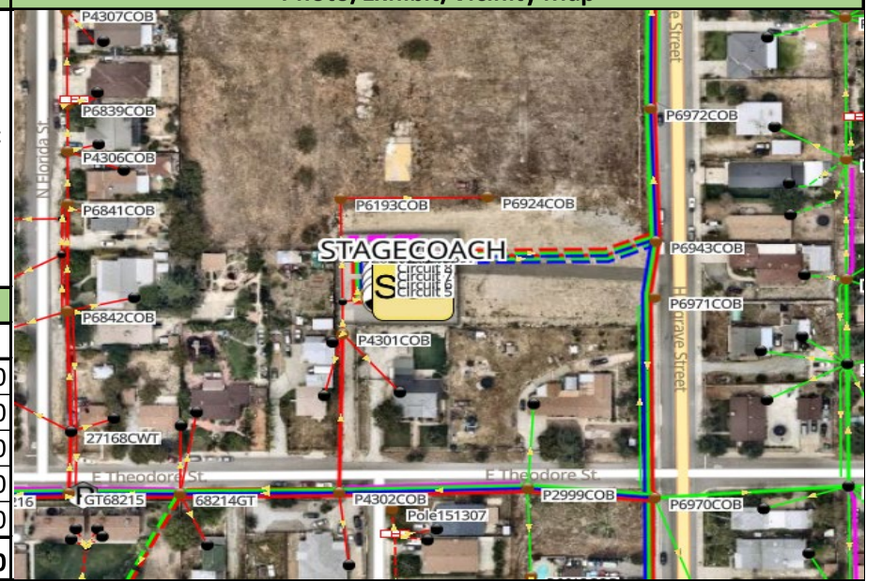
Project Benefit:

This project will help push BEU toward completion of fiber optic hard line connectivity all six substations for SCADA monitoring and control.

Project Status:

In 2022, BEU completed a line extension on Hargrave Street from the site of the decommissioned Alola Substation to the newly built Stagecoach Substation in order to energize the asset and provide service to the northeast portion of BEU's service area. The design for this pole line extension included provisions for a future utility fiber optic line attachment to support SCADA communication. BEU anticipates construction to commence during FY 26/27, but may be able to be delayed and encumbered into future fiscal year budgets if needed.

Photo/Exhibit/Vicinity Map



Project Budget:

Budget Distribution	Est. Amount
Design/Engineering/Enviro.	$15,000
Right of Way Acquisition	$0
Construction Support (e.g. survey, soils, etc.)	$0
Construction Management/Inspections	$5,000
Construction	$265,000
Total	**$285,000**

Funding Plan:

Funding Source	Funds	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	Funds	Total
Electric Revenue	$285,000	$285,000						**$285,000**
CIAC	$0							**$0**
								$0
Total	**$285,000**	**$285,000**	**$0**	**$0**	**$0**	**$0**	**$0**	**$285,000**

Department:	**Division:**	**Contacts:**
Electric	Engineering	Fred Lyn, Deputy Electric Utility Director Brandon Robinson, Electric Engineering Supervisor

CITY OF BANNING

5 YEAR CAPITAL IMPROVEMENT PROGRAM (FY 2027- 2031)

Project Title:	**Estimated Completion Date:**
Midway Substation Upgrades (breaker replacement and SCADA upgrades)	**5/30/2028**

Project Description:

Install SCADA RTU and other equipment to make Midway Substation SCADA ready. Replace distribution with spare breakers as needed. This project will also address potential full substation upgrade if direction is to utilize the existing property.

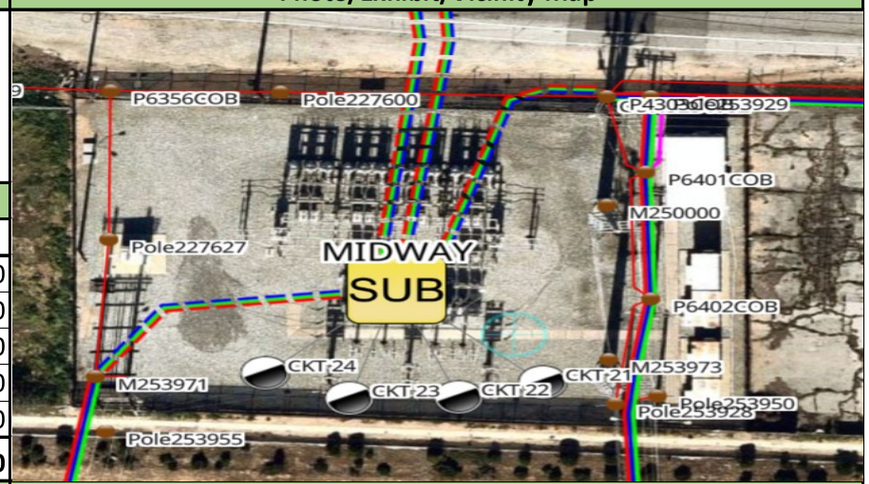
Project Benefit:

Midway is BEU's oldest Substation, built in 1972. Most of the equipment, including the transformers and distribution breakers are original and nearing the end of useful life. The SCADA upgrades will allow remote visibility at the substation, while as-needed breaker replacement will allow the substation to continue operating as intended. The eventual replacement of all equipment at the substation will help conclude modernization of all BEU's substation assets.

Project Status:

BEU has began vetting equipment that will be utilized to make Midway Substation SCADA-ready. Construction of this phase is tentatively scheduled to commence during FY 26/27. All other improvements we be evaluated later in the initial 5-yr CIP period.

Photo/Exhibit/Vicinity Map



Project Budget:

Budget Distribution	Est. Amount
Design/Engineering/Enviro.	$5,000
Right of Way Acquisition	$0
Construction Support (e.g. survey, soils, etc.)	$0
Construction Management/Inspections	$2,500
Construction	$117,500
Total	**$125,000**

Funding Plan:

Funding Source	Funds	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	Funds	Total
Electric Revenue	$125,000	$75,000	$50,000					**$125,000**
								$0
								$0
Total	**$125,000**	**$75,000**	**$50,000**	**$0**	**$0**	**$0**	**$0**	**$125,000**

Department:	**Division:**	**Contacts:**
Electric	Engineering	Fred Lyn, Deputy Electric Utility Director Brandon Robinson, Electric Engineering Supervisor

CITY OF BANNING

5 YEAR CAPITAL IMPROVEMENT PROGRAM (FY 2027- 2031)

Project Title:	**Estimated Completion Date:**
34.5kV/12.47kV (Cir 77)/fiber UG and OH Extension to Sunset Ave	**6/30/2029**

Project Description:

Extend electric sub-transmission and distribution from Mountain Ave to Sunset Ave.

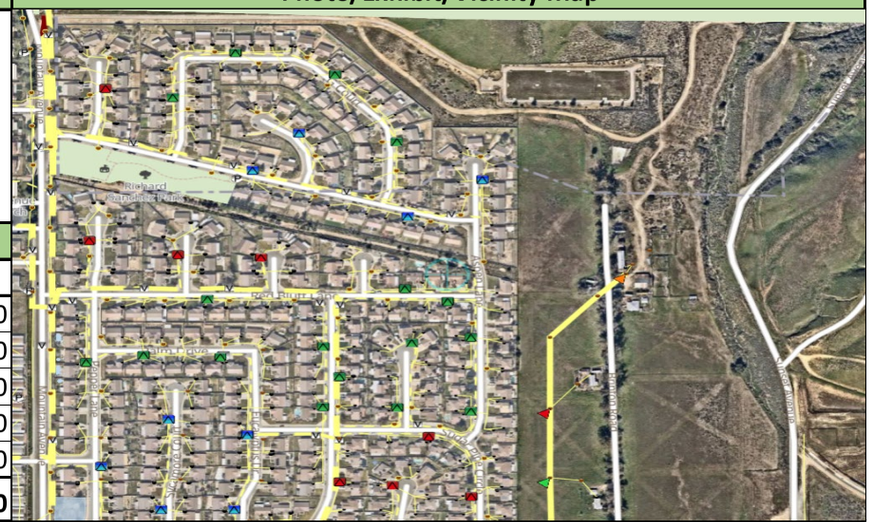
Project Benefit:

Circuit #77, which originates from Sunset Substation, is terminated in a switch cabinet on Mountain Ave. This circuit was designed to provide distribution services to newer developments along Sunset Ave north of Wilson St. Completing this line extension allows BEU to fulfill this need, while also seeking monetary contributions from these developments thru line extension agreements.

Project Status:

BEU has completed a preliminary design of the 12.47kV distribution extension thru the area. Design for the 34.5kV and fiber extension still needs to be completed. Environmental, survey, and possible ROW acquisition will be required for this project. Construction is tentatively scheduled to commence during FY 28/29, or as soon as advance on construction is received for from developers in the area that will be served with this line extension.

Photo/Exhibit/Vicinity Map



Project Budget:

Budget Distribution	Est. Amount
Design/Engineering/Enviro.	$115,000
Right of Way Acquisition	$50,000
Construction Support (e.g. survey, soils, etc.)	$75,000
Construction Management/Inspections	$45,000
Construction	$1,715,000
Total	**$2,000,000**

Funding Plan:

Funding Source	Funds	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	Funds	Total
Electric Revenue	$800,000			$800,000				**$800,000**
CIAC (WJK Development)	$1,200,000			$1,200,000				**$1,200,000**
								$0
Total	**$2,000,000**	**$0**	**$0**	**$2,000,000**	**$0**	**$0**	**$0**	**$2,000,000**

Department:	**Division:**	**Contacts:**
Electric	Engineering	Fred Lyn, Deputy Electric Utility Director Brandon Robinson, Electric Engineering Supervisor

CITY OF BANNING

5 YEAR CAPITAL IMPROVEMENT PROGRAM (FY 2027- 2031)

Project Title:	**Estimated Completion Date:**
Underground Conductor Replacement at Vista Serena	**6/30/2029**

Project Description:

Complete reconductoring of unjacketed cable in the Vista Serena development in conjunction with an ongoing development-driven project to complete buildout of the complex.

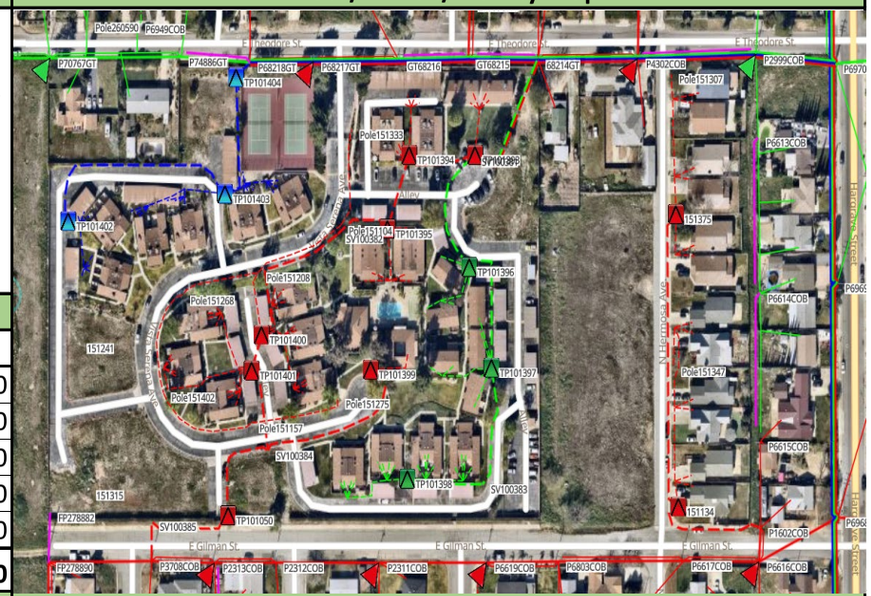
Project Benefit:

This project will address replacement of antiquated unjacketed cable in BEU's system. The unjacketed cable has become obsolete and is prone to greater percentage of fault occurrence, which leads to longer customer outages.

Project Status:

BEU has completed minor reconductoring within Vista Serena that had come as a result of outages created by cable fault/failure. Design for the complete distribution upgrades to serve the development is in progress. The developer will have a cost responsibility for new line extensions within the development, as well as replacement of some of the existing unjacketed cable. Construction is tentatively scheduled to commence during FY 26/27, or as soon as advance on construction is received from the developer. Completion of all remaining reconductoring outside of developer requirements will occur during FY 28/29.

Photo/Exhibit/Vicinity Map



Project Budget:

Budget Distribution	Est. Amount
Design/Engineering/Enviro.	$6,500
Right of Way Acquisition	$0
Construction Support (e.g. survey, soils, etc.)	$0
Construction Management/Inspections	$15,000
Construction	$328,500
Total	**$350,000**

Funding Plan:

Funding Source	Funds	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	Funds	Total
Electric Revenue	$175,000			$175,000				**$175,000**
CIAC (Vista Serena)	$175,000	$175,000						**$175,000**
								$0
Total	**$350,000**	**$175,000**	**$0**	**$175,000**	**$0**	**$0**	**$0**	**$350,000**

Department:	**Division:**	**Contacts:**
Electric	Engineering	Fred Lyn, Deputy Electric Utility Director Brandon Robinson, Electric Engineering Supervisor

CITY OF BANNING

5 YEAR CAPITAL IMPROVEMENT PROGRAM (FY 2027- 2031)

Project Title:	**Estimated Completion Date:**
Fire Mitigation Improvements in High Fire Threat District	**6/30/2029**

Project Description:

BEU will complete improvements to control of electricity in the Tiers 2 & 3 High Fire Threat District (HFTD). BEU will begin with the installation of distribution circuit reclosers to allow power to be shut off to these areas in the event that an imminent threat to public safety becomes present.

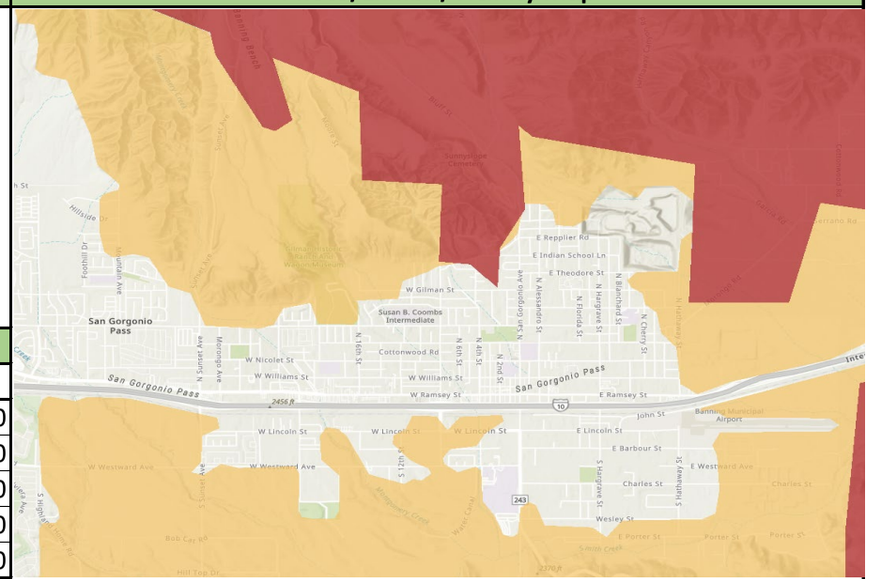
Project Benefit:

This project will assist with the continued monitoring and operation of the electric distribution facilities within the HFTD Tiers 2 & 3 areas. The California Public Utility Commission's Wildfire Safety Advisory Board (WSAB) recommended that utilities with electric transmission or distribution facilities in HFTDs make tangible improvements to the monitoring and operation of these facilities to reduce wildfire risk.

Project Status:

BEU has been required to submit a Wildfire Mitigation Plan for review to the WSAB each year since 2020. Within this time, BEU has completed minor improvements to facilities in Banning Canyon (water canyon) and has applied for grant funding to upgrade facilities within Mias Canyon. BEU is obligated to continue fire mitigation efforts, and has identified the use of reclosers as a high priority solution for circuits that enter the HFTD. BEU anticipates construction to begin during FY 26/27, and continue annually until grid hardening solutions have been met. BEU will continue to search for and apply for grant funding to offset revenue expenditures.

Photo/Exhibit/Vicinity Map



Project Budget:

Budget Distribution	Est. Amount
Design/Engineering/Enviro.	$25,000
Right of Way Acquisition	$0
Construction Support (e.g. survey, soils, etc.)	$0
Construction Management/Inspections	$5,000
Construction	$420,000
Total	**$450,000**

Funding Plan:

Funding Source	Funds	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	Funds	Total
Electric Revenue	$450,000	$150,000	$150,000	$150,000				**$450,000**
CIAC	$0							**$0**
								$0
Total	**$450,000**	**$150,000**	**$150,000**	**$150,000**	**$0**	**$0**	**$0**	**$450,000**

Department:	**Division:**	**Contacts:**
Electric	Engineering	Fred Lyn, Deputy Electric Utility Director Brandon Robinson, Electric Engineering Supervisor

Project Title:	Estimated Completion Date:
Mias Canyon Line Hardening	12/30/2028

Project Description:

This project involves replacing 75 utility poles with new fire retardant-treated poles; replacing wooden crossarms on poles with fiberglass crossarms; installing insulated/covered wire and jumpers; installing covered insulators; installing line protection measures; and completing hazardous fuels reduction.

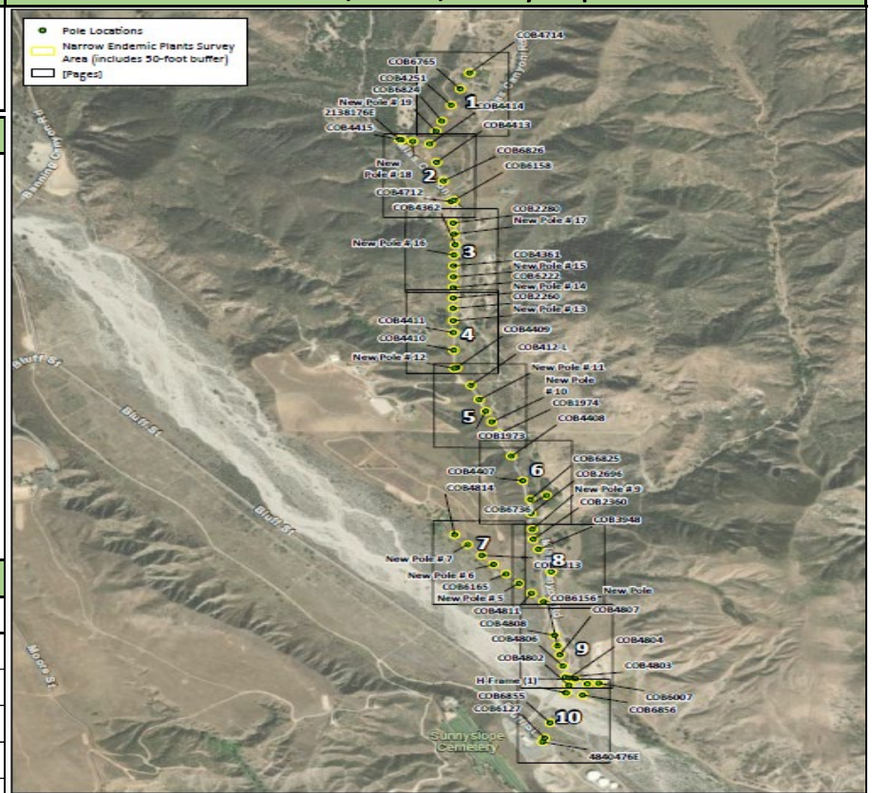
Project Benefit:

This project will help provide redundancy on our 34.5kV and 12.47kV and assist providing a point of connection to the 34.5kV system for the proposed substation to support expansion in the eastern part of the City.

Project Status:

The result from the Apple Fire in 2020 prompted BUE to search for funding to complete much needed upgrades/line hardening in areas within the service territory that are most susceptible to fire ignition. BEU began the design and grant application process for this project in 2021, and is currently awaiting funding after various design and environmental clearance activities. This project will be grant-funded thru the federal government's Hazard Mitigation Grant Program at 75% of total project cost, with 25% matching contributions form California Governor's Office of Emergency Services (CalOES) to complete the full 100% funding. Construction start for this project is dependent upon the grant funding during FY 26/27, in which BEU will be given 24 months to complete.

Photo/Exhibit/Vicinity Map



Project Budget:

Budget Distribution	Est. Amount
Design/Engineering/Enviro.	$185,000
Right of Way Acquisition	$0
Construction Support (e.g. survey, soils, etc.)	$10,000
Construction Management/Inspections	$45,000
Construction	$1,860,000
Total	**$2,100,000**

Funding Plan:

Funding Source	Funds	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	Funds	Total
Electric Revenue	$0							**$0**
CIAC (Grant)	$2,100,000	$2,100,000						**$2,100,000**
Total	**$2,100,000**	**$2,100,000**	**$0**	**$0**	**$0**	**$0**	**$0**	**$2,100,000**

Department:	Division:	Contacts:
Electric	Engineering	Fred Lyn, Deputy Electric Utility Director Brandon Robinson, Electric Engineering Supervisor

CITY OF BANNING

5 YEAR CAPITAL IMPROVEMENT PROGRAM (FY 2027- 2031)

Project Title:	**Estimated Completion Date:**
34.5kV/12.47kV/fiber Underground Circuits Hathaway St from Williams St to Hoffer St	**6/30/2030**

Project Description:

Underground conversion of 34.5kV, 12.47kV and fiber optic circuits on Hathaway St and new utility service extensions to accomodate new industrial development. This project is fully dependent on the completion of this development.

Project Benefit:

This project will accommodate street improvements required by the Sansone Group and First Hathaway Industrial warehouse developments. This will also assist with beautification of the eastern corridor due to the undergrounding of BEU utilities.

Project Status:

BEU has completed UG conversion of facilities from Ramsey St to Williams St along Hathaway St in 2022. Design for this project is in progress. The developers will have a full responsibility for relocation/conversion along Hathaway St and new line extensions within the development. Construction is tentatively scheduled to commence during FY 28/29, or as soon as advance on construction is received from the developer.

Photo/Exhibit/Vicinity Map



Project Budget:

Budget Distribution	Est. Amount
Design/Engineering/Enviro.	$55,000
Right of Way Acquisition	$0
Construction Support (e.g. survey, soils, etc.)	$0
Construction Management/Inspections	$35,000
Construction	$1,910,000
Total	**$2,000,000**

Funding Plan:

Funding Source	Funds	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	Funds	Total
Electric Revenue								**$0**
CIAC (Sansone/First Hathaway)	$2,000,000			$1,000,000	$1,000,000			**$2,000,000**
								$0
Total	**$2,000,000**	**$0**	**$0**	**$1,000,000**	**$1,000,000**	**$0**	**$0**	**$2,000,000**

Department:	**Division:**	**Contacts:**
Electric	Engineering	Fred Lyn, Deputy Electric Utility Director Brandon Robinson, Electric Engineering Supervisor

CITY OF BANNING

5 YEAR CAPITAL IMPROVEMENT PROGRAM (FY 2027- 2031)

Project Title:	**Estimated Completion Date:**
34.5kV/12.47kV/fiber Underground Circuits Lincoln St to John St	**6/30/2029**

Project Description:

Underground conversion of 34.5kV, 12.47kV and fiber optic circuits thru easement within Banning Airport property from Lincoln St to John St.

Project Benefit:

This project will help provide redundancy on our 34.5kV and 12.47kV and assist providing a point of connection to the 34.5kV system for the proposed substation to support expansion in the eastern part of the City.

Project Status:

In 2015, BEU completed a line extension thru an existing utility easement on the airport property to accommodate future redundancy needs. BEU has also completed UG line extensions to new facilities in the area which began in 2021. As the City continues to build out, more capacity will be needed in East Banning. Design for this project should begin early 2027. There may be a design/construction cost responsibility for future developers, but that cost is still unknown. BEU anticipates construction to commence during FY 28/29, as the need for additional capacity may become a requirement.

Photo/Exhibit/Vicinity Map



Project Budget:

Budget Distribution	Est. Amount
Design/Engineering/Enviro.	$20,000
Right of Way Acquisition	$0
Construction Support (e.g. survey, soils, etc.)	$0
Construction Management/Inspections	$5,000
Construction	$125,000
Total	**$150,000**

Funding Plan:

Funding Source	Funds	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	Funds	Total
Electric Revenue	$175,000	$20,000		$130,000				**$150,000**
CIAC	$0							**$0**
								$0
Total	**$175,000**	**$20,000**	**$0**	**$130,000**	**$0**	**$0**	**$0**	**$150,000**

Department:	**Division:**	**Contacts:**
Electric	Engineering	Fred Lyn, Deputy Electric Utility Director Brandon Robinson, Electric Engineering Supervisor

CITY OF BANNING

5 YEAR CAPITAL IMPROVEMENT PROGRAM (FY 2027- 2031)

Project Title:	**Estimated Completion Date:**
Engineered Base-Plate Poles at Sunset and Lincoln	**6/30/2029**

Project Description:

Installation of two engineer-base steel pole to support 69/ 34.5kV, 12.47kV and fiber optic circuits on the west side of Sunset Ave north of Lincoln St.

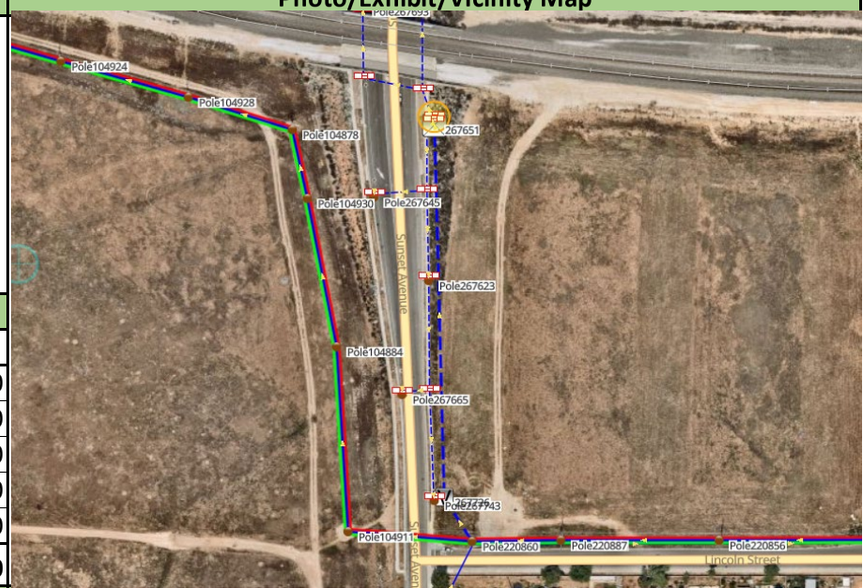
Project Benefit:

This project will provide a much needed infrastructure upgrade for a critical 69/34.5kV/12.47kV/fiber pole line that contains the capacity to support 2/3 of BEU's total energy demand. This pole line carries transmission to Midway and Subset Substations which account for the largest loads within BEU's service territory.

Project Status:

In 2014, BEU completed a relocation of the steel pole transmission line at Sunset Ave and Lincoln Street. The final phase of this project was to be completed prior to 2017, however budget constraints prevented the completion of the project. There may be a design/construction cost responsibility for future developers, but that cost is still unknown. BEU anticipates construction to commence during FY 28/29, which is anticipated to coincide with commercial development within the area.

Photo/Exhibit/Vicinity Map



Project Budget:

Budget Distribution	Est. Amount
Design/Engineering/Enviro.	$60,000
Right of Way Acquisition	$0
Construction Support (e.g. survey, soils, etc.)	$50,000
Construction Management/Inspections	$35,000
Construction	$705,000
Total	**$850,000**

Funding Plan:

Funding Source	Funds	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	Funds	Total
Electric Revenue	$850,000		$425,000	$425,000				**$850,000**
CIAC	$0							**$0**
								$0
Total	**$850,000**	**$0**	**$425,000**	**$425,000**	**$0**	**$0**	**$0**	**$850,000**

Department:	**Division:**	**Contacts:**
Electric	Engineering	Fred Lyn, Deputy Electric Utility Director Brandon Robinson, Electric Engineering Supervisor

CITY OF BANNING

5 YEAR CAPITAL IMPROVEMENT PROGRAM (FY 2027- 2031)

Project Title:	**Estimated Completion Date:**
Install Reclosers on 34.5 kV and 12.47 kV system	**6/30/2028**

Project Description:

BEU will complete a pilot project to install reclosers and other sectionalizing devices on the distribution and sub-transmission system.

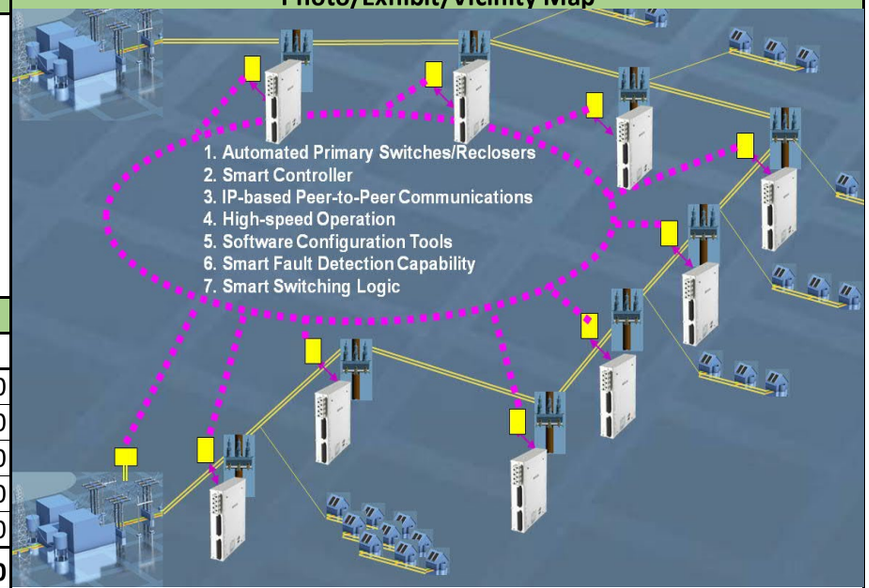
Project Benefit:

This project will allow BEU to improve redundancy and reliability within the system by isolating outages to a smaller area and reduce power restoration times.

Project Status:

Planning and equipment research for this project began in 2022 and will continue with the completion of a system impact study of the current electric grid. BEU will vet different equipment manufacturers and determine the best method for initiating the pilot. The project will be constructed using BEU's in-house power line construction services. The pilot will include investigation and implementation of distribution automation (DA) solutions to provide communication with the field devices that are installed. BEU anticipates this pilot to begin in FY 27/28.

Photo/Exhibit/Vicinity Map



Project Budget:

Budget Distribution	Est. Amount
Design/Engineering/Enviro.	$35,000
Right of Way Acquisition	$0
Construction Support (e.g. survey, soils, etc.)	$0
Construction Management/Inspections	$5,000
Construction	$210,000
Total	**$250,000**

Funding Plan:

Funding Source	Funds	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	Funds	Total
Electric Revenue	$250,000		$250,000					**$250,000**
CIAC (Grant)								**$0**
								$0
Total	**$250,000**	**$0**	**$250,000**	**$0**	**$0**	**$0**	**$0**	**$250,000**

Department:	**Division:**	**Contacts:**
Electric	Engineering	Fred Lyn, Deputy Electric Utility Director Brandon Robinson, Electric Engineering Supervisor

CITY OF BANNING

5 YEAR CAPITAL IMPROVEMENT PROGRAM (FY 2027- 2031)

Project Title:	**Estimated Completion Date:**
Robertson's Ready Mix Circuit Re-route	**6/30/2028**

Project Description:

Re-route/rebuild of 34.5kV, 12.47kV and fiber optic circuits around the Robertson's Ready Mix mining site.

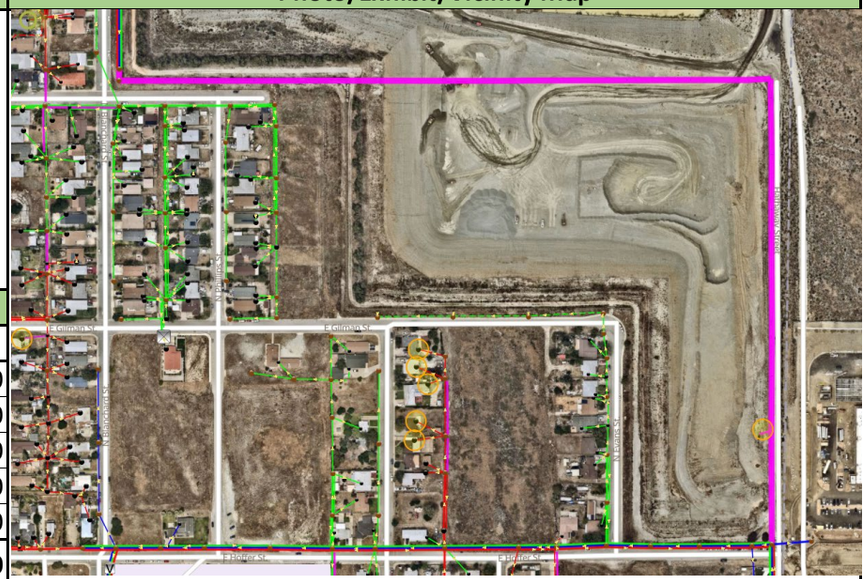
Project Benefit:

This project will be required to rebuild BEU's distribution circuit around Robertson's Ready Mix's expanded mining site that was previously removed. BEU will regain the loss in capacity and redundancy in the system be completing this circuit re-build.

Project Status:

BEU is negotiating a line extension agreement with Roberston's Ready Mix to complete the circuit re-route around the expanded mining area north of Hoffer St and west of Hathaway St. BEU has already completed removal of utility poles in conflict with the new mining activities in anticipation of beginning the construction of the circuit re-rout by 2025. There will be a design/construction cost responsibility for Robertson's that will total 75% or more of total project costs. BEU anticipates construction to commence during FY 26/27 and be completed in the following fiscal year.

Photo/Exhibit/Vicinity Map



Project Budget:

Budget Distribution	Est. Amount
Design/Engineering/Enviro.	$65,000
Right of Way Acquisition	$0
Construction Support (e.g. survey, soils, etc.)	$0
Construction Management/Inspections	$15,000
Construction	$345,000
Total	**$425,000**

Funding Plan:

Funding Source	Funds	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	Funds	Total
Electric Revenue	$106,250		$106,250					**$106,250**
CIAC	$318,750	$318,750						**$318,750**
								$0
Total	**$425,000**	**$318,750**	**$106,250**	**$0**	**$0**	**$0**	**$0**	**$425,000**

Department:	**Division:**	**Contacts:**
Electric	Engineering	Fred Lyn, Deputy Electric Utility Director Brandon Robinson, Electric Engineering Supervisor

CITY OF BANNING

5 YEAR CAPITAL IMPROVEMENT PROGRAM (FY 2027- 2031)

Project Title:	**Estimated Completion Date:**
Sun Lakes Blvd Extension - Electric Relocation	**12/30/2027**

Project Description:

BEU will relocate transmission, distribution, and fiber optic infrastructure on Westward Ave/Sun Lakes Blvd due to roadway improvements. This project will include both underground conversion and overhead line hardening as these improvements will occur in the Tier 2 High Fire Threat District (HFTD).

Project Benefit:

This project will accommodate roadway improvements to connect Sun Lakes Blvd from Highland Home Road to Sunset Ave.

Project Status:

Planning and field investigation for this project started in 2021. BEU completed a design to convert overhead facilities to underground construction to accommodate the roadway extension. The project was bid to a construction contractor and approved by City Council in late 2025. Since BEU is obligated to continue fire mitigation efforts, improvements to the overhead infrastructure that will remain will include line hardening elements to protect from and prevent wildfire in the HFTD. BEU anticipates construction to begin toward the end of FY 26/27, and continue thru FY 27/28. Electric improvements for this project will be grant funded.

Photo/Exhibit/Vicinity Map



Project Budget:

Budget Distribution	Est. Amount
Design/Engineering/Enviro.	$125,000
Right of Way Acquisition	$0
Construction Support (e.g. survey, soils, etc.)	$0
Construction Management/Inspections	$50,000
Construction	$3,325,000
Total	**$3,500,000**

Funding Plan:

Funding Source	Funds	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	Funds	Total
Electric Revenue	$0							**$0**
CIAC (Grant)	$3,500,000	$2,500,000	$1,000,000					**$3,500,000**
								$0
Total	**$3,500,000**	**$2,500,000**	**$1,000,000**	**$0**	**$0**	**$0**	**$0**	**$3,500,000**

Department:	**Division:**	**Contacts:**
Electric	Engineering	Fred Lyn, Deputy Electric Utility Director Brandon Robinson, Electric Engineering Supervisor

5.6 – Substation Capacity Analysis

The table below represents the substation capacity analysis based on the 2030 substation demand forecast. As shown in the table, the Midway, San Gorgonio, and Sunset summer forecast exceeds the base rating of their respective transformer; however, the forecast does not exceed the max rating of the transformer, therefore, no substation improvements are required in the 5-Year CIP.

The table also shows that the BEU system non-coincident peak exceeds the SCE Banning substation transformer base capacity for the summer and winter forecast and also the max capacity in the summer. Based on the non-coincident forecast, the total BEU system load is expected to exceed the max capacity by the summer of 2026. It is recommended that BEU continue to coordinate with SCE on the substation transformer capacity and develop a plan to increase the substation transformer capacity through the end of the forecast period.

Table 5.6-1 – Substation Capacity Analysis

		2030 kW Demand Forecast	Transformer Base MVA	Transformer Max MVA	Transformer High Side kV	Transformer Low Side kV	Transformer % Capacity Base	Transformer % Capacity Max
22nd Street	S	11,270	15	25	34.4	12.47	75%	45%
	W	8,672	18	29			48%	30%
Ivy	S	6,598	15	25	69x34.4	12.47	44%	26%
	W	5,604	18	29			31%	19%
Midway	S	17,197	2 x 7.5	2 x 9.375	34.4	12.47	115%	92%
	W	11,040	18	22			61%	51%
San Gorgonio	S	21,465	2 x 10	2 x 14	69x34.5	12.47	107%	77%
	W	19,809	24	32			83%	62%
Stagecoach	S	7,397	10	12.5	69x34.5	12.47	74%	59%
	W	4,196	12	14			35%	29%
Sunset	S	15,077	15	25	69x34.5	12.47	101%	60%
	W	10,064	18	29			56%	35%
SCE-Banning	S	63,576	2 x 21	2 x 28		34.5	151%	114%
	W	53,737	50.4	64			107%	83%

Notes:

1. Individual substation kW Demand forecast shown as the non-coincident peak.
2. SCE-Banning kW Demand forecast shown as the coincident peak.
3. Base winter rating determined by IEEE C57.91-1995, Table 4 (1% increase per °C)
4. Max winter rating determined by IEEE C57.91-1995, Table 4 (0.75% increase per °C)

5.7 – Distribution System Analysis

Analysis was run using Milsoft's Windmil software on the distribution system to determine system improvement projects to correct low voltage, decrease conductor and equipment loading, and reduce single phase line loading to aid in phase balancing. The analysis results include 14 projects to switch load to adjacent lines to reduce single-phase line loading at a total estimated cost of $41,700, 2 projects for new line construction of 600' totaling $336,400, 9 projects for single-phase to three-phase line rebuild of 10,107' totaling $2,142,100, and 2 projects for three-phase line rebuild using larger conductor of 2,130' totaling $285,500. The total estimated cost for distribution system improvements is $2,805,700.

The following pages detail the recommended distribution system improvements by substation and circuit.

22ND STREET SUBSTATION

CKT 63

CIP-1

Issue: UG146168, 1Ø, #2 URD line with 36 amps, 94 thru consumers.

Resolution: Close switch at vault 143589 at the intersection of Weather Way and Spring Pl. and open at the transformer at pad 146130 at the intersection of Summer Set Cir. and Amper Sky St. and feed load along Autumn Ln. from SW145671-B. Estimated cost: $2,300 (2030).

Image 5.7-1 – CIP Project 1

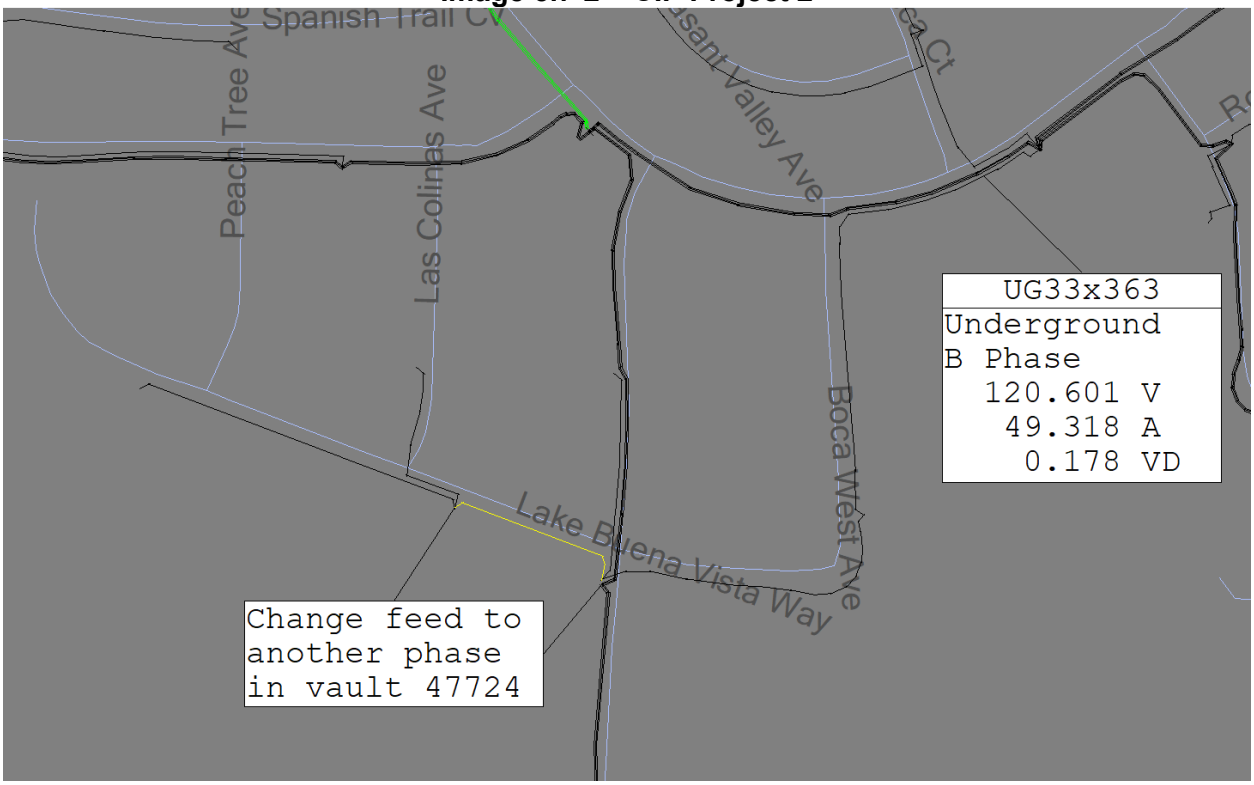


CIP-2

Issue: UG33x363, 1Ø, 1/0 URD line with 49 amps, 102 thru consumers.

Resolution: BEU will inspect the facilities at the intersection of Lake Buena Vista Way and Birdie Dr. and switch some of this B phase load along Lake Buena Vista Way west of Birdie Dr. to the 3Ø line that runs along Birdie Dr. Estimated cost: $2,000 (2028).

Image 5.7-2 – CIP Project 2



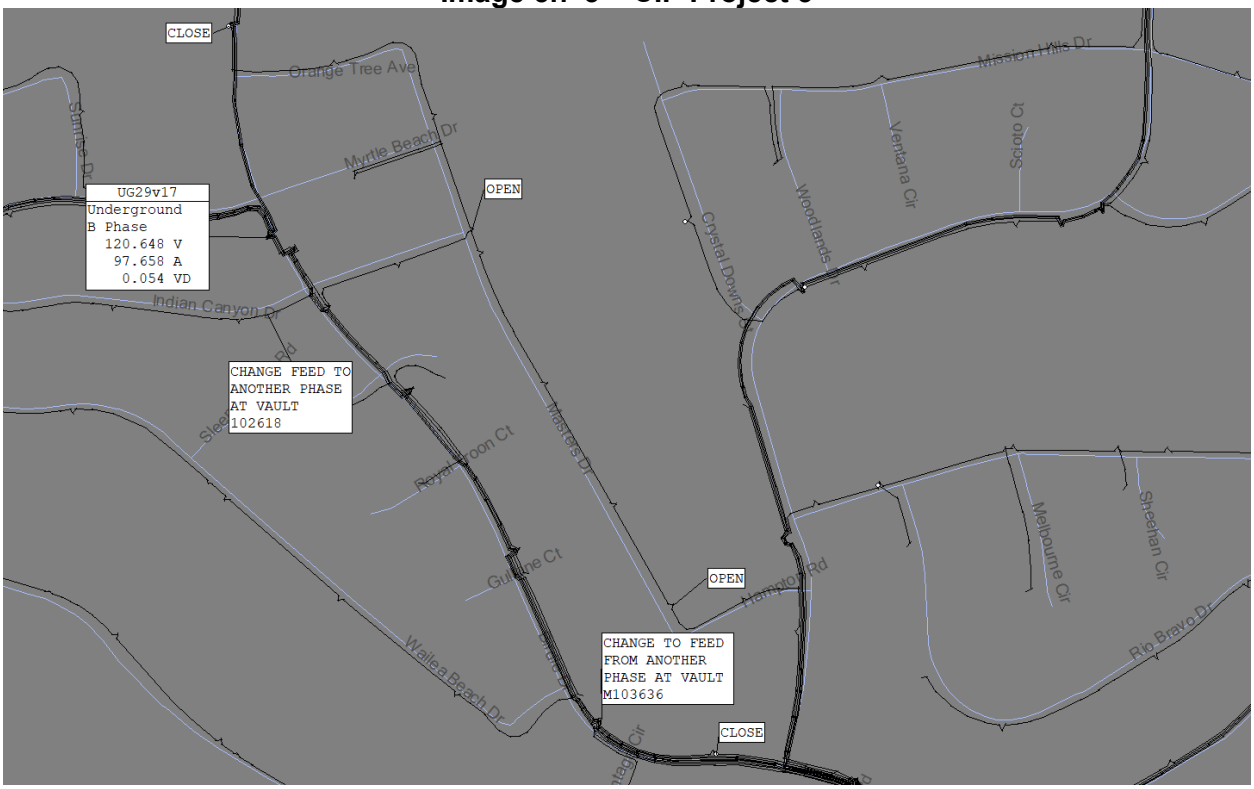
CIP-3

Issue: UG29v17, 1Ø, 1/0 URD with 97 amps, 239 thru consumers.

Resolution:

- Close switch at vault 101946 and open at vault 102621 at the intersection of Indian Canyon Dr. and Masters Dr. and backfeed all load north from SW103762-A.
- Close switch at pad 103628 and open at pad 103513 to switch load south from pad 103628A.
- Install 3Ø vault at the intersection of Indian Canyon Dr. and Birdie Dr. and change feed of UG33x433 from 3Ø line along Birdie Dr. to feed all load along Indian Canyon Dr. west of Birdie Dr. from the 3Ø vault. Estimated cost: $5,900 (2026).

Image 5.7-3 – CIP Project 3



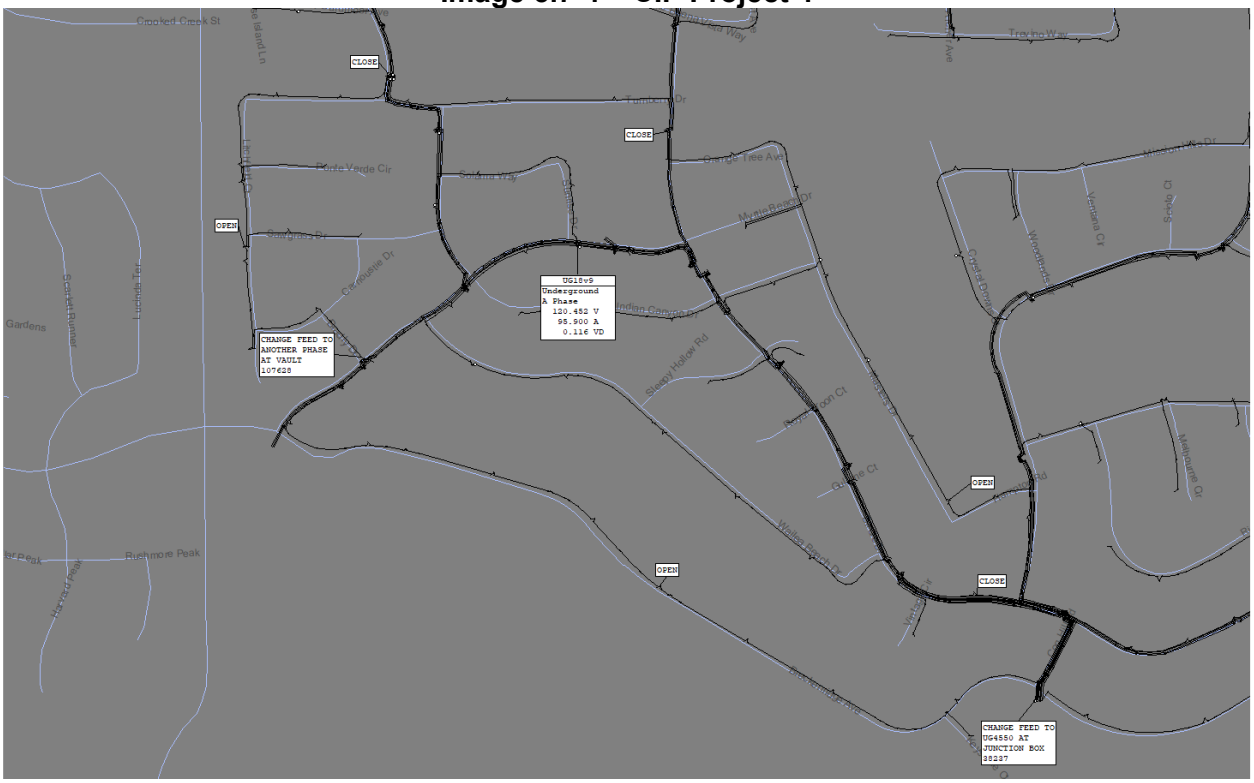
CIP-4

Issue: UG18v9, 1Ø, 1/0 URD with 96 amps, 230 thru customers.

Resolution:

- Change feed of line along Bradley St. to feed from 3Ø junction box and connect UG133185 by closing a switch at vault 103523 and open at the intersection of Sawgrass Dr. and Litchfield Ct. to serve all load north of vault 103523.
- Backfeed UG109597 from 3Ø UG4550 and open around UG33x474 along Brackenridge Ave. Estimated cost: $4,000 (2027).

Image 5.7-4 – CIP Project 4



CKT 64

Issue: None

IVY SUBSTATION

CKT 11

Issue: None

CKT 12

Issue: None

CKT 13

Issue: None

MIDWAY SUBSTATION

CKT 21

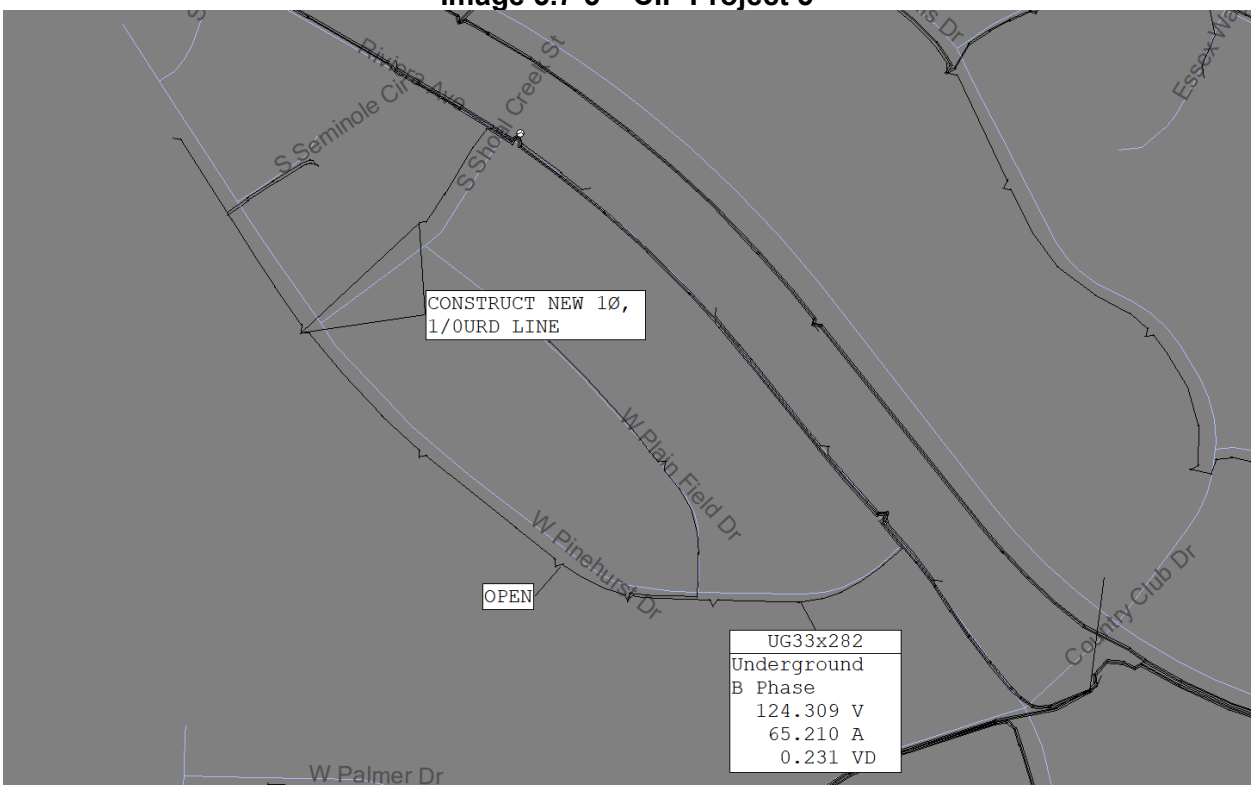
CIP-5

Issue: UG33x282, 1Ø, #2 URD with 65 amps, 97 thru consumers.

Resolution:

- Construct a new, 300', 1Ø, 1/0 AL URD primary voltage tie from pad 42503 to pad 42498, crossing W. Pinehurst Dr. and following S. Shoal Creek St.
- Open the line at pad 42491 and serve all load to the west from the 1Ø line at S. Shoal Creek St. and Riveria Ave. Estimated cost: $114,600 (2027).

Image 5.7-5 – CIP Project 5

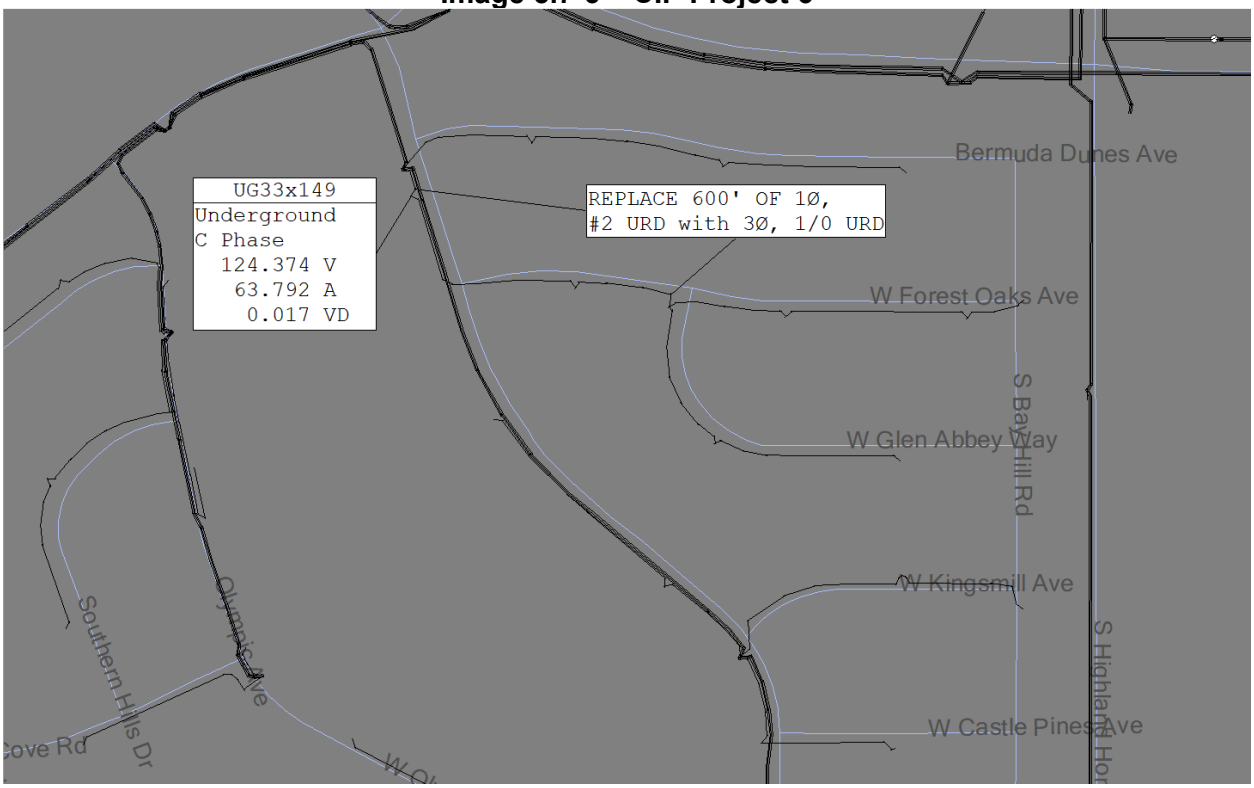


CIP-6

Issue: UG33x149, 1Ø, 2 URD with 64 amps, 86 thru consumers.

Resolution: Replace 600' of 1Ø, #2 URD line with 3Ø, 1/0 URD line from vault 36857 along Rivera Ave. just south of Bermuda Dunes Ave to vault 36879 at the intersection of W. Forest Oaks Ave and W. Glen Abbey Way and split the load between multiple phases. Estimated cost: $223,300 (2027).

Image 5.7-6 – CIP Project 6

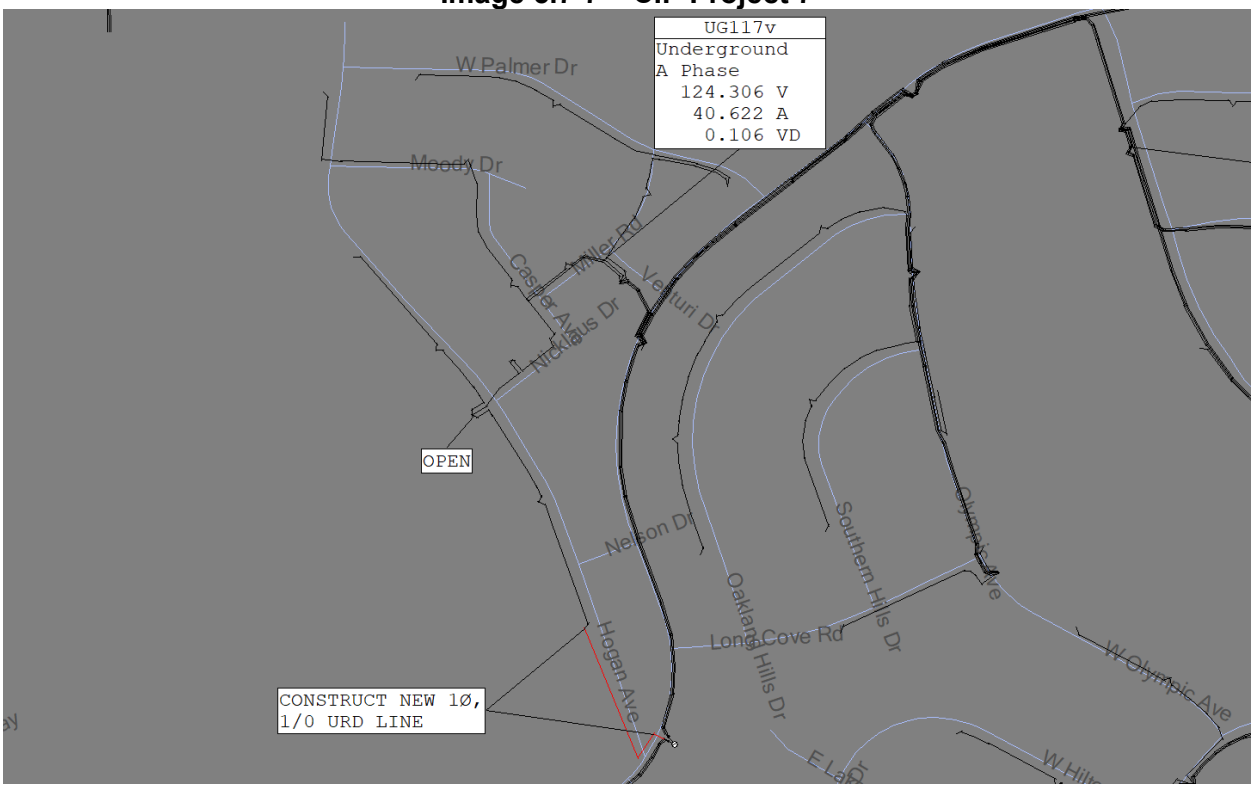


CIP-7

Issue: UG117v, 1Ø, #2 URD with 41 amps, 65 thru consumers.

Resolution: Construct a new, 600', 1Ø, 1/0 URD primary voltage tie from vault 41797 to pad 41823. Open at pad 41830 and switch all load southeast of Nicklaus Dr. along Hogan Ave. to feed from pad 41797. Estimated cost: $221,800 (2028).

Image 5.7-7 – CIP Project 7

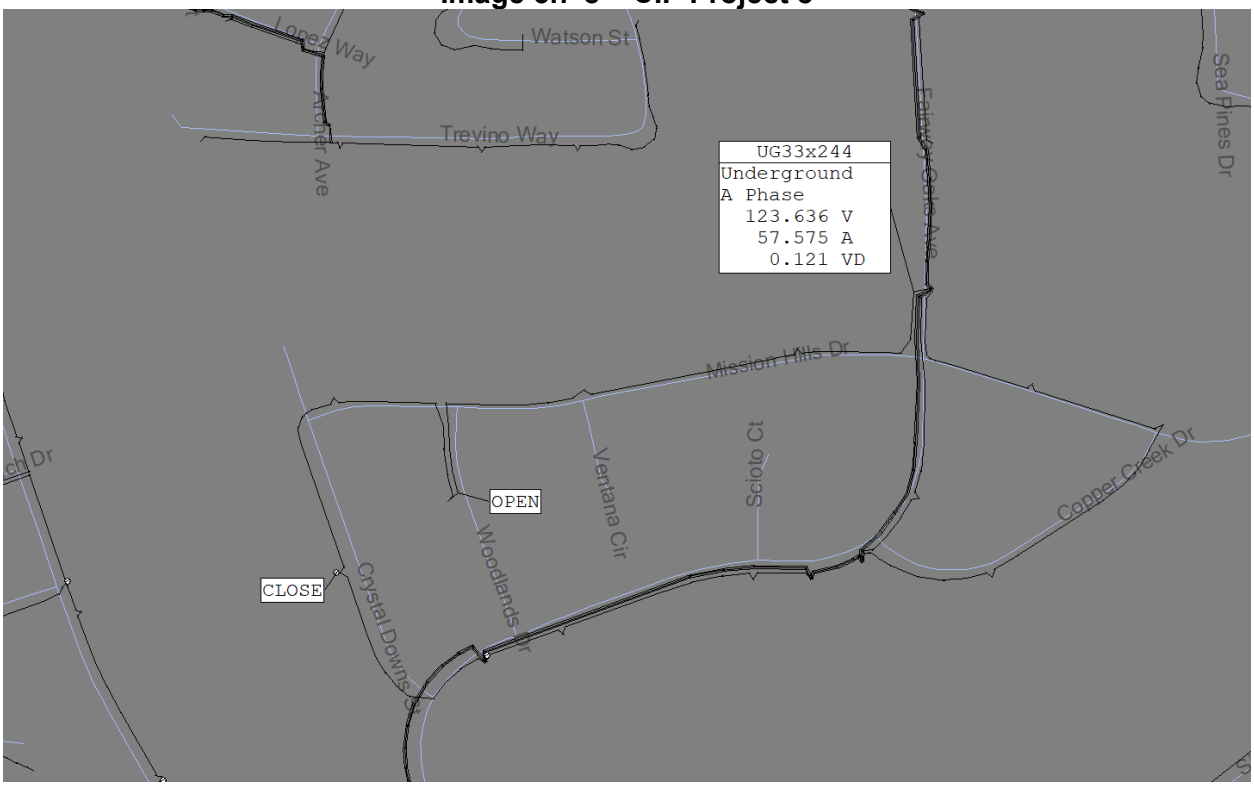


CIP-8

Issue: UG33x244, 1Ø, 1/0 URD with 58 amps, 84 thru consumers.

Resolution: Close switch at vault 40252 and open at pad 40237 along Woodland Dr. to split west of Woodland Dr. to feed from vault 40252. Estimated cost: $2,100 (2028).

Image 5.7-8 – CIP Project 8

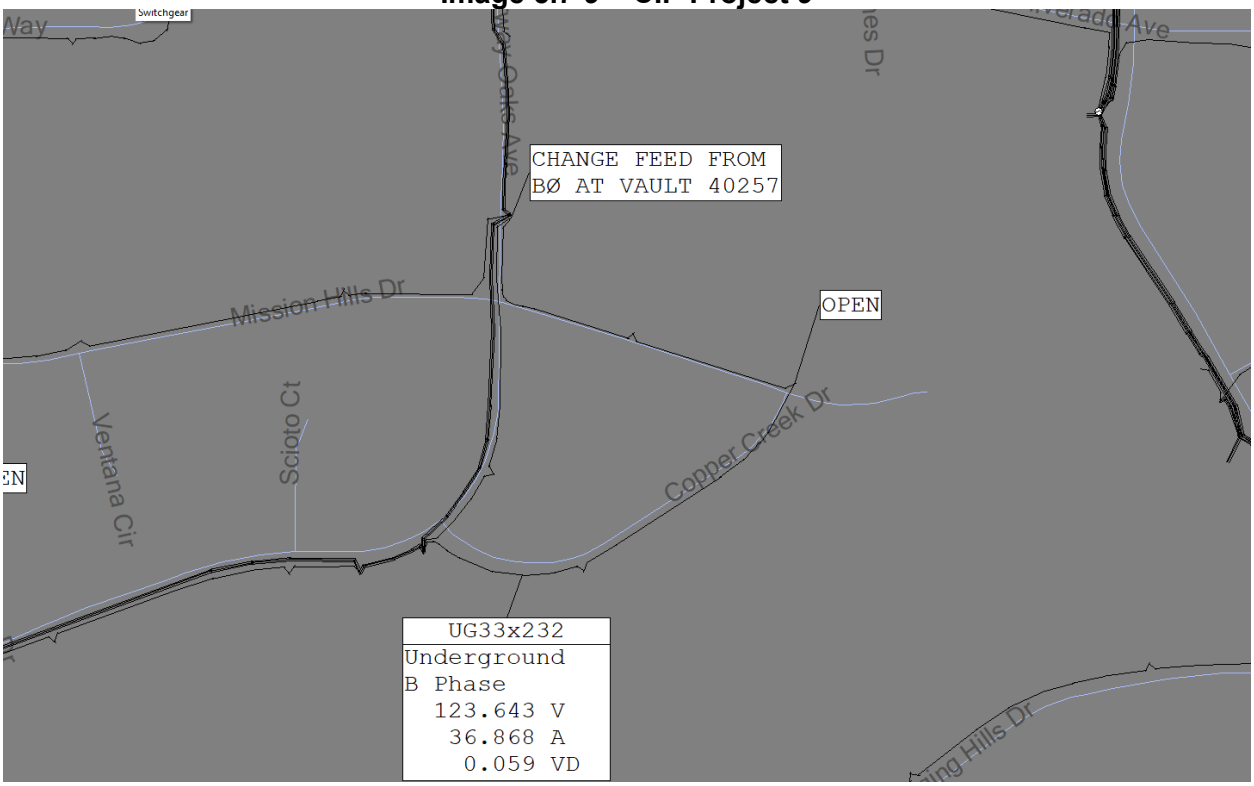


CIP-9

Issue: UG33x232, 1Ø, 1/0 URD with 37 amps, 41 thru consumers.

Resolution: Close BØ at pad 40257 along Fairway Oaks Ave. and open Transformer303 at the intersection of Mission Hills Dr. and Cooper Creek Dr. and feed load along Mission Hills Dr. from pad 40257. Estimated cost: $2,100 (2030).

Image 5.7-9 – CIP Project 9



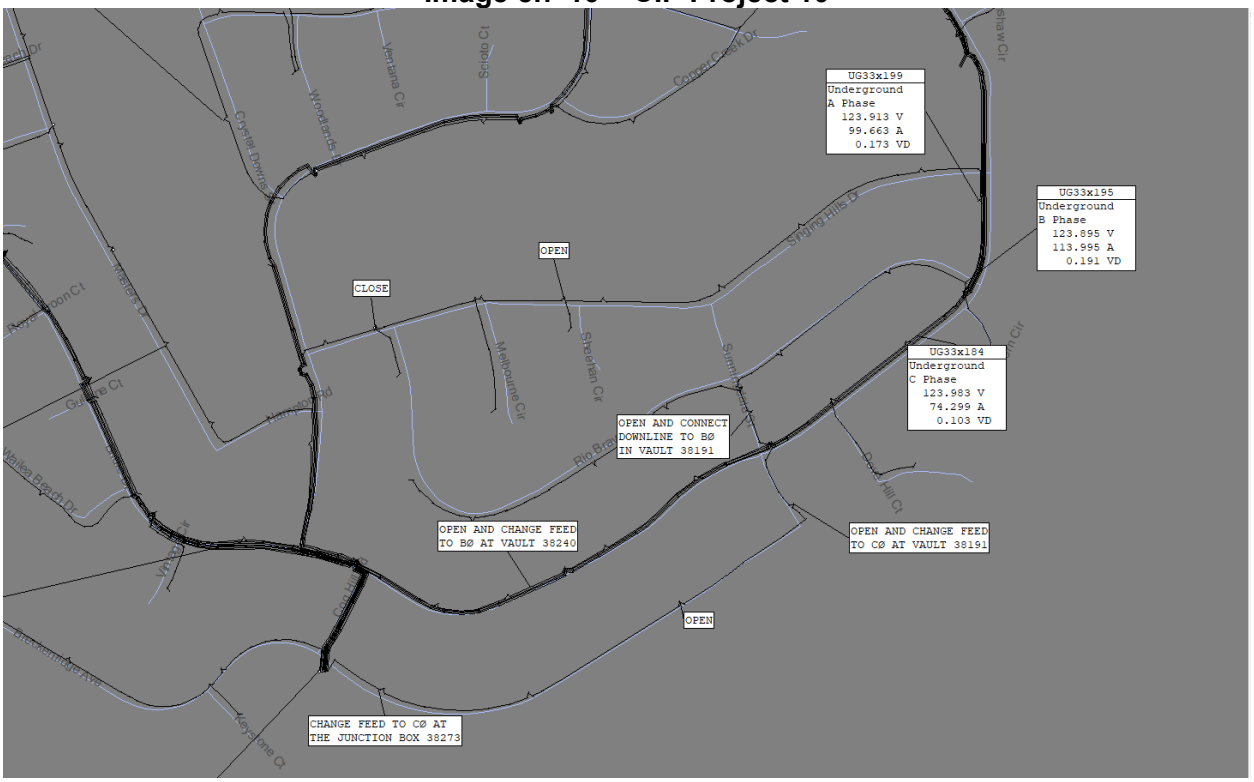
CIP-10

Issue: UG33x199, 1Ø, 1/0 URD with 100 amps, 98 thru consumers (A phase), UG33x195, 1Ø, 1/0 URD with 114 amps, 162 thru consumers (B phase), and UG33x184, 1Ø, 1/0 URD with 74 amps, 99 thru consumers (C phase).

Resolution:

- Close switch at vault 38245 and open at vault 38212 at the intersection of Spring Hills Cr. And Sheehan Cir. and backfeed all load west of Sheehan Cir. from vault 38245.
- Change the feed of UG33x189 to feed from another phase at the 3Ø vault 38191 at the intersection of Riveria Ave. and Sunningdale St.
- Change feed of UG33x190 to feed from another phase at the 3Ø vault 38240 along Birdie Dr.
- Change feed of UG33x212 to feed from another phase at the 3Ø vault 38191 at the intersection of Riveria Ave. and Sunningdale St.
- Change feed of UG33x211 to feed from the 3Ø pad 38237 at the intersection of Cog Hill Rd. and Breckenridge Ave. and open at pad 38248 and feed all load to the west along Breckenridge Ave. to feed from pad 38237. Estimated cost: $6,700 (2026).

Image 5.7-10 – CIP Project 10



CKT 22

Issue: None

CKT 23

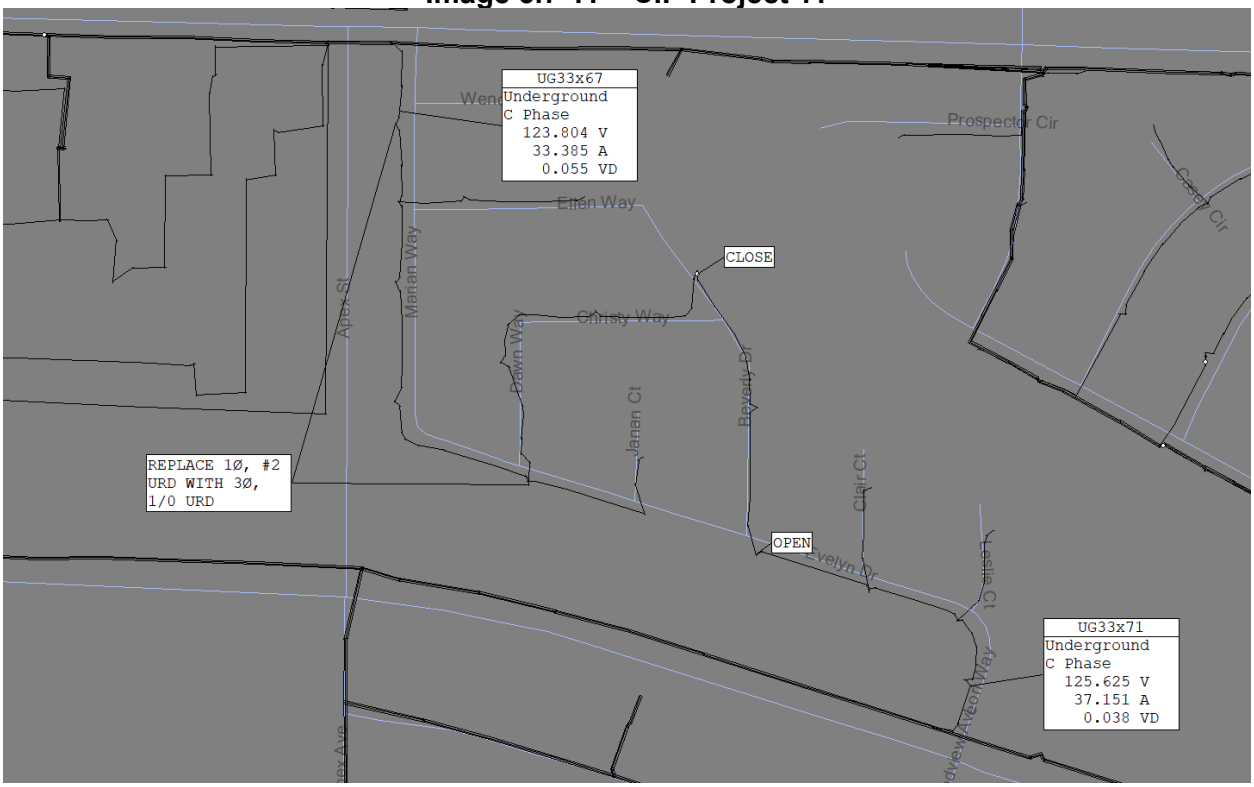
CIP-11

Issue: UG33x71, 1Ø, 1/0 URD with 37 amps, 77 thru consumers.

Resolution:

- Replace 1,300' of 1Ø, #2 URD line with 3Ø, 1/0 URD line from pullbox Pb32117 along W. Wilson St. to vault 32103 at the intersection of Marian Way and Dawn Way.
- Close switch at marker M32898 along Beverly Dr. and open at pad 35930 along Evelyn Dr. Estimated cost: $547,600 (2030).

Image 5.7-11 – CIP Project 11



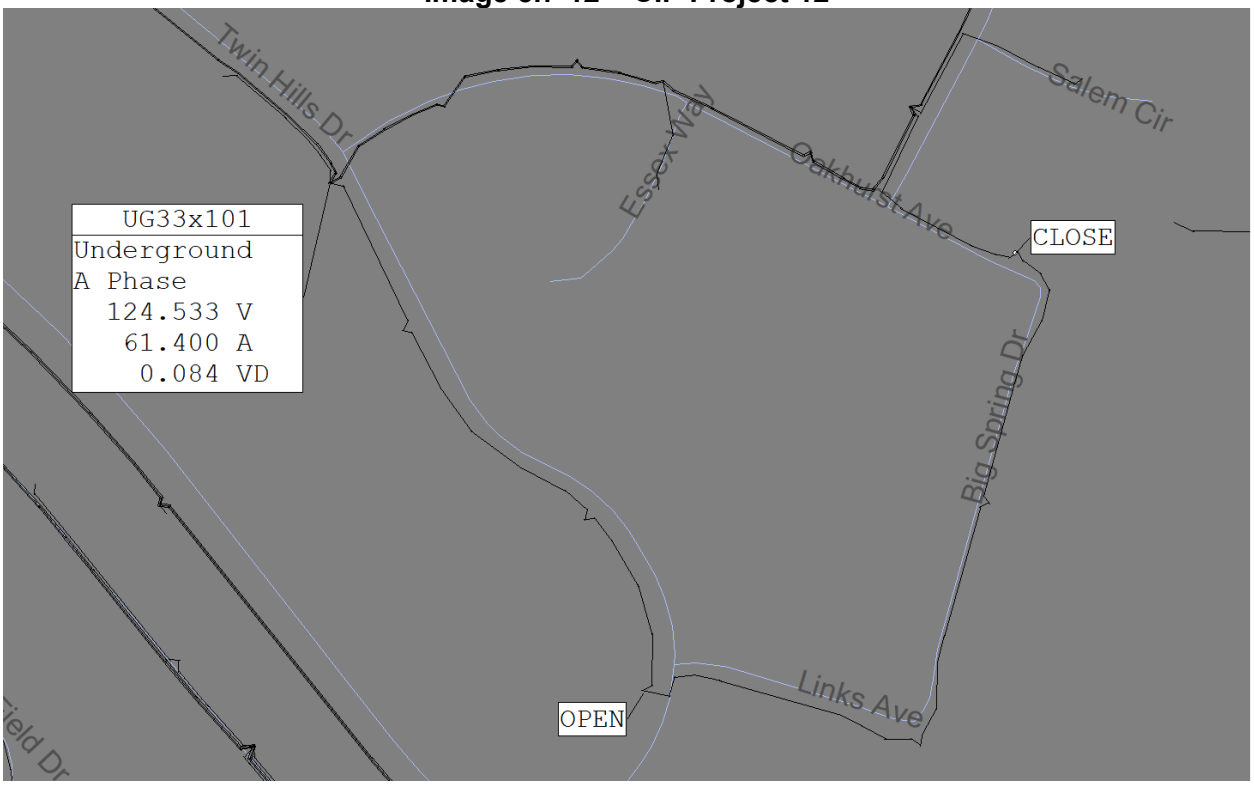
CKT 24

CIP-12

Issue: UG33x101, 1Ø, 1/0 URD with 61 amps, 93 downline customers.

Resolution: Close switch at pad 34934 and openUG33x118 at pad 34956 the intersection of Twin Hills Dr. and Links Ave. and backfeed load along Big Springs Dr. to feed from 3Ø lie to north at switch pad 34934. Estimated cost: $2,100 (2027).

Image 5.7-12 – CIP Project 12



SAN GORGONIO SUBSTATION

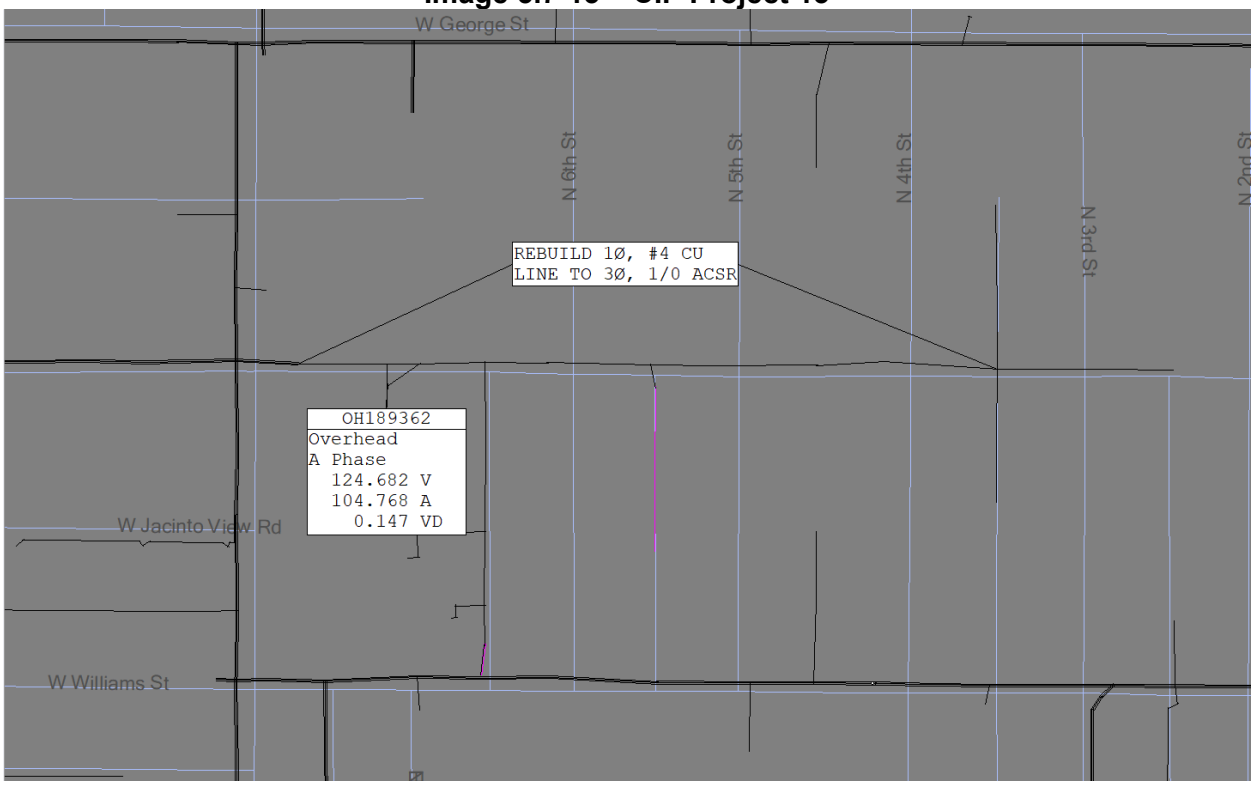
CKT 51

CIP-13

Issue: OH189362, 1Ø, #4 CU line with 105 amps, 174 thru consumers.

Resolution: Rebuild 1,391' of 1Ø, #4 Cu line to 3Ø, 1/0 ACSR along W. Nicolet St. from pole number 189371 to pole number 192590. Estimated cost: $172,200 (2026).

Image 5.7-13 – CIP Project 13

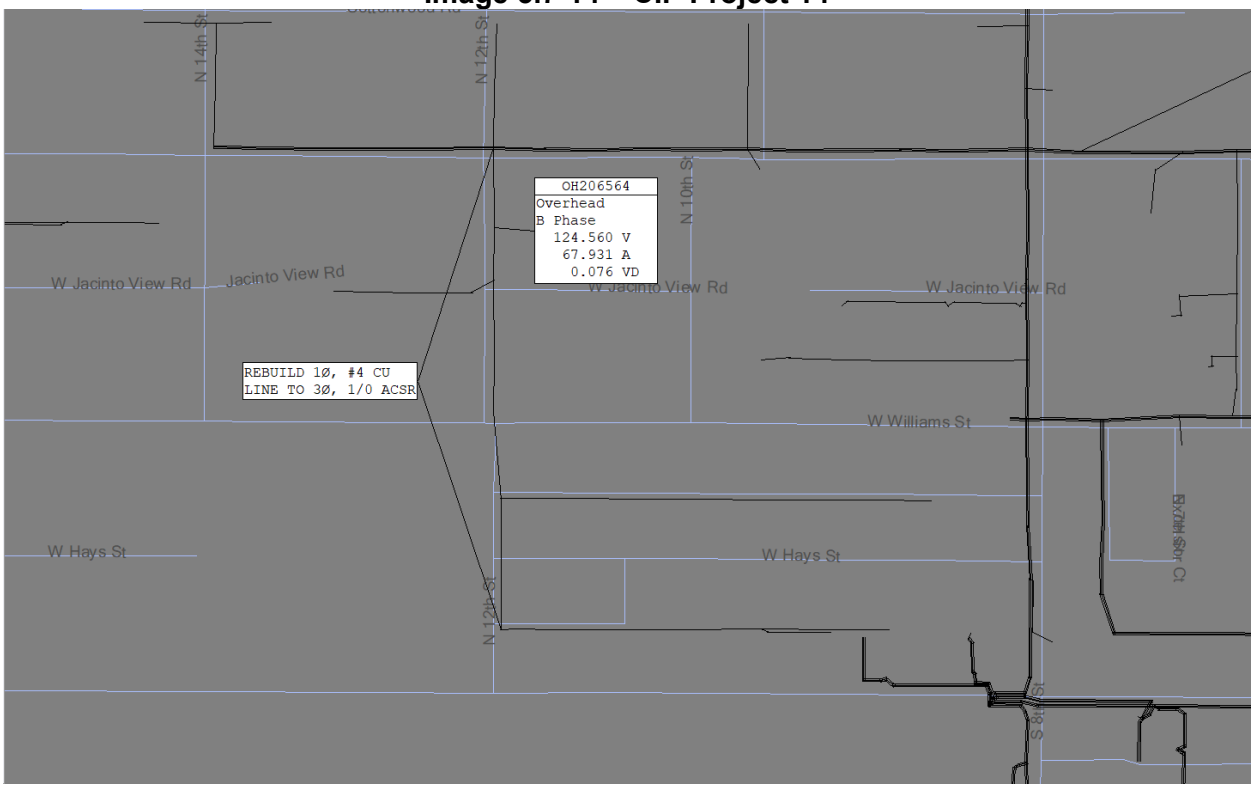


CIP-14

Issue: OH206564, 1Ø, #4 CU line with 68 amps, 106 thru consumers.

Resolution: Rebuild 1,183' of 1Ø, #4 and #6 CU line to 3Ø, 1/0 ACSR along N. 12th St. from pole number 190013 to pole number 158883. Estimated cost: $148,700 (2027).

Image 5.7-14 – CIP Project 14



CKT 52

Issue: None

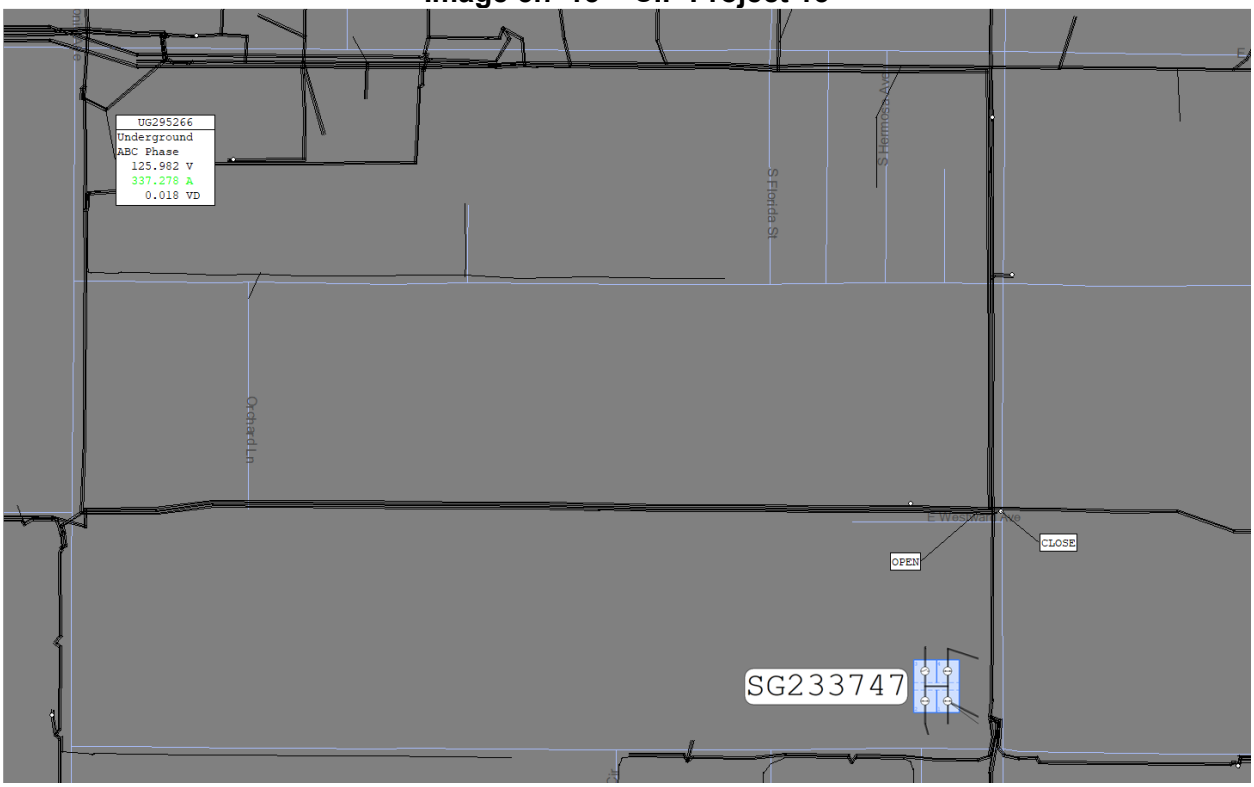
CKT 53

CIP-15

19 Issue: UG295266, 3Ø, 750 MC URD conductor reaches 63% capacity.

Resolution: Open after OH240725 and close switch at Pole23857 and reconfigure SG233747 to 4=CLOSED, 3=CLOSED, 2=CLOSED and 1=OPEN to switch load to the Ivy substation. Estimated cost: $2,000 (2026).

Image 5.7-15 – CIP Project 15



CKT 54

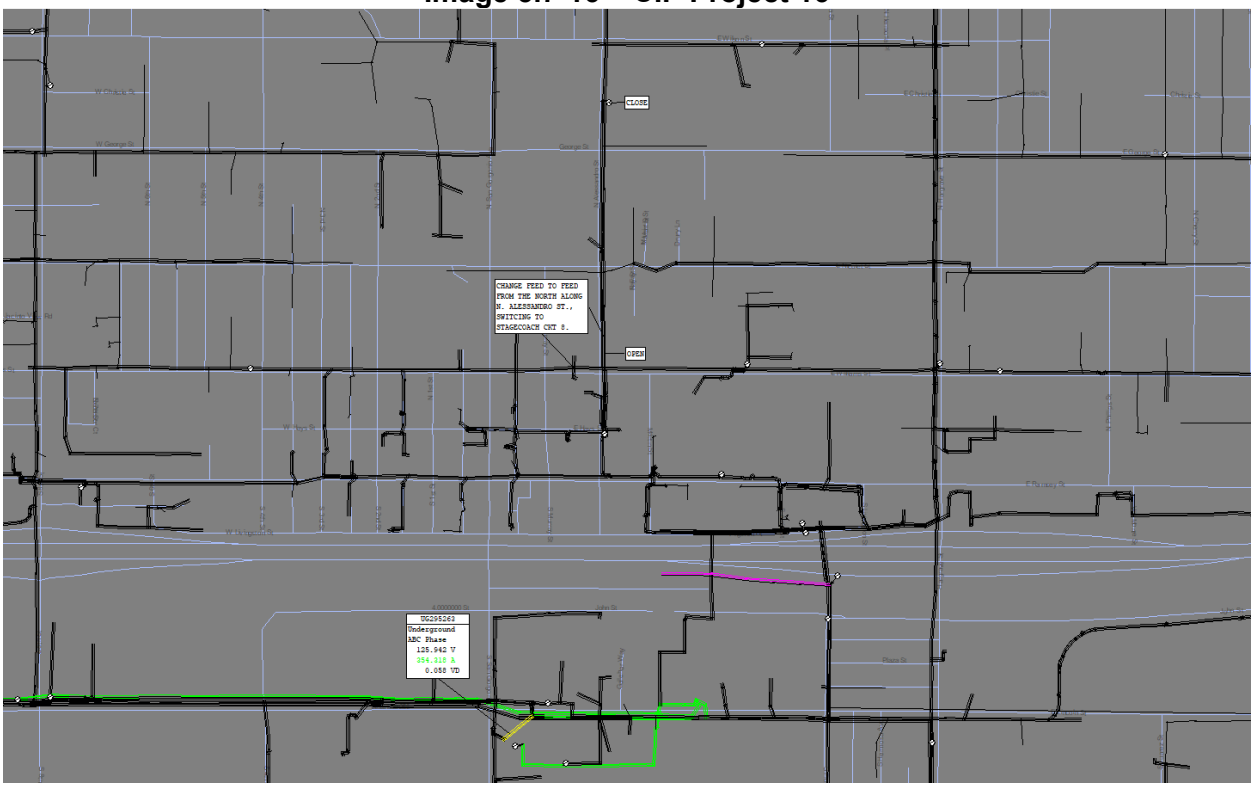
CIP-16

Issue: UG295263, 3Ø, 750 MCM feeder exit and 336 ACSR exceeds 60% capacity thru OH252561 (67% capacity is the highest).

Resolution:

- Disconnect line section OH2138 from OH2137 (line heading north on N. Alessandro St. north of E. Williams St.) and close switch at Pole284048 (along N. Alessandro St. between George St. and E. Wilson St.).
- Change the feed of line section OH194778 to feed from OH2138 (which will now be fed from Stagecoach CKT 8) and serve all the load along E. Williams St. west of N. Alesandro St. to feed from Stagecoach CKT8. Estimate cost: $3,400 (2029).

Image 5.7-16 – CIP Project 16



STAGECOACH SUBSTATION

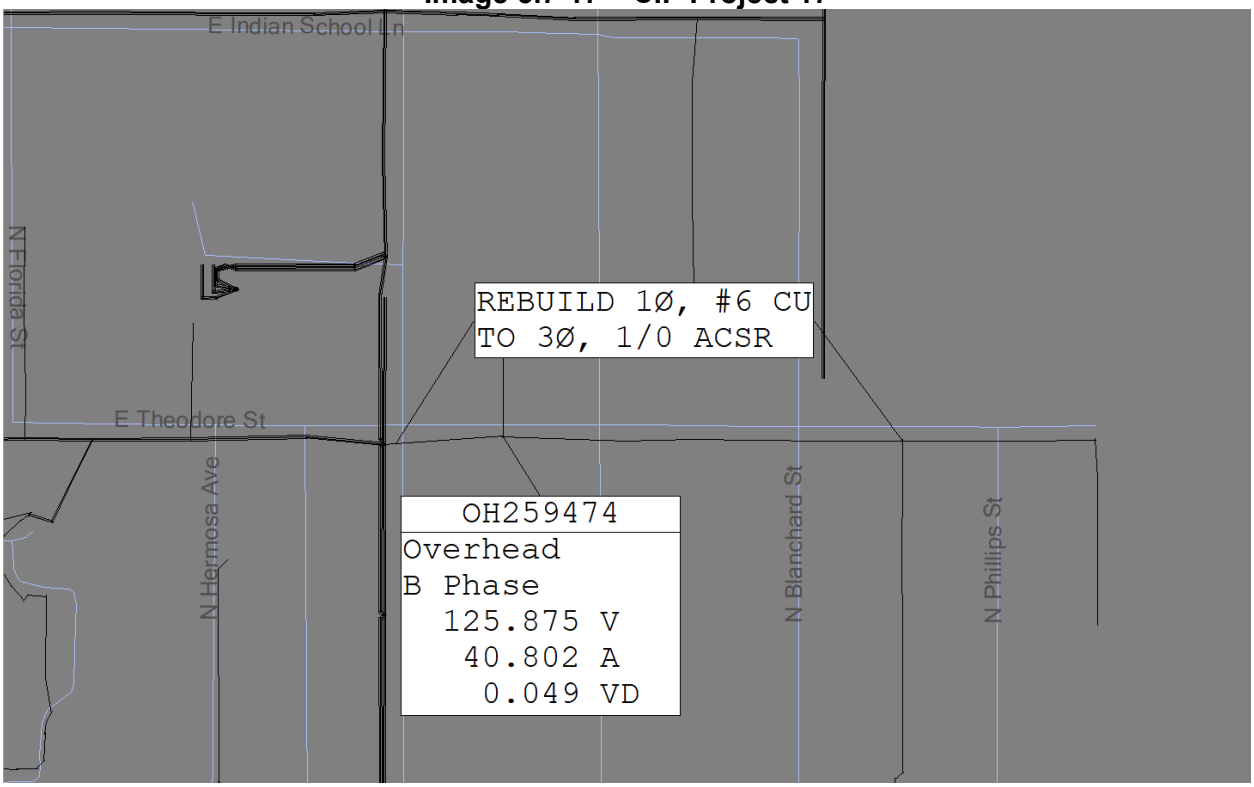
CKT 7

CIP-17

Issue: OH259474, 1Ø, #6 Cu line with 41 amps, 80 thru consumers.

Resolution: Rebuild 871' of 1Ø, #6 CU line to 3Ø, 1/0 ACSR along E. Theadore St. from pole number P6970COB to pole number P2891COB. Estimated cost: $119,800 (2029).

Image 5.7-17 – CIP Project 17

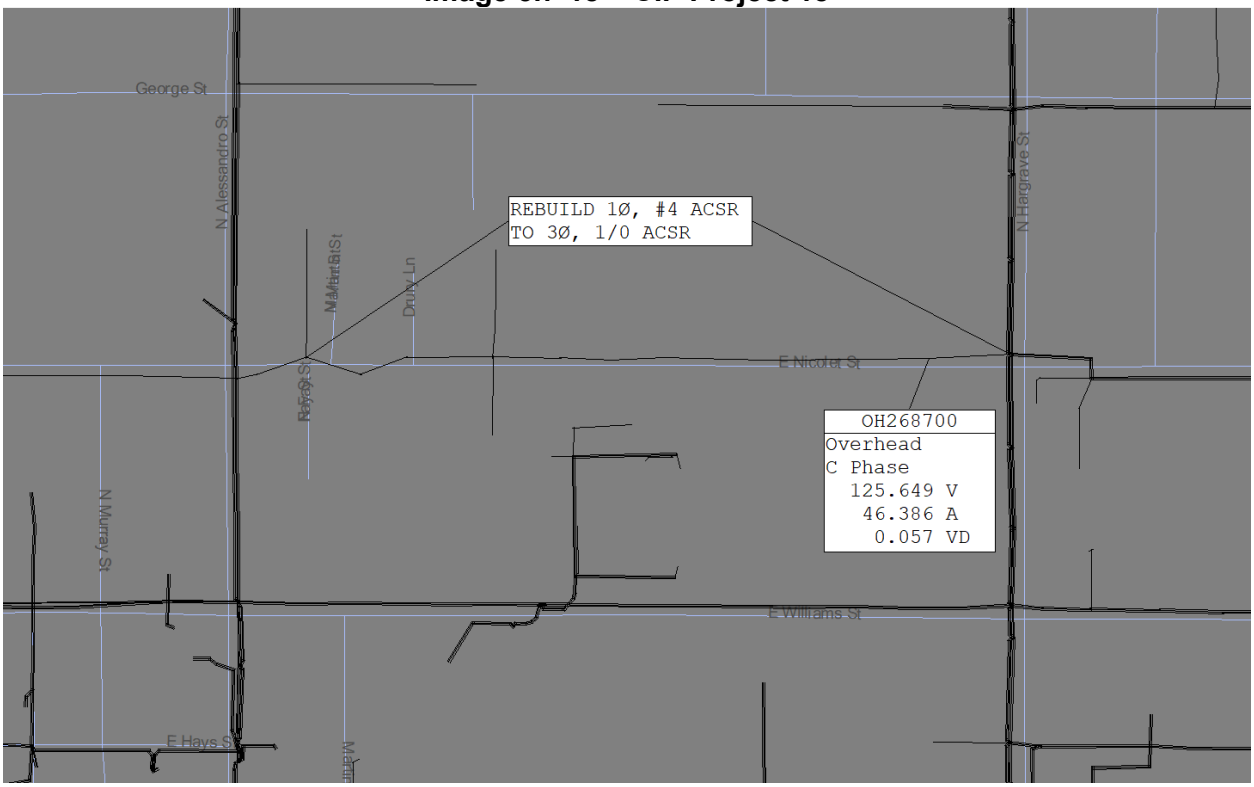


CIP-18

Issue: OH268700, 1Ø, #4 ACSR line with 46 amps, 105 thru consumers.

Resolution: Rebuild 1,790' of 1Ø, #4 ACSR line to 3Ø, 1/0 ACSR along E. Nicolet St. from pole number P6956COB to pole number Pole194713. Estimated cost: $236,700 (2029).

Image 5.7-18 – CIP Project 18

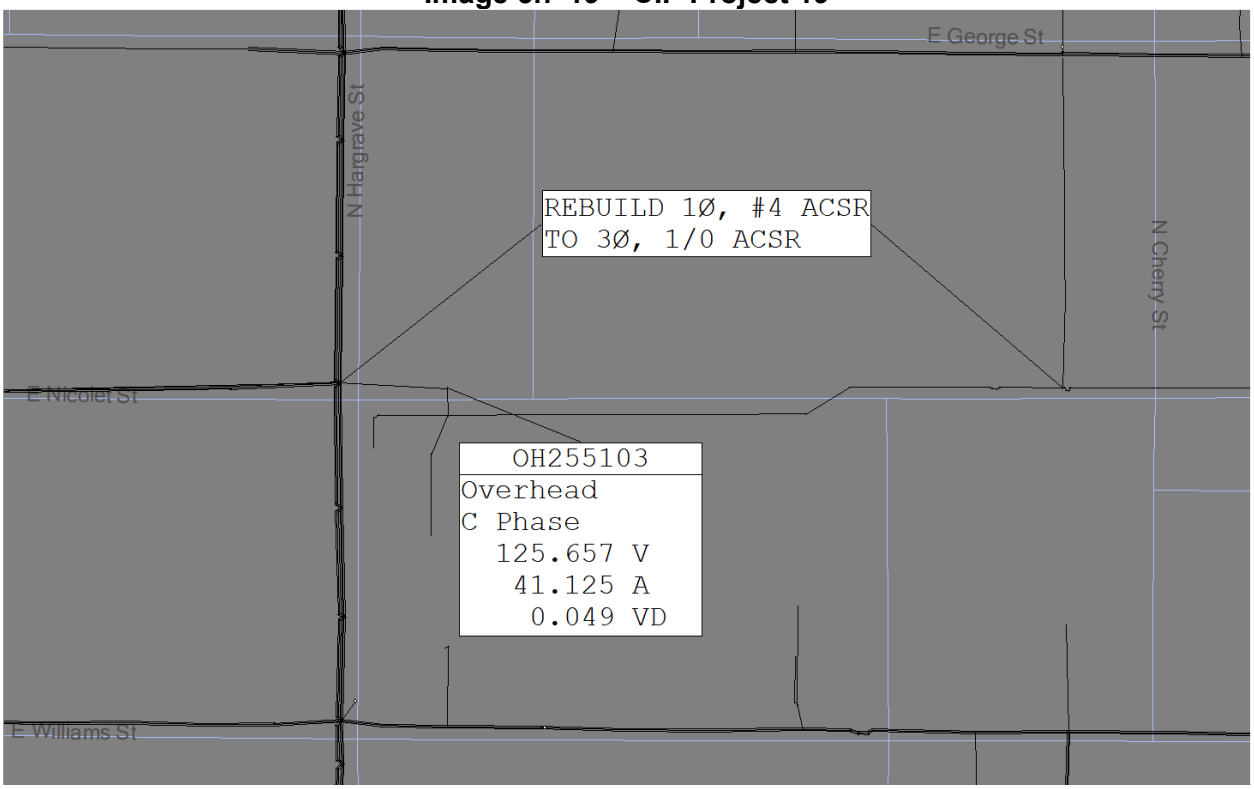


CIP-19

Issue: OH255103, 1Ø, #4 ACSR line with 41 amps, 80 thru consumers.

Resolution: Rebuild 1,417' of 1Ø, #4 ACSR line to 3Ø, 1/0 ACSR along E. Nicolet St. from pole number P6956COB to pole number FP255128. Estimated cost: $193,400 (2029).

Image 5.7-19 – CIP Project 19



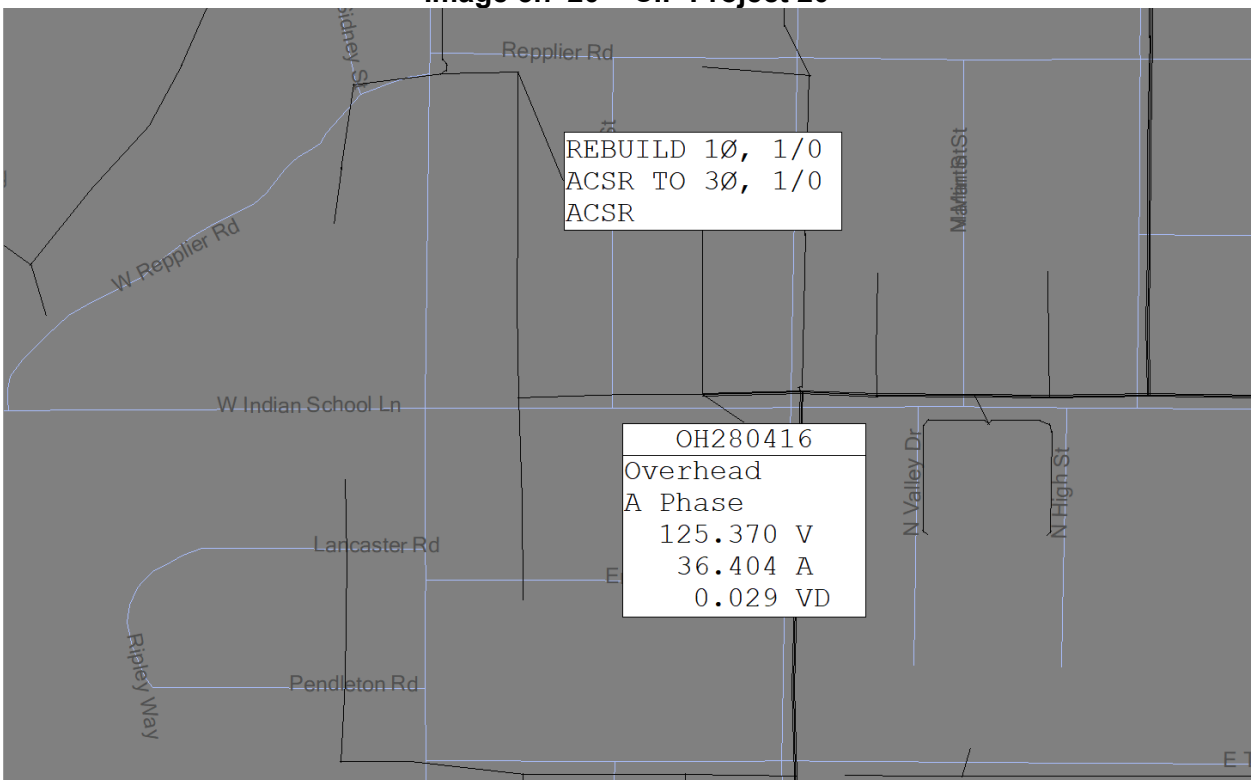
CKT 8

CIP-20

Issue: OH280416, 1Ø, 1/0 ACSR line with 36 amps, 61 consumers.

Resolution: Rebuild 955' of 1Ø, 1/0 ACSR and #2 ACSR line to 3Ø, 1/0 ACSR beginning on E. Indian School Ln. then heading north to E. Repplier Rd. from pole number P1344COB to pole number 280435. Estimated cost: $134,300 (2030).

Image 5.7-20 – CIP Project 20



SUNSET SUBSTATION

CKT 72

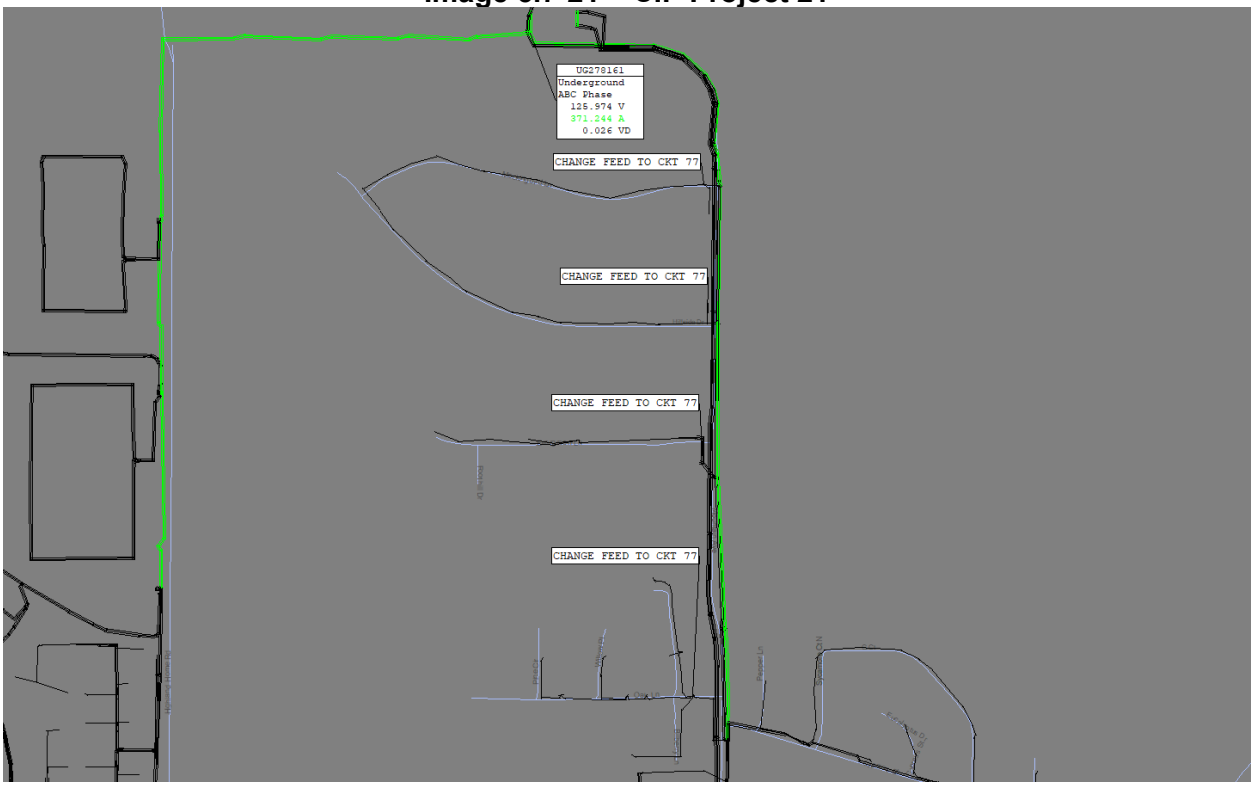
CIP-21

Issue: UG278161 Feeder Exit, 3Ø, 750 MCM URD conductor reaches 70% capacity.

Resolution: It is recommended to serve the Crestwood Communities load addition from CKT 77 at UG3.

- Change the feed of UG6 for the load along Mocking Bird Ln. to CKT 77 at vault SV100086.
- Change the feed of UG18 for the load along Hillside Dr. to CKT 77 at vault SV100180.
- Change the feed of UG33 for the load along Evergreen Ln. to CKT 77 at vault SV100084.
- Change the feed of UG82 for the load along Oak Ln. to CKT 77 at junction box Pb20340. Estimated cost: $2,800 (2026).

Image 5.7-21 – CIP Project 21

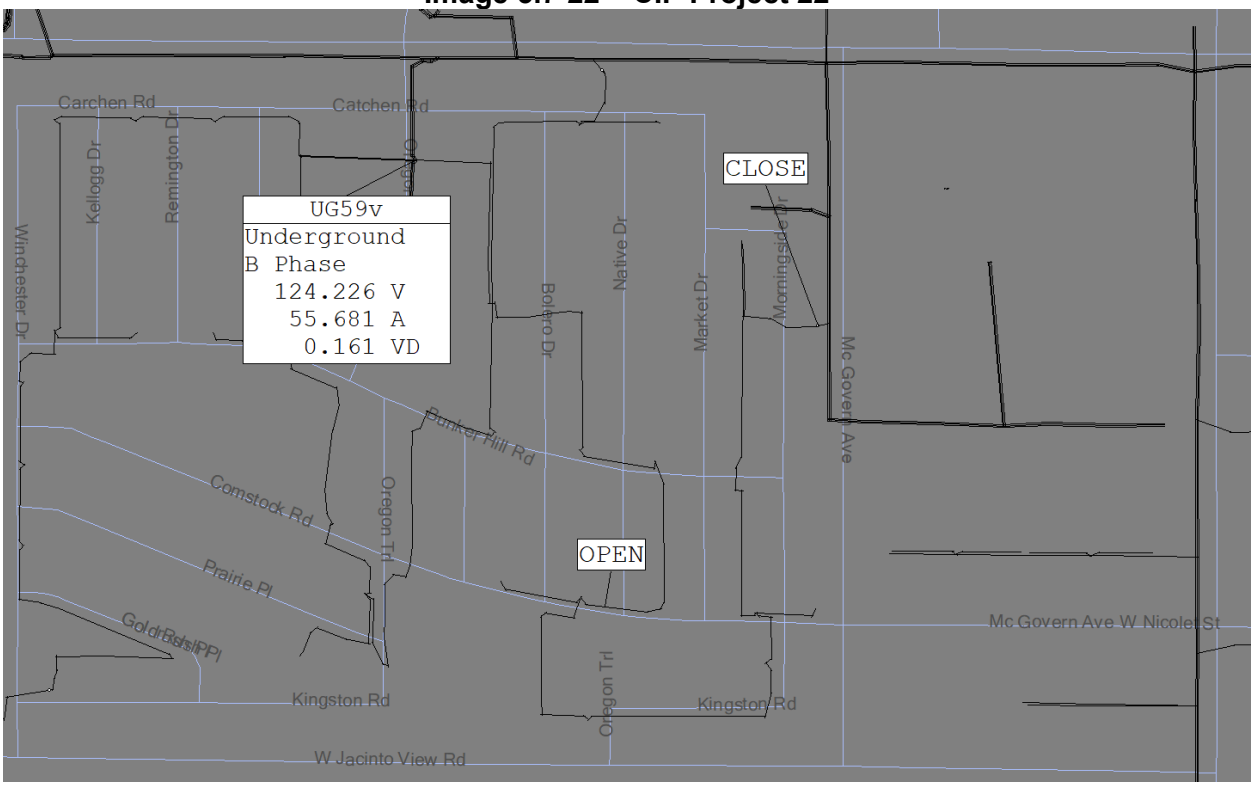


CIP-22

Issue: UG59v, 1Ø, 1/0 URD with 56 amps, 177 thru consumers.

Resolution: Close switch at pad 23132 along Mc Govern Ave. and open at pad 253139 and switch all load south and east to serve from pad 23132 along Mc Govern Ave.. Estimated cost: $2,100 (2028).

Image 5.7-22 – CIP Project 22

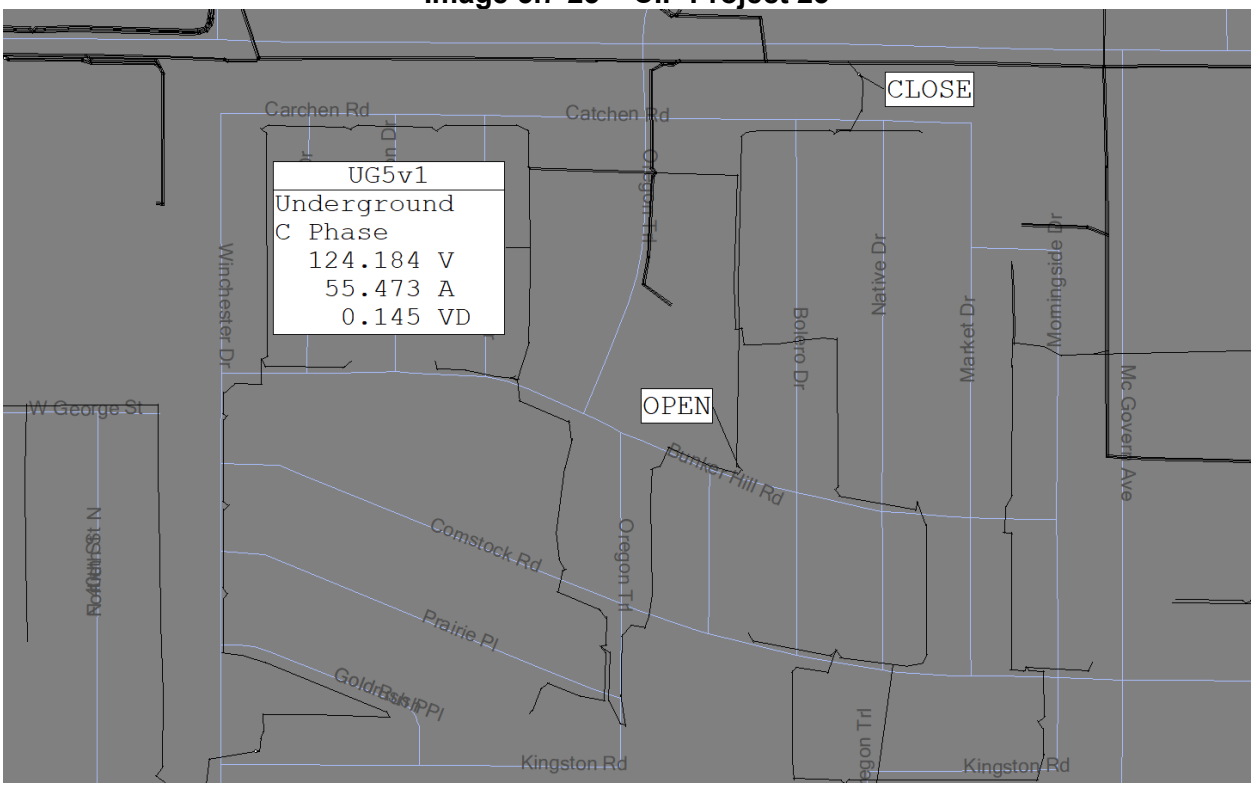


CIP-23

Issue: UG5v1, 1Ø, 4/0 URD with 55 amps, 174 thru consumers.

Resolution: Close switch at pad 23137 along W. Wilson St. and open at PAD 23138 along Bunker Hill Rd. and serve all load along Catchen Rd. from pad 23137. Estimated cost: $2,100 (2028).

Image 5.7-23 – CIP Project 23

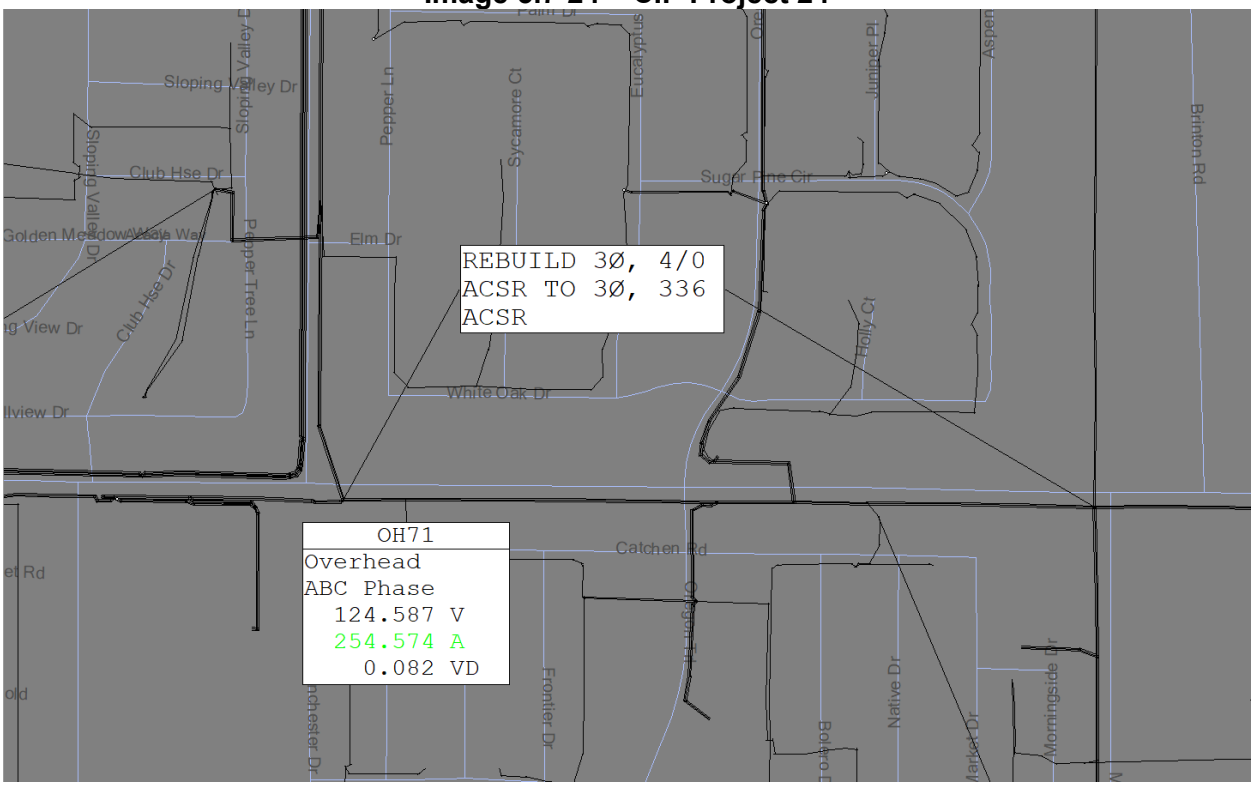


CIP-24

Issue: OH71, 3Ø, 4/0 ACSR conductor reaches 75% capacity and continued to be greater than 60% capacity thru OH143.

Resolution: Rebuild 1,693; of 3Ø, 4/0 ACSR line to 3Ø, 336 ACSR along W. Wilson St. from pole number 14759 to pole number 14817. Estimated cost: $219,300 (2026).

Image 5.7-24 – CIP Project 24

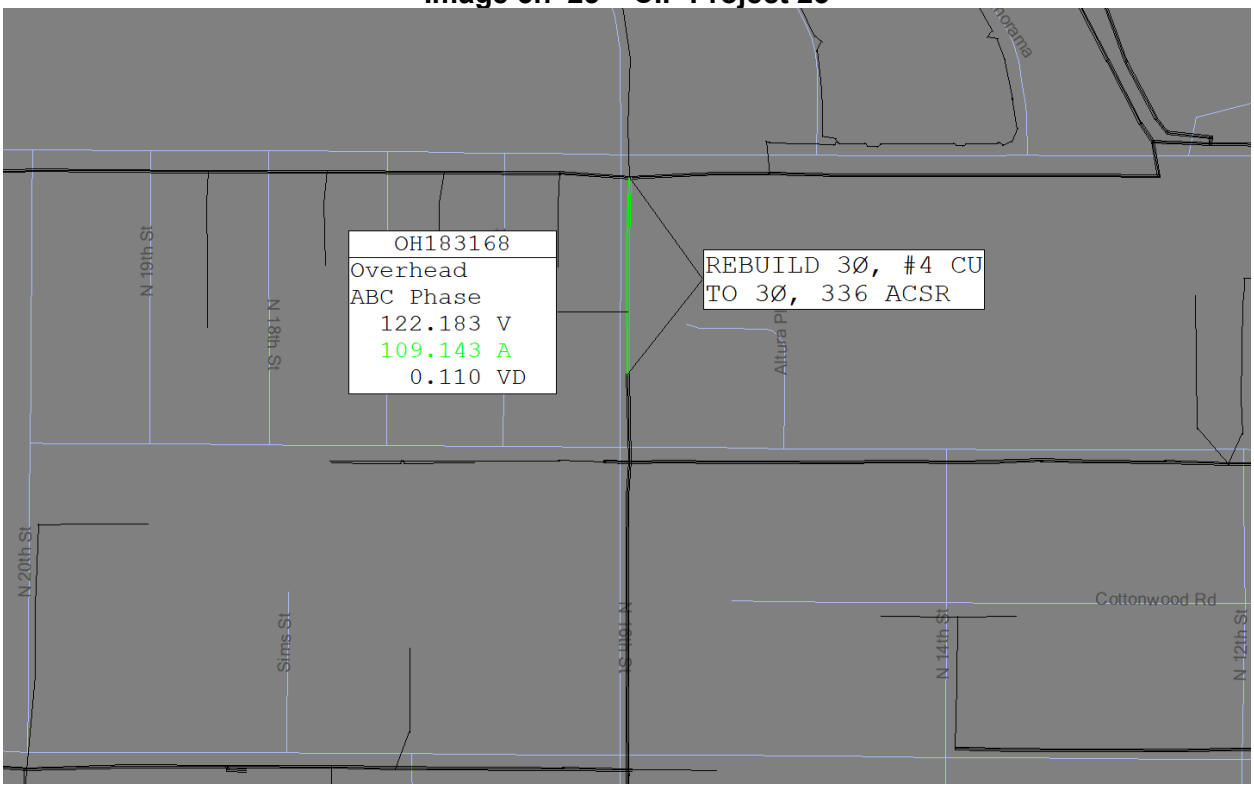


CIP-25

Issue: OH183168, OH183140, and OH183149, 3Ø, #4 ACSR conductor reaches 60% capacity.

Resolution: Rebuild 437' of 3Ø, #4 CU line to 3Ø, 336 ACSR along N. 16th St. between W. Nicolet St. and W. Wilson St. from pole number 183146 to pole number Pole183139. Estimated cost: $66,200 (2030).

Image 5.7-23 – CIP Project 25



CKT 74

Issue: None

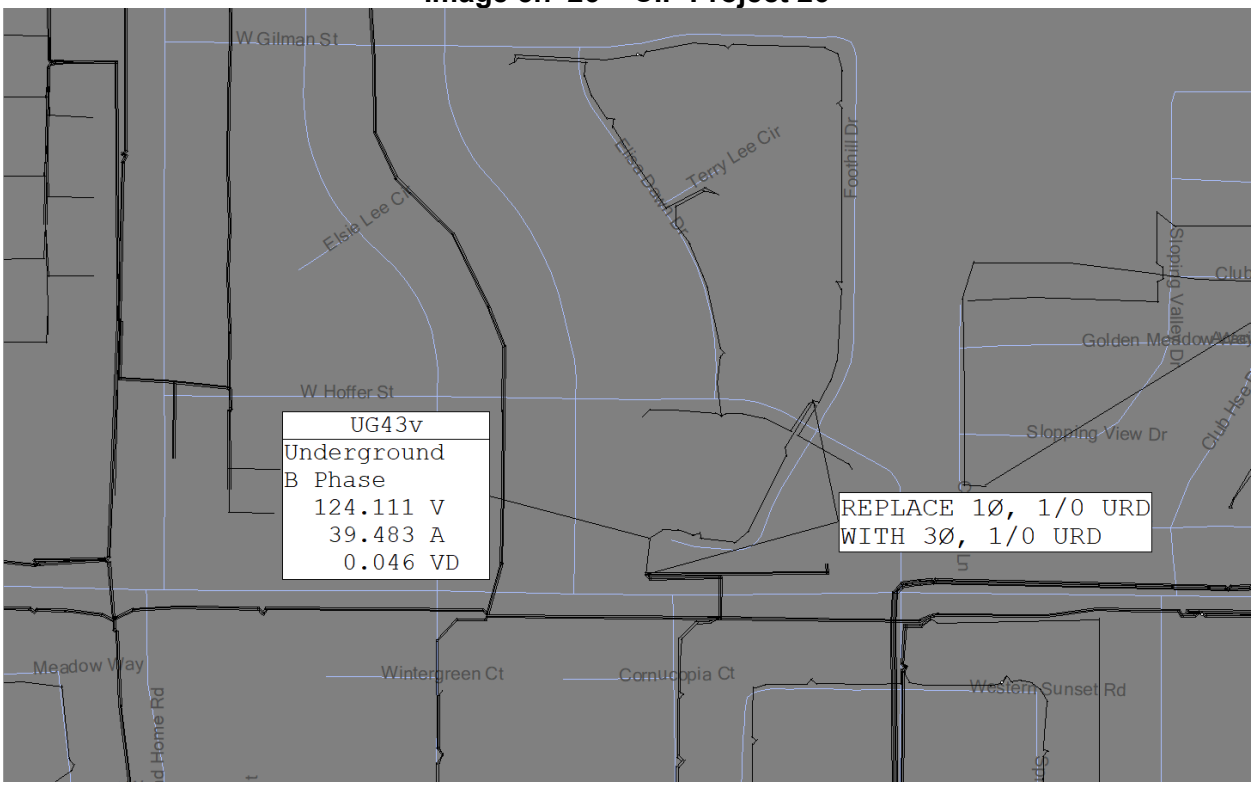
CKT 76

CIP-26

Issue: UG43v, 1Ø, 1/0 URD with 39 amps, 95 thru consumers.

Resolution: Replace 650' of 1Ø, 1/0 URD line with 3Ø, 1/0 URD line from vault 28573 along W. Wilson St. to vault 28595 at the intersection of W. Hoffer St. and Foothill Dr. Estimated cost: $336,100 (2029).

Image 5.7-26 – CIP Project 26



CKT 77

Note: The feeder extends along Mountain Ave. along with CKT 72 but does not have any load connected. SEE CKT 72 recommendations.

BANNING SUBSTATION (34.5 kV Analysis)

CKT 1

Issue: None

CKT 2

Issue: None

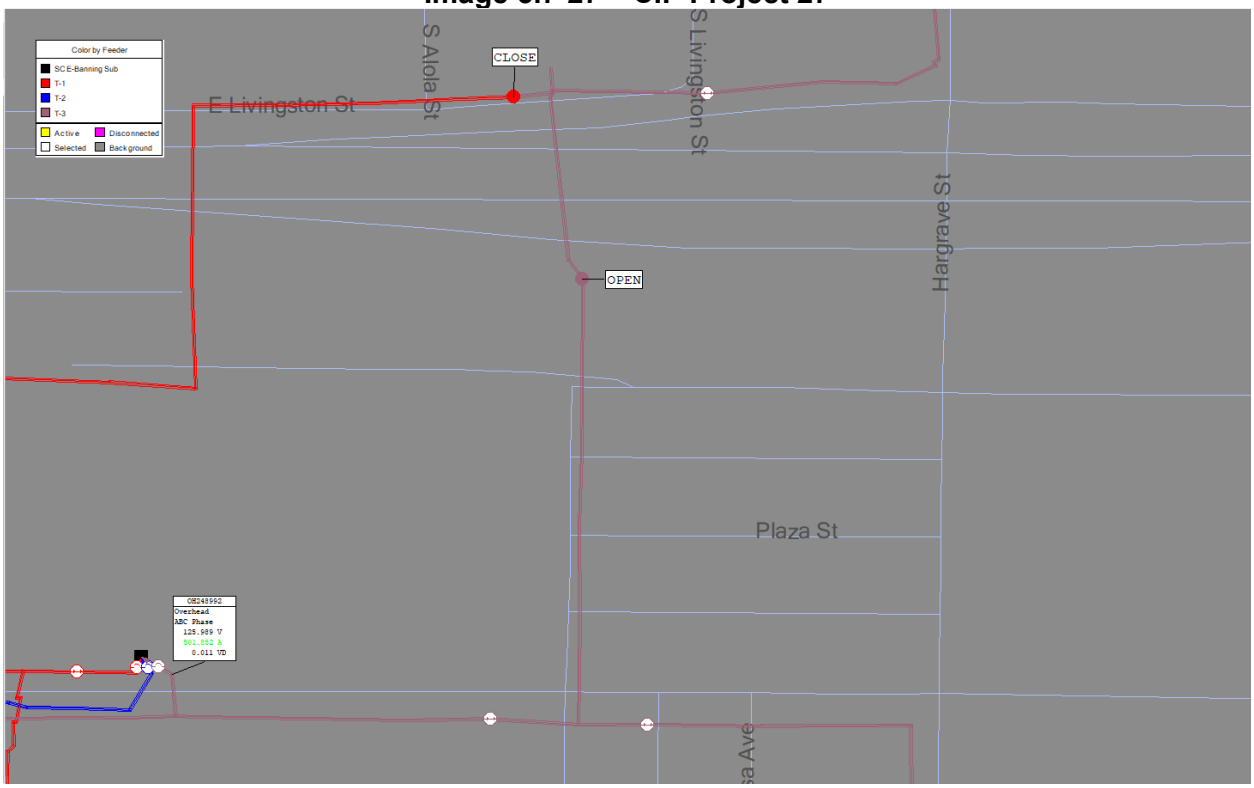
CKT 3

CIP-27

Issue: The model shows CKT 3 feeding the Midway, Ivy, and Stagecoach substations. OH248992 Feeder Exit, 3Ø, 336 ACSR reaches 95% capacity, OH2296, 3Ø, 4/0 ACSR reaches 78% capacity, and OH2316, 3Ø, 4/0 ACSR reaches 62% capacity.

Resolution: Close the tie around Pole241891 and open the line at Pole262449 to switch load from CKT 3 to CKT 1. This will change the feed of the Stagecoach substation to be served by CKT1. Estimated cost: $2,100 (2026).

Image 5.7-27 – CIP Project 27



5.8 – Total Cost Estimate

The table below contains a breakdown of the total estimated cost of the 5-Year CIP.

Table 5.8-1 – Total 5-Year CIP Cost Estimate

	2026-2030 CIP					
	2026	2027	2028	2029	2030	Totals
OH Maintenance Program						
Total Cost	$604,198	$622,324	$640,994	$1,079,272	$1,111,650	$4,058,438
CIAC	$0	$0	$0	$0	$0	$0
BEU Funding Cost	$604,198	$622,324	$640,994	$1,079,272	$1,111,650	$4,058,438
Capital-Maintenance Projects						
Total Cost	$5,460,000	$3,154,500	$1,690,000	$4,980,000	$5,500,000	$20,784,500
CIAC	$4,918,750	$1,000,000	$0	$2,375,000	$1,000,000	$9,293,750
BEU Funding Cost	$541,250	$2,154,500	$1,690,000	$2,605,000	$4,500,000	$11,490,750
System Improvements Projects						
Total Cost	$411,000	$492,700	$230,100	$919,400	$752,500	$2,805,700
CIAC	$0	$0	$0	$0	$0	$0
BEU Funding Cost	$411,000	$492,700	$230,100	$919,400	$752,500	$2,805,700
5-year CIP Cost						
Total Cost	$6,475,198	$4,269,524	$2,561,094	$6,978,672	$7,364,150	$27,648,638
CIAC	$4,918,750	$1,000,000	$0	$2,375,000	$1,000,000	$9,293,750
BEU Funding Cost	$1,156,448	$3,269,524	$2,561,094	$4,603,672	$6,364,150	$18,354,888

For the BEU funding cost, 22% is for OH Maintenance Program, 63% is for Capital Maintenance Projects, and 15% is for System-Improvement Projects.

6.0 – 15 – YEAR ESMP

6.1 – Overhead Maintenance Program

The Overhead Maintenance Program includes the routine inspection and replacement of poles on the sub-transmission and distribution circuits on the BEU system.

It is projected that BEU will inspect 20 poles per week for the years 2031 thru 2035 and 25 poles per week for the years 2036 thru 2045. This totals to 1,040 poles inspected per year between 2031 and 2035 and 1,300 poles inspected between 2036 and 2045 for a grand total of 18,200 poles inspected for the duration of the 15-Year ESMP. An estimated cost of $322 per pole inspection was used for 2031 and a 3% inflation to this cost was assumed per year every year after thru 2045. The total estimated cost for pole inspections for the 15-Year ESMP is $7,350,010.

It is projected that BEU will replace 100 poles per year for the years 2031 thru 2045. This totals to 1,500 poles replaced for the duration of the 15-Year ESMP. An estimated cost of $8,935 per pole replacement was used for 2031 and a 3% inflation to this cost was assumed per year every year after thru 2045. The total estimated cost for pole replacements for the 15-Year ESMP is $16,618,732.

The total estimated cost for the Overhead Maintenance Program for the 15-year ESMP is $23,968,742. The table below shows a breakdown of the Overhead Maintenance Program.

Table 6.1-1 – Overhead Maintenance Program Costs 2031 thru 2035

	2031	2032	2033	2034	2035	Total
Number of Poles Inspected	1,040	1,040	1,040	1,040	1,040	5,200
Cost per Inspection	□□□□	□□□□	□□□□	□□□□	□□□□	-
Total Cost of Inspection	$335,290	$345,349	$355,709	$366,380	$377,372	$1,780,100
Number of Poles Replaced	100	100	100	100	100	500
Cost per Replacement	$8,935	$9,203	$9,479	$9,764	$10,057	-
Total Cost of Replacement	$893,532	$920,338	$947,949	$976,387	$1,005,679	$4,743,885

Table 6.1-2 – Overhead Maintenance Program Costs 2036 thru 2040

	2036	2037	2038	2039	2040	Total
Number of Poles Inspected	1,300	1,300	1,300	1,300	1,300	6,500
Cost per Inspection	$374	$385	$397	$408	$421	-
Total Cost of Inspection	$485,866	$500,442	$515,455	$530,919	$546,847	$2,579,529
Number of Poles Replaced	100	100	100	100	100	500
Cost per Replacement	$10,358	$10,669	$10,989	$11,319	$11,659	-
Total Cost of Replacement	$1,035,849	$1,066,924	$1,098,932	$1,131,900	$1,165,857	$5,499,463

Table 6.1-3 – Overhead Maintenance Program Costs 2041 thru 2045

	2041	2042	2043	2044	2045	Total
Number of Poles Inspected	1,300	1,300	1,300	1,300	1,300	6,500
Cost per Inspection	$433	$446	$460	$473	$488	-
Total Cost of Inspection	$563,252	$580,150	$597,554	$615,481	$633,945	$2,990,381
Number of Poles Replaced	100	100	100	100	100	500
Cost per Replacement	$12,008	$12,369	$12,740	$13,122	$13,515	-
Total Cost of Replacement	$1,200,833	$1,236,858	$1,273,964	$1,312,182	$1,351,547	$6,375,384

6.2 – CAPITAL MAINTENANCE PROJECTS

BEU has identified 6 Capital Maintenance Projects to include in the 15-year ESMP. The total estimated cost for these projects is $8,350,000. It is projected that BEU will receive $3,000,000 in contributions in aid to these projects bringing the total BEU funding cost to $5,350,000.

The following tables list the Capital Maintenance projects that have been identified for inclusion to the 15-year ESMP.

Table 6.2-1 – Capital Maintenance Project Costs

Project Description	Year	Total Cost	CIAC	BEU Funding Cost
Midway Substation Upgrades (breaker replacement and SCADA-ready upgrades and future full replacement)	2031	$1,000,000	$0	$1,000,000
34.5/12.47/fiber Relocation on 4th St from Westward Ave to Lincoln St	2031	$1,500,000	$1,500,000[1]	$0
Underground Conversion from Apex/Ramsey to Joshua Palmer	2031	$850,000	$0	$850,000
Underground Conversion at Wilson St from Smith Creek to Highland Home Rd	2031	$500,000	$0	$500,000
34.5/12.47/fiber I-10 Crossing at Hathaway from John St to Ramsey St	2031	$1,500,000	$1,500,000[2]	$0
Overhead Transmission System Extension (Hoffer/Hathaway to Stagecoach Substation)	2031-2032	$3,000,000	$0	$3,000,000
Total 15-Year ESMP Capital Maintenance Cost		**$8,350,000**	**$3,000,000**	**$5,300,000**

[1] Up to 100% funding from Rancho San Gorgonio Development
[2] Up to 100% funding from Hillwood Development

6.3 – SUBSTATION CAPACITY ANALYSIS

The table below represents the substation capacity analysis based on the 2045 substation demand after distribution system improvements including adding the new Smith Creek Substation, new feeders out of Stagecoach and Sunset, and load switching recommendations. As shown in the table, the San Gorgonio, Stagecoach, and Sunset substations summer projected peak exceeds the base rating of their respective transformer; however, with the exception of the Stagecoach Substation, the load does not exceed the max rating of the transformer. For the Stagecoach Substation, it is recommended to replace the existing base 10 MVA transformer with a base 15 MVA transformer before the summer 2040 peak. With this improvement, the projected load will not exceed the base rating or the max rating of the new transformer thru the end of this ESMP.

The table also shows that the BEU system non-coincident peak exceeds the SCE Banning substation transformer base capacity for the summer and winter forecast and also the max capacity in the summer. Based on the non-coincident forecast, the total BEU system load is expected to exceed the max capacity by the summer of 2026. It is recommended that BEU continue to coordinate with SCE on the substation transformer capacity and develop a plan to increase the substation transformer capacity through the end of the ESMP period.

Table 6.3-1 – Substation Capacity Analysis

		2045 kW Demand Forecast	Transformer Base MVA	Transformer Max MVA	Transformer High Side kV	Transformer Low Side kV	Transformer % Capacity Base	Transformer % Capacity Max
22nd Street	S	6,250	15	25	34.4	12.47	42%	25%
	W	4,809	18	29			27%	17%
Ivy	S	11,446	15	25	69x34.4	12.47	76%	46%
	W	9,679	18	29			54%	34%
Midway	S	0	2 x 7.5	2 x 9.375	34.4	12.47	0%	0%
	W	0	18	22			0%	0%
Smith Creek	S	32,566	2 x 20	2 x 37.5	69x34.4	12.47	81%	43%
	W	20,906	48	75			44%	28%
San Gorgonio	S	19,996	2 x 10	2 x 14	69x34.5	12.47	100%	71%
	W	18,391	24	32			77%	57%
Stagecoach	S	14,764	10	12.5	69x34.5	12.47	148%	118%
	W	8,374	12	14			70%	58%
Sunset	S	20,920	15	25	69x34.5	12.47	139%	84%
	W	13,441	18	29			75%	47%
SCE-Banning	S	90,738	2 x 21	2 x 28		34.5	216%	162%
	W	75,580	50.4	64			150%	117%

Notes:

1. Individual substation kW Demand forecast shown as the non-coincident peak.
2. SCE-Banning kW Demand forecast shown as the coincident peak.
3. Base winter rating determined by IEEE C57.91-1995, Table 4 (1% increase per °C)
4. Max winter rating determined by IEEE C57.91-1995, Table 4 (0.75% increase per °C)

6.4 – DISTRIBUTION SYSTEM ANALYSIS

Analysis was run using Milsoft's Windmil software on the distribution system to determine system improvement projects to correct low voltage, decrease conductor and equipment loading, and reduce single phase line loading to aid in phase balancing for the 15-year ESMP. The analysis results include 5 projects to switch load to adjacent lines at a total estimated cost of $17,100, 2 projects for new overhead line construction totaling $1,219,000, 9 projects for rebuilding overhead lines totaling $1,926,600, 10 projects for new underground line construction totaling $7,107,100 and 4 projects for replacing underground line with larger conductor totaling $1,269,500. The total estimated cost for distribution system improvements for the 15-year ESMP is $11,539,300.

The following pages detail the recommended distribution system improvements by substation and circuit.

22ND STREET SUBSTATION

CKT 63

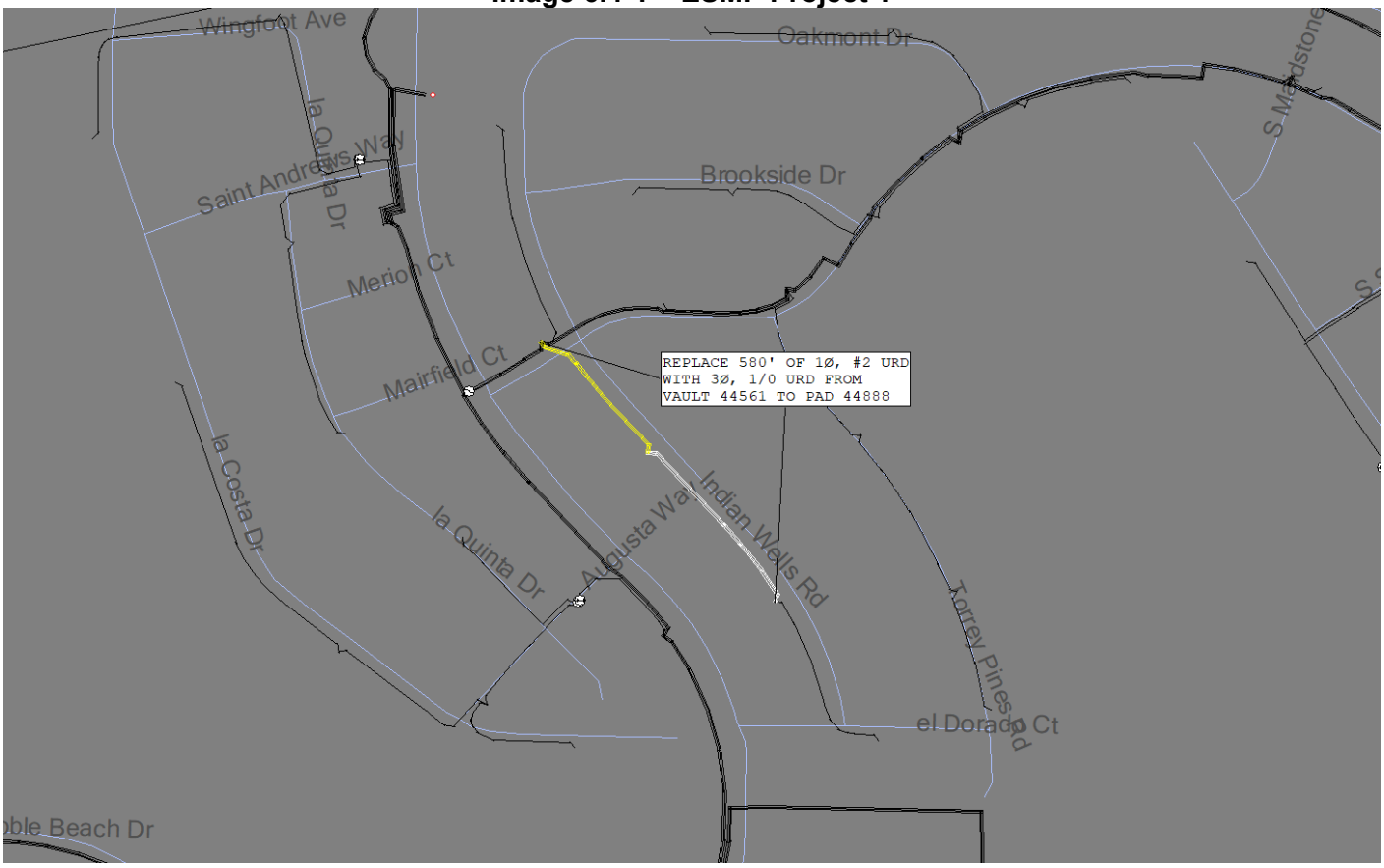
ESMP-1

Issue: UG33x303, 1Ø, #2 URD line with 41 amps, 41 thru consumers.

Resolution:

- Replace 580’ of 1Ø, #2 URD line with 3Ø, 1/0 URD line from vault 44888 to pad 44888 along Indian Wells Rd.
- Split the load between multiple phases.
- Estimated cost: $345,600 (2041).

Image 6.4-1 – ESMP Project 1



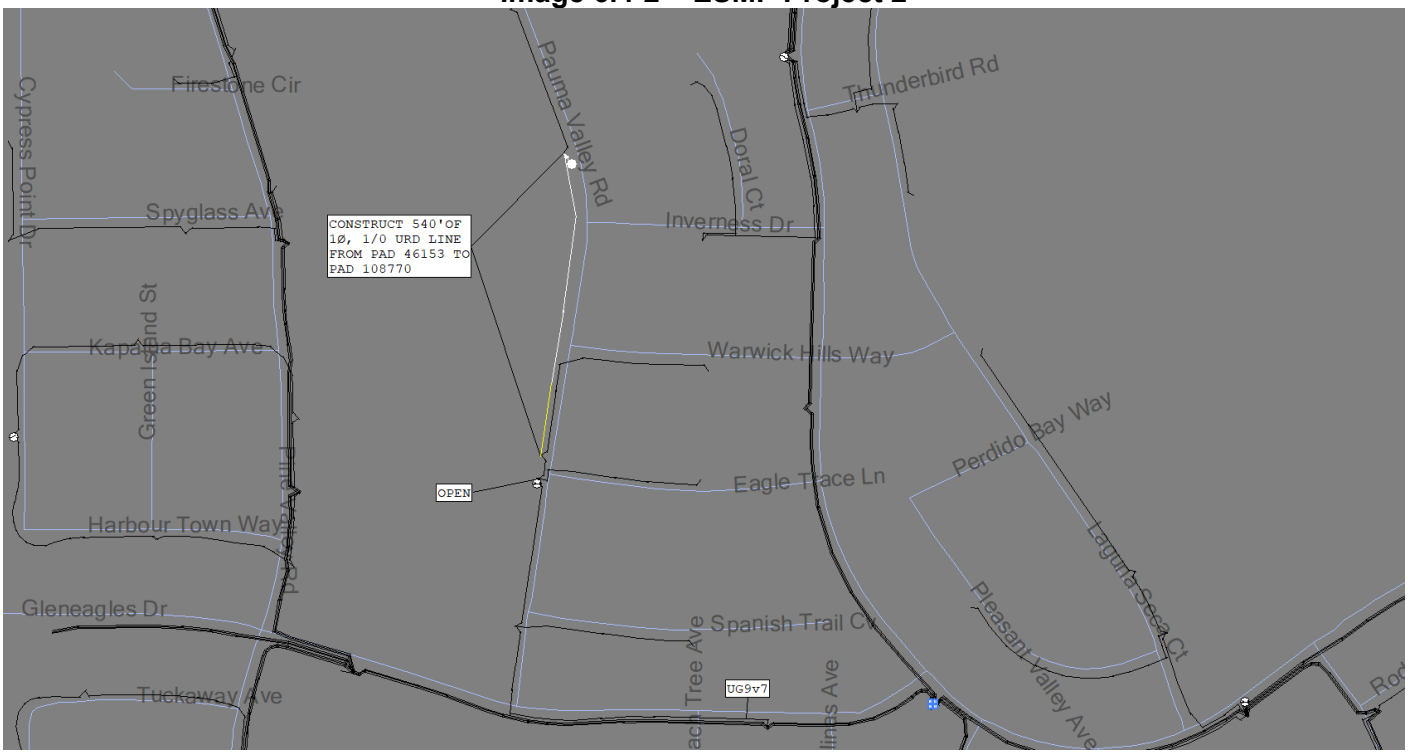
ESMP-2

Issue: UG9v7, 1Ø, 1/0 URD line with 41 amps, 86 thru consumers.

Resolution:

- Construct 540’ of 1Ø, 1/0 URD line from pad 46153 to pad 108770 along Pauma Valley Rd. utilizing pull boxes Pb101706, Pb108810, PB108831, and Pb108819
- Open after line section UG9v9 at vault 108834
- Change the feed of line section UG33x490 along Eagle Trace Ln. at vault 108834 to feed from the north.
- Change the feed of UG33x489 along Warwick Hills Way at pad 108770 to feed from the north.
- Estimated cost: $388,100 (2045).

Image 6.4-2 – ESMP Project 2



CKT 64

Issue: None

IVY SUBSTATION

CKT 11

Issue: None

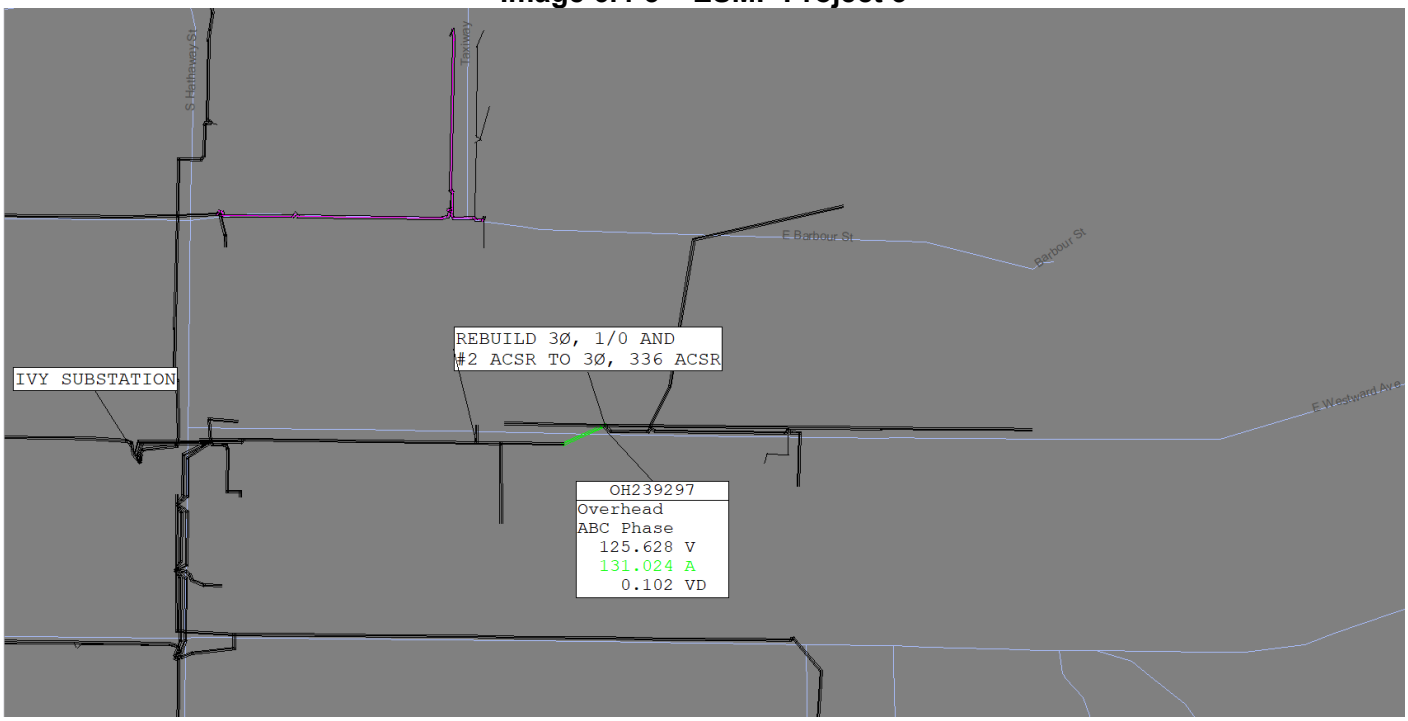
CKT 12

ESMP-3

Issue: OH239297, 3Ø, #2 ACSR OH conductor reaches 73% capacity.

Resolution: Rebuild 423' of 3Ø, 1/0 ACSR and #2 ACSR line to 3Ø, 336 ACSR along E. Westward Ave and crossing E. Woodward Ave from Pole239250 to Pole239296. Estimated cost: $120,400 (2044).

Image 6.4-3 – ESMP Project 3



CKT 13

Issue: None

MIDWAY SUBSTATION

The new Smith Creek Substation is planned for construction beginning in 2030 with a planned energization in 2031. All of the load currently served by the Midway Substation will be switched to Smith Creek. See the Smith Creek Substation writeup for system improvements required to support the load.

SAN GORGONIO SUBSTATION

CKT 51

ESMP-4

Issue: UG295264, 3Ø, 750 MCM conductor at the feeder exit reaches 66% capacity and OH1359, 3Ø, 336 ACSR conductor along W Lincoln St. reaches 62% capacity.

Resolution: Open SW209315-A at FP197794 Along George St. between N. 3rd St. and N 2nd St. and switch a portion of load to the Stagecoach substation. Note: In order for this to be completed without further problems, CKT's 5 and 6 out of the Stagecoach substation will be constructed. See the Stagecoach system improvement recommendations for projects required to complete this load switch. Estimated cost: $3,100 (2041).

Image 6.4-4 – ESMP Project 4

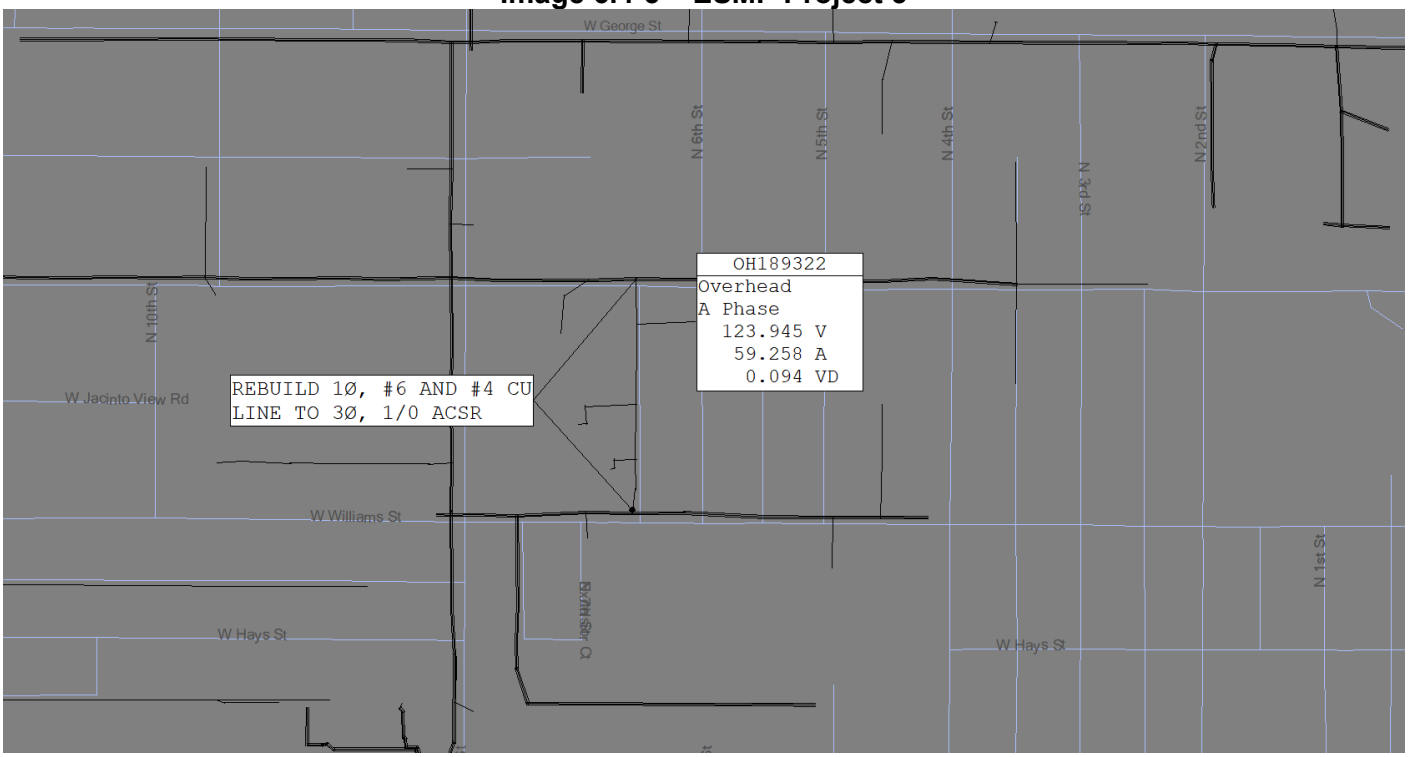


ESMP-5

Issue: OH189322, 1Ø, #6 CU line with 59 amps, 57 thru consumers.

Resolution: Rebuild 625' of 1Ø, #6 and #4 CU line to 3Ø, 1/0 ACSR from Pole189367 to Pole198056 between W. Nicolet St. and W. Williams St. and just west of N. 6th St. Once the line is rebuilt to three-phase, balance the taps between the three phases. Estimated cost: $132,800 (2040).

Image 6.4-5 – ESMP Project 5



CKT 52

Issue: None

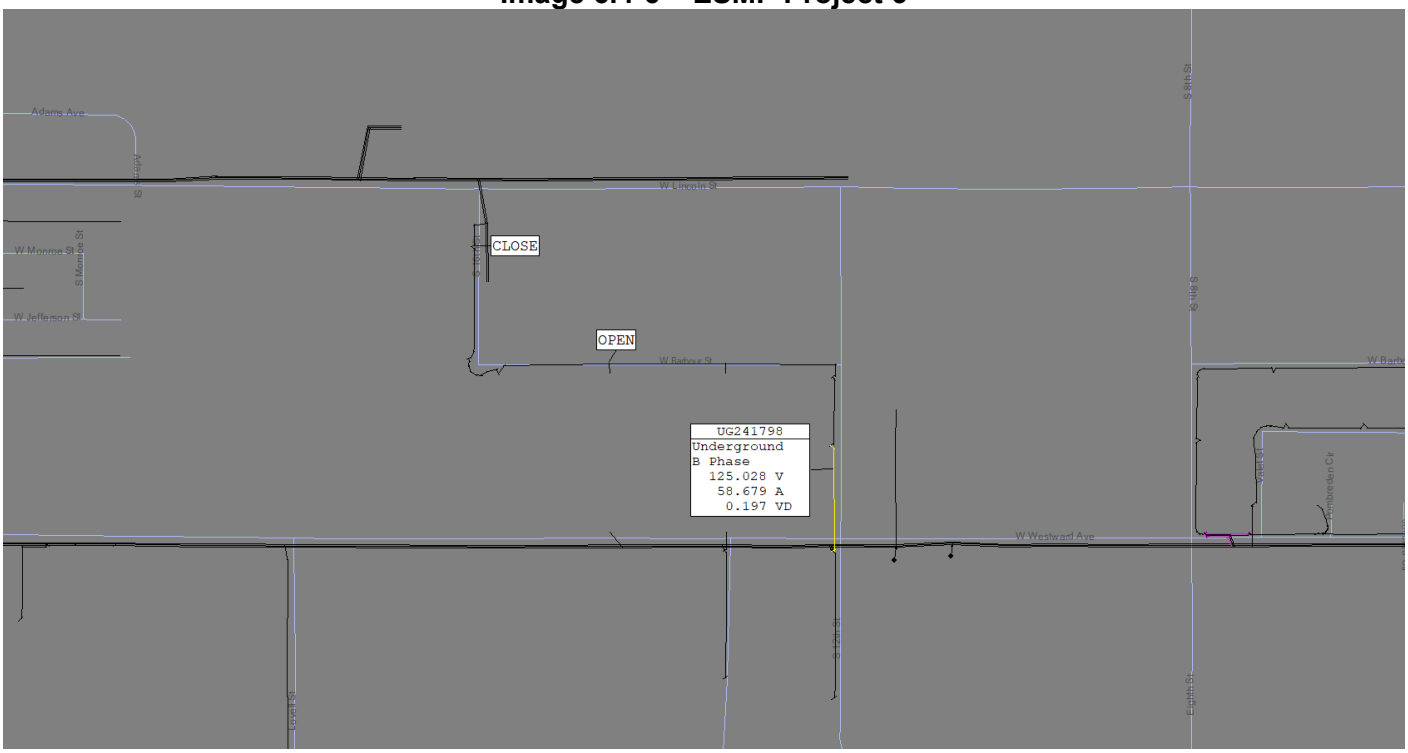
CKT 53

ESMP-6

Issue: UG241798, 1Ø, 2 URD with 59 amps, 46 thru consumers.

Resolution: Open the single-phase line at Vault 146193 and backfeed the line at Pad 146238 to split up the single-phase line and serve from another source. Estimated cost: $2,900 (2039).

Image 6.4-6 – ESMP Project 6

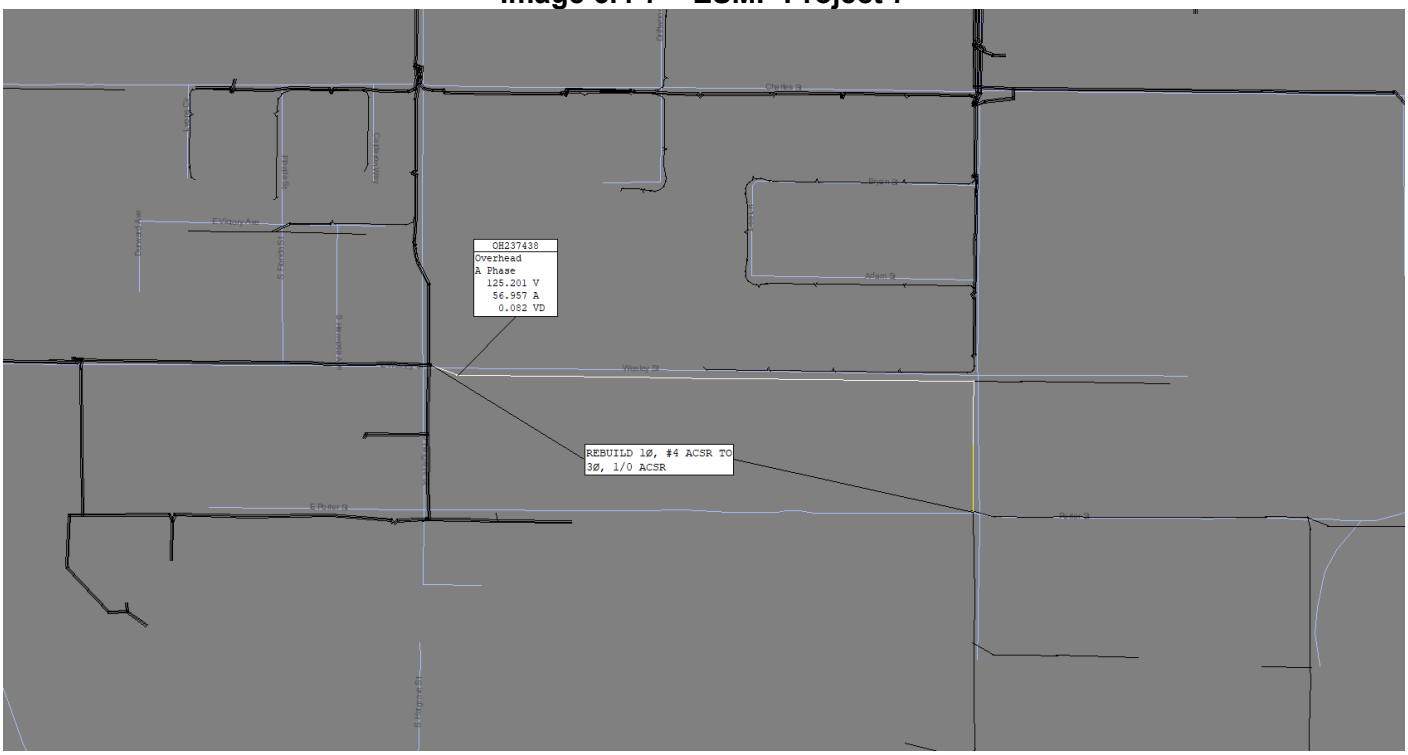


ESMP-7

Issue: OH237438, 1Ø, #4 ACSR line with 57 amps, 34 thru consumers.

Resolution: Rebuild 3,155' of 1Ø, #4 ACSR line to 3Ø, 1/0 ACSR from FP237936 to Pole237034 beginning at the intersection of S. Hargrave St. and Wesley St. and ending at the intersection of S. Hathaway St. and Porter St. Once the line is rebuilt to three-phase, balance the taps between the three phases. Estimated cost: $539,700 (2038).

Image 6.4-7 – ESMP Project 7



CKT 54

Issue: None

STAGECOACH SUBSTATION

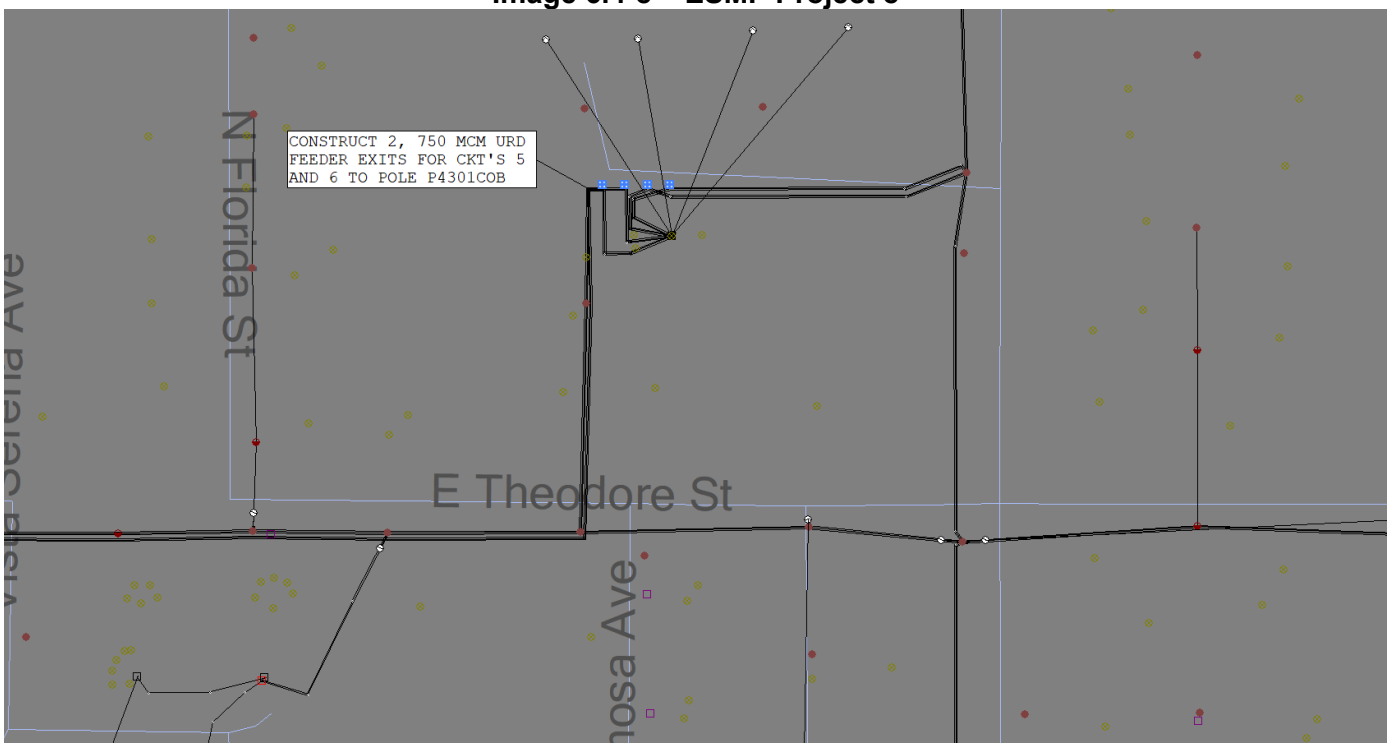
CKT 5 & 6

In order to balance the load at the Stagecoach substation and also to switch load from the San Gorgonio and Sunset substations to reduce conductor loading, it is recommended to build out CKT's 5 and 6 out of the Stagecoach substation. The projects listed below are recommended to construct CKT's 5 and 6 along with switching load from Stagecoach CKT's 7 and 8, San Gorgonio CKT 51, and Sunset CKT 72. The two need circuits will head south from the substation to E. Theodore St., head west on E. Theodore St. to N. Alessandro St., head south on N. Alessandro St. to E. Hoffer St. and then head west on E. Hoffer St. and end just west of N. San Gorgonio Ave. Circuit 5 will be express to this point.

ESMP-8

- Construct 2, 150'; 3Ø, 750 MCM feeder exits from Bay 5 and Bay 6 to pole P4301COB. Estimated cost: $165,800 (2035).

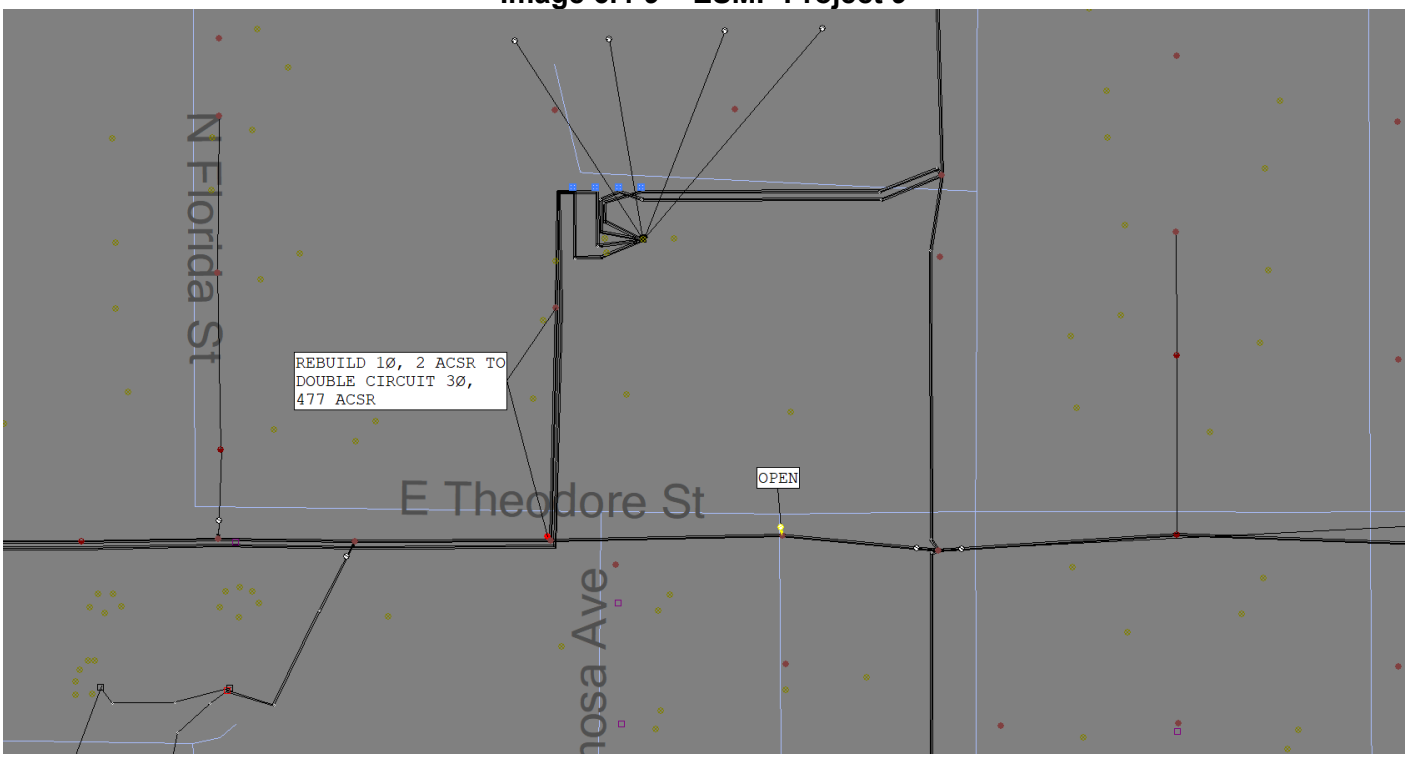
Image 6.4-8 – ESMP Project 8



ESMP-9

- Rebuild 200’ of 1Ø, #2 ACSR line to double circuit 3Ø, 477 ACSR from pole P4301COB to pole P4302COB along the substation back entrance road.
- Create open point at pole P2999COB along E. Theodore St. and switch a portion of load from CKT 7 to the new CKT 6.
- Estimated cost: $57,500 (2035).

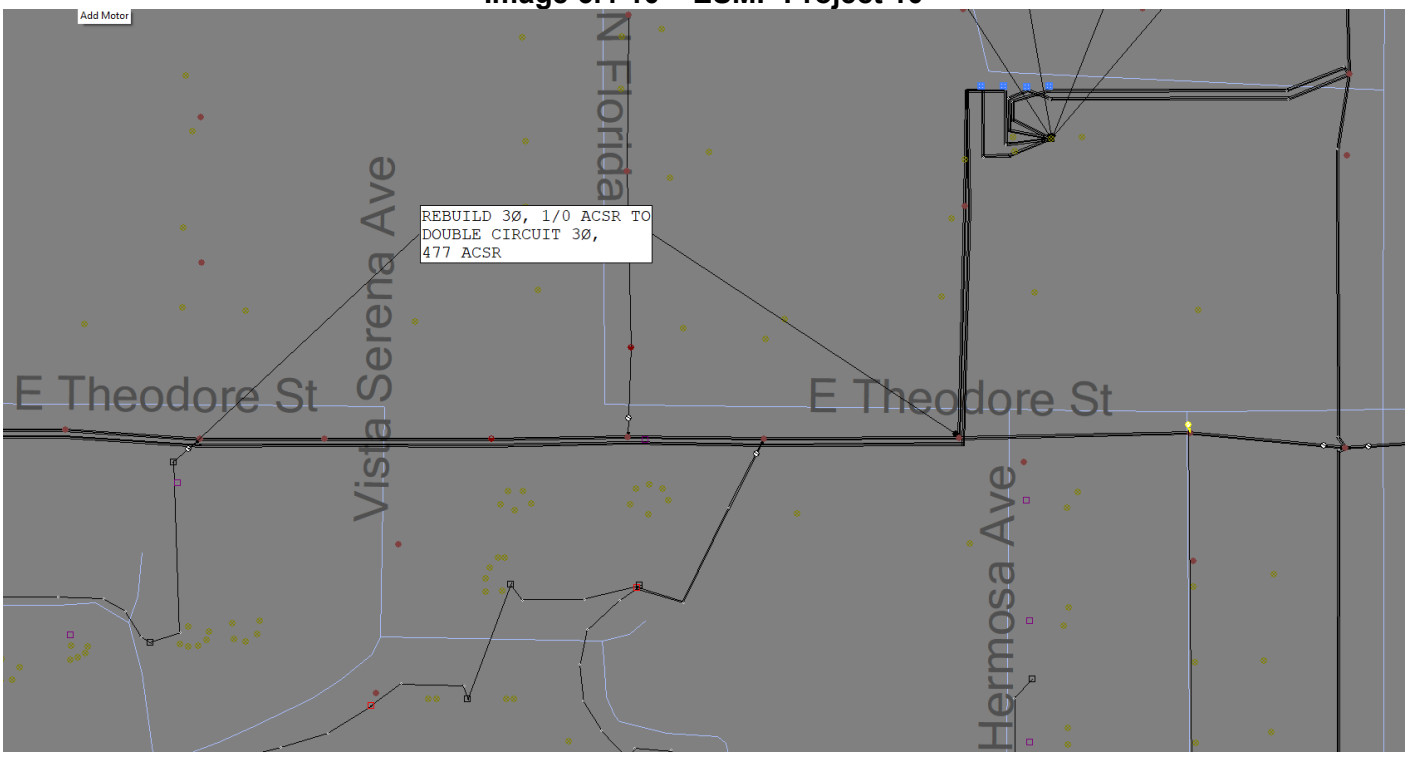
Image 6.4-9 – ESMP Project 9



ESMP-10

- Rebuild 650' of 3Ø, 1/0 ACSR line to double circuit 3Ø, 477 ACSR from pole P4302COB to pole GT68215 along E. Theodore St. from N. Hermosa Ave heading west to just past Vista Serna Ave. Estimated cost: $157,400 (2035).

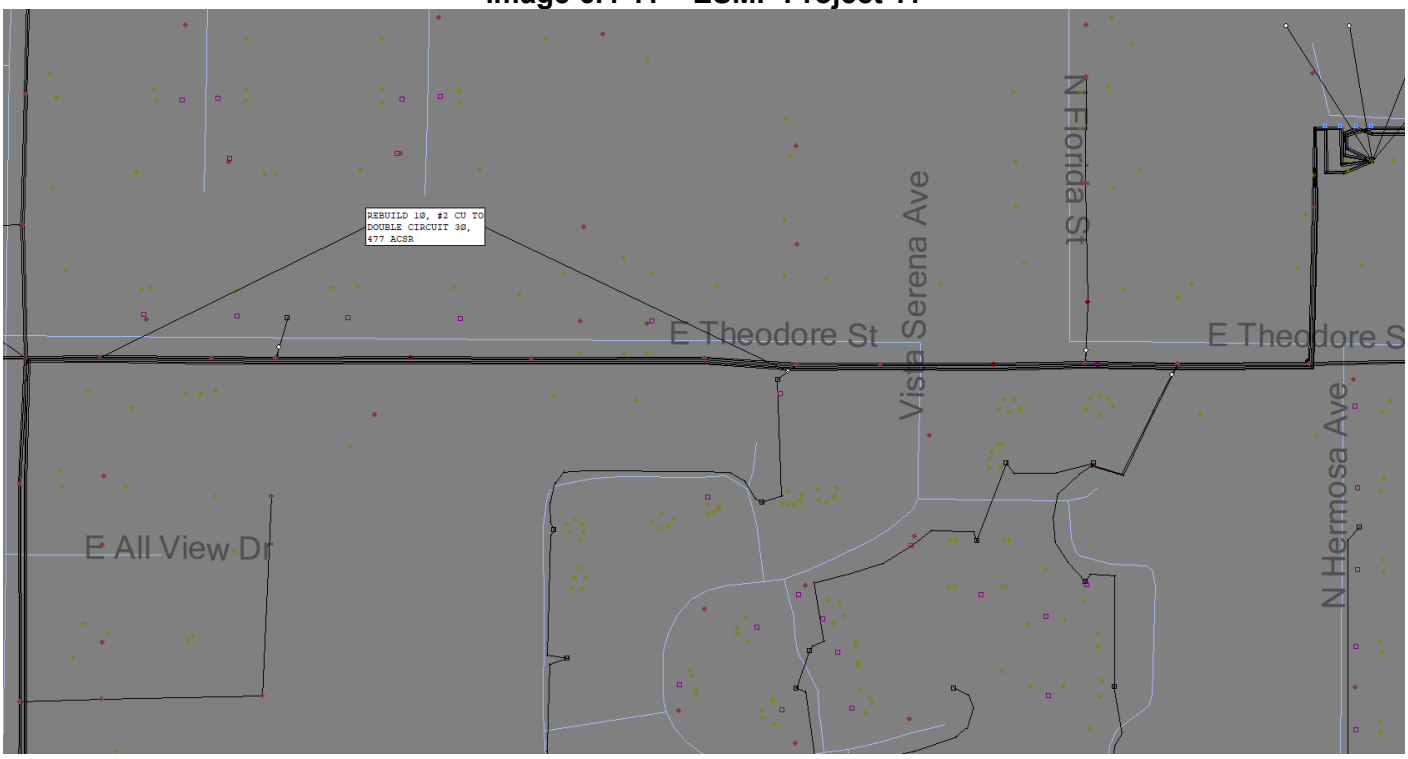
Image 6.4-10 – ESMP Project 10



ESMP-11

- Rebuild 900' of 1Ø, #2 CU line to double circuit 3Ø, 477 ACSR from pole GT68215 to pole P2330COB along E. Theadore St. east of N. Alessandro St. Estimated cost: $181,800 (2035).

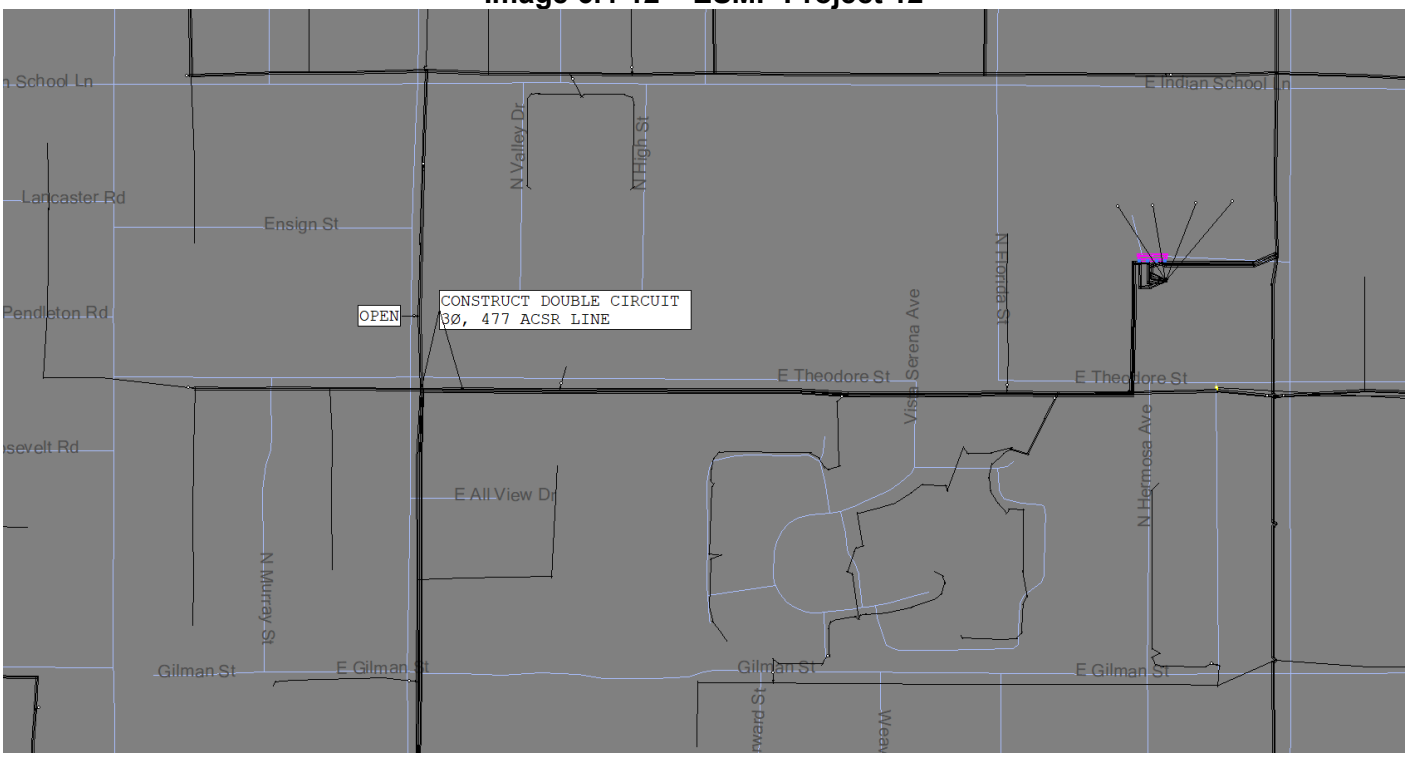
Image 6.4-11 – ESMP Project 11



ESMP-12

- Construct 100' of double circuit 3Ø, 477 ACSR line from pole P2330COB to pole P2331COB along E. Theadore St. east of N. Alessandro St.
- Create open point at Pole282646 along N. Alessandro St. just north of E. Theodore St. and switch a portion of load from CKT 8 to CKT 6.
- Estimated cost: $31,800 (2035).

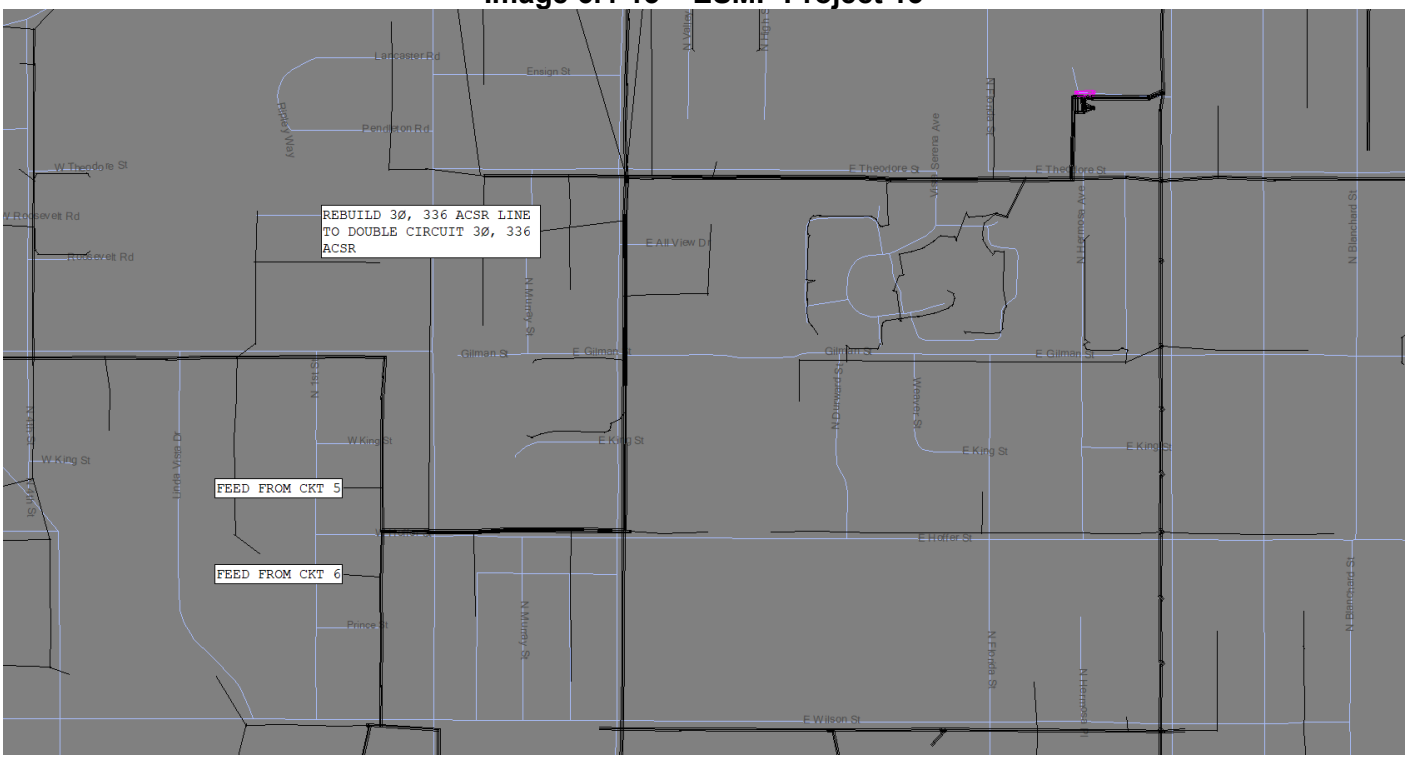
Image 6.4-12 – ESMP Project 12



ESMP-13

- Rebuild 2,150' of 3Ø, 336 ACSR line to double circuit 3Ø, 336 ACSR from pole P2331COB to Pole283017 heading south along N. Alessandro St and then west along W. Hoffer St.
- At Pole283017, switch the tap heading north towards W. Gillman St. to CKT 5 and switch the tap heading south towards E. Wilson St. to CKT 6.
- Estimated cost: $455,400 (2035).

Image 6.4-13 – ESMP Project 13



CKT 7

Issue: None

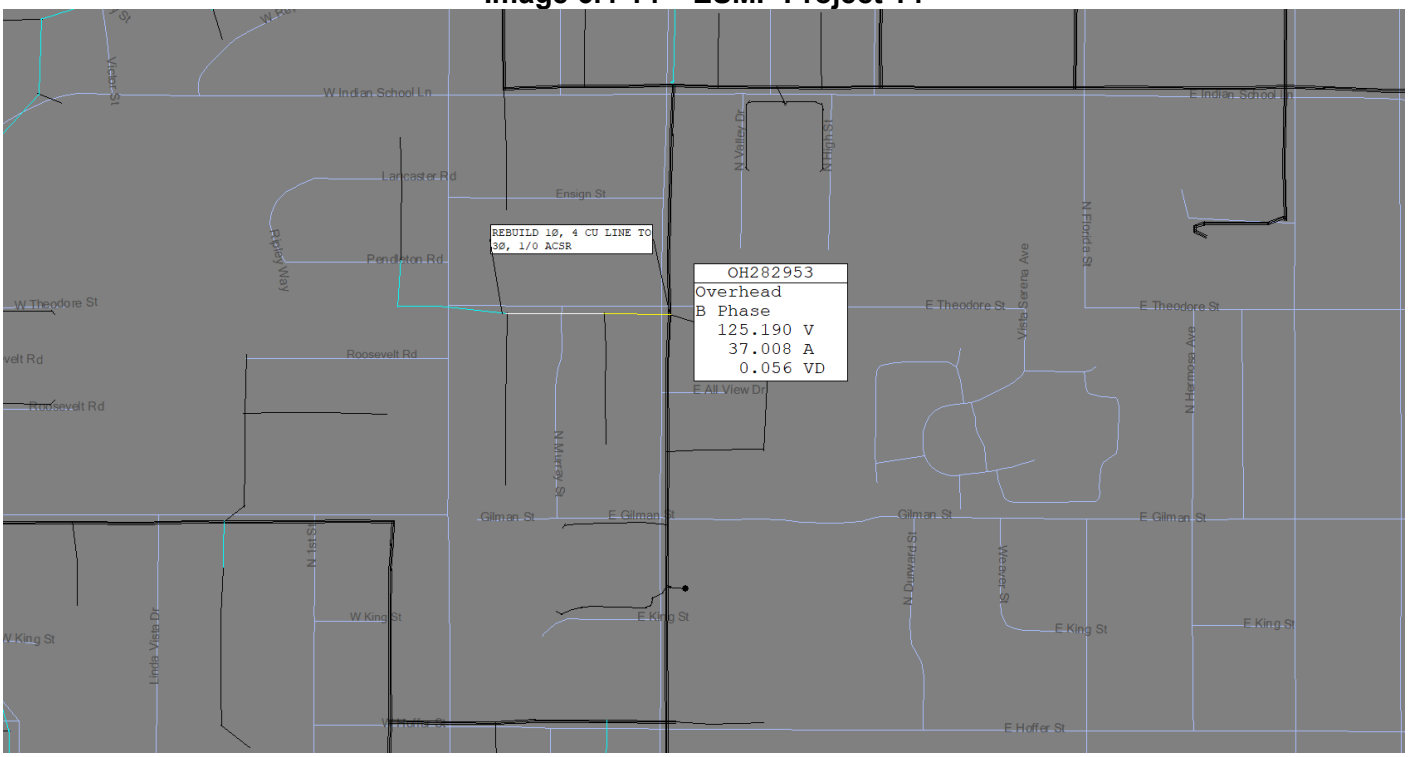
CKT 8

ESMP-14

Issue: OH282953, 1Ø, #4 CU line with 37 amps, 52 consumers.

Resolution: Rebuild 510' of 1Ø, #4 CU line to 3Ø, 1/0 ACSR along E. Theodore St. west of N. Alessandro St from pole P2331COB to pole 30733CWT. Estimated cost: $115,200 (2043).

Image 6.4-14 – ESMP Project 14



SUNSET SUBSTATION

CKT 72

ESMP-15

Issue: UG278161 Feeder Exit, 3Ø, 750 MCM URD conductor reaches 95% capacity and is greater than 80% capacity thru UG20. OH71 3Ø, 336 ACSR reaches 76% capacity and is greater than 60% capacity thru OH165. OH162 3Ø, 4/0 ACSR reaches 80% capacity and is greater than 60% capacity thru OH156.

Resolution: It is recommended to open at Pole175357 at the intersection of N. 22nd St. and W. Nicolet St. and close at Pole200537 along W. Gilman St. just west of N. 8th St. and switch load to the new Stagecoach CKT 5. Estimated cost: $2,800 (2036).

Image 6.4-15 – ESMP Project 15

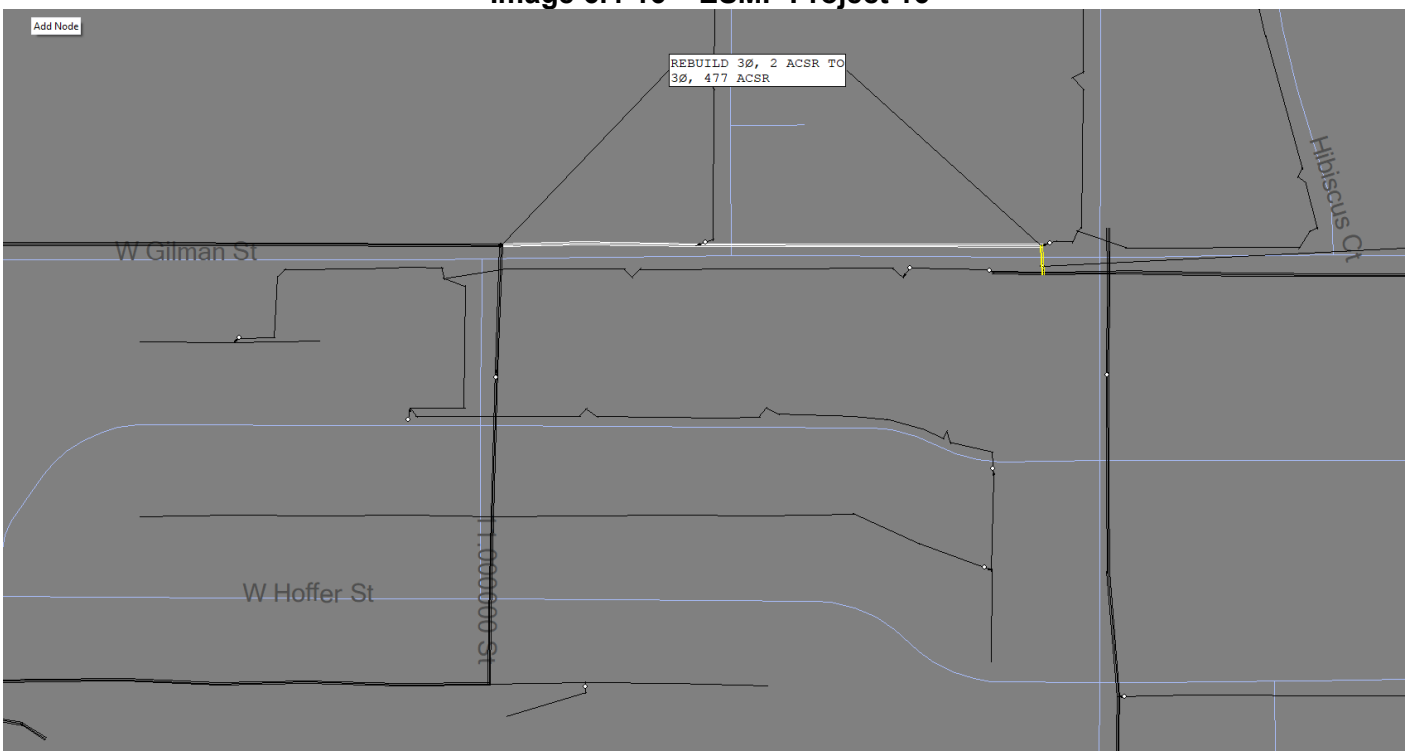


ESMP-16

Issue: With the load switch from Stagecoach CKT 72 to Stagecoach CKT 5 as described in ESMP-15, the 3Ø, #2 ACSR line at OH200538 reaches 101%

Resolution: Rebuild 875' of 3Ø, #2 ACSR line to 3Ø, 477 ACSR from Pole200537 to Pole213210 along W. Gilman St. between N. 8th St and 11th St. Estimated cost: $166,400 (2037).

Image 6.4-16 – ESMP Project 16

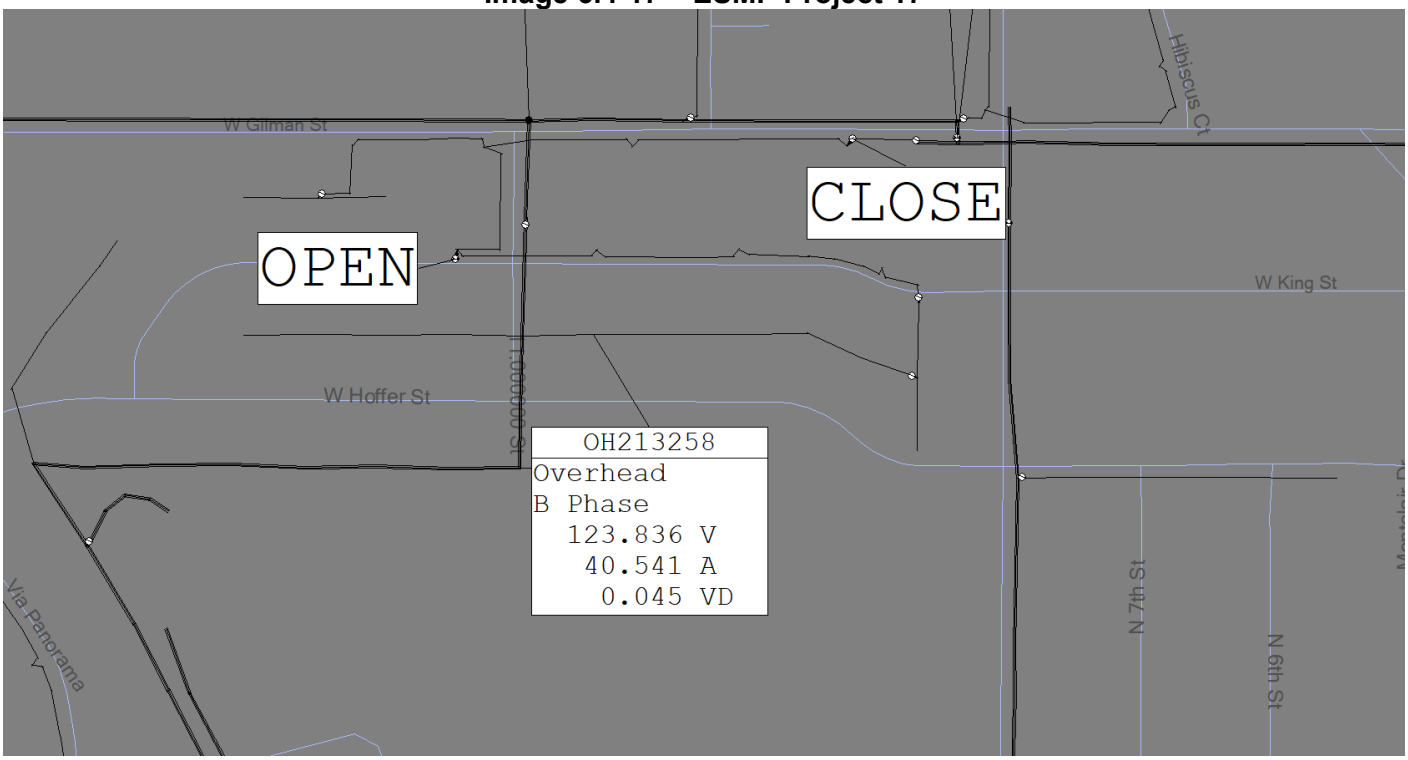


ESMP-17

Issue: OH213258, 1Ø, #2 ACSR line with 41 amps, 73 consumers

Resolution: It is recommended to open at Pad 28196 and close at Pad 28229 and split the load between W. Gilman St. and W Hoffer St. west of N. 8th St. from two different three-phase lines. Estimated cost: $3,400 (2042).

Image 6.4-17 – ESMP Project 17



CKT 74

Issue: None

CKT 76

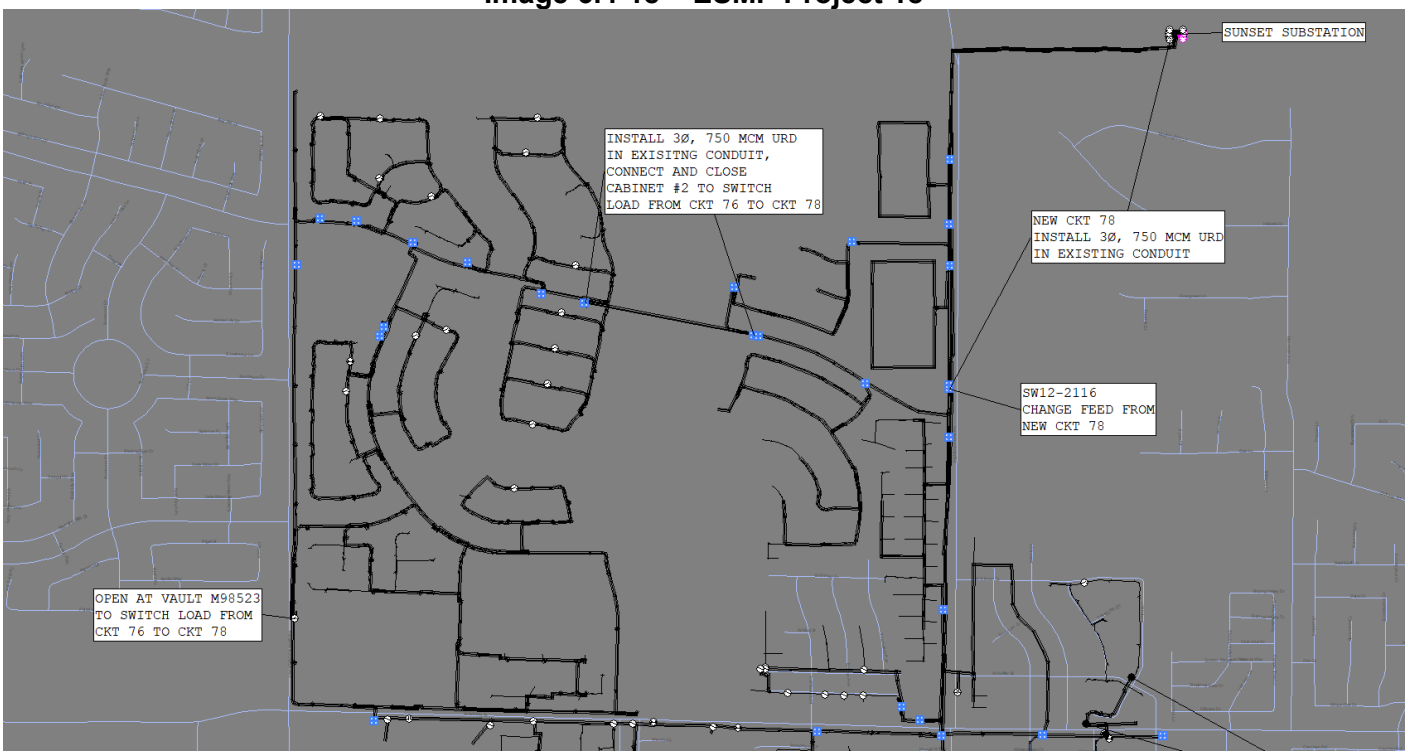
ESMP-18

Issue: Underground feeder exit, 3Ø, 750 MCM reaches 110% capacity and is greater than 60% capacity through UG2vQ6 at Vault 31064.

Resolution:

- Utilize CKT 78 and create a new feeder to serve the south west side of the Atwell Subdivision. See Image 6.4-20 below for the feeder plan recommendation.
- Using the existing empty conduit that is in the same trench as CKT 76:
  - Install 1,862' of 3Ø, 750 MCM from the feeder bay exit to Vault LV100172 at the intersection of Highland Home Rd. and Mountain Ave. using the existing conduit.
  - Install 2,706' of 3Ø, 750 MCM from Vault LV100172 to Vault SP100103 along Highland Home Rd. north of Meadowline Way using the existing conduit and connect to cabinet #2 in switchgear SW12-2116 while removing the connection between Vault SP100102 cabinet #1 and Vault SP100103 cabinet #2. This will switch all load along Meadowline Way west of Highland Home Rd. to CKT 78.
  - Install 1,400' of 3Ø, 750 MCM from Vault SP100109 cabinet 1 to Switchgear SG290766 following Meadowline Way.
  - Open at Vault M98523 along N. Highland Springs Ave. and close SG290766 cabinet #2 along Meadowline Way and switch all load currently served from CKT 76 to the new CKT 78.
  - Estimated cost: $927,000 (2031).

Image 6.4-18 – ESMP Project 18



EMSP-19

Issue: Despite the load switch to the new CKT 78, the underground feeder exit, 3Ø, 750 MCM is still over 60% capacity through Vault SP100105

Resolution:

- Utilize CKT 75 and create a new feeder to serve the south side of the Atwell Subdivision. See Image 6.4-20 below for the feeder plan recommendation.
- Using the existing empty conduit that is in the same trench as CKT 76:
  - Install 1,862' of 3Ø, 750 MCM from the feeder bay exit to Vault LV100172 at the intersection of Highland Home Rd. and Mountain Ave. using the existing conduit.
  - Install 2,706' of 3Ø, 750 MCM from Vault LV100172 to Vault SP100103 along Highland Home Rd. north of Meadowline Way using the existing conduit.
  - Install 2,953' of 3Ø, 750 MCM from Vault SP100103 to Vault 30985 along W. Wilson St. west of Highland Home Rd.
  - At Vault 30985, switch the conductor heading west along W. Wilson St. to feed from the new CKT 75.
  - Estimated cost: $1,032,400 (2032).

Image 6.4-19 – ESMP Project 19

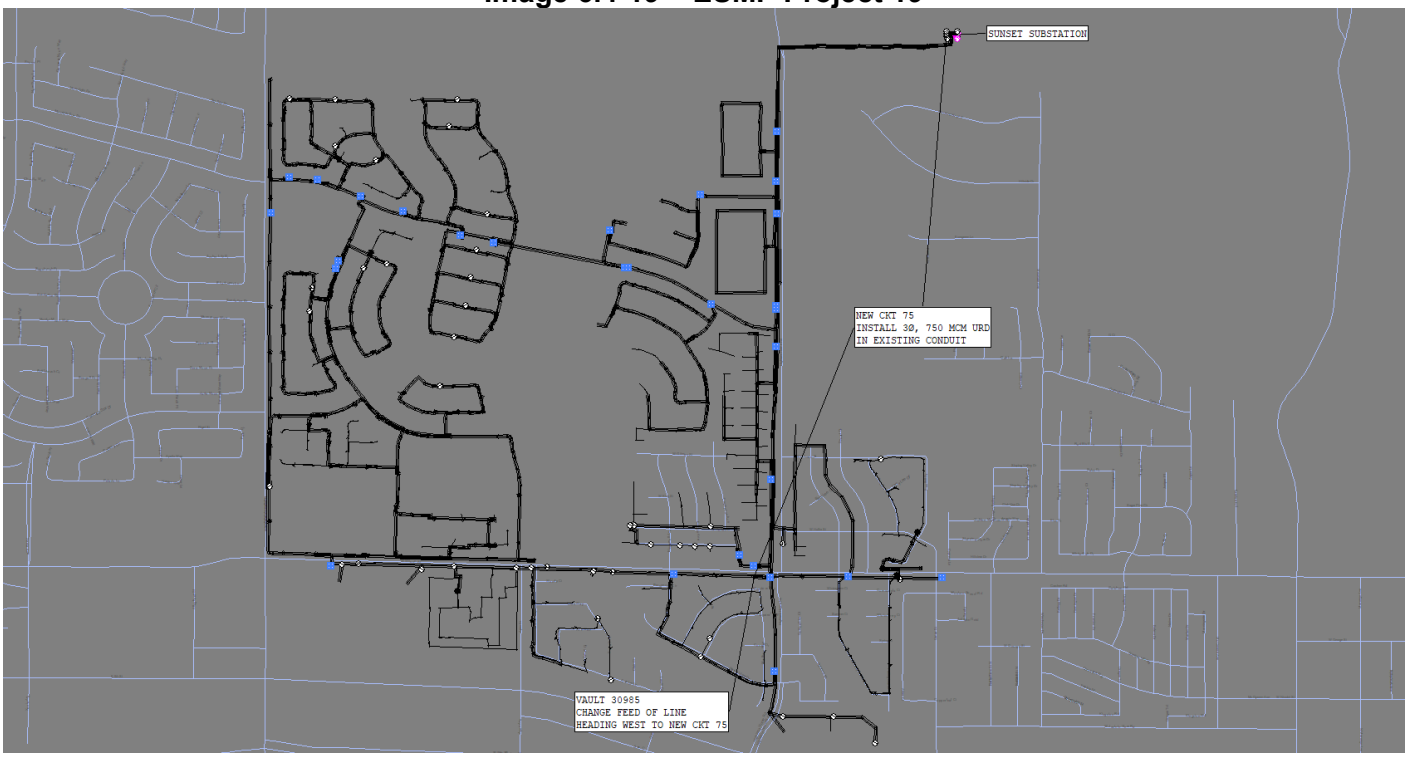
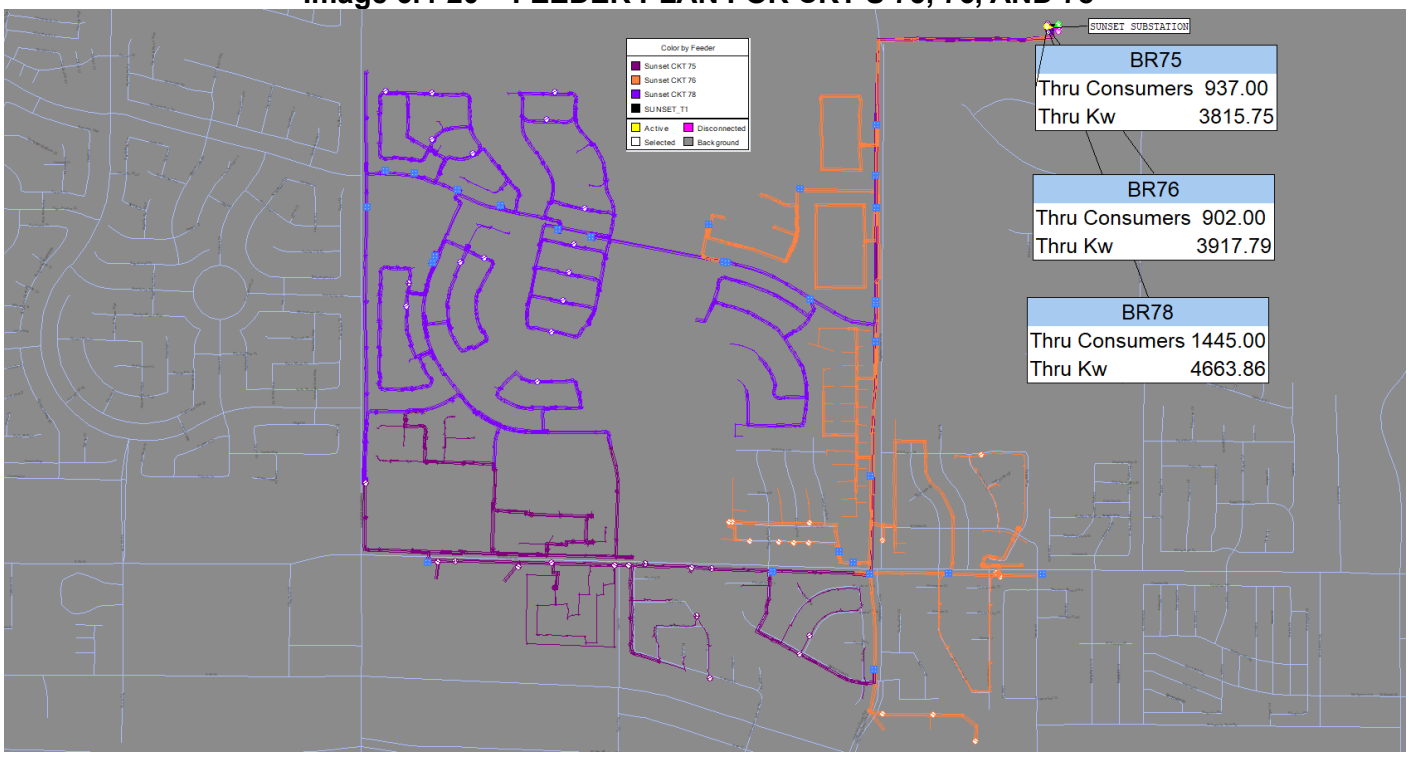


Image 6.4-20 – FEEDER PLAN FOR CKT'S 75, 76, AND 78



CKT 77

Issue: None

NEW SMITH CREEK SUBSTATION

The new Smith Creek substation is planned to be constructed at a property owned by the City of Banning on the south side of Interstate 10 and will replace the Midway substation on the north side of Interstate 10. Construction for the new Smith Creek substation will begin in 2030 with an energization date in 2031. All four feeders currently served by Midway will be switched to Smith Creek. Additionally, four new feeders will be added at Smith Creek to served planned load additions between Interstate 10 and Westward Ave. The projects below are recommended to construct the new feeders out of Smith Creek to serve the existing Midway feeders and support existing and future load additions. Refer to Image 6.4-32 for the Smith Creek feeder plan.

Smith Creek CKT 21

Circuit 21 will be constructed to serve the existing Midway CKT 21.

ESMP-20

- Construct 300' of 3Ø, 750 MCM URD from the feeder bay to Pole104936.
- Create open point at Pole104876 and serve the load on the south side of Interstate 10.
- Create an open point at Pole104926 along Highland Home Rd. between CKT 21 and 25
- Create an open point at pole P6554COB along Westward Ave. between CKT 21 and 25
- Create an open point at Vault 40257 along Fairway Oks Ave. just north of Mission Hills Dr. between CKT 21 and 25
- Tie the three-phase line together at Vault 38231 at the intersection of Birdie Dr. and Cog Hill Rd.
- Estimated cost: $144,400 (2031).

Image 6.4-21 – ESMP Project 20



Smith Creek CKT 22

Circuit 22 will be constructed to serve the existing Midway CKT 22 and CKT 23.

ESMP-21

- Construct 300' of 3Ø, 750 MCM URD from the feeder bay to Pole104876 and use the existing Midway CKT 21 Interstate 10 crossing to serve the existing Midway CKT 22. Estimated cost: $139,600 (2031).

Image 6.4-22 – ESMP Project 21



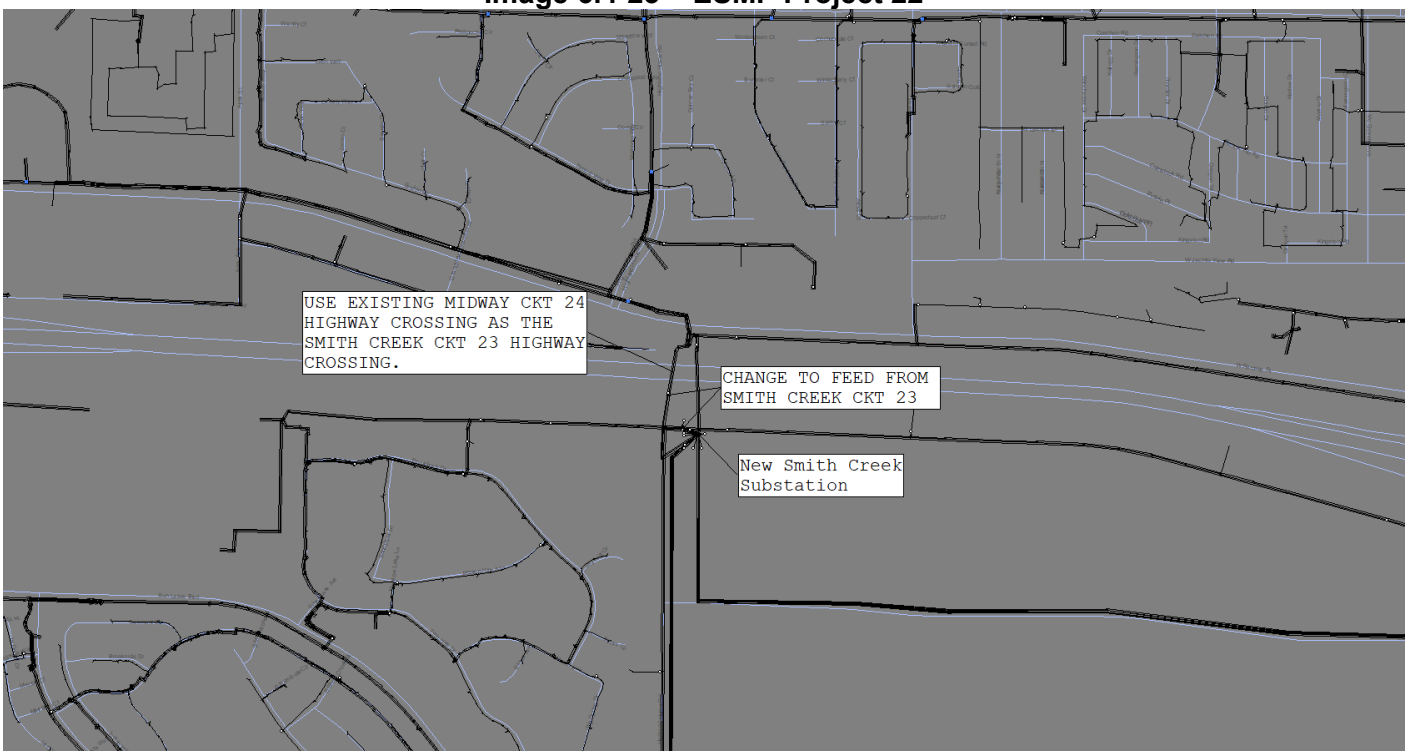
Smith Creek CKT 23

Circuit 23 will be constructed to serve the existing Midway CKT 23.

ESMP-22

- Construct 300' of 3Ø, 750 MCM URD from the feeder bay to Pole104936
- Chage the feed at Pole104936 from Midway CKT 23 to Smith Creek CKT 23
- Use the existing Midway CKT 24 Interstate 10 crossing as the new Smith Creek CKT 23 highway crossing.
- Tie Midway CKT 23 to Smith Creek CKT 23 inside the current Midway substation to switch all of Midway CKT 23 to Smith Creek CKT 23
- Estimated cost: $144,400 (2031).

Image 6.4-23 – ESMP Project 22



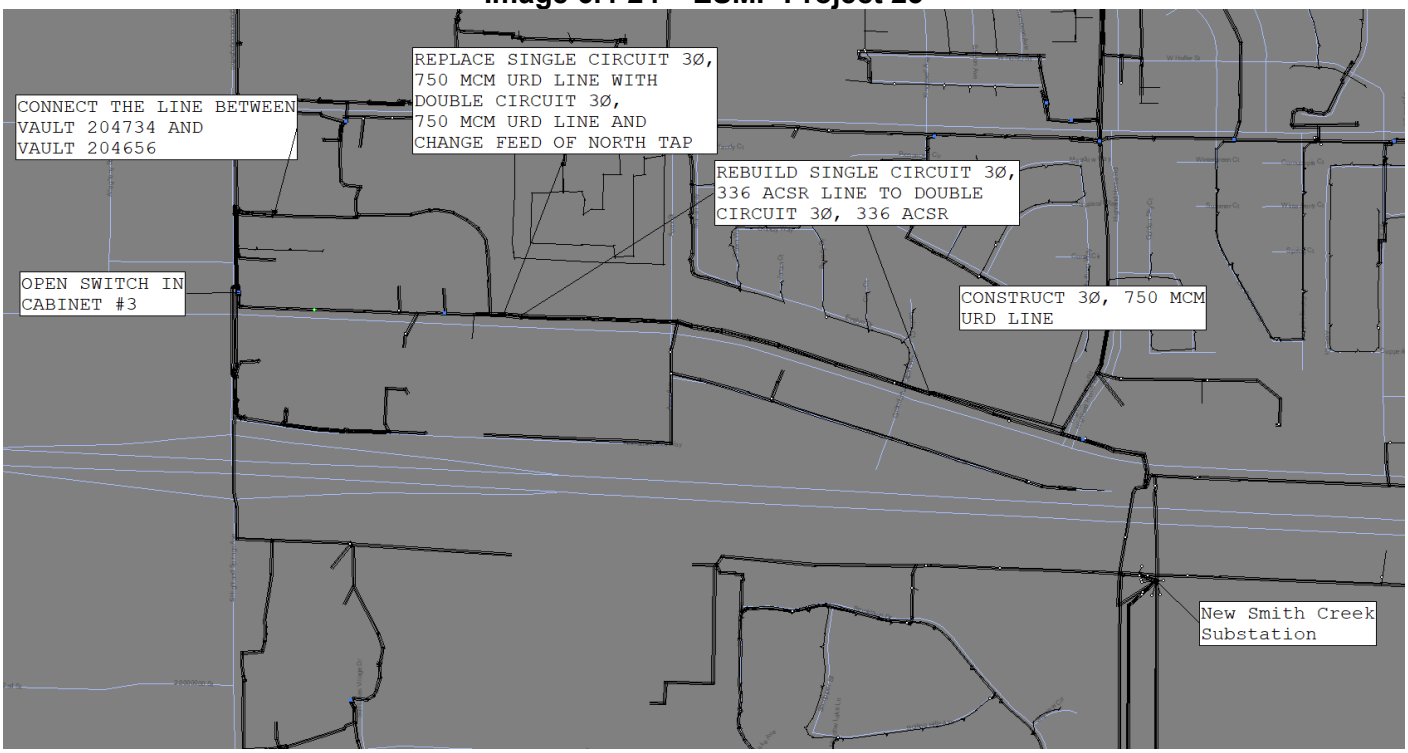
ESMP-23

Issue: The 750 MCM conductor at the feeder exit will reach 79% capacity, the 336 ACSR and 477 ACSR line up to and crossing Interstate 10 will reach 80% capacity and 64% capacity respectively, and the 750 MCM conductor at the current Midway CKT 23 feeder exit and heading along W. Ramsey St. to Lori Way exceeds 60% capacity.

Resolution:

- Construct 800' of 3Ø, 750 MCM URD line from Vault 320963 to Vault 34038 and up to riser Pole34020 along W. Ramsey St between Highland Home Rd. and Lori Way.
- Rebuild 2,165' of single circuit 3Ø, 336 ACSR to double circuit 3Ø, 336 ACSR from Pole34020 to Pole206642 along W. Ramsey St. between Lori Way and Memorial Dr.
- Rebuild 175' of single circuit 3Ø, 750 MCM URD line to double circuit 3Ø, 750 MCM from riser Pole206642 to Vault 204676 along W. Ramsey St. at Memorial Dr.
- At Vault 204676, leave the tap heading west along W. Ramey St. connected to CKT 23 and change the feed of the tap heading north along Memorial Dr. to CKT 22 using the newly constructed line.
- In SG266801 at the intersection of W. Ramsey St. and N. Highland Springs Ave., open cabinet #3
- Connect the three-phase between Vault 204734 and Vault 204656 to change the feed to Smith Creek CKT 22.
- Estimated cost: $1,187,200 (2036).

Image 6.4-24 – ESMP Project 23



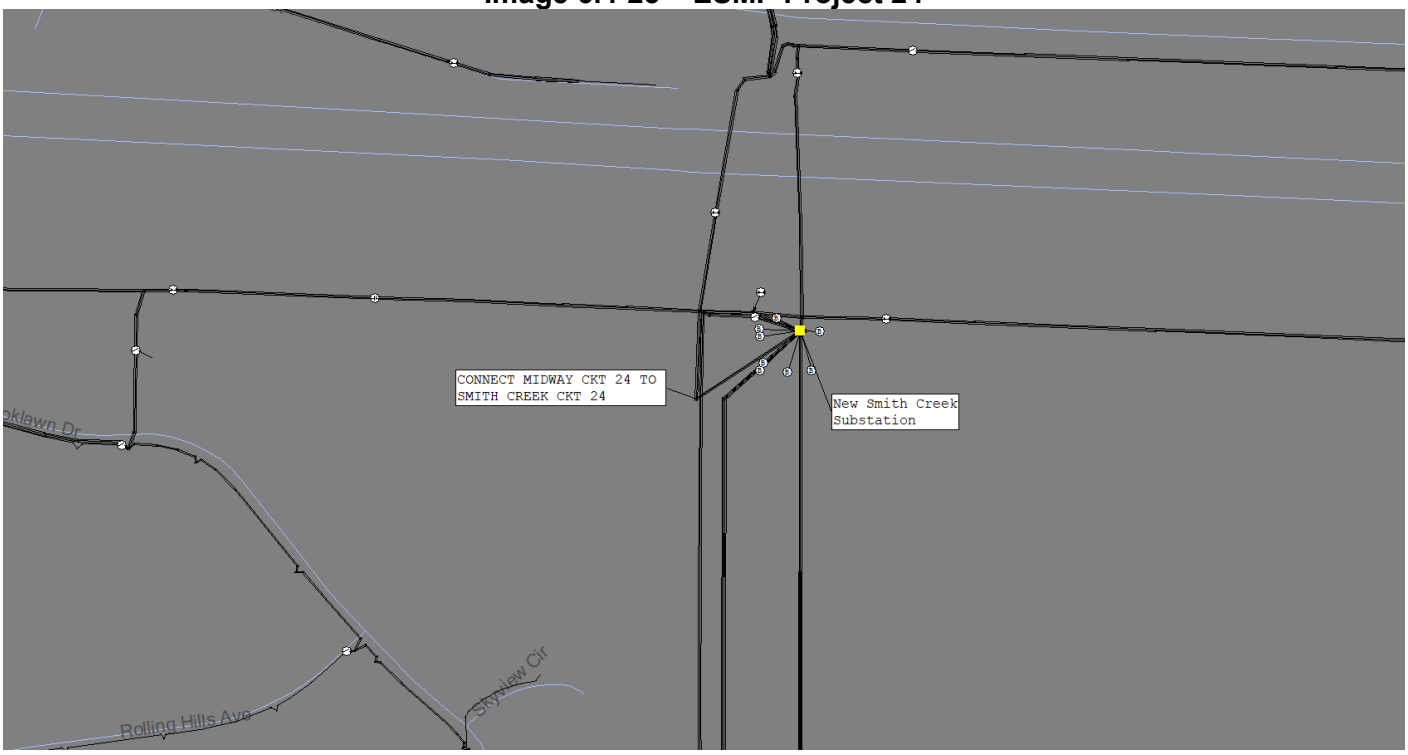
Smith Creek CKT 24

Circuit 24 will be constructed to serve the existing Midway CKT 24.

ESMP-24

- Construct 300' of 3Ø, 750 MCM URD from the feeder bay to Pole104900 and switch Midway CKT 24 to Smith Creek CKT 24. Estimated cost: $139,600 (2031).

Image 6.4-25 – ESMP Project 24

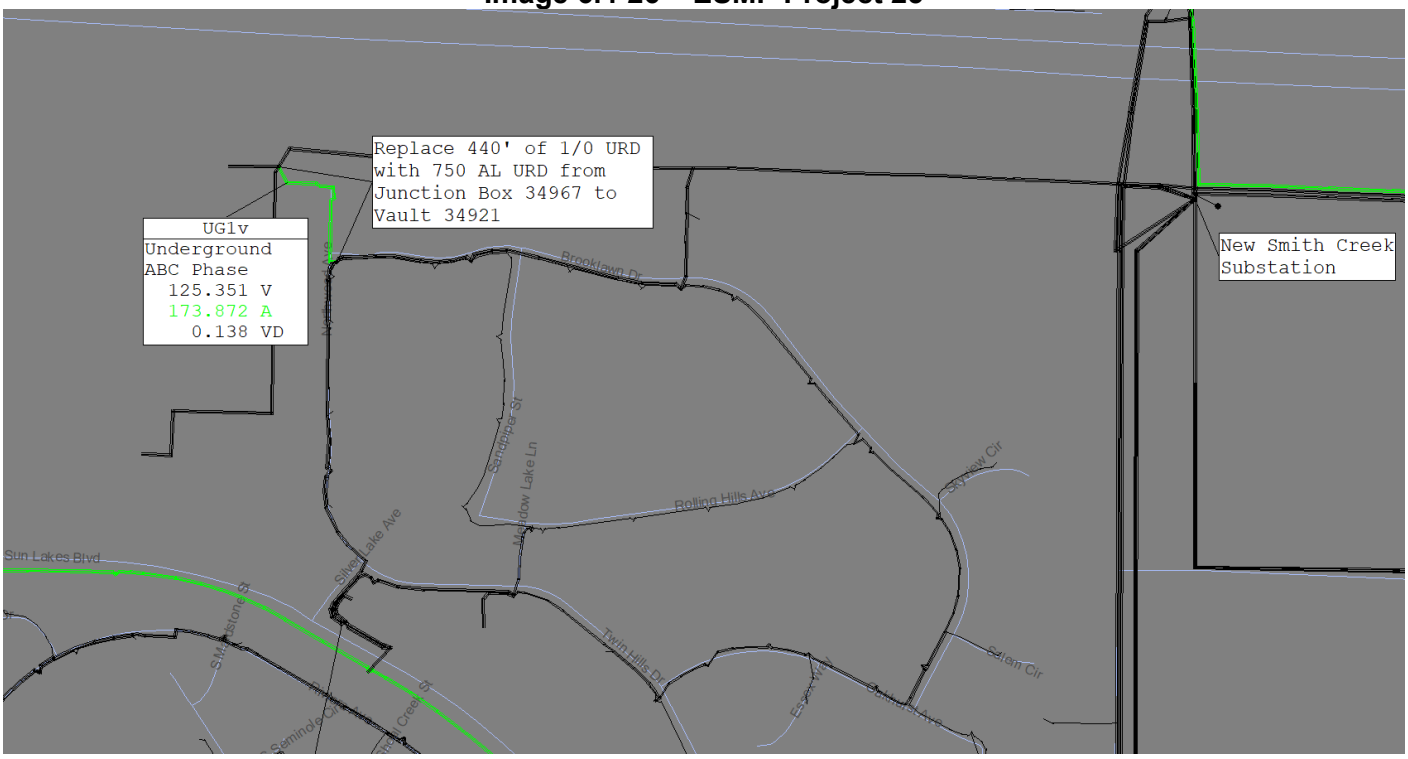


ESMP-25

Issue: UG1v, 3Ø, 1/0 URD line reaches 81% Capacity

Resolution: Replace 440' of 3Ø, 1/0 URD with 3Ø, 750 MCM from Junction Box 34967 to Vault 34921 at the intersection of Northwood Ave. and Brooklawn Dr. Estimated cost: $237,600 (2034).

Image 6.4-26 – ESMP Project 25



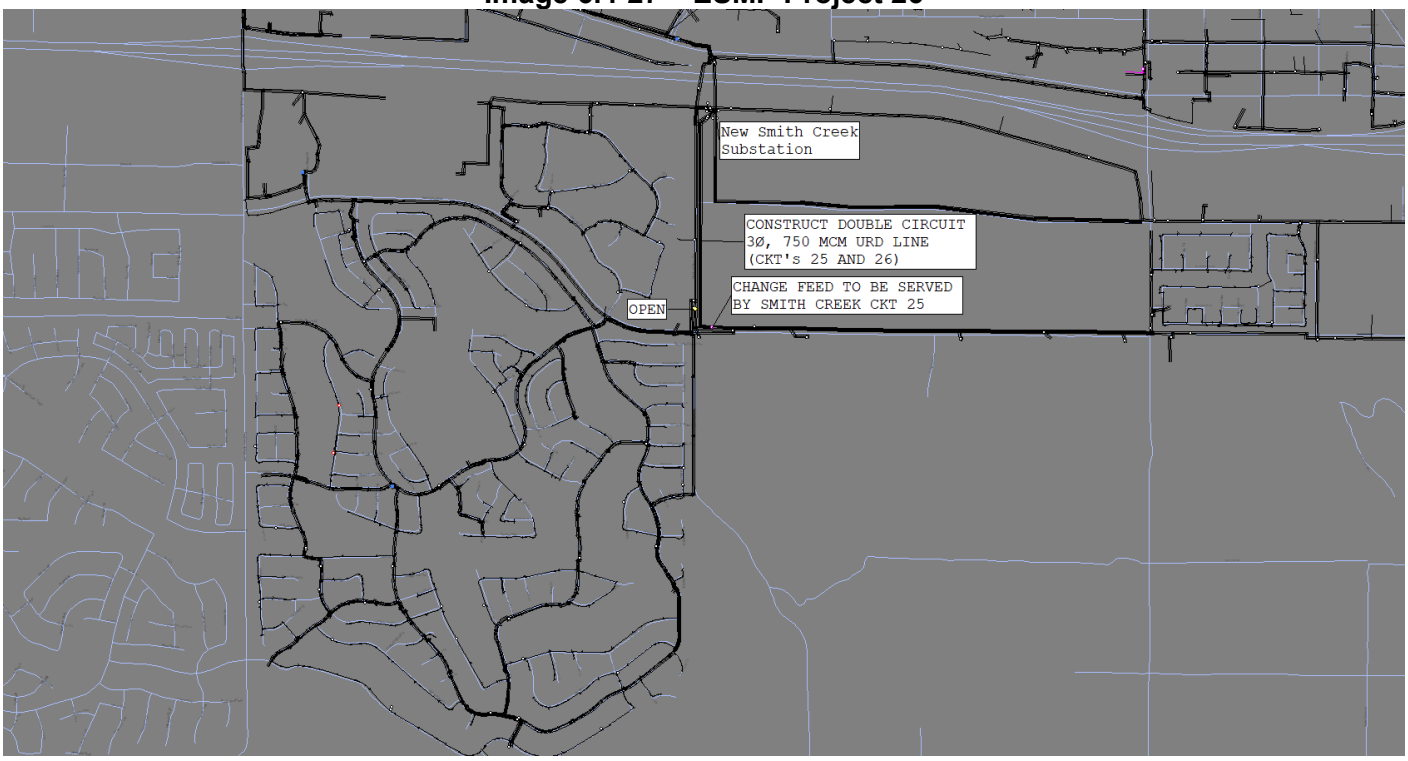
Smith Creek CKT 25

Circuit 25 will be constructed to serve a portion of the existing Midway CKT 21.

ESMP-26

- Construct 2,745’ of double circuit 3Ø, 750 MCM URD line from the feeder bay to pole P6554COB at the intersection of Westward Ave. and S. Highland Home Rd. *Note, this will also be the route for Smith Creek CKT 26.
- At pole P6554COB, change feed from Midway CKT 21 to Smith Creek CKT 25.
- Estimated cost: $1,652,900 (2031).

Image 6.4-27 – ESMP Project 26



ESMP-27

Issue: UG1v24, 3Ø, 350 MCM URD conductor reaches 79% capacity.

Resolution: Replace 2,100' of 3Ø, 350 AL MCM URD conductor with 3Ø, 750 MCM URD conductor from Vault 36923 located at the intersection of Sun Lakes Blvd. and Country Club Dr. and following Country Club Dr. to Vault 41797 at the intersection of Country Club Dr. and Hogan Ave. Estimated cost: $316,000 (2031).

Image 6.4-28 – ESMP Project 27



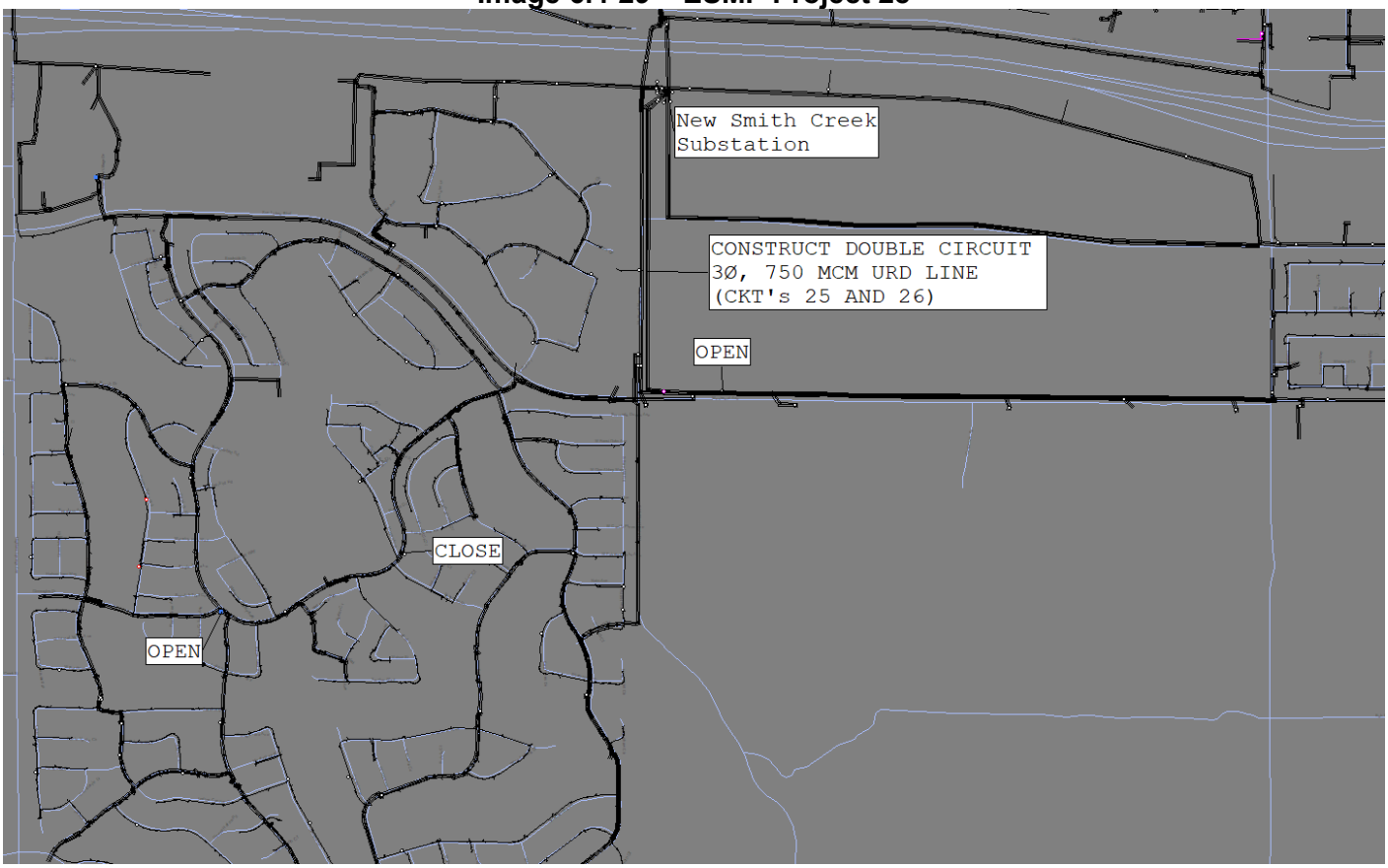
Smith Creek CKT 26

Circuit 26 will be constructed to serve a portion of the existing Midway CKT 21 and 22nd Street CKT 63. See ESMP-26 for project to construct the circuit from Smith Creek.

ESMP-28

- Create open point at Pole104842 along Westward Ave to switch a portion of load from 22nd Street CKT 63
- At SG49762 along Country Club Dr. between Birdie Dr. and Gleneagles Dr., open cabinet #2 and change feed to Smith Creek CKT 25 at Vault 41797 along County Club Dr. at Hogan Ave.
- Estimated cost: $4,900 (2031).

Image 6.4-29 – ESMP Project 28

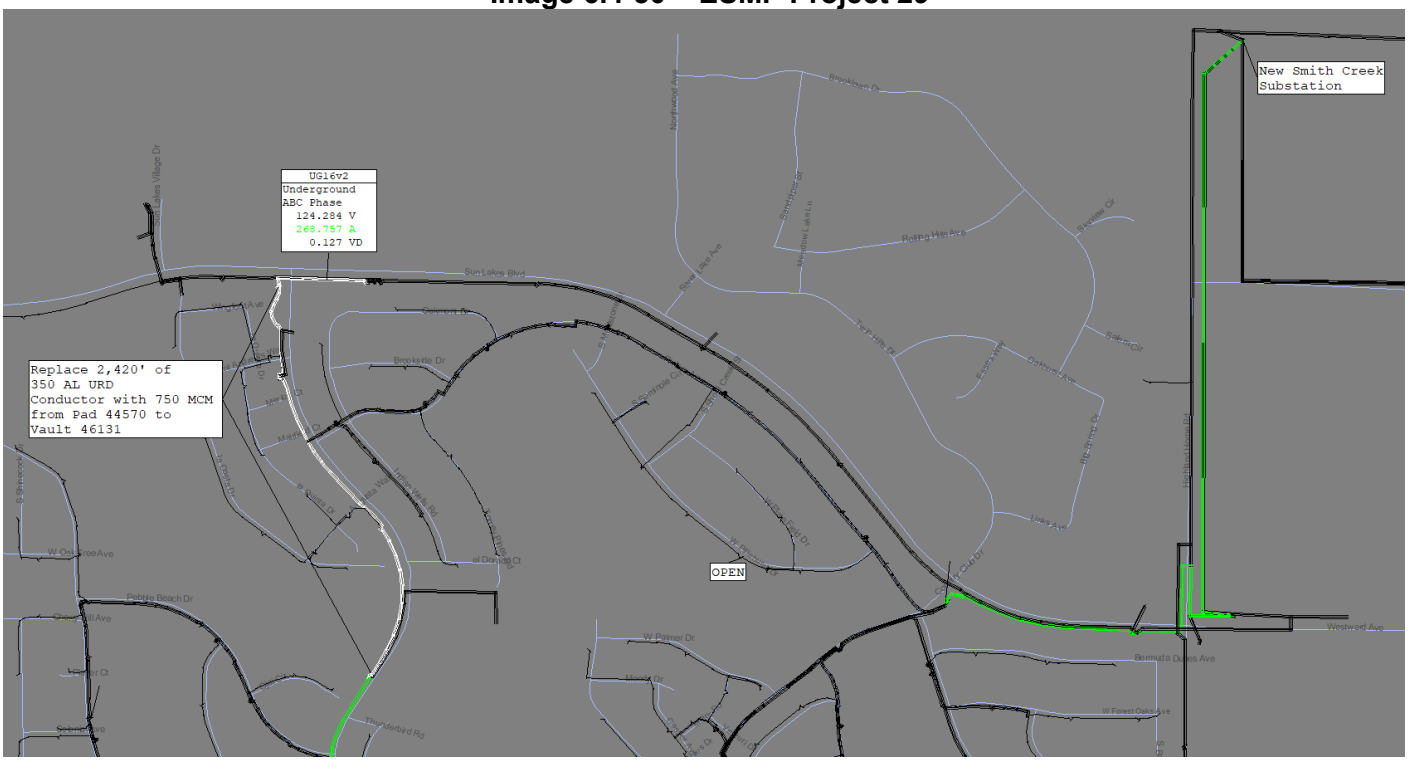


ESMP-29

Issue: UG16v2, 3Ø, 350 MCM URD conductor reaches 70% capacity.

Resolution: Replace 2,420' of 3Ø, 350 MCM URD with 3Ø, 750 MCM URD beginning at Pad 44570 along Sun Lakes Blvd, heading south on Country Club Dr. and ending at Vault 46131. Estimated cost: $370,300 (2033).

Image 6.4-30 – ESMP Project 29



Smith Creek CKT's 27 & 28

Circuits 27 and 28 will be constructed to serve new planned load in an area bordered by Interstate 10 and Westward Ave. on the north and south and Highland Home Rd. and Sunset Ave. on the east and west.

ESMP-30

- Construct 2, 3Ø, 750 MCM URD lines from the feeder bay heading due south from the substation to what will be the extension of W Lincoln St. and then heading east along W. Lincoln St. to Sunset Ave at Pole104911. Estimated cost: $2,372,900 (2032).

Image 6.4-31 – ESMP Project 30

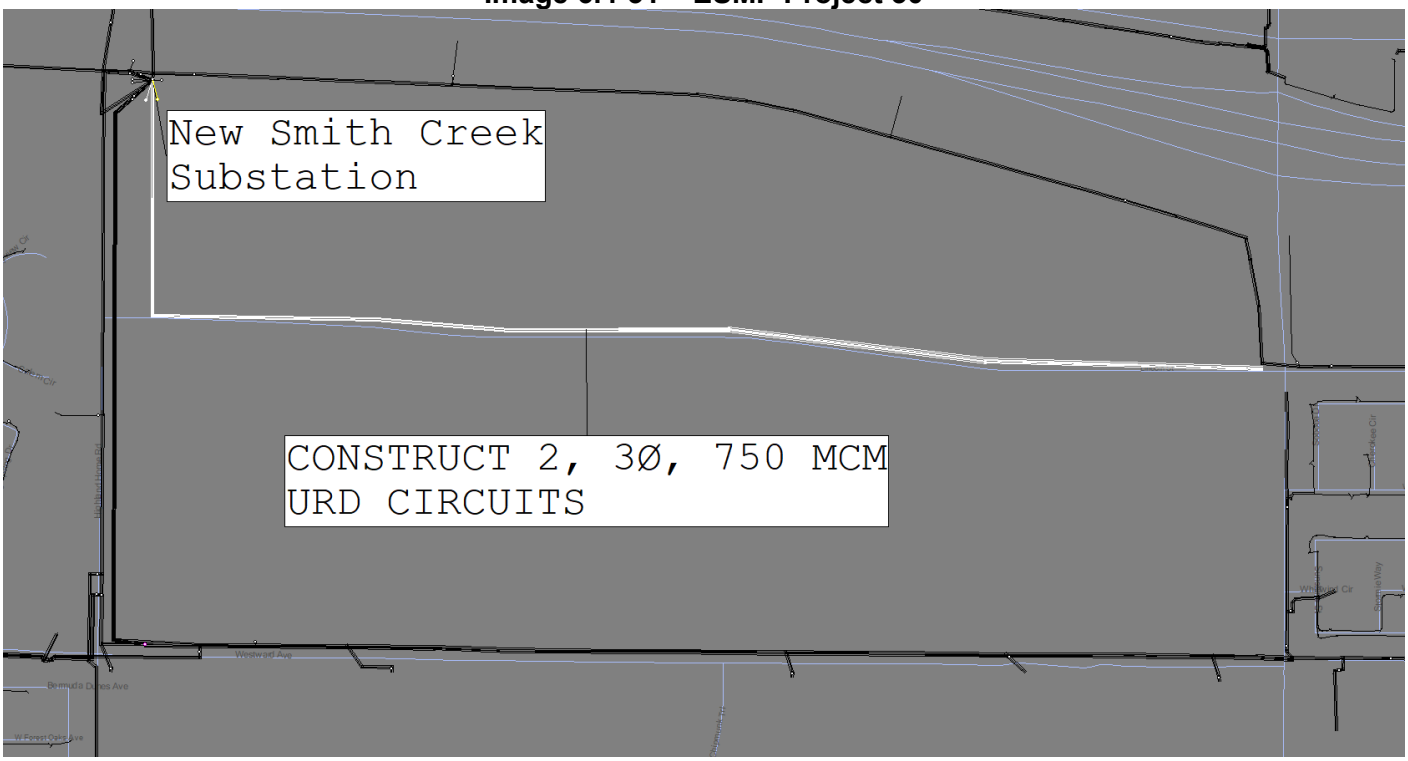
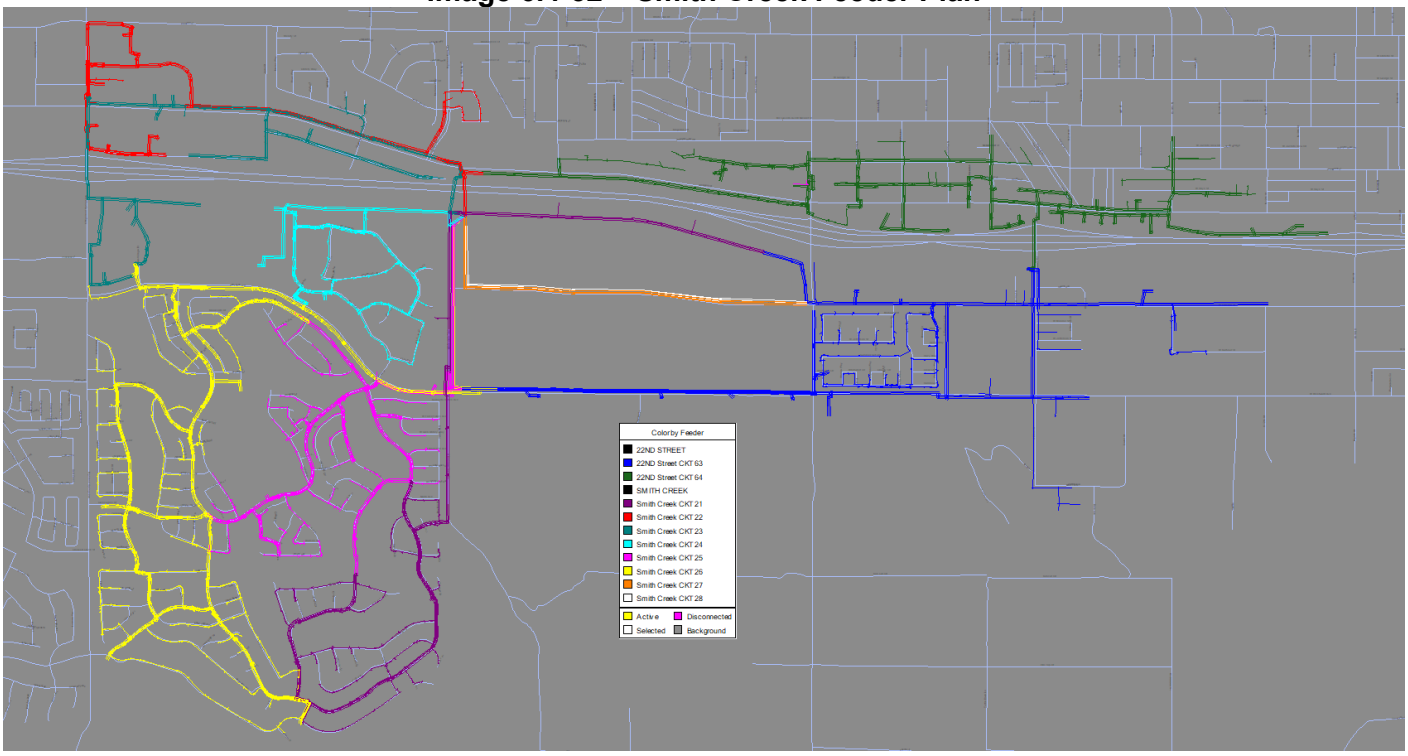


Image 6.4-32 – Smith Creek Feeder Plan



6.5 – TOTAL COST ESTIMATE

The tables below contain a breakdown of the total estimated cost of the 15-Year ESMP.

Table 6.5-1 – 15-Year ESMP Cost Estimate (2031-2035)

	2031	2032	2033	2034	2035
OH Maintenance Program					
Total Cost	$1,228,822	$1,265,687	$1,303,658	$1,342,767	$1,383,050
CIAC	$0	$0	$0	$0	$0
BEU Funding Cost	$1,228,822	$1,265,687	$1,303,658	$1,342,767	$1,383,050
Capital-Maintenance Projects					
Total Cost	$6,850,000	$1,500,000	$0	$0	$0
CIAC	$3,000,000	$0	$0	$0	$0
BEU Funding Cost	$3,850,000	$1,500,000	$0	$0	$0
System Improvement Projects					
Total Cost	$3,468,800	$3,405,300	$370,300	$237,600	$1,049,700
CIAC	$0	$0	$0	$0	$0
BEU Funding Cost	$3,468,800	$3,405,300	$370,300	$237,600	$1,049,700
15-year ESMP Cost					
Total Cost	$11,547,622	$6,170,987	$1,673,958	$1,580,367	$2,432,750
CIAC	$3,000,000	$0	$0	$0	$0
BEU Funding Cost	$8,547,622	$6,170,987	$1,673,958	$1,580,367	$2,432,750

Table 6.5-2 – 15-Year ESMP Cost Estimate (2036-2040)

	2036	2037	2038	2039	2040
OH Maintenance Program					
Total Cost	$1,521,715	$1,567,367	$1,614,387	$1,662,819	$1,712,704
CIAC	$0	$0	$0	$0	$0
BEU Funding Cost	$1,521,715	$1,567,367	$1,614,387	$1,662,819	$1,712,704
Capital-Maintenance Projects					
Total Cost	$0	$0	$0	$0	$0
CIAC	$0	$0	$0	$0	$0
BEU Funding Cost	$0	$0	$0	$0	$0
System Improvement Projects					
Total Cost	$1,190,000	$166,400	$539,700	$2,900	$132,800
CIAC	$0	$0	$0	$0	$0
BEU Funding Cost	$1,190,000	$166,400	$539,700	$2,900	$132,800
15-year ESMP Cost					
Total Cost	$2,711,715	$1,733,767	$2,154,087	$1,665,719	$1,845,504
CIAC	$0	$0	$0	$0	$0
BEU Funding Cost	$2,711,715	$1,733,767	$2,154,087	$1,665,719	$1,845,504

Table 6.5-3 – 15-Year ESMP Cost Estimate (2041-2045)

	2041	2042	2043	2044	2045	Totals
OH Maintenance Program						
Total Cost	$1,764,085	$1,817,007	$1,871,518	$1,927,663	$1,985,493	$23,968,742
CIAC	$0	$0	$0	$0	$0	$0
BEU Funding Cost	$1,764,085	$1,817,007	$1,871,518	$1,927,663	$1,985,493	$23,968,742
Capital-Maintenance Projects						
Total Cost	$0	$0	$0	$0	$0	$8,350,000
CIAC	$0	$0	$0	$0	$0	$3,000,000
BEU Funding Cost	$0	$0	$0	$0	$0	$5,350,000
System Improvement Projects						
Total Cost	$348,700	$3,400	$115,200	$120,400	$388,100	$11,539,300
CIAC	$0	$0	$0	$0	$0	$0
BEU Funding Cost	$348,700	$3,400	$115,200	$120,400	$388,100	$11,539,300
15-year ESMP Cost						
Total Cost	$2,112,785	$1,820,407	$1,986,718	$2,048,063	$2,373,593	**$43,858,042**
CIAC	$0	$0	$0	$0	$0	**$3,000,000**
BEU Funding Cost	$2,112,785	$1,820,407	$1,986,718	$2,048,063	$2,373,593	**$40,858,042**

For the BEU funding cost, 22% is for OH Maintenance Program, 63% is for Capital Maintenance Projects, and 15% is for System-Improvement Projects.

7.0 – 2026-2045 ESMP SUMMARY

7.1 – Total Overhead Maintenance Program

The Overhead Maintenance Program includes the routine inspection and replacement of poles on the sub-transmission and distribution circuits on the BEU system.

It is projected that BEU will inspect a total of 22,100 poles for the duration of the ESMP. An estimated cost of $278 per pole inspection was used for 2026 and a 3% inflation to this cost was assumed per year every year after thru 2045. The total estimated cost for pole inspections for the ESMP is $8,501,657.

It is projected that BEU will replace 1,850 for the duration of the ESMP. An estimated cost of $7,746 per pole replacement was used for 2026 and a 3% inflation to this cost was assumed per year every year after thru 2045. The total estimated cost for pole replacements for the ESMP is $19,525,523.

The total estimated cost for the Overhead Maintenance Program for the ESMP is $28,027,180.

7.2 – Total Capital Maintenance Program

BEU has identified 23 Capital Maintenance Projects to include in the ESMP. The total estimated cost for these projects is $29,134,500. It is projected that BEU will receive $12,293,750 in contributions in aid to these projects bringing the total BEU funding cost to $16,840,750.

7.3 – Total Distribution System Improvement Projects

Analysis was run using Milsoft's Windmil software on the distribution system to determine system improvement projects to correct low voltage, decrease conductor and equipment loading, and reduce single phase line loading to aid in phase balancing. The analysis results include:

- 19 projects to switch load to adjacent lines at a total estimated cost $58,800
- 12 projects for new underground line construction totaling $7,443,500
- 2 projects for new overhead line construction totaling $1,219,000,
- 9 projects for single-phase to three-phase line rebuild totaling $2,142,100
- 11 projects for overhead line rebuild using larger conductor totaling $2,212,100
- 4 projects for replacing underground line using larger conductor totaling $1,269,500

The total estimated cost for distribution system improvements is $14,345,000.

7.4 – Total 2026-2045 ESMP Cost Estimate

The table below contains a breakdown of the total estimate cost for the 2026-2045 ESMP.

2026-2045 Electric Service Master Plan

		5-year CIP	15- Year ESMP	Totals
OH Maintenance Program				
	Total Cost	$4,058,438	$23,968,742	$28,027,180
	CIAC	$0	$0	$0
	BEU Funding Cost	$4,058,438	$23,968,742	$28,027,180
Capital Maintenance. Projects				
	Total Cost	$20,784,500	$8,350,000	$29,134,500
	CIAC	$9,293,750	$3,000,000	$12,293,750
	BEU Funding Cost	$11,490,750	$5,350,000	$16,840,750
System Improvement Projects				
	Total Cost	$2,805,700	$11,539,300	$14,345,000
	CIAC	$0	$0	$0
	BEU Funding Cost	$2,805,700	$11,539,300	$14,345,000
Total ESMP Cost				
	Total Cost	$27,648,638	$43,858,042	$71,506,680
	CIAC	$9,293,750	$3,000,000	$12,293,750
	BEU Funding Cost	$18,354,888	$40,858,042	$59,212,930

CITY OF BANNING, CALIFORNIA

2026-2045 ELECTRIC SERVICE MASTER PLAN

APRIL 2026

Prepared by:

Finley Engineering Company, Inc.

On behalf of:

Banning Electric Utility

BANNING ELECTRIC UTILITY

PROVIDING POWER TO THE COMMUNITY OF BANNING SINCE 1922

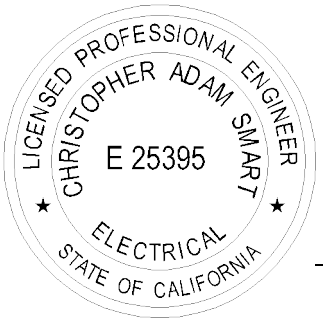
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Banning, CA 92220
951.922.3100
www.banningca.gov

ENGINEERS CERTIFICATION

I, Christopher Adam Smart, P.E., herby certify that this *2026-2045 Electric Service Master Plan* was prepared by me or under my direct Supervision and that I am a duly Licensed Professional Engineer under the laws of the state of California, license number E 25395.



Christopher A. Smart, P.E.

Digitally signed by Christopher A. Smart, P.E.
Date: 2026.04.29 14:47:47 -05'00'

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1.0 - EXECUTIVE SUMMARY

1.1 - Introduction

The City of Banning owns the utility that provides electric service to Banning, California and the electric utility is maintained by Banning Electric Utility (BEU). Originally established in 1913 as a private utility, the City of Banning purchased the electric utility in 1922 and has been providing electric service to its residents since that time. Banning's energy resource base includes portions of nuclear, geothermal, solar, landfill gas-to-energy, and hydro generating plants, that provide the majority of electricity required to meet the system peak demand.

Through an agreement with Southern California Edison Company (SCE), the BEU system utilizes SCE's transmission system in bringing power from the California Independent System Operator ("CAISO") controlled high voltage transmission grid to the BEU distribution system at the Banning Substation.

The City of Banning supports clean-energy and is committed to additional renewable energy resources to its already diverse portfolio. BEU has met and/or exceeded the renewable energy requirements of Compliance Period #1, Compliance Period #2, and Compliance Period #3 of the State's Renewable Portfolio Standard (RPS) program. The Utility was 81 percent renewable in 2022, already exceeding the current State mandate of 60 percent by 2030.

BEU is a member of the Southern California Public Power Authority (SCPPA) enjoying the benefits of joint action through cost effective planning, construction, management, and operations of electrical energy resources.

1.2 - Purpose of Study

This Electric Service Master Plan (ESMP) is a report prepared by Finley Engineering Company, Inc. (FEC) based on an analysis and review of the historical system growth and operation to determine projections of future growth, recommendations for capital improvements, and scheduled system maintenance that will insure the continued economical and reliable operation of the system over the ensuing 20-year period.

The analysis was completed in two parts. The first 5-year analysis was completed as the Capital Improvement Plan (CIP) and includes projects and recommendations determined from the analysis, Capital Improvements specified by BEU, and Capital Maintenance also specified by BEU. This CIP will be presented to the City Council as the actual construction plan for the next 5 years. The 15 year ESMP analysis was completed as a guideline for determining the future system performance and improving system capacity for expansion.

1.3 – Existing System Review

BEU maintains three, 34.5 kV sub-transmission circuits totaling approximately eighteen miles which feed six distribution substations.

These six distribution substations have approximately 27 circuits feeding 147 miles of overhead and underground distribution line with an operating voltage of 7.2/12.5 kV. An estimated 47% of the total distribution line is underground.

Along these distribution lines, BEU serves approximately 15,570 consumer meters. In 2024, the BEU system experienced a coincident summer peak demand of 55.1 MW and a winter peak demand of 22.3 MW. Historically, the BEU system is a summer peaking system with the summer peak more than double the winter peak. Also in 2024, BEU purchased approximately 157,000 MWH's through its portfolio of long-term power purchase agreements as well as purchases from the CAISO wholesale markets, distributed among the membership of Residential, Small Commercial, Medium Commercial, Industrial, Security Lighting, Street Lighting, and Well Service customers.

1.4 – Total ESMP Cost Estimate

Table 1.4-1 – Total ESMP Cost Estimate

2026-2045 Electric Service Master Plan

	5-year CIP	15-Year ESMP	Totals
OH Maintenance Program			
Total Cost	$4,058,438	$23,968,742	$28,027,180
CIAC	$0	$0	$0
BEU Funding Cost	$4,058,438	$23,968,742	$28,027,180
Capital-Maintenance Projects			
Total Cost	$20,784,500	$8,350,000	$29,134,500
CIAC	$9,293,750	$3,000,000	$12,293,750
BEU Funding Cost	$11,490,750	$5,350,000	$16,840,750
System Improvement Projects			
Total Cost	$2,805,700	$11,539,300	$14,345,000
CIAC	$0	$0	$0
BEU Funding Cost	$2,805,700	$11,539,300	$14,345,000
Total ESMP Cost			
Total Cost	$27,648,638	$43,858,042	$71,506,680
CIAC	$9,293,750	$3,000,000	$12,293,750
BEU Funding Cost	$18,354,888	$40,858,042	$59,212,930

Of the total cost, 47% is for the OH Maintenance Program, 28% is for Capital Maintenance Projects, and 24% is for System Improvement Projects.

2.0 – SYSTEM PLANNING CRITERIA

2.1 - Distribution System Planning Criteria

The distribution projects contained in this ESMP are recommended based upon the following planning criteria.

a. With an assumed delivered voltage of 125 volts (1.041 per unit on a 120 volt base) during peak load conditions, the design minimum allowable voltage at the primary terminals of any distribution transformer shall be 118 volts (0.98 per unit on a 120 volt base).

b. Voltage regulators and step transformers will be upgraded when projected peak loads exceed 85% of the device's rating.

c. Sectionalizing devices will be upgraded when projected peak loads exceed 70% of the device's continuous current rating.

d. Primary conductors on the 7.2/12.5 kV and below distribution system will be upgraded when projected peak loads exceed 60% of the conductor's thermal rating and may be subject to upgrade before this time if anticipated load growth may potentially exceed 60% of the conductor's thermal rating

e. Primary conductors on the 34.5 kV sub-transmission system will be upgraded when projected peak loads exceed 90% of the conductor's thermal rating and may be subject to upgrade before this time if anticipated load growth may potentially exceed 90% of the conductor's thermal rating

f. Single-phase primary voltage lines will be limited to 35 amps maximum loading.

g. The power factor at the delivery point under peak loading conditions is desired to be no less than 95%. The off-peak power factor should preferably be maintained between 95% lagging and 95% leading. This criterion is subject to the cost of the installation of capacitors, switches, and controls vs. the cost of kilowatt (kW) loss reduction.

2.1.1 - Distribution System Design Criteria

The following design criteria was considered when determining projects contained in this ESMP.

a. Feeder current balance will be maintained at plus or minus 20% of the average per phase loading during peak conditions. This criterion may be relaxed in areas where it could impose unnecessary or premature costs.

b. Conductor sizes will be economically sized but may be modified to conform to BEU's standard conductor sizes.

c. Load switching and backfeeding will be considered to defer unnecessary or premature costs to correct any load voltage or high conductor loading.

d. Load switching and backfeeding will be considered to defer unnecessary or premature costs to correct any high single-phase loading. For areas where there is no backfeed or load switch solution, additional conductors will be added to allow for phase balancing.

e. Relocation of existing line sections will be considered where inaccessibility impedes the maintenance of line sections or jeopardizes the service or reliability of line sections.

2.2 – Substation Planning Criteria

The substation projects contained in this ESMP are recommended based upon the following planning criteria.

a. Substation transformers will limited to 95% of the max kVA rating of the transformer. The following improvements will be considered in the event the load exceeds 95% of the max kVA rating:

a. Load switching to adjacent substations
b. Upgrade of existing transformer
c. Installation of an additional transformer in the existing substation
d. Construction of a new substation

2.3 – Basis of Cost Estimates

The following tables for material and labor costs were used to determine system improvement project costs. The costs were taken from actual prices provided by BEU as well as prices received by FEC from other sources.

Table 2.3-1 Conductor Material Cost

Conductor (price per foot)				
OH Conductor			**UG Conductor**	
#2 Copper	$1.31		1/0 AL, 15 kV	$2.03
#2 ACSR	$0.26		1/0 CU, 15 kV	$10.98
#4 ACSR	$0.15		1/0 CU, 35 kV	$8.47
1/0 ACSR	$0.30		4/0 CU	$6.95
4/0 Copper	$3.11		4/0 AL	$4.97
4/0 ACSR	$0.80		350 CU	$7.53
336 ACSR	$1.62		750 AL	$13.38

Table 2.3-2 Pole Material Cost

Pole	Price per unit	Pole	Price per unit
35' Douglas Fir, H2	$1,269.30	35’ Wood, Class 2	$1,067.38
		40’ Wood, Class 2	$766.35
45' Douglas Fir, H2	$1,771.08	45’ Wood, Class 2	$953.80
		50’ Wood, Class 2	$1,135.73
55' Douglas Fir, H2	$2,889.48	55’ Wood, Class 2	$918.72
60' Douglas Fir, H2	$2,945.89	60’ Wood, Class 2	$1,362.29

Table 2.3-3 Transformer Material Cost

Transformer	Price per unit
10 kVA O.H. Transformer S-Type 7,200	$500.00
15 kVA 7,200, 120/240 DV S-Type	$645.42
25 kVA 7,200, 120/240 DV S-Type	$919.16
37 kVA 7,200, 120/240 DV S-Type	$1,496.65
50 kVA 7,200 120/240	$3,992.05
75 kVA 3Ø 12,470/7,200 120/208	$6,023.22
300 kVA DV	$8,583.61
750 kVA 3Ø 12,470/7,200	$14,626.30
1,000 kVA 3Ø 12,470/7,200 DV	$10,809.48
2,500 kVA 3Ø 12,470/7,200 277/480	$34,539.92
25 kVA 1Ø 12,470/7,200 120/240 Pdmnt	$3,685.34
37.5 kVA 1Ø 12,400/7,200 DV Pdmnt	$1,988.01
75 kVA 1Ø 12,470/7,200 120/240 Pdmnt	$7,110.42
300 kVA 3Ø 12,470/4,160 DV Pdmnt 208/120	$13,547.15
500 kVA 3Ø Pdmnt	$10,442.65
1,500 kVA DV 3Ø Pdmnt 277/480	$31,037.04

Table 2.3-4 Framing Units Material Cost

Framing Unit	Price per unit
A1.3P	$75.32
A1.11P	$493.46
A5.2G	$286.41
A3.1	$78.74
A6.21	$1,080.29
G1.2	$317.41
G1.2	$1,318.96
A5.1	$195.12
A5.21	$888.35
(A4.1)	$255.90
G1.3	$433.79
G1.3	$1,127.02
C1.11	$628.33
C1.81G	$1,592.53
C1.11,A5.21	$1,516.68
C5.82G	$3,472.80
C3.1	$208.96
C3.1,A5.1	$404.08
C3.1,A5.21	$1,097.31
C3.1, C5.1	$376.78
C5.1	$167.82
C5.1,A5.1	$362.94
C5.1,A5.21	$1,056.17

Table 2.3-5 Underground Material Cost

Material	Price per unit
Light Duty Secondary Box	$78.42
Light Duty Secondary Lid	$83.43
4" PVC SCH 40 (per foot)	$1.69
1/0 AL U/G (per foot)	$4.75
Service Entrance Sleeve	$0.45
Deadend Shoe Small	$8.58
Power Solve (Pulling Lube)	$58.98

Table 2.3-6 Overhead Construction Labor and Fleet Cost

	Units (hr.)	Unit Cost (per hr.)
Utility Bed P/U 1 ton (Foreman) (2 hrs. per connection)	4	$27.78
2 Person Lift (Bucket Truck) 55' (2 hrs. per connection)	2	$51.68
4 Person Crew	4	$466.73
3 Person Crew (2 hours per connection)	4	$352.02
2 Person Crew	2	$237.31
Electrical Engineering Supervisor (0.5 hrs. per connection)	1	$125.98
Electric Service Planning Supervisor (0.5 hrs. per connection)	1	$127.97
GIS Technician (1 hr. per connection)	2	$59.21

For overhead line, project cost estimates are based on an average of construction 1 mile of line per month with average span lengths at 150’.

Table 2.3-7 Underground Construction Labor and Fleet Cost

Labor	Price per hr.
4 Person Line Crew	$466.73
Powerline Crew Superintendent	$135.93
Fleet	**Price per hr.**
Dump Truck	$55.98
Utility Bed P/U 1 ton (Foreman) (3)	$27.78
Digger Derrick	$48.77
Wire Puller	$24.98
Reel Trailer	$24.98
Backhoe	$23.95

For underground line, project estimates are based on an average construction of 1 month to trench, lay conduit, pull wire and terminate, and backfill 300’.

Engineering (10%) and contingency (5%) were also added for each cost estimate.

3.0 LOAD FORECAST

The demand forecast was prepared to project the summer and winter kW demand per substation area as well as the total system demand for the City of Banning for the 2026-2045 ESMP period. The historical non-coincident substation demands as well as the historical coincident system demands were provided by BEU and used as the basis for the forecast. BEU also provided insight into new load additions that are in some sort of application or planning process and were used in the conceptual forecast.

Additional factors that were considered when reviewing the historical peaks include temporary load switching between substations, construction of new substations with permanent load switching, and removal and/or replacement of existing substations.

Along with new load additions, considerations were also made for the addition of EV chargers at new subdivision locations.

This forecast was used to run voltage drop and load flow analysis to determine system improvements required to reliably serve the City of Banning's existing consumers and allow for future consumer growth.

It is projected that the BEU system will reach a non-coincident peak of 110,556 kW in the summer of 2045 and 81,410 kW in the winter of 2045. It is also projected that the BEU system will reach a coincident peak of 90,738 kW in the summer of 2045 and 75,580 kW in the winter of 2045.

A separate conceptual forecast was created to include new load additions that are in some state of application or planning process. It is projected that the BEU system will reach a conceptual non-coincident peak of 176,165 kW in the summer of 2045 and 161,007 kW in the winter of 2045.

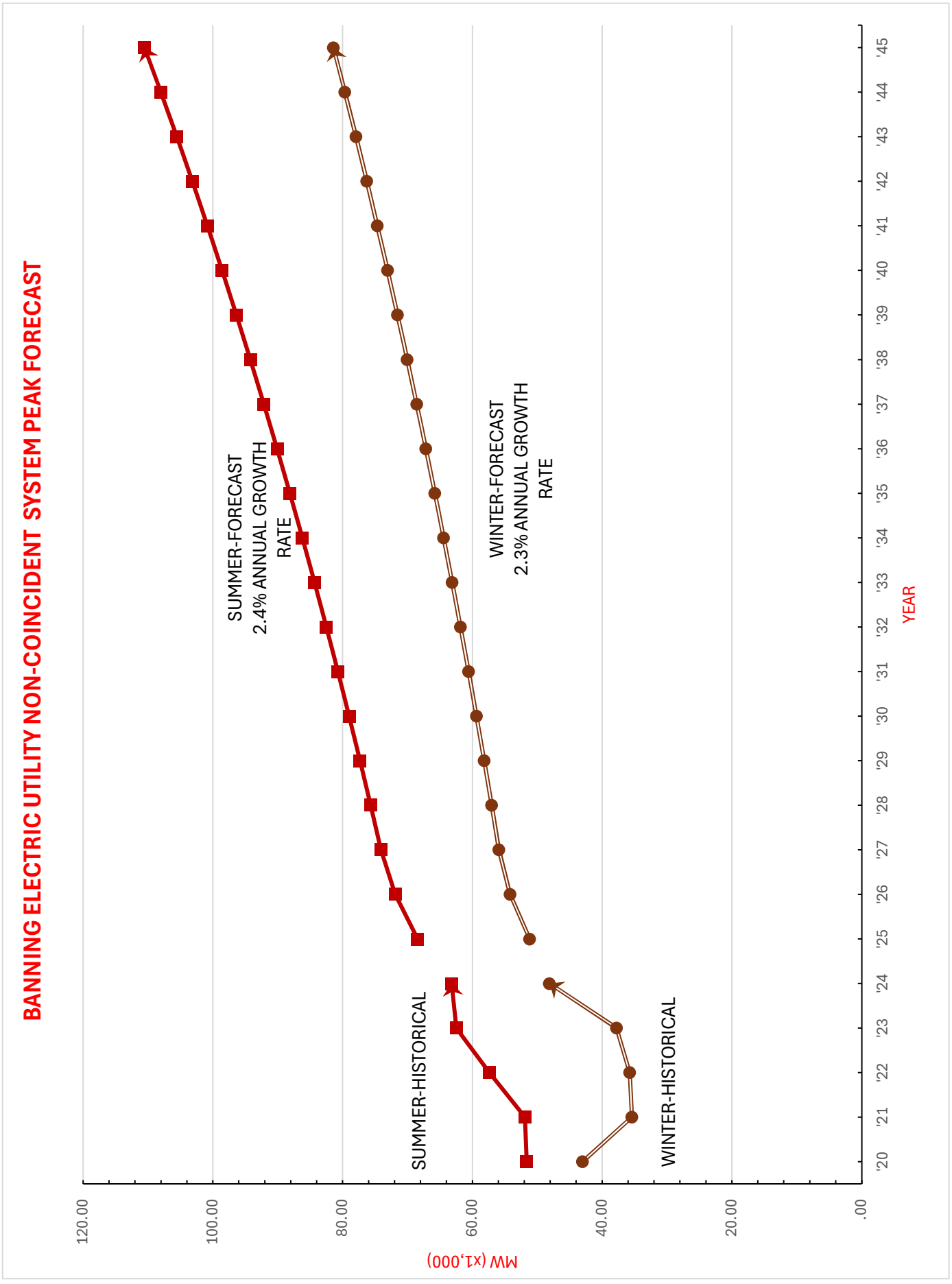
As part of the historical review, MWH purchases were also reviewed and a forecast was determined. It is projected that the BEU system will have an annual coincident purchase of 272,571 MWH's by 2045.

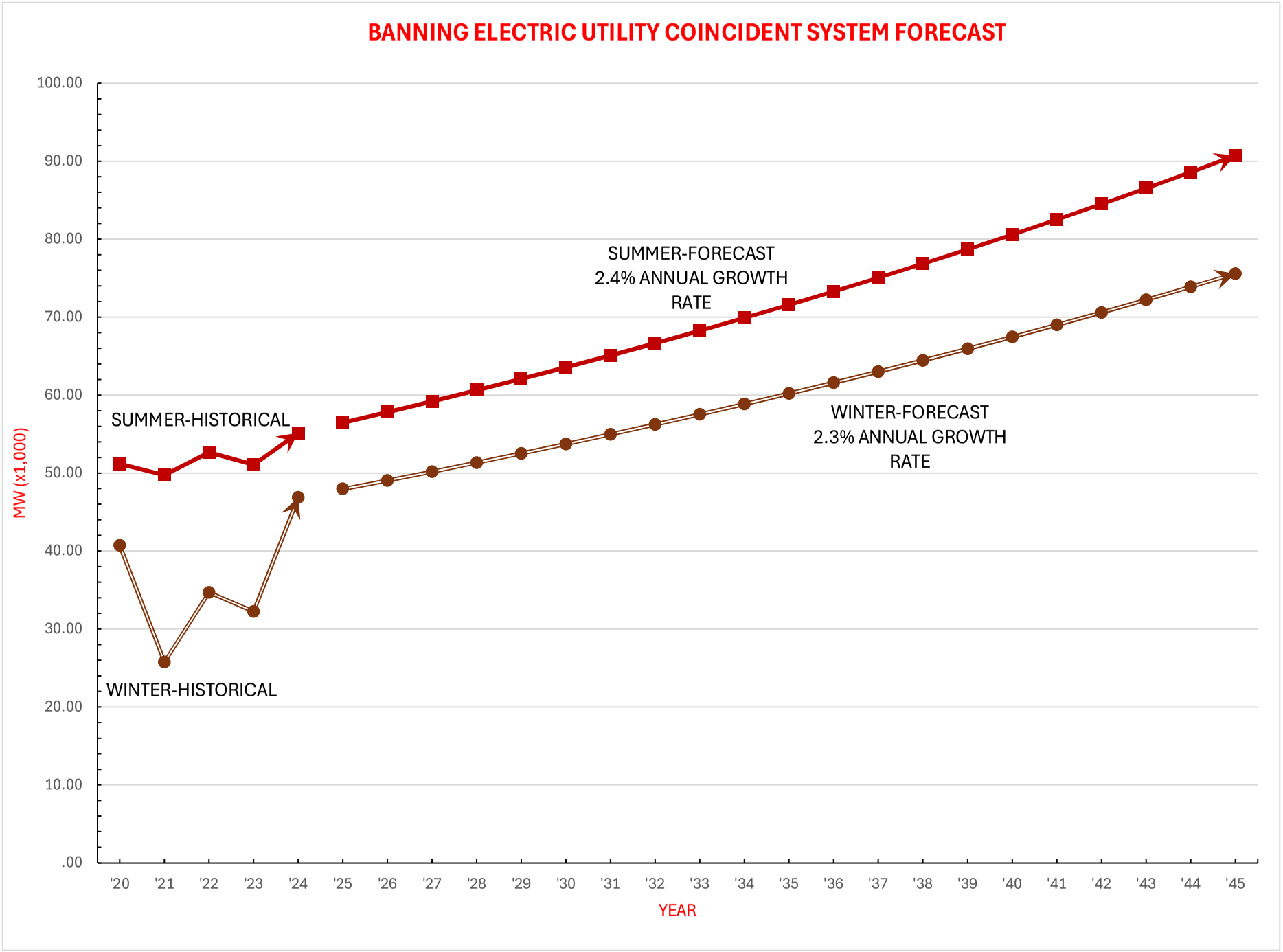
A graphical representation of the individual substation demand forecast as well as the total system coincident demand, non-coincident demand, conceptual non-coincident demand and MWH purchases is included following this page.

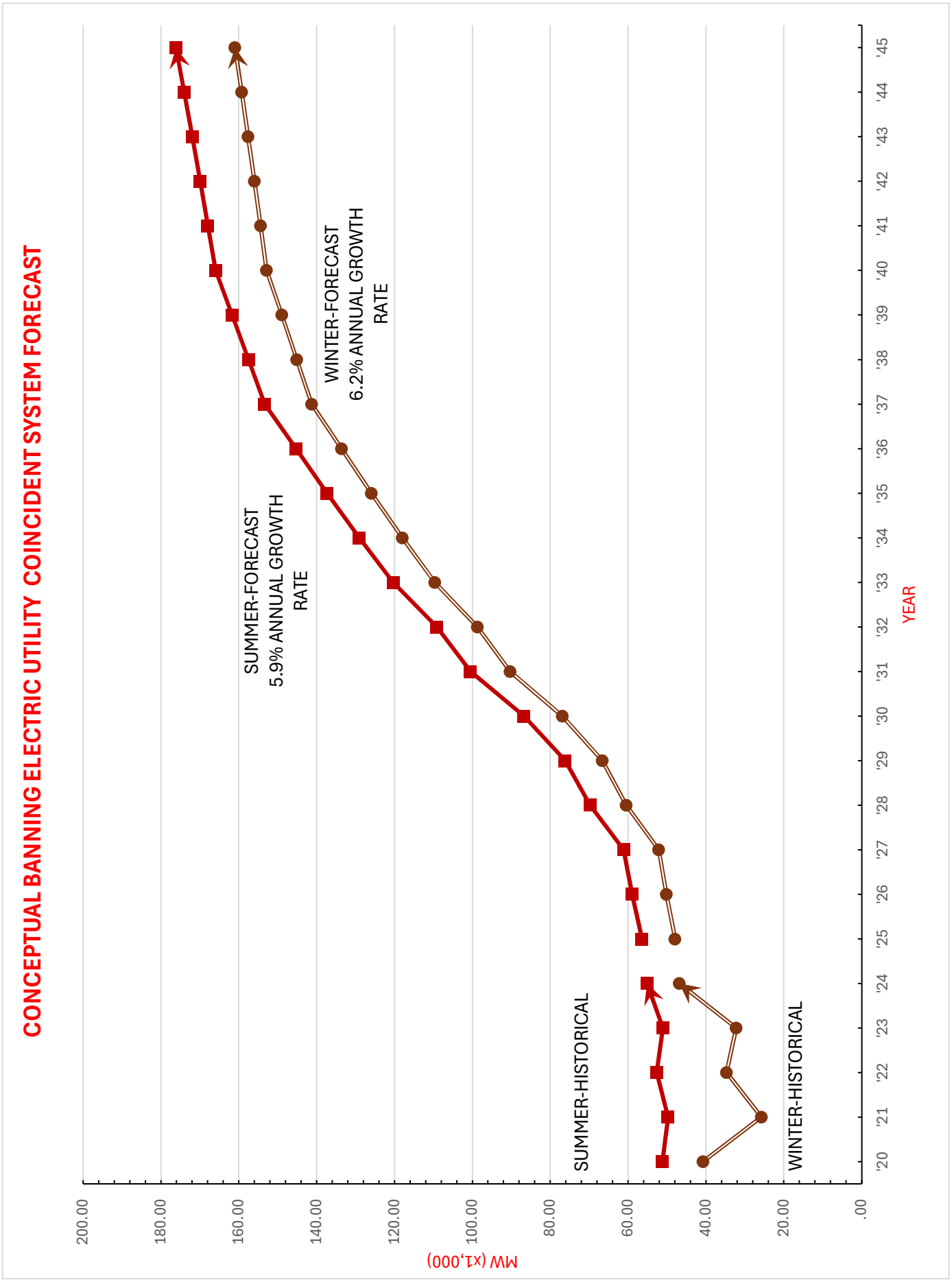
BANNING ELECTRIC UTILTIY
2026-2045 ESMP SYSTEM FORECAST

Peak kW Demand

		Historical					Forecast																					2025-2045 Annual Growth Rate
		2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	
San Gorgonio Total																												
	S	16,425	17,079	16,472	9,131	4,958	16,500	16,830	17,167	17,510	17,860	18,217	18,582	18,953	19,332	19,719	20,113	20,516	20,926	21,345	21,771	22,207	22,651	23,104	23,566	24,037	24,518	2.0%
	W	15,022	12,746	11,267	7,193	3,739	15,000	15,300	15,606	15,918	16,236	16,561	16,892	17,230	17,575	17,926	18,285	18,651	19,024	19,404	19,792	20,188	20,592	21,004	21,424	21,852	22,289	2.0%
					Cannabis Cultivation		3,159	3,159	3,159	3,159	3,159	3,159	3,159	3,159	3,159	3,159	3,159	3,159	3,159	3,159	3,159	3,159	3,159	3,159	3,159	3,159	3,159	
					Yoshinoya		89	89	89	89	89	89	89	89	89	89	89	89	89	89	89	89	89	89	89	89	89	
	S	16,425	17,079	16,472	9,131	4,958	19,748	20,078	20,415	20,758	21,108	21,465	21,830	22,201	22,580	22,967	23,361	23,764	24,174	24,593	25,019	25,455	25,899	26,352	26,814	27,285	27,766	1.7%
	W	15,022	12,746	11,267	7,193	3,739	18,248	18,548	18,854	19,166	19,484	19,809	20,140	20,478	20,823	21,174	21,533	21,899	22,272	22,652	23,040	23,436	23,840	24,252	24,672	25,100	25,537	1.7%
Midway Total																												
	S	13,541	13,649	14,272	17,082	15,786	15,052	15,458	15,876	16,304	16,745	17,197	17,661	18,138	18,628	19,131	19,647	20,178	20,722	21,282	21,856	22,447	23,053	23,675	24,314	24,971	25,645	2.7%
	W	10,384	9,247	7,788	6,868	10,715	9,663	9,924	10,192	10,467	10,750	11,040	11,338	11,644	11,958	12,281	12,613	12,953	13,303	13,662	14,031	14,410	14,799	15,199	15,609	16,031	16,463	2.7%
Airport																												
	S	365	370	360	32	30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
	W	389	389	280	23	22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
22nd Street																												
	S	10,233	10,319	9,736	10,585	11,240	10,670	10,787	10,906	11,026	11,147	11,270	11,394	11,519	11,646	11,774	11,904	12,034	12,167	12,301	12,436	12,573	12,711	12,851	12,992	13,135	13,280	1.1%
	W	8,140	6,529	6,105	6,567	8,018	8,210	8,300	8,392	8,484	8,577	8,672	8,767	8,863	8,961	9,059	9,159	9,260	9,362	9,465	9,569	9,674	9,781	9,888	9,997	10,107	10,218	1.1%
Stagecoach																												
	S	0	0	0	6,634	8,040	6,700	6,834	6,971	7,110	7,252	7,397	7,545	7,696	7,850	8,007	8,167	8,331	8,497	8,667	8,841	9,017	9,198	9,382	9,569	9,761	9,956	2.0%
	W	0	0	0	3,616	7,955	3,800	3,876	3,954	4,033	4,113	4,196	4,279	4,365	4,452	4,541	4,632	4,725	4,819	4,916	5,014	5,114	5,217	5,321	5,427	5,536	5,647	2.0%
Ivy																												
	S	0	0	5,308	7,206	8,333	5,400	5,508	5,618	5,731	5,845	5,962	6,081	6,203	6,327	6,453	6,583	6,714	6,849	6,985	7,125	7,268	7,413	7,561	7,713	7,867	8,024	2.0%
	W	0	0	4,493	4,890	6,235	4,500	4,590	4,682	4,775	4,871	4,968	5,068	5,169	5,272	5,378	5,485	5,595	5,707	5,821	5,938	6,056	6,178	6,301	6,427	6,556	6,687	2.0%
					Morongo Health Clinic		0	0	636	636	636	636	636	636	636	636	636	636	636	636	636	636	636	636	636	636	636	
	S	0	0	5,308	7,206	8,333	5,400	5,508	6,254	6,367	6,481	6,598	6,717	6,839	6,963	7,089	7,219	7,350	7,485	7,621	7,761	7,904	8,049	8,197	8,349	8,503	8,660	2.4%
	W	0	0	4,493	4,890	6,235	4,500	4,590	5,318	5,411	5,507	5,604	5,704	5,805	5,908	6,014	6,121	6,231	6,343	6,457	6,574	6,692	6,814	6,937	7,063	7,192	7,323	2.5%
Sunset																												
	S	8,140	8,099	9,586	11,441	14,821	10,439	10,857	11,291	11,742	12,212	12,701	13,209	13,737	14,286	14,858	15,452	16,070	16,713	17,382	18,077	18,800	19,552	20,334	21,147	21,993	22,873	4.0%
	W	6,716	5,803	5,037	8,299	11,443	6,319	6,572	6,835	7,108	7,392	7,688	7,996	8,315	8,648	8,994	9,354	9,728	10,117	10,522	10,942	11,380	11,835	12,309	12,801	13,313	13,846	4.0%
					Crestwood Communities		432	864	864	864	864	864	864	864	864	864	864	864	864	864	864	864	864	864	864	864	864	
					Vista Robles KB homes		0	1,512	1,512	1,512	1,512	1,512	1,512	1,512	1,512	1,512	1,512	1,512	1,512	1,512	1,512	1,512	1,512	1,512	1,512	1,512	1,512	
	S	8,140	8,099	9,586	11,441	14,821	10,871	13,233	13,667	14,118	14,588	15,077	15,585	16,113	16,662	17,234	17,828	18,446	19,089	19,758	20,453	21,176	21,928	22,710	23,523	24,369	25,249	4.3%
	W	6,716	5,803	5,037	8,299	11,443	6,751	8,948	9,211	9,484	9,768	10,064	10,372	10,691	11,024	11,370	11,730	12,104	12,493	12,898	13,318	13,756	14,211	14,685	15,177	15,689	16,222	4.5%
Alola																												
	S	2,929	2,370	1,646	372	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
	W	2,377	708	782	336	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
Banning Electric Utility Non-Coincident System Peak Forecast																												
	S	51,632	51,885	57,380	62,482	63,207	68,441	71,898	74,088	75,683	77,322	79,004	80,732	82,507	84,330	86,202	88,126	90,103	92,134	94,221	96,367	98,571	100,837	103,167	105,562	108,024	110,556	2.4%
	W	43,029	35,422	35,752	37,792	48,126	51,172	54,186	55,919	57,045	58,200	59,385	60,600	61,847	63,127	64,440	65,788	67,172	68,592	70,050	71,546	73,083	74,661	76,281	77,945	79,654	81,410	2.3%
Banning Electric Utility System Coincident Forecast																												
	S	51,197	49,751	52,667	51,096	55,143	56,467	57,822	59,210	60,631	62,086	63,576	65,102	66,664	68,264	69,902	71,580	73,298	75,057	76,858	78,703	80,592	82,526	84,507	86,535	88,612	90,738	2.4%
	W	40,752	25,776	34,719	32,262	46,883	47,962	49,065	50,193	51,348	52,529	53,737	54,973	56,237	57,530	58,854	60,207	61,592	63,009	64,458	65,940	67,457	69,009	70,596	72,219	73,881	75,580	2.3%
Conceptual Banning Electric Utility System Coincident Forecast																												
	S	51,197	49,751	52,667	51,096	55,143	56,467	58,962	61,201	69,810	76,184	86,777	100,472	109,135	120,377	129,082	137,336	145,321	153,347	157,527	161,751	166,019	167,953	169,934	171,962	174,039	176,165	5.9%
	W	40,752	25,776	34,719	32,262	46,883	47,962	50,205	52,185	60,527	66,627	76,938	90,343	98,708	109,643	118,034	125,963	133,615	141,299	145,127	148,988	152,884	154,436	156,023	157,646	159,308	161,007	6.2%
					Bridge-Morongo Logistics		0	0	0	0	1,031	1,991	2,858	3,344	3,641	3,641	3,641	3,641	3,641	3,641	3,641	3,641	3,641	3,641	3,641	3,641	3,641	
					Sunset Crossroads		0	0	0	2,712	2,712	6,967	10,213	10,561	13,639	14,439	14,748	14,748	14,748	14,748	14,748	14,748	14,748	14,748	14,748	14,748	14,748	
					Rancho San Gorgonio		0	0	0	3,888	7,776	11,664	15,552	19,440	23,328	27,216	31,104	34,992	38,880	38,880	38,880	38,880	38,880	38,880	38,880	38,880	38,880	
					Mission Heights		0	0	0	0	0	0	2,379	4,758	7,137	9,516	11,895	14,274	16,653	19,032	21,411	23,790	23,790	23,790	23,790	23,790	23,790	
					First Hathaway Logistics		0	0	0	0	0	0	471	471	471	471	471	471	471	471	471	471	471	471	471	471	471	
					Banning Commerce Center		0	0	0	0	0	0	438	438	438	438	438	438	438	438	438	438	438	438	438	438	438	
					WEKA		0	0	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	
					Charles St. CDRE		0	0	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	
					KCB Towers		0	0	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	
					Pallet Yard		0	0	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	
					First Lincoln Logistics		0	0	186	186	186	186	186	186	186	186	186	186	186	186	186	186	186	186	186	186	186	
					Brown Strauss		0	390	390	390	390	390	390	390	390	390	390	390	390	390	390	390	390	390	390	390	390	
					Wyndam Micro Hotel		0	750	750	750	750	750	750	750	750	750	750	750	750	750	750	750	750	750	750	750	750	
					DR Horton		0	0	588	1,175	1,175	1,175	1,175	1,175	1,175	1,175	1,175	1,175	1,175	1,175	1,175	1,175	1,175	1,175	1,175	1,175	1,175	
					Atwell Large Retail		0	0	0	0	0	0	880	880	880	880	880	880	880	880	880	880	880	880	880	880	880	


BANNING ELECTRIC UTILITY NON-COINCIDENT SYSTEM PEAK FORECAST
SUMMER-FORECAST
2.4% ANNUAL GROWTH
RATE
WINTER-FORECAST
2.3% ANNUAL GROWTH
RATE
SUMMER-HISTORICAL
WINTER-HISTORICAL
MW (x1,000)
YEAR
120.00
100.00
80.00
60.00
40.00
20.00
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BANNING ELECTRIC UTILITY COINCIDENT SYSTEM FORECAST
100.00
90.00
80.00
70.00
60.00
50.00
40.00
30.00
20.00
10.00
.00
MW (x1,000)
SUMMER-HISTORICAL
WINTER-HISTORICAL
SUMMER-FORECAST
2.4% ANNUAL GROWTH
RATE
WINTER-FORECAST
2.3% ANNUAL GROWTH
RATE
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'43
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'45
YEAR


CONCEPTUAL BANNING ELECTRIC UTILITY COINCIDENT SYSTEM FORECAST
SUMMER-FORECAST
5.9% ANNUAL GROWTH
RATE
WINTER-FORECAST
6.2% ANNUAL GROWTH
RATE
SUMMER-HISTORICAL
WINTER-HISTORICAL
MW (x1,000)
YEAR
200.00
180.00
160.00
140.00
120.00
100.00
80.00
60.00
40.00
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BANNING ELECTRIC UTILITY
2026-2045 ESMP NON-COINCIDENT SYSTEM FORECAST

Projected Load Data 2025 - 2031

	2025		2026		2027		2028		2029		2030		2031	
	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW
Jan	11,577	21.27	12,259	22.52	12,651	23.24	12,906	23.71	13,167	24.19	13,435	24.68	13,710	25.19
Feb	10,470	21.33	11,086	22.58	11,441	23.31	11,671	23.78	11,907	24.26	12,150	24.75	12,399	25.26
Mar	10,870	20.69	11,511	21.91	11,879	22.61	12,118	23.07	12,363	23.54	12,615	24.01	12,873	24.51
Apr	13,733	32.53	14,427	34.18	14,867	35.22	15,187	35.98	15,515	36.76	15,853	37.56	16,200	38.38
May	15,631	37.92	16,420	39.84	16,920	41.05	17,285	41.94	17,659	42.85	18,043	43.78	18,438	44.74
Jun	18,497	56.73	19,432	59.59	20,023	61.41	20,455	62.73	20,897	64.09	21,352	65.48	21,819	66.92
Jul	25,788	65.86	27,090	69.19	27,915	71.29	28,517	72.83	29,134	74.40	29,768	76.02	30,419	77.69
Aug	26,719	68.44	28,069	71.90	28,923	74.09	29,546	75.68	30,186	77.32	30,843	79.00	31,517	80.73
Sep	21,335	64.10	22,413	67.34	23,096	69.39	23,593	70.88	24,104	72.42	24,628	73.99	25,167	75.61
Oct	19,525	51.17	20,675	54.19	21,336	55.92	21,766	57.05	22,206	58.20	22,658	59.38	23,122	60.60
Nov	10,787	21.08	11,423	22.32	11,788	23.04	12,025	23.50	12,269	23.98	12,518	24.46	12,775	24.97
Dec	12,073	22.02	12,784	23.31	13,193	24.06	13,458	24.54	13,731	25.04	14,010	25.55	14,297	26.07
TOTAL:	197,005		207,588		214,032		218,526		223,138		227,873		232,734	
Summer Peak (MW)		*68.44*		*71.90*		*74.09*		*75.68*		*77.32*		*79.00*		*80.73*
Winter Peak (MW)		*51.17*		*54.19*		*55.92*		*57.05*		*58.20*		*59.38*		*60.60*

Projected Load Data 2032-2038

	2032		2033		2034		2035		2036		2037		2038	
	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW
Jan	13,992	25.71	14,282	26.24	14,579	26.79	14,884	27.35	15,197	27.92	15,518	28.51	15,848	29.12
Feb	12,654	25.78	12,916	26.31	13,184	26.86	13,460	27.42	13,743	28.00	14,034	28.59	14,332	29.20
Mar	13,138	25.01	13,410	25.53	13,689	26.06	13,975	26.60	14,269	27.16	14,571	27.74	14,880	28.33
Apr	16,556	39.22	16,922	40.09	17,297	40.98	17,683	41.89	18,080	42.83	18,488	43.80	18,907	44.79
May	18,843	45.72	19,259	46.73	19,687	47.77	20,126	48.83	20,578	49.93	21,042	51.05	21,518	52.21
Jun	22,299	68.39	22,791	69.90	23,297	71.45	23,817	73.04	24,352	74.68	24,901	76.37	25,465	78.10
Jul	31,087	79.39	31,774	81.15	32,480	82.95	33,205	84.80	33,950	86.70	34,715	88.66	35,501	90.67
Aug	32,210	82.51	32,922	84.33	33,653	86.20	34,404	88.13	35,176	90.10	35,969	92.13	36,783	94.22
Sep	25,720	77.27	26,288	78.98	26,872	80.74	27,472	82.54	28,088	84.39	28,721	86.29	29,372	88.25
Oct	23,598	61.85	24,086	63.13	24,587	64.44	25,102	65.79	25,630	67.17	26,171	68.59	26,728	70.05
Nov	13,038	25.48	13,307	26.01	13,584	26.55	13,868	27.10	14,160	27.67	14,459	28.26	14,767	28.86
Dec	14,591	26.61	14,893	27.16	15,203	27.73	15,521	28.31	15,847	28.90	16,182	29.51	16,526	30.14
TOTAL:	237,725		242,850		248,113		253,518		259,069		264,770		270,627	
Summer Peak (MW)		*82.51*		*84.33*		*86.20*		*88.13*		*90.10*		*92.13*		*94.22*
Winter Peak (MW)		*61.85*		*63.13*		*64.44*		*65.79*		*67.17*		*68.59*		*70.05*

Projected Load Data 2039-2045

	2039		2040		2041		2042		2043		2044		2045	
	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW
Jan	16,187	29.74	16,534	30.38	16,891	31.03	17,258	31.71	17,634	32.40	18,021	33.11	18,418	33.84
Feb	14,638	29.82	14,953	30.46	15,275	31.12	15,607	31.79	15,947	32.49	16,297	33.20	16,656	33.93
Mar	15,198	28.93	15,525	29.55	15,860	30.19	16,204	30.85	16,558	31.52	16,921	32.21	17,294	32.92
Apr	19,337	45.81	19,779	46.86	20,234	47.93	20,702	49.04	21,182	50.18	21,676	51.35	22,184	52.55
May	22,008	53.40	22,512	54.62	23,029	55.88	23,561	57.17	24,108	58.49	24,671	59.86	25,249	61.26
Jun	26,044	79.88	26,640	81.70	27,253	83.58	27,882	85.51	28,530	87.50	29,195	89.54	29,879	91.64
Jul	36,310	92.73	37,140	94.85	37,994	97.03	38,872	99.27	39,774	101.58	40,702	103.95	41,656	106.38
Aug	37,621	96.37	38,482	98.57	39,366	100.84	40,276	103.17	41,211	105.56	42,172	108.02	43,160	110.56
Sep	30,041	90.26	30,728	92.32	31,434	94.44	32,161	96.63	32,907	98.87	33,675	101.17	34,464	103.55
Oct	27,299	71.55	27,885	73.08	28,487	74.66	29,105	76.28	29,740	77.95	30,392	79.65	31,062	81.41
Nov	15,082	29.47	15,406	30.11	15,739	30.76	16,080	31.43	16,431	32.11	16,791	32.82	17,161	33.54
Dec	16,879	30.78	17,242	31.44	17,614	32.12	17,996	32.82	18,389	33.54	18,792	34.27	19,206	35.03
TOTAL:	276,644		282,826		289,178		295,705		302,412		309,305		316,390	
Summer Peak (MW)		*96.37*		*98.57*		*100.84*		*103.17*		*105.56*		*108.02*		*110.56*
Winter Peak (MW)		*71.55*		*73.08*		*74.66*		*76.28*		*77.95*		*79.65*		*81.41*

BANNING ELECTRIC UTILITY
2026-2045 ESMP COINCIDENT SYSTEM FORECAST

Projected Load Data 2025 - 2031

	2025		2026		2027		2028		2029		2030		2031	
	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW
Jan	10,851	19.94	11,100	20.39	11,356	20.86	11,617	21.34	11,884	21.83	12,157	22.34	12,437	22.85
Feb	9,813	19.99	10,038	20.45	10,269	20.92	10,506	21.40	10,747	21.89	10,994	22.40	11,247	22.91
Mar	10,188	19.40	10,423	19.84	10,662	20.30	10,908	20.76	11,158	21.24	11,415	21.73	11,678	22.23
Apr	11,331	26.84	11,603	27.49	11,881	28.15	12,166	28.82	12,458	29.51	12,757	30.22	13,063	30.95
May	12,896	31.29	13,205	32.04	13,522	32.81	13,847	33.60	14,179	34.40	14,519	35.23	14,868	36.07
Jun	15,261	46.80	15,627	47.93	16,002	49.08	16,386	50.25	16,780	51.46	17,182	52.70	17,595	53.96
Jul	21,276	54.34	21,787	55.64	22,309	56.98	22,845	58.34	23,393	59.74	23,955	61.18	24,529	62.65
Aug	22,044	56.47	22,573	57.82	23,115	59.21	23,670	60.63	24,238	62.09	24,820	63.58	25,415	65.10
Sep	17,603	52.89	18,025	54.16	18,458	55.45	18,901	56.79	19,354	58.15	19,819	59.54	20,294	60.97
Oct	18,300	47.96	18,721	49.06	19,151	50.19	19,592	51.35	20,042	52.53	20,503	53.74	20,975	54.97
Nov	10,110	19.76	10,343	20.21	10,581	20.68	10,824	21.15	11,073	21.64	11,328	22.14	11,588	22.65
Dec	11,315	20.64	11,575	21.11	11,842	21.60	12,114	22.09	12,393	22.60	12,678	23.12	12,969	23.65
TOTAL:	170,987		175,020		179,149		183,374		187,700		192,127		196,659	
Summer Peak (MW)		*56.47*		*57.82*		*59.21*		*60.63*		*62.09*		*63.58*		*65.10*
Winter Peak (MW)		*47.96*		*49.06*		*50.19*		*51.35*		*52.53*		*53.74*		*54.97*

Projected Load Data 2032-2038

	2032		2033		2034		2035		2036		2037		2038	
	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW
Jan	12,723	23.38	13,016	23.91	13,315	24.46	13,621	25.03	13,935	25.60	14,255	26.19	14,583	26.79
Feb	11,506	23.44	11,771	23.98	12,041	24.53	12,318	25.09	12,602	25.67	12,891	26.26	13,188	26.86
Mar	11,946	22.74	12,221	23.26	12,502	23.80	12,790	24.35	13,084	24.91	13,385	25.48	13,693	26.07
Apr	13,377	31.69	13,698	32.45	14,027	33.23	14,363	34.03	14,708	34.84	15,061	35.68	15,422	36.54
May	15,225	36.94	15,590	37.83	15,964	38.73	16,347	39.66	16,740	40.62	17,142	41.59	17,553	42.59
Jun	18,017	55.26	18,449	56.58	18,892	57.94	19,346	59.33	19,810	60.75	20,285	62.21	20,772	63.71
Jul	25,118	64.15	25,721	65.69	26,338	67.27	26,970	68.88	27,618	70.53	28,281	72.23	28,959	73.96
Aug	26,025	66.66	26,650	68.26	27,289	69.90	27,944	71.58	28,615	73.30	29,302	75.06	30,005	76.86
Sep	20,781	62.44	21,280	63.94	21,791	65.47	22,314	67.04	22,849	68.65	23,398	70.30	23,959	71.98
Oct	21,457	56.24	21,951	57.53	22,456	58.85	22,972	60.21	23,501	61.59	24,041	63.01	24,594	64.46
Nov	11,855	23.17	12,128	23.70	12,406	24.25	12,692	24.80	12,984	25.37	13,282	25.96	13,588	26.55
Dec	13,268	24.20	13,573	24.75	13,885	25.32	14,204	25.90	14,531	26.50	14,865	27.11	15,207	27.73
TOTAL:	201,298		206,047		210,907		215,882		220,975		226,188		231,523	
Summer Peak (MW)		*66.66*		*68.26*		*69.90*		*71.58*		*73.30*		*75.06*		*76.86*
Winter Peak (MW)		*56.24*		*57.53*		*58.85*		*60.21*		*61.59*		*63.01*		*64.46*

Projected Load Data 2039-2045

	2039		2040		2041		2042		2043		2044		2045	
	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW
Jan	14,918	27.41	15,261	28.04	15,612	28.68	15,971	29.34	16,339	30.02	16,715	30.71	17,099	31.42
Feb	13,491	27.48	13,801	28.11	14,119	28.76	14,444	29.42	14,776	30.10	15,116	30.79	15,463	31.50
Mar	14,007	26.67	14,330	27.28	14,659	27.91	14,996	28.55	15,341	29.20	15,694	29.88	16,055	30.56
Apr	15,793	37.41	16,172	38.31	16,560	39.23	16,957	40.17	17,364	41.14	17,781	42.12	18,208	43.13
May	17,974	43.61	18,406	44.66	18,847	45.73	19,300	46.83	19,763	47.95	20,237	49.10	20,723	50.28
Jun	21,271	65.23	21,781	66.80	22,304	68.40	22,839	70.04	23,387	71.73	23,949	73.45	24,523	75.21
Jul	29,654	75.73	30,366	77.55	31,095	79.41	31,841	81.32	32,605	83.27	33,388	85.27	34,189	87.32
Aug	30,725	78.70	31,462	80.59	32,218	82.53	32,991	84.51	33,783	86.53	34,593	88.61	35,424	90.74
Sep	24,534	73.71	25,123	75.48	25,726	77.29	26,344	79.15	26,976	81.05	27,623	82.99	28,286	84.98
Oct	25,160	65.94	25,738	67.46	26,330	69.01	26,936	70.60	27,555	72.22	28,189	73.88	28,838	75.58
Nov	13,900	27.17	14,220	27.79	14,547	28.43	14,882	29.08	15,224	29.75	15,574	30.44	15,932	31.14
Dec	15,557	28.37	15,915	29.02	16,281	29.69	16,655	30.37	17,038	31.07	17,430	31.79	17,831	32.52
TOTAL:	236,985		242,576		248,298		254,156		260,152		266,289		272,571	
Summer Peak (MW)		*78.70*		*80.59*		*82.53*		*84.51*		*86.53*		*88.61*		*90.74*
Winter Peak (MW)		*65.94*		*67.46*		*69.01*		*70.60*		*72.22*		*73.88*		*75.58*

BANNING ELECTRIC UTILITY
2026-2045 ESMP CONCEPTUAL COINCIDENT SYSTEM FORECAST

Projected Load Data 2025 - 2031

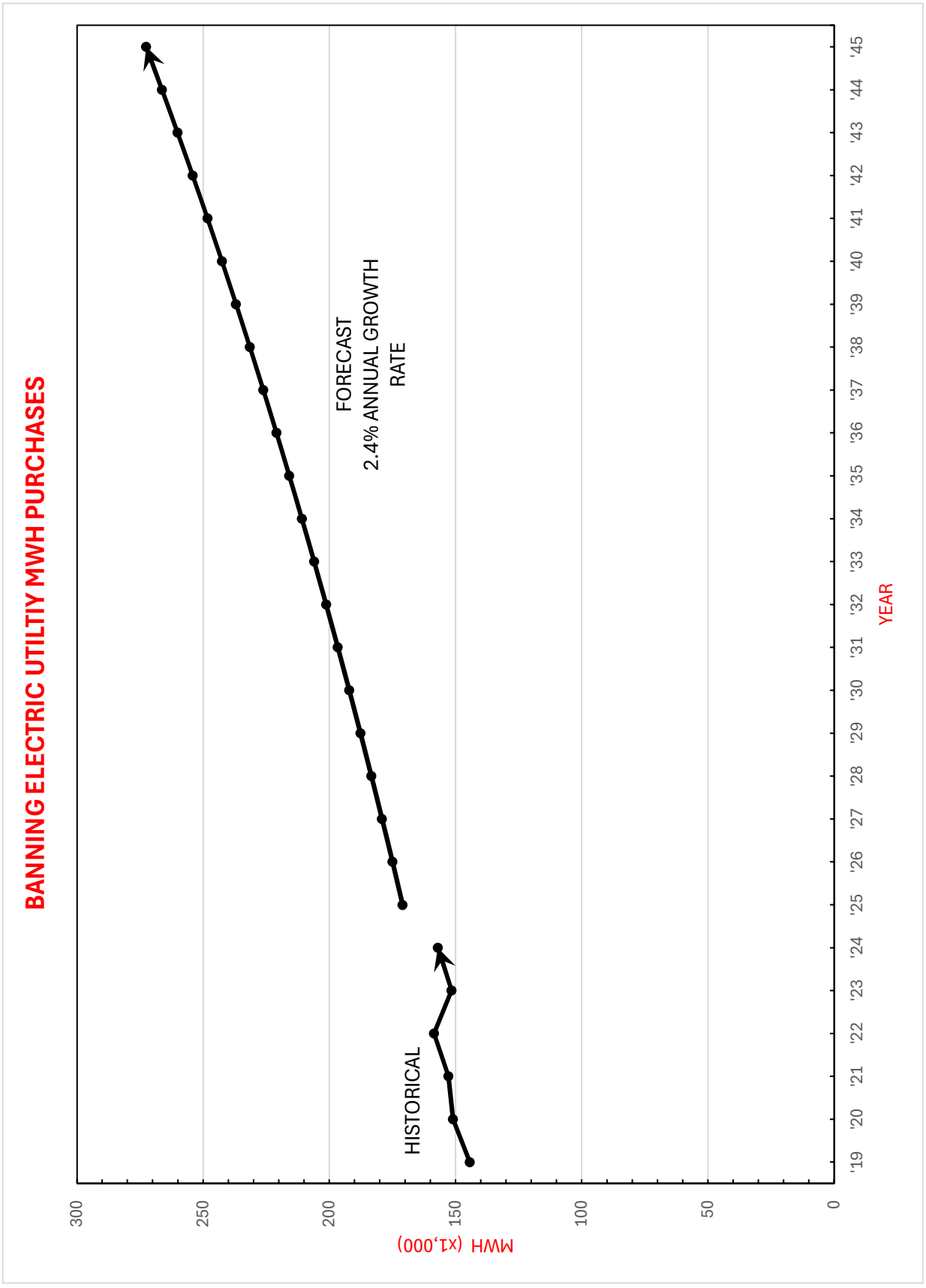
	2025		2026		2027		2028		2029		2030		2031	
	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW
Jan	10,851	19.94	11,358	20.87	11,806	21.69	13,693	25.16	15,074	27.69	17,406	31.98	20,439	37.55
Feb	9,813	19.99	10,272	20.92	10,677	21.75	12,384	25.23	13,632	27.77	15,741	32.07	18,484	37.65
Mar	10,188	19.40	10,665	20.30	11,085	21.10	12,857	24.48	14,153	26.94	16,344	31.11	19,191	36.53
Apr	11,331	26.84	11,831	28.03	12,281	29.09	14,008	33.19	15,287	36.22	17,413	41.25	20,161	47.76
May	12,896	31.29	13,466	32.67	13,977	33.91	15,943	38.68	17,399	42.22	19,818	48.08	22,946	55.67
Jun	15,261	46.80	15,935	48.87	16,540	50.73	18,867	57.86	20,590	63.15	23,453	71.93	27,154	83.28
Jul	21,276	54.34	22,216	56.74	23,060	58.89	26,303	67.18	28,705	73.31	32,696	83.50	37,856	96.68
Aug	22,044	56.47	23,018	58.96	23,892	61.20	27,253	69.81	29,742	76.18	33,877	86.78	39,223	100.47
Sep	17,603	52.89	18,380	55.22	19,078	57.32	21,762	65.38	23,749	71.35	27,051	81.27	31,320	94.10
Oct	18,300	47.96	19,156	50.20	19,911	52.18	23,094	60.53	25,421	66.63	29,356	76.94	34,470	90.34
Nov	10,110	19.76	10,583	20.68	11,001	21.50	12,759	24.94	14,045	27.45	16,219	31.70	19,044	37.22
Dec	11,315	20.64	11,844	21.60	12,312	22.45	14,280	26.04	15,719	28.67	18,151	33.10	21,314	38.87
TOTAL:	170,987		178,725		185,621		213,204		233,515		267,525		311,603	
Summer Peak (MW)		*56.47*		*58.96*		*61.20*		*69.81*		*76.18*		*86.78*		*100.47*
Winter Peak (MW)		*47.96*		*50.20*		*52.18*		*60.53*		*66.63*		*76.94*		*90.34*

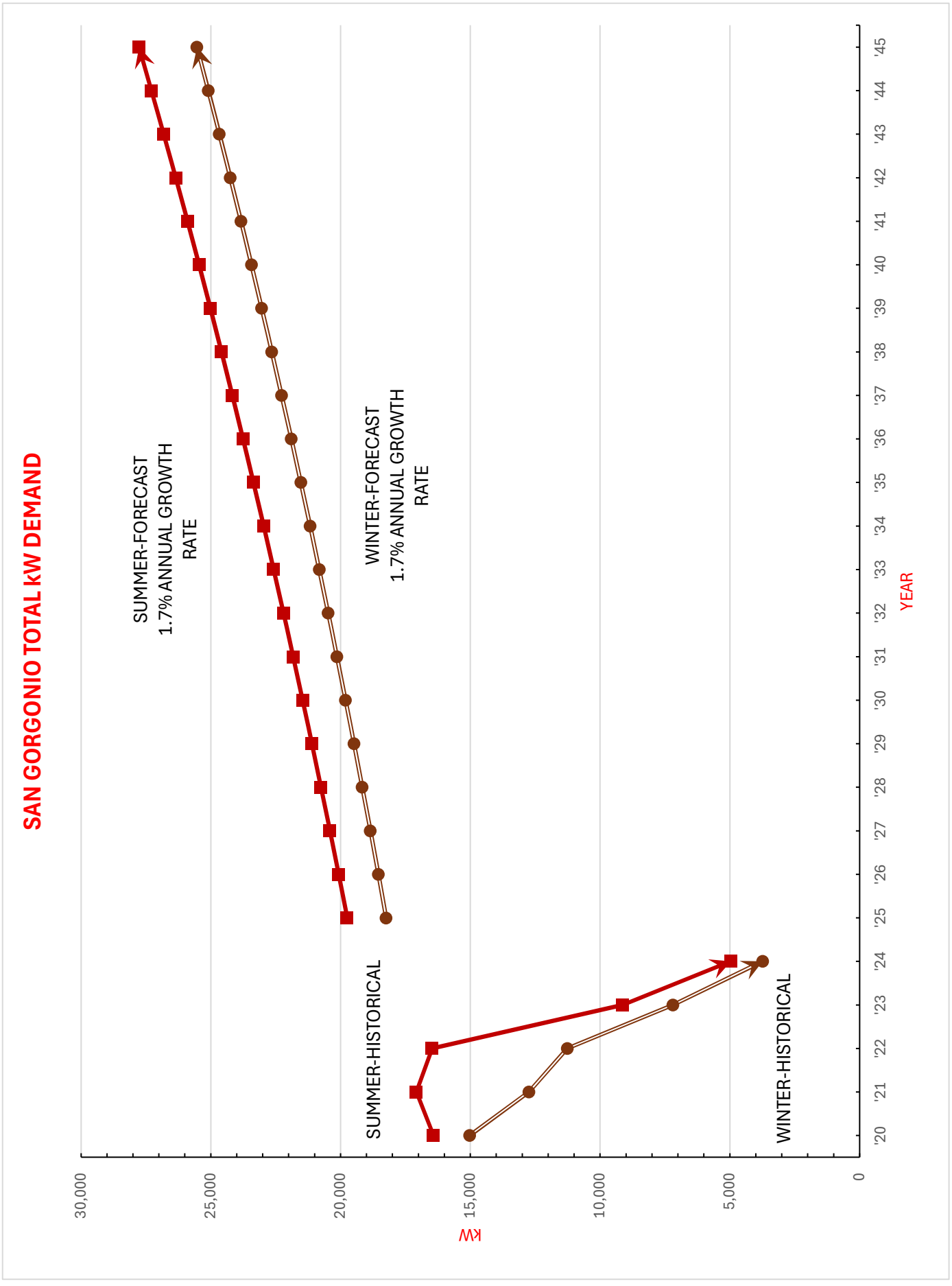
Projected Load Data 2032-2038

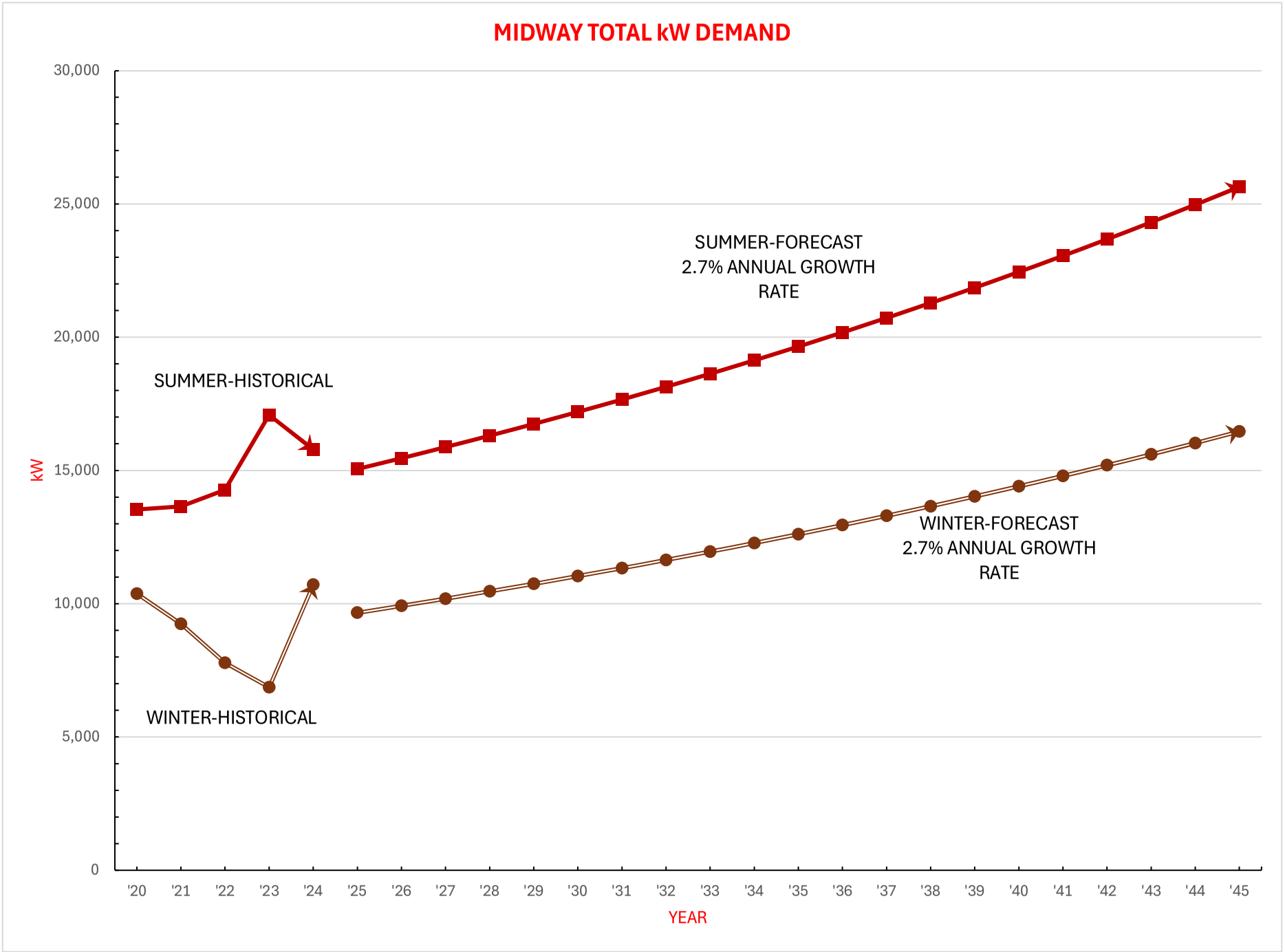
	2032		2033		2034		2035		2036		2037		2038	
	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW
Jan	22,332	41.03	24,806	45.58	26,704	49.06	28,498	52.36	30,229	55.54	31,967	58.73	32,833	60.32
Feb	20,195	41.14	22,433	45.70	24,149	49.19	25,772	52.50	27,337	55.69	28,909	58.89	29,692	60.49
Mar	20,968	39.92	23,291	44.34	25,073	47.73	26,758	50.94	28,383	54.03	30,016	57.14	30,829	58.69
Apr	21,899	51.88	24,155	57.22	25,902	61.36	27,558	65.29	29,160	69.08	30,771	72.90	31,610	74.88
May	24,924	60.47	27,492	66.70	29,480	71.53	31,365	76.10	33,188	80.53	35,021	84.97	35,976	87.29
Jun	29,495	90.46	32,534	99.78	34,886	106.99	37,117	113.83	39,275	120.45	41,444	127.10	42,574	130.57
Jul	41,121	105.02	45,356	115.84	48,637	124.21	51,746	132.15	54,755	139.84	57,779	147.56	59,354	151.58
Aug	42,606	109.14	46,994	120.38	50,393	129.08	53,615	137.34	56,732	145.32	59,866	153.35	61,498	157.53
Sep	34,021	102.21	37,526	112.74	40,239	120.90	42,812	128.63	45,301	136.11	47,803	143.62	49,107	147.54
Oct	37,662	98.71	41,835	109.64	45,036	118.03	48,061	125.96	50,981	133.62	53,913	141.30	55,373	145.13
Nov	20,808	40.66	23,113	45.17	24,882	48.63	26,553	51.89	28,166	55.05	29,786	58.21	30,593	59.79
Dec	23,287	42.47	25,867	47.17	27,847	50.78	29,718	54.20	31,523	57.49	33,336	60.79	34,239	62.44
TOTAL:	339,319		375,401		403,228		429,573		455,032		480,611		493,678	
Summer Peak (MW)		*109.14*		*120.38*		*129.08*		*137.34*		*145.32*		*153.35*		*157.53*
Winter Peak (MW)		*98.71*		*109.64*		*118.03*		*125.96*		*133.62*		*141.30*		*145.13*

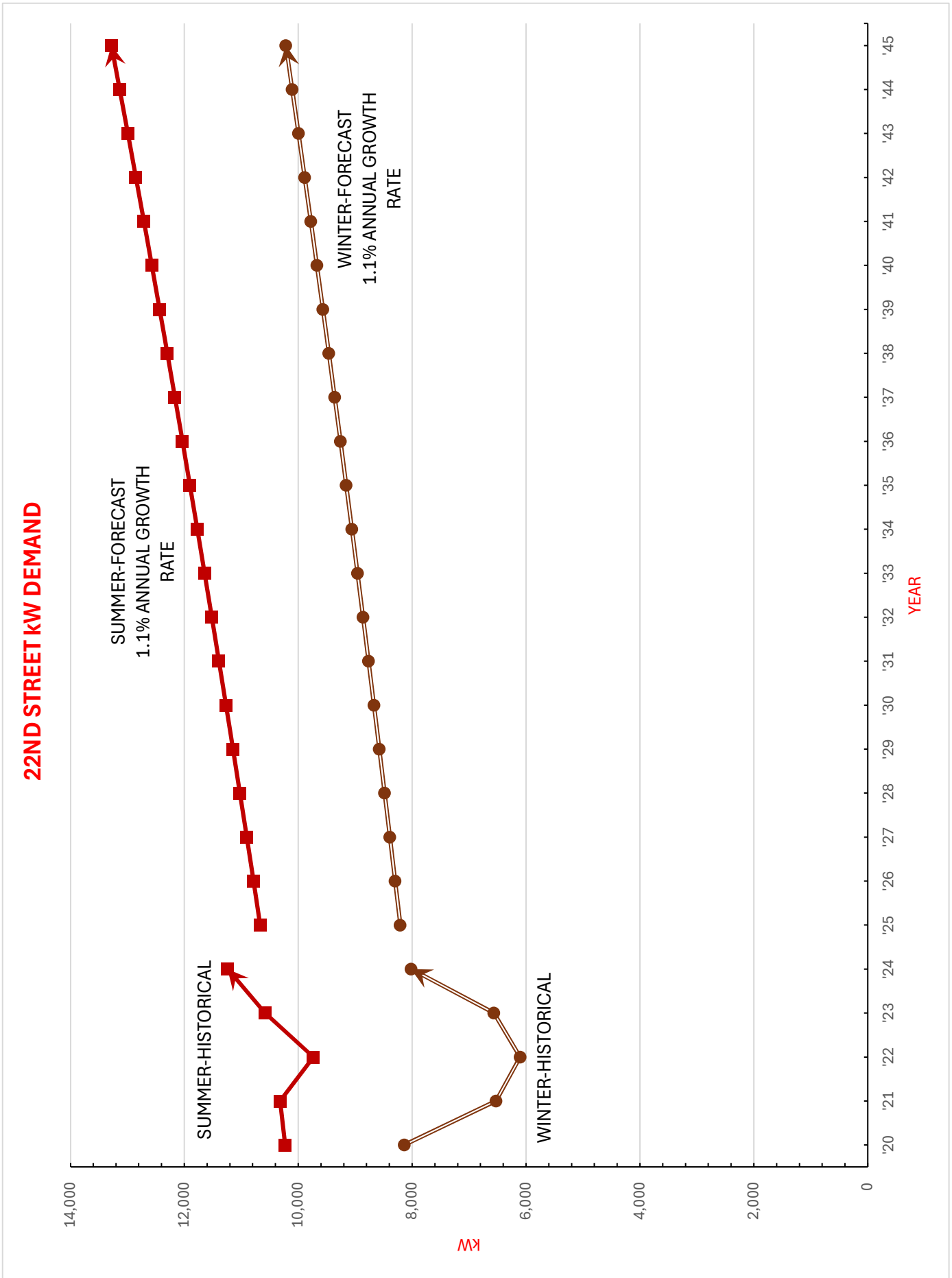
Projected Load Data 2039-2045

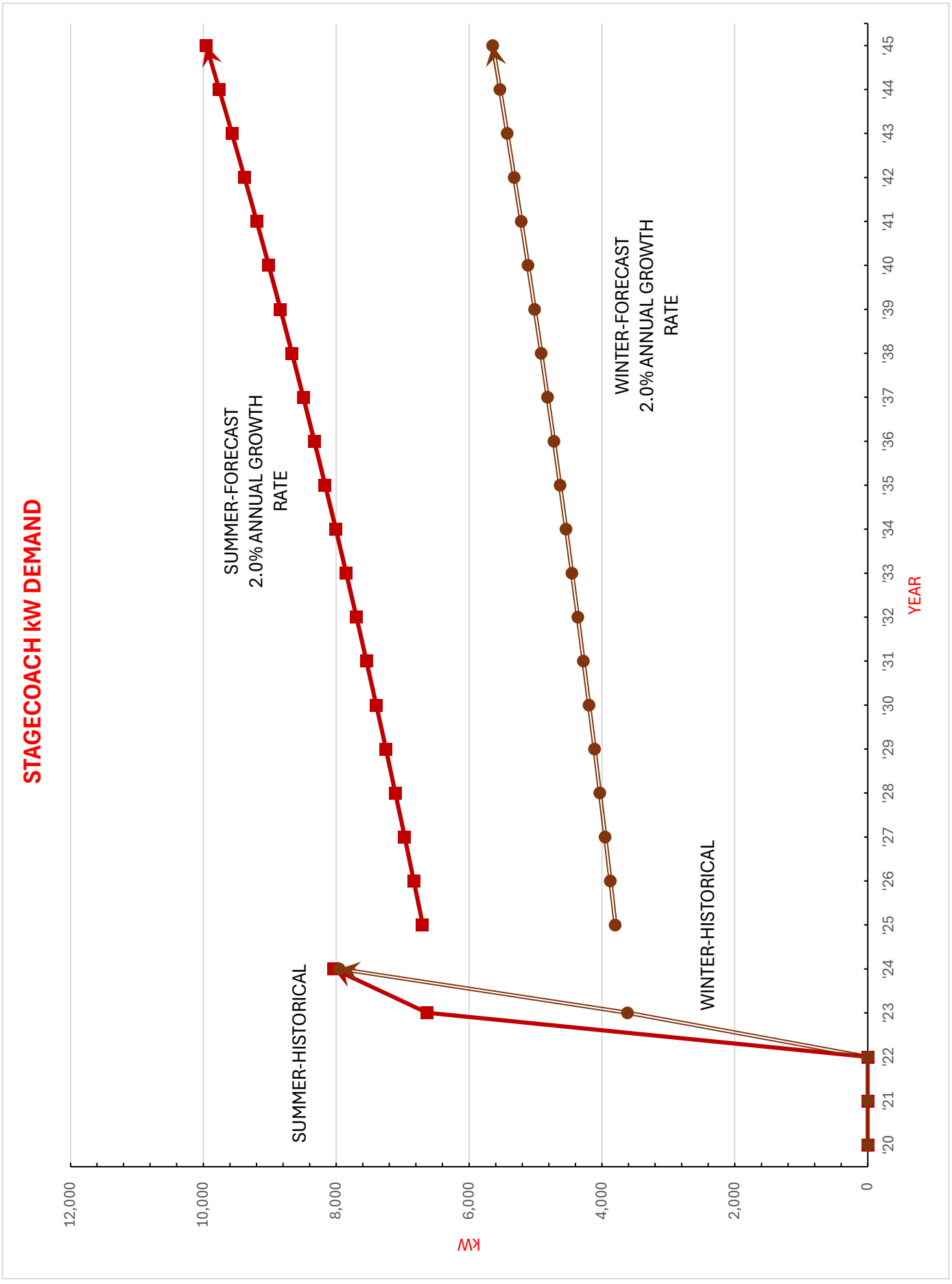
	2039		2040		2041		2042		2043		2044		2045	
	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW
Jan	33,707	61.93	34,588	63.55	34,939	64.19	35,298	64.85	35,666	65.53	36,042	66.22	36,426	66.93
Feb	30,483	62.10	31,280	63.72	31,597	64.37	31,922	65.03	32,254	65.70	32,594	66.40	32,941	67.10
Mar	31,649	60.25	32,477	61.82	32,806	62.45	33,143	63.09	33,488	63.75	33,841	64.42	34,202	65.11
Apr	32,457	76.89	33,314	78.92	33,702	79.84	34,099	80.78	34,506	81.75	34,923	82.73	35,350	83.74
May	36,941	89.63	37,915	91.99	38,357	93.07	38,810	94.16	39,273	95.29	39,747	96.44	40,233	97.62
Jun	43,716	134.07	44,869	137.61	45,392	139.21	45,927	140.85	46,475	142.53	47,037	144.25	47,611	146.02
Jul	60,946	155.65	62,554	159.76	63,283	161.62	64,029	163.52	64,793	165.47	65,575	167.47	66,377	169.52
Aug	63,146	161.75	64,813	166.02	65,568	167.95	66,341	169.93	67,133	171.96	67,943	174.04	68,774	176.17
Sep	50,423	151.49	51,754	155.49	52,357	157.30	52,974	159.16	53,606	161.06	54,254	163.00	54,917	164.99
Oct	56,847	148.99	58,333	152.88	58,925	154.44	59,531	156.02	60,150	157.65	60,784	159.31	61,432	161.01
Nov	31,407	61.38	32,228	62.98	32,555	63.62	32,890	64.28	33,232	64.95	33,582	65.63	33,941	66.33
Dec	35,150	64.10	36,069	65.78	36,435	66.45	36,809	67.13	37,192	67.83	37,584	68.54	37,985	69.27
TOTAL:	506,871		520,193		525,915		531,773		537,769		543,906		550,188	
Summer Peak (MW)		*161.75*		*166.02*		*167.95*		*169.93*		*171.96*		*174.04*		*176.17*
Winter Peak (MW)		*148.99*		*152.88*		*154.44*		*156.02*		*157.65*		*159.31*		*161.01*

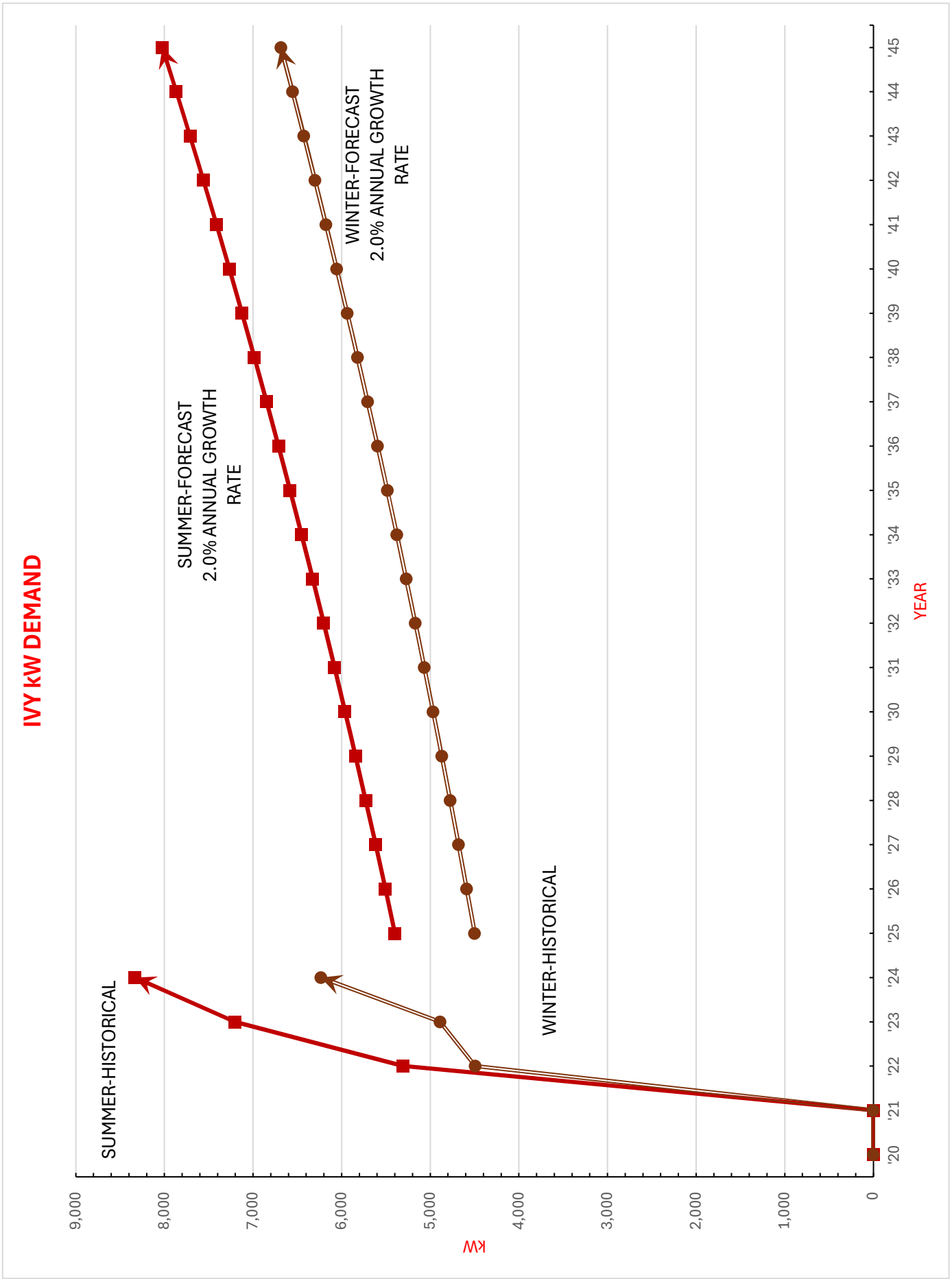

BANNING ELECTRIC UTILTIY MWH PURCHASES
FORECAST
2.4% ANNUAL GROWTH
RATE
HISTORICAL
MWH (x1,000)
YEAR
300
250
200
150
100
50
0
'19
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'21
'22
'23
'24
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'28
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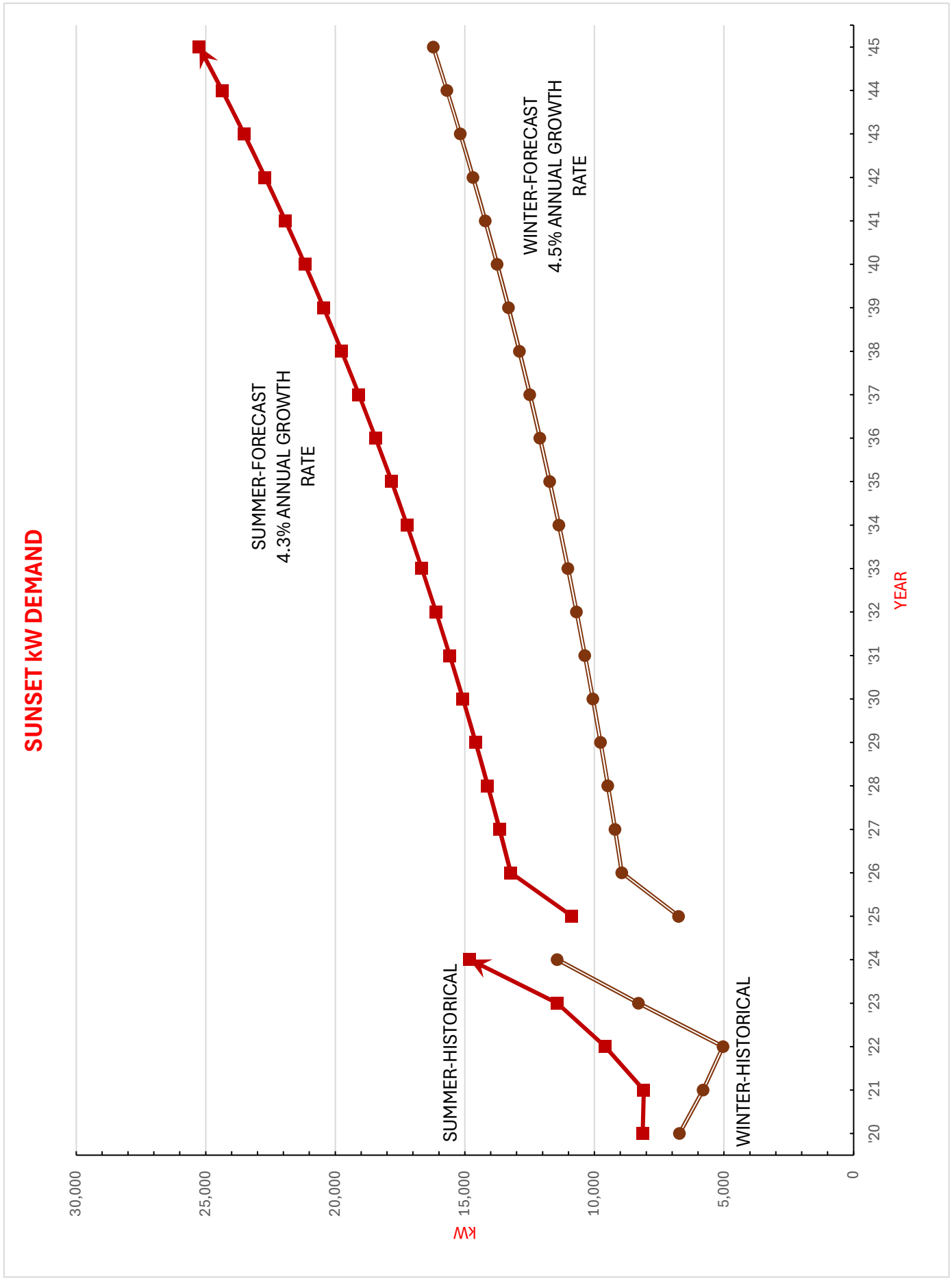

SAN GORGONIO TOTAL kW DEMAND
SUMMER-FORECAST
1.7% ANNUAL GROWTH
RATE
WINTER-FORECAST
1.7% ANNUAL GROWTH
RATE
SUMMER-HISTORICAL
WINTER-HISTORICAL
kW
YEAR
30,000
25,000
20,000
15,000
10,000
5,000
0
'20
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MIDWAY TOTAL kW DEMAND
30,000
25,000
20,000
15,000
10,000
5,000
0
kW
SUMMER-FORECAST
2.7% ANNUAL GROWTH
RATE
SUMMER-HISTORICAL
WINTER-FORECAST
2.7% ANNUAL GROWTH
RATE
WINTER-HISTORICAL
'20
'21
'22
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'26
'27
'28
'29
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'45
YEAR


22ND STREET kW DEMAND
SUMMER-FORECAST
1.1% ANNUAL GROWTH
RATE
WINTER-FORECAST
1.1% ANNUAL GROWTH
RATE
SUMMER-HISTORICAL
WINTER-HISTORICAL
kW
YEAR
14,000
12,000
10,000
8,000
6,000
4,000
2,000
0
'20
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STAGECOACH kW DEMAND
SUMMER-FORECAST
2.0% ANNUAL GROWTH
RATE
SUMMER-HISTORICAL
WINTER-FORECAST
2.0% ANNUAL GROWTH
RATE
WINTER-HISTORICAL
kW
YEAR
12,000
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IVY kW DEMAND
SUMMER-HISTORICAL
SUMMER-FORECAST
2.0% ANNUAL GROWTH
RATE
WINTER-HISTORICAL
WINTER-FORECAST
2.0% ANNUAL GROWTH
RATE
kW
YEAR
9,000
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SUNSET kW DEMAND
SUMMER-FORECAST
4.3% ANNUAL GROWTH
RATE
WINTER-FORECAST
4.5% ANNUAL GROWTH
RATE
SUMMER-HISTORICAL
WINTER-HISTORICAL
kW
YEAR
30,000
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4.0 – LAND USE AND POPULATION

The City of Banning is located in Riverside County and has a reported 2026 population of approximately 33,000 people which has increased by an estimated 10% since the most recent census in 2020. The annual growth rate is projected at 1.6%

The BEU service area for the most part is the same as the Banning City Boundary which covers approximately 23 square miles.

The following table shows current development whose load was included in the ESMP analysis.

Table 4.0-1 – Current Developments

Development	Classification	Land Area (acres)	Size
Atwell Subdivision	Residential	1,457	14,000 + lots
Cannabis Cultivation	Industrial	0.5	-
Yoshinoya	Commercial	-	-
Morongo Health Clinic	Commercial	-	-
Crestwood Communities	Residential	5.9	19 lots
Vista Robles Homes	Residential	72	140 lots

The following table shows future developments whose load was included in the ESMP analysis.

Table 4.0-2 – Future Developments

Development	Classification	Land Area (acres)	Size
Bridge-Morongo Logistics	Commercial/Industrial	509	5 buildings
Sunset Crossroads	Commercial/Industrial	559	6 buildings
Rancho San Gorgonio	Residential	710	3,600 lots
Mission Heights	Residential	-	2,200 lots
First Hathaway Logistics	Commercial/Industrial	88	-
Banning Commerce Center	Industrial	124	-
WEKA	Industrial	3.4	-
Charlles St. CDRE	Industrial	4.6	-
KCB Towers	Industrial	4.5	-
Pallet Yard	Industrial	0.3	-
First Lincoln Logistics	Commercial	6.2	-
Brown Strauss	Commercial	15.8	-
Wyndam Micro Hotel	Residential/Commercial	1.3	-
DR Horton	Residential	-	98 lots
Atwell Large Retail	Commercial	-	-

CITY OF BANNING, CALIFORNIA

2026-2030 5-YEAR CAPITAL IMPROVEMENT PLAN

April 2026

Prepared by:

Finley Engineering Company, Inc.

On behalf of:

Banning Electric Utility

BANNING ELECTRIC UTILITY
PROVIDING POWER TO THE COMMUNITY OF BANNING SINCE 1922

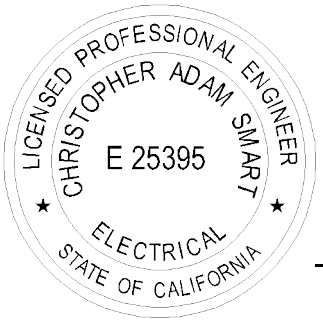
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417.682.5531
www.finleyusa.com

City of Banning
99 E. Ramsey Street
Banning, CA 92220
951.922.3100
www.banningca.gov

ENGINEERS CERTIFICATION

I, Christopher Adam Smart, P.E., herby certify that this *2026-2030 5-Year Capital Improvement Plan* was prepared by me or under my direct Supervision and that I am a duly Licensed Professional Engineer under the laws of the state of California, license number E 25395.



X _____

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5.1 - EXECUTIVE SUMMARY

5.1.1 - Introduction

The City of Banning owns the utility that provides electric service to Banning, California and the electric utility is maintained by Banning Electric Utility (BEU). Originally established in 1913 as a private utility, the City of Banning purchased the electric utility in 1922 and has been providing electric service to its residents since that time. Banning's energy resource base includes portions of nuclear, geothermal, solar, landfill gas-to-energy, and hydro generating plants, that provide the majority of electricity required to meet the system peak demand.

Through an agreement with Southern California Edison Company (SCE), the BEU system utilizes SEC's transmission system in bringing power from the California Independent System Operator ("CAISO") controlled high voltage transmission grid to the BEU distribution system at the Banning Substation. BEU maintains three, 34.5kV sub-transmission circuits totaling approximately eighteen miles which feed six distribution substations.

These six distribution substations have approximately 27 circuits feeding 147 miles of overhead and underground distribution line with an operating voltage of 7.2/12.5 kV. An estimated 47% of the total distribution line is underground.

The City of Banning supports clean-energy and is committed to additional renewable energy resources to its already diverse portfolio. BEU has met and/or exceeded the renewable energy requirements of Compliance Period #1, Compliance Period #2, and Compliance Period #3 of the State's Renewables Portfolio Standard (RPS) program. The Utility was 81 percent renewable in 2022, already exceeding the current State mandate of 60 percent by 2030.

BEU is a member of the Southern California Public Power Authority (SCPPA) enjoying the benefits of joint action through cost effective planning, construction, management, and operations of electrical energy resources.

5.1.2 - Purpose of Study

This 5-year Capital Improvement Plan (CIP) is a study prepared by Finley Engineering Company, Inc. (Finley) based on an analysis and review of the historical system growth and operation to determine projections of future growth, recommendations for capital improvements, and scheduled system maintenance that will insure the continued economical and reliable operation of the system over the ensuing 5-year period.

5.1.3 – General Conclusions and Recommendations

The 5-Year CIP includes projects and estimated costs for Overhead Maintenance, Capital Maintenance, and Distribution System Improvements.

The Overhead Maintenance program include the inspection of 3,900 poles and the replacement of 350 pole at a total estimated cost of $4,058,438.

Capital Maintenance includes 18 various projects such as underground conductor replacement, fiber extensions, substation breaker upgrades, fire mitigation, line hardening, line re-routes and/or relocation, recloser installations for sectionalizing, etc. The total estimated cost for these projects

is $20,784,500. It is expected that BEU will receive $9,293,750 in cost in aid to construction (CIAC) bringing the total BEU funding cost to $11,490,750.

Analysis was run using Milsoft's Windmil software on the distribution system to determine system improvement projects to correct low voltage, decrease conductor and equipment loading, and reduce single phase line loading to aid in phase balancing. The analysis results include 14 projects to switch load to adjacent lines to reduce single-phase line loading at a total estimated cost of $41,700, 2 projects for new line construction of 600' totaling $336,400, 9 projects for single-phase to three-phase line rebuild of 10,107' totaling $2,142,100, and 2 projects for three-phase line rebuild using larger conductor of 2,130' totaling $285,500. The total estimated cost for distribution system improvements is $2,805,700.

The total estimated cost for the 5-Year CIP is $27,648,638 with an estimated $9,293,750 in CIAC reducing the BEU funding estimate to $18,354,888. For the BEU funding cost, 22% is for Overhead Maintenance, 63% is for Capital Maintenance, and 15% is for Distribution System improvements.

5.2 – Planning Criteria

5.2.1 - Distribution System

The distribution projects contained in this 5-Year CIP are recommended based upon the following planning criteria.

a. With an assumed delivered voltage of 125 volts (1.041 per unit on a 120 volt base) during peak load conditions, the design minimum allowable voltage at the primary terminals of any distribution transformer shall be 118 volts (0.98 per unit on a 120 volt base).

b. Voltage regulators and step transformers will be upgraded when projected peak loads exceed 85% of the device's rating.

c. Sectionalizing devices will be upgraded when projected peak loads exceed 70% of the device's continuous current rating.

d. Primary conductors on the 7.2/12.5 kV and below distribution system will be upgraded when projected peak loads exceed 60% of the conductor's thermal rating and may be subject to upgrade before this time if anticipated load growth may potentially exceed 60% of the conductor's thermal rating

e. Primary conductors on the 34.5 kV sub-transmission system will be upgraded when projected peak loads exceed 90% of the conductor's thermal rating and may be subject to upgrade before this time if anticipated load growth may potentially exceed 90% of the conductor's thermal rating

f. Single-phase primary voltage lines will be limited to 35 amps maximum loading.

g. The power factor at the delivery point under peak loading conditions is desired to be no less than 95%. The off-peak power factor should preferably be maintained between 95% lagging and 95% leading. This criterion is subject to the cost of the installation of capacitors, switches, and controls vs. the cost of kilowatt (kW) loss reduction.

5.2.1.1 - Distribution System Design Criteria

The following design criteria was considered when determining projects contained in this 5-year CIP.

a. Feeder current balance will be maintained at plus or minus 20% of the average per phase loading during peak conditions. This criterion may be relaxed in areas where it could impose unnecessary or premature costs.

b. Conductor sizes will be economically sized but may be modified to conform to BEU's standard conductor sizes.

c. Load switching and backfeeding will be considered to defer unnecessary or premature costs to correct any load voltage or high conductor loading.

d. Load switching and backfeeding will be considered to defer unnecessary or premature costs to correct any high single-phase loading. For areas where there is no backfeed or load switch solution, additional conductors will be added to allow for phase balancing.

e. Relocation of existing line sections will be considered where inaccessibility impedes the maintenance of line sections or jeopardizes the service or reliability of line sections.

5.2.2 – Substation

The substation projects contained in this 5-Year CIP are recommended based upon the following planning criteria.

a. Substation transformers will limited to 95% of the max kVA rating of the transformer. The following improvements will be considered in the event the load exceeds 95% of the max kVA rating:

a. Load switching to adjacent substations
b. Upgrade of existing transformer
c. Installation of an additional transformer in the existing substation
d. Construction of a new substation

5.2.3 – Basis of Cost Estimates

The following tables for material and labor costs were used to determine total project costs. The costs were taken from actual prices provided by BEU as well as prices received by FEC from other sources.

Table 5.2.3-1 Conductor Material Cost

Conductor (price per foot)				
OH Conductor			**UG Conductor**	
#2 Copper	$1.31		1/0 AL, 15 kV	$2.03
#2 ACSR	$0.26		1/0 CU, 15 kV	$10.98
#4 ACSR	$0.15		1/0 CU, 35 kV	$8.47
1/0 ACSR	$0.30		4/0 CU	$6.95
4/0 Copper	$3.11		4/0 AL	$4.97
4/0 ACSR	$0.80		350 CU	$7.53
336 ACSR	$1.62		750 AL	$13.38

Table 5.2.3-2 Pole Material Cost

Pole	Price per unit	Pole	Price per unit
35' Douglas Fir, H2	$1,269.30	35’ Wood, Class 2	$1,067.38
		40’ Wood, Class 2	$766.35
45' Douglas Fir, H2	$1,771.08	45’ Wood, Class 2	$953.80
		50’ Wood, Class 2	$1,135.73
55' Douglas Fir, H2	$2,889.48	55’ Wood, Class 2	$918.72
60' Douglas Fir, H2	$2,945.89	60’ Wood, Class 2	$1,362.29

Table 5.2.3-3 Transformer Material Cost

Transformer	Price per unit
10 kVA O.H. Transformer S-Type 7,200	$500.00
15 kVA 7,200, 120/240 DV S-Type	$645.42
25 kVA 7,200, 120/240 DV S-Type	$919.16
37 kVA 7,200, 120/240 DV S-Type	$1,496.65
50 kVA 7,200 120/240	$3,992.05
75 kVA 3Ø 12,470/7,200 120/208	$6,023.22
300 kVA DV	$8,583.61
750 kVA 3Ø 12,470/7,200	$14,626.30
1,000 kVA 3Ø 12,470/7,200 DV	$10,809.48
2,500 kVA 3Ø 12,470/7,200 277/480	$34,539.92
25 kVA 1Ø 12,470/7,200 120/240 Pdmnt	$3,685.34
37.5 kVA 1Ø 12,400/7,200 DV Pdmnt	$1,988.01
75 kVA 1Ø 12,470/7,200 120/240 Pdmnt	$7,110.42
300 kVA 3Ø 12,470/4,160 DV Pdmnt 208/120	$13,547.15
500 kVA 3Ø Pdmnt	$10,442.65
1,500 kVA DV 3Ø Pdmnt 277/480	$31,037.04

Table 5.2.3-4 Framing Units Material Cost

Framing Unit	Price per unit
A1.3P	$75.32
A1.11P	$493.46
A5.2G	$286.41
A3.1	$78.74
A6.21	$1,080.29
G1.2	$317.41
G1.2	$1,318.96
A5.1	$195.12
A5.21	$888.35
(A4.1)	$255.90
G1.3	$433.79
G1.3	$1,127.02
C1.11	$628.33
C1.81G	$1,592.53
C1.11,A5.21	$1,516.68
C5.82G	$3,472.80
C3.1	$208.96
C3.1,A5.1	$404.08
C3.1,A5.21	$1,097.31
C3.1, C5.1	$376.78
C5.1	$167.82
C5.1,A5.1	$362.94
C5.1,A5.21	$1,056.17

Table 5.2.3-5 Underground Material Cost

Material	Price per unit
Light Duty Secondary Box	$78.42
Light Duty Secondary Lid	$83.43
4" PVC SCH 40 (per foot)	$1.69
1/0 AL U/G (per foot)	$4.75
Service Entrance Sleeve	$0.45
Deadend Shoe Small	$8.58
Power Solve (Pulling Lube)	$58.98

Table 5.2.3-6 Overhead Construction Labor and Fleet Cost

	Units (hr.)	Unit Cost (per hr.)
Utility Bed P/U 1 ton (Foreman) (2 hrs. per connection)	4	$27.78
2 Person Lift (Bucket Truck) 55' (2 hrs. per connection)	2	$51.68
4 Person Crew	4	$466.73
3 Person Crew (2 hours per connection)	4	$352.02
2 Person Crew	2	$237.31
Electrical Engineering Supervisor (0.5 hrs. per connection)	1	$125.98
Electric Service Planning Supervisor (0.5 hrs. per connection)	1	$127.97
GIS Technician (1 hr. per connection)	2	$59.21

For overhead line, project cost estimates are based on an average of construction 1 mile of line per month with average span lengths at 150’.

Table 5.2.3-7 Underground Construction Labor and Fleet Cost

Labor	Price per hr.
4 Person Line Crew	$466.73
Powerline Crew Superintendent	$135.93
Fleet	**Price per hr.**
Dump Truck	$55.98
Utility Bed P/U 1 ton (Foreman) (3)	$27.78
Digger Derrick	$48.77
Wire Puller	$24.98
Reel Trailer	$24.98
Backhoe	$23.95

For underground line, project estimates are based on an average construction of 1 month to trench, lay conduit, pull wire and terminate, and backfill 300’.

Engineering (10%) and contingency (5%) were also added for each cost estimate.

5.3 – System Forecast

The 5-year CIP demand forecast was prepared to project the summer and winter kW demand per substation area as well as the total system demand for the City of Banning for the 2025-2030 CIP period. The historical non-coincident substation demands as well as the historical coincident system demands were provided by BEU and used as the basis for the forecast. BEU also provided insight into new load additions that are in some sort of application or planning process and were used in the conceptual forecast.

Additional factors that were considered when reviewing the historical peaks include temporary load switching between substations, construction of new substations with permanent load switching, and removal and/or replacement of existing substations.

Along with new load additions, considerations were also made for the addition of EV chargers at new subdivision locations.

This forecast will be used to run voltage drop and load flow analysis to determine system improvements required to reliably serve the City of Banning existing consumers and allow for future consumer growth.

It is projected that the BEU system will reach a non-coincident peak of 79,004 kW in the summer of 2030 and 59,385 kW in the winter of 2030. It is also projected that the BEU system will reach a coincident peak of 63,576 kW in the summer of 2030 and 53,737 kW in the winter of 2030.

A separate conceptual forecast was created to include new load additions that are in some state of application or planning process. It is projected that the BEU system will reach a conceptual non-coincident peak of 86,777 kW in the summer of 2030 and 76,938 kW in the winter of 2030.

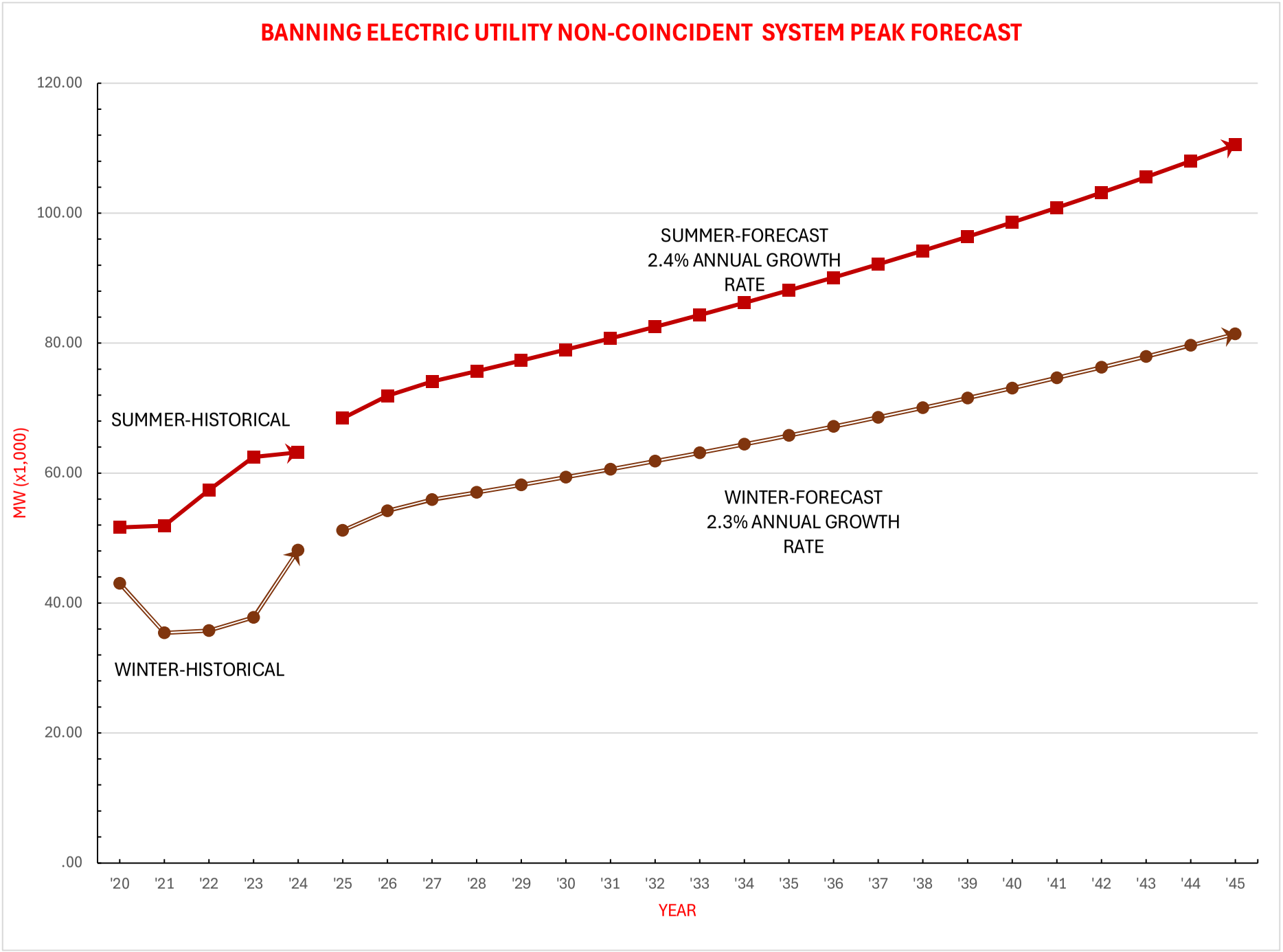
As part of the historical review, MWH purchases were also reviewed and a forecast was determined. It is projected that the BEU system will have an annual coincident purchase of 192,127 MWH's by 2030.

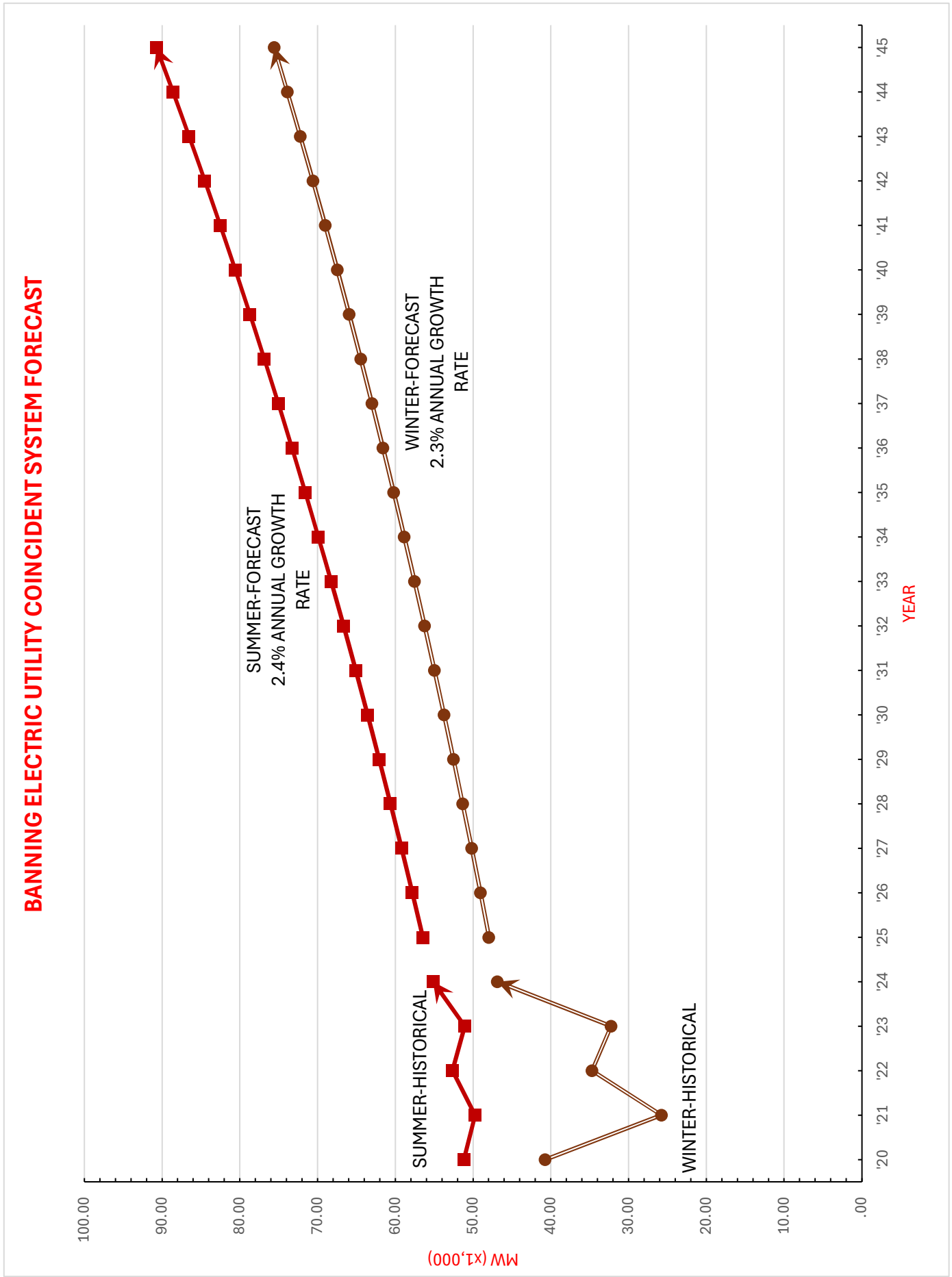
A graphical representation of the individual substation demand forecast as well as the total system coincident demand, non-coincident demand, conceptual non-coincident demand and MWH purchases is included following this page.

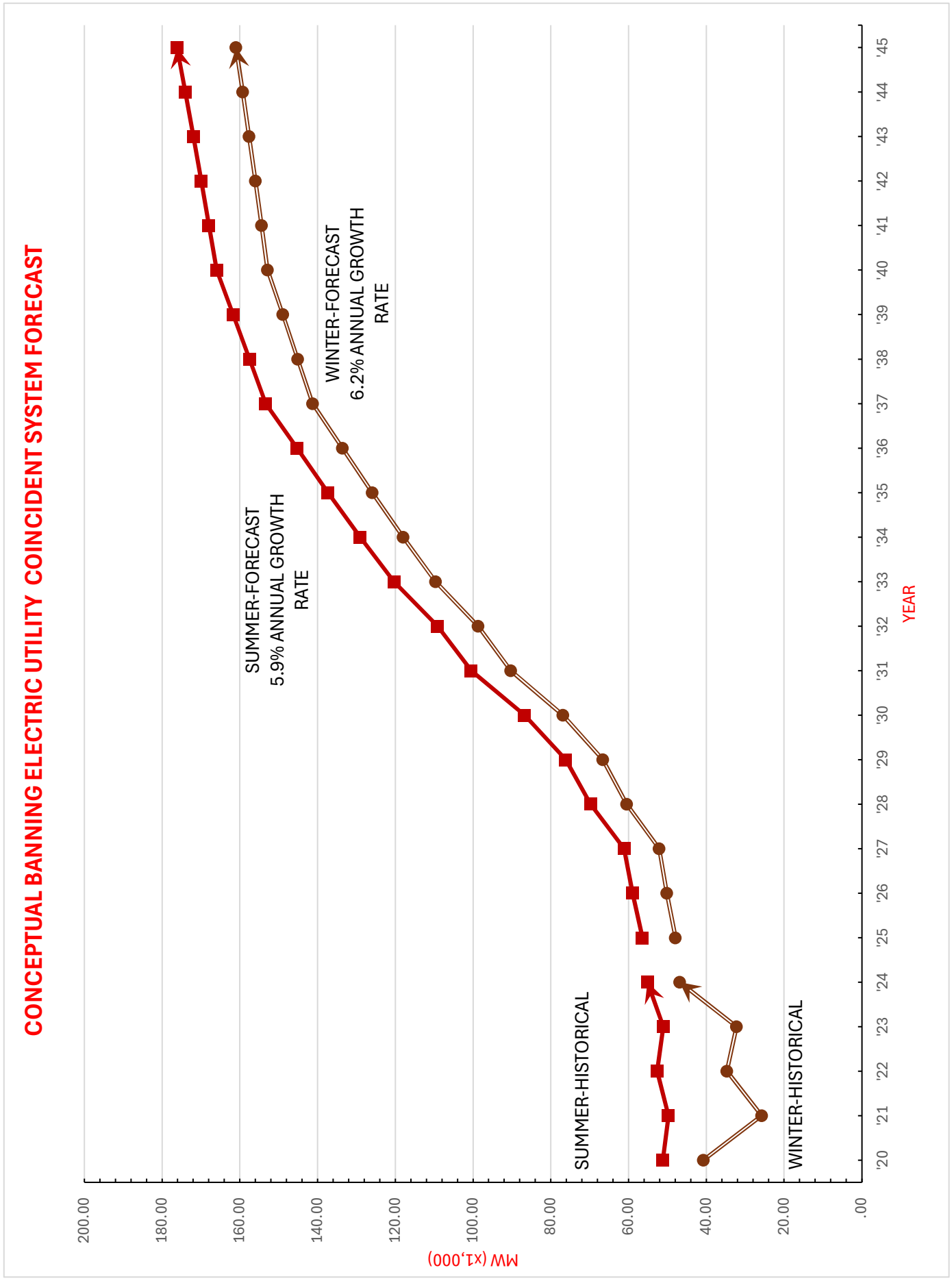
BANNING ELECTRIC UTILTIY
2026-2045 ESMP SYSTEM FORECAST

Peak kW Demand

	Historical					Forecast																					2025-2045 Annual Growth Rate
	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	
San Gorgonio Total																											
S	16,425	17,079	16,472	9,131	4,958	16,500	16,830	17,167	17,510	17,860	18,217	18,582	18,953	19,332	19,719	20,113	20,516	20,926	21,345	21,771	22,207	22,651	23,104	23,566	24,037	24,518	2.0%
W	15,022	12,746	11,267	7,193	3,739	15,000	15,300	15,606	15,918	16,236	16,561	16,892	17,230	17,575	17,926	18,285	18,651	19,024	19,404	19,792	20,188	20,592	21,004	21,424	21,852	22,289	2.0%
						3,159	3,159	3,159	3,159	3,159	3,159	3,159	3,159	3,159	3,159	3,159	3,159	3,159	3,159	3,159	3,159	3,159	3,159	3,159	3,159	3,159	
Cannabis Cultivation																											
Yoshinoya						89	89	89	89	89	89	89	89	89	89	89	89	89	89	89	89	89	89	89	89	89	
S	16,425	17,079	16,472	9,131	4,958	19,748	20,078	20,415	20,758	21,108	21,465	21,830	22,201	22,580	22,967	23,361	23,764	24,174	24,593	25,019	25,455	25,899	26,352	26,814	27,285	27,766	1.7%
W	15,022	12,746	11,267	7,193	3,739	18,248	18,548	18,854	19,166	19,484	19,809	20,140	20,478	20,823	21,174	21,533	21,899	22,272	22,652	23,040	23,436	23,840	24,252	24,672	25,100	25,537	1.7%
Midway Total																											
S	13,541	13,649	14,272	17,082	15,786	15,052	15,458	15,876	16,304	16,745	17,197	17,661	18,138	18,628	19,131	19,647	20,178	20,722	21,282	21,856	22,447	23,053	23,675	24,314	24,971	25,645	2.7%
W	10,384	9,247	7,788	6,868	10,715	9,663	9,924	10,192	10,467	10,750	11,040	11,338	11,644	11,958	12,281	12,613	12,953	13,303	13,662	14,031	14,410	14,799	15,199	15,609	16,031	16,463	2.7%
Airport																											
S	365	370	360	32	30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
W	389	389	280	23	22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
22nd Street																											
S	10,233	10,319	9,736	10,585	11,240	10,670	10,787	10,906	11,026	11,147	11,270	11,394	11,519	11,646	11,774	11,904	12,034	12,167	12,301	12,436	12,573	12,711	12,851	12,992	13,135	13,280	1.1%
W	8,140	6,529	6,105	6,567	8,018	8,210	8,300	8,392	8,484	8,577	8,672	8,767	8,863	8,961	9,059	9,159	9,260	9,362	9,465	9,569	9,674	9,781	9,888	9,997	10,107	10,218	1.1%
Stagecoach																											
S	0	0	0	6,634	8,040	6,700	6,834	6,971	7,110	7,252	7,397	7,545	7,696	7,850	8,007	8,167	8,331	8,497	8,667	8,841	9,017	9,198	9,382	9,569	9,761	9,956	2.0%
W	0	0	0	3,616	7,955	3,800	3,876	3,954	4,033	4,113	4,196	4,279	4,365	4,452	4,541	4,632	4,725	4,819	4,916	5,014	5,114	5,217	5,321	5,427	5,536	5,647	2.0%
Ivy																											
S	0	0	5,308	7,206	8,333	5,400	5,508	5,618	5,731	5,845	5,962	6,081	6,203	6,327	6,453	6,583	6,714	6,849	6,985	7,125	7,268	7,413	7,561	7,713	7,867	8,024	2.0%
W	0	0	4,493	4,890	6,235	4,500	4,590	4,682	4,775	4,871	4,968	5,068	5,169	5,272	5,378	5,485	5,595	5,707	5,821	5,938	6,056	6,178	6,301	6,427	6,556	6,687	2.0%
						0	0	636	636	636	636	636	636	636	636	636	636	636	636	636	636	636	636	636	636	636	
Morongo Health Clinic																											
S	0	0	5,308	7,206	8,333	5,400	5,508	6,254	6,367	6,481	6,598	6,717	6,839	6,963	7,089	7,219	7,350	7,485	7,621	7,761	7,904	8,049	8,197	8,349	8,503	8,660	2.4%
W	0	0	4,493	4,890	6,235	4,500	4,590	5,318	5,411	5,507	5,604	5,704	5,805	5,908	6,014	6,121	6,231	6,343	6,457	6,574	6,692	6,814	6,937	7,063	7,192	7,323	2.5%
Sunset																											
S	8,140	8,099	9,586	11,441	14,821	10,439	10,857	11,291	11,742	12,212	12,701	13,209	13,737	14,286	14,858	15,452	16,070	16,713	17,382	18,077	18,800	19,552	20,334	21,147	21,993	22,873	4.0%
W	6,716	5,803	5,037	8,299	11,443	6,319	6,572	6,835	7,108	7,392	7,688	7,996	8,315	8,648	8,994	9,354	9,728	10,117	10,522	10,942	11,380	11,835	12,309	12,801	13,313	13,846	4.0%
						432	864	864	864	864	864	864	864	864	864	864	864	864	864	864	864	864	864	864	864	864	
Crestwood Communities																											
Vista Robles KB homes						0	1,512	1,512	1,512	1,512	1,512	1,512	1,512	1,512	1,512	1,512	1,512	1,512	1,512	1,512	1,512	1,512	1,512	1,512	1,512	1,512	
S	8,140	8,099	9,586	11,441	14,821	10,871	13,233	13,667	14,118	14,588	15,077	15,585	16,113	16,662	17,234	17,828	18,446	19,089	19,758	20,453	21,176	21,928	22,710	23,523	24,369	25,249	4.3%
W	6,716	5,803	5,037	8,299	11,443	6,751	8,948	9,211	9,484	9,768	10,064	10,372	10,691	11,024	11,370	11,730	12,104	12,493	12,898	13,318	13,756	14,211	14,685	15,177	15,689	16,222	4.5%
Alola																											
S	2,929	2,370	1,646	372	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
W	2,377	708	782	336	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
Banning Electric Utility Non-Coincident System Peak Forecast																											
S	51,632	51,885	57,380	62,482	63,207	68,441	71,898	74,088	75,683	77,322	79,004	80,732	82,507	84,330	86,202	88,126	90,103	92,134	94,221	96,367	98,571	100,837	103,167	105,562	108,024	110,556	2.4%
W	43,029	35,422	35,752	37,792	48,126	51,172	54,186	55,919	57,045	58,200	59,385	60,600	61,847	63,127	64,440	65,788	67,172	68,592	70,050	71,546	73,083	74,661	76,281	77,945	79,654	81,410	2.3%
Banning Electric Utility System Coincident Forecast																											
S	51,197	49,751	52,667	51,096	55,143	56,467	57,822	59,210	60,631	62,086	63,576	65,102	66,664	68,264	69,902	71,580	73,298	75,057	76,858	78,703	80,592	82,526	84,507	86,535	88,612	90,738	2.4%
W	40,752	25,776	34,719	32,262	46,883	47,962	49,065	50,193	51,348	52,529	53,737	54,973	56,237	57,530	58,854	60,207	61,592	63,009	64,458	65,940	67,457	69,009	70,596	72,219	73,881	75,580	2.3%
Conceptual Banning Electric Utility System Coincident Forecast																											
S	51,197	49,751	52,667	51,096	55,143	56,467	58,962	61,201	69,810	76,184	86,777	100,472	109,135	120,377	129,082	137,336	145,321	153,347	157,527	161,751	166,019	167,953	169,934	171,962	174,039	176,165	5.9%
W	40,752	25,776	34,719	32,262	46,883	47,962	50,205	52,185	60,527	66,627	76,938	90,343	98,708	109,643	118,034	125,963	133,615	141,299	145,127	148,988	152,884	154,436	156,023	157,646	159,308	161,007	6.2%
Bridge-Morongo Logistics						0	0	0	0	1,031	1,991	2,858	3,344	3,641	3,641	3,641	3,641	3,641	3,641	3,641	3,641	3,641	3,641	3,641	3,641	3,641	
Sunset Crossroads						0	0	0	2,712	2,712	6,967	10,213	10,561	13,639	14,439	14,748	14,748	14,748	14,748	14,748	14,748	14,748	14,748	14,748	14,748	14,748	
Rancho San Gorgonio						0	0	0	3,888	7,776	11,664	15,552	19,440	23,328	27,216	31,104	34,992	38,880	38,880	38,880	38,880	38,880	38,880	38,880	38,880	38,880	
Mission Heights						0	0	0	0	0	0	2,379	4,758	7,137	9,516	11,895	14,274	16,653	19,032	21,411	23,790	23,790	23,790	23,790	23,790	23,790	
First Hathaway Logistics						0	0	0	0	0	0	471	471	471	471	471	471	471	471	471	471	471	471	471	471	471	
Banning Commerce Center						0	0	0	0	0	0	438	438	438	438	438	438	438	438	438	438	438	438	438	438	438	
WEKA						0	0	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	
Charles St. CDRE						0	0	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	
KCB Towers						0	0	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	
Pallet Yard						0	0	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	
First Lincoln Logistics						0	0	186	186	186	186	186	186	186	186	186	186	186	186	186	186	186	186	186	186	186	
Brown Strauss						0	390	390	390	390	390	390	390	390	390	390	390	390	390	390	390	390	390	390	390	390	
Wyndam Micro Hotel						0	750	750	750	750	750	750	750	750	750	750	750	750	750	750	750	750	750	750	750	750	
DR Horton						0	0	588	1,175	1,175	1,175	1,175	1,175	1,175	1,175	1,175	1,175	1,175	1,175	1,175	1,175	1,175	1,175	1,175	1,175	1,175	
Atwell Large Retail						0	0	0	0	0	0	880	880	880	880	880	880	880	880	880	880	880	880	880	880	880	


BANNING ELECTRIC UTILITY NON-COINCIDENT SYSTEM PEAK FORECAST
120.00
100.00
80.00
60.00
40.00
20.00
.00
MW (x1,000)
SUMMER-FORECAST
2.4% ANNUAL GROWTH
RATE
SUMMER-HISTORICAL
WINTER-FORECAST
2.3% ANNUAL GROWTH
RATE
WINTER-HISTORICAL
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YEAR


BANNING ELECTRIC UTILITY COINCIDENT SYSTEM FORECAST
SUMMER-FORECAST
2.4% ANNUAL GROWTH
RATE
WINTER-FORECAST
2.3% ANNUAL GROWTH
RATE
SUMMER-HISTORICAL
WINTER-HISTORICAL
MW (x1,000)
YEAR
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CONCEPTUAL BANNING ELECTRIC UTILITY COINCIDENT SYSTEM FORECAST
SUMMER-FORECAST
5.9% ANNUAL GROWTH
RATE
WINTER-FORECAST
6.2% ANNUAL GROWTH
RATE
SUMMER-HISTORICAL
WINTER-HISTORICAL
MW (x1,000)
YEAR
200.00
180.00
160.00
140.00
120.00
100.00
80.00
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BANNING ELECTRIC UTILITY
2026-2045 ESMP NON-COINCIDENT SYSTEM FORECAST

Projected Load Data 2025 - 2031

	2025		2026		2027		2028		2029		2030		2031	
	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW
Jan	11,577	21.27	12,259	22.52	12,651	23.24	12,906	23.71	13,167	24.19	13,435	24.68	13,710	25.19
Feb	10,470	21.33	11,086	22.58	11,441	23.31	11,671	23.78	11,907	24.26	12,150	24.75	12,399	25.26
Mar	10,870	20.69	11,511	21.91	11,879	22.61	12,118	23.07	12,363	23.54	12,615	24.01	12,873	24.51
Apr	13,733	32.53	14,427	34.18	14,867	35.22	15,187	35.98	15,515	36.76	15,853	37.56	16,200	38.38
May	15,631	37.92	16,420	39.84	16,920	41.05	17,285	41.94	17,659	42.85	18,043	43.78	18,438	44.74
Jun	18,497	56.73	19,432	59.59	20,023	61.41	20,455	62.73	20,897	64.09	21,352	65.48	21,819	66.92
Jul	25,788	65.86	27,090	69.19	27,915	71.29	28,517	72.83	29,134	74.40	29,768	76.02	30,419	77.69
Aug	26,719	68.44	28,069	71.90	28,923	74.09	29,546	75.68	30,186	77.32	30,843	79.00	31,517	80.73
Sep	21,335	64.10	22,413	67.34	23,096	69.39	23,593	70.88	24,104	72.42	24,628	73.99	25,167	75.61
Oct	19,525	51.17	20,675	54.19	21,336	55.92	21,766	57.05	22,206	58.20	22,658	59.38	23,122	60.60
Nov	10,787	21.08	11,423	22.32	11,788	23.04	12,025	23.50	12,269	23.98	12,518	24.46	12,775	24.97
Dec	12,073	22.02	12,784	23.31	13,193	24.06	13,458	24.54	13,731	25.04	14,010	25.55	14,297	26.07
TOTAL:	197,005		207,588		214,032		218,526		223,138		227,873		232,734	
Summer Peak (MW)		*68.44*		*71.90*		*74.09*		*75.68*		*77.32*		*79.00*		*80.73*
Winter Peak (MW)		*51.17*		*54.19*		*55.92*		*57.05*		*58.20*		*59.38*		*60.60*

Projected Load Data 2032-2038

	2032		2033		2034		2035		2036		2037		2038	
	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW
Jan	13,992	25.71	14,282	26.24	14,579	26.79	14,884	27.35	15,197	27.92	15,518	28.51	15,848	29.12
Feb	12,654	25.78	12,916	26.31	13,184	26.86	13,460	27.42	13,743	28.00	14,034	28.59	14,332	29.20
Mar	13,138	25.01	13,410	25.53	13,689	26.06	13,975	26.60	14,269	27.16	14,571	27.74	14,880	28.33
Apr	16,556	39.22	16,922	40.09	17,297	40.98	17,683	41.89	18,080	42.83	18,488	43.80	18,907	44.79
May	18,843	45.72	19,259	46.73	19,687	47.77	20,126	48.83	20,578	49.93	21,042	51.05	21,518	52.21
Jun	22,299	68.39	22,791	69.90	23,297	71.45	23,817	73.04	24,352	74.68	24,901	76.37	25,465	78.10
Jul	31,087	79.39	31,774	81.15	32,480	82.95	33,205	84.80	33,950	86.70	34,715	88.66	35,501	90.67
Aug	32,210	82.51	32,922	84.33	33,653	86.20	34,404	88.13	35,176	90.10	35,969	92.13	36,783	94.22
Sep	25,720	77.27	26,288	78.98	26,872	80.74	27,472	82.54	28,088	84.39	28,721	86.29	29,372	88.25
Oct	23,598	61.85	24,086	63.13	24,587	64.44	25,102	65.79	25,630	67.17	26,171	68.59	26,728	70.05
Nov	13,038	25.48	13,307	26.01	13,584	26.55	13,868	27.10	14,160	27.67	14,459	28.26	14,767	28.86
Dec	14,591	26.61	14,893	27.16	15,203	27.73	15,521	28.31	15,847	28.90	16,182	29.51	16,526	30.14
TOTAL:	237,725		242,850		248,113		253,518		259,069		264,770		270,627	
Summer Peak (MW)		*82.51*		*84.33*		*86.20*		*88.13*		*90.10*		*92.13*		*94.22*
Winter Peak (MW)		*61.85*		*63.13*		*64.44*		*65.79*		*67.17*		*68.59*		*70.05*

Projected Load Data 2039-2045

	2039		2040		2041		2042		2043		2044		2045	
	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW
Jan	16,187	29.74	16,534	30.38	16,891	31.03	17,258	31.71	17,634	32.40	18,021	33.11	18,418	33.84
Feb	14,638	29.82	14,953	30.46	15,275	31.12	15,607	31.79	15,947	32.49	16,297	33.20	16,656	33.93
Mar	15,198	28.93	15,525	29.55	15,860	30.19	16,204	30.85	16,558	31.52	16,921	32.21	17,294	32.92
Apr	19,337	45.81	19,779	46.86	20,234	47.93	20,702	49.04	21,182	50.18	21,676	51.35	22,184	52.55
May	22,008	53.40	22,512	54.62	23,029	55.88	23,561	57.17	24,108	58.49	24,671	59.86	25,249	61.26
Jun	26,044	79.88	26,640	81.70	27,253	83.58	27,882	85.51	28,530	87.50	29,195	89.54	29,879	91.64
Jul	36,310	92.73	37,140	94.85	37,994	97.03	38,872	99.27	39,774	101.58	40,702	103.95	41,656	106.38
Aug	37,621	96.37	38,482	98.57	39,366	100.84	40,276	103.17	41,211	105.56	42,172	108.02	43,160	110.56
Sep	30,041	90.26	30,728	92.32	31,434	94.44	32,161	96.63	32,907	98.87	33,675	101.17	34,464	103.55
Oct	27,299	71.55	27,885	73.08	28,487	74.66	29,105	76.28	29,740	77.95	30,392	79.65	31,062	81.41
Nov	15,082	29.47	15,406	30.11	15,739	30.76	16,080	31.43	16,431	32.11	16,791	32.82	17,161	33.54
Dec	16,879	30.78	17,242	31.44	17,614	32.12	17,996	32.82	18,389	33.54	18,792	34.27	19,206	35.03
TOTAL:	276,644		282,826		289,178		295,705		302,412		309,305		316,390	
Summer Peak (MW)		*96.37*		*98.57*		*100.84*		*103.17*		*105.56*		*108.02*		*110.56*
Winter Peak (MW)		*71.55*		*73.08*		*74.66*		*76.28*		*77.95*		*79.65*		*81.41*

BANNING ELECTRIC UTILITY
2026-2045 ESMP COINCIDENT SYSTEM FORECAST

Projected Load Data 2025 - 2031

	2025		2026		2027		2028		2029		2030		2031	
	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW
Jan	10,851	19.94	11,100	20.39	11,356	20.86	11,617	21.34	11,884	21.83	12,157	22.34	12,437	22.85
Feb	9,813	19.99	10,038	20.45	10,269	20.92	10,506	21.40	10,747	21.89	10,994	22.40	11,247	22.91
Mar	10,188	19.40	10,423	19.84	10,662	20.30	10,908	20.76	11,158	21.24	11,415	21.73	11,678	22.23
Apr	11,331	26.84	11,603	27.49	11,881	28.15	12,166	28.82	12,458	29.51	12,757	30.22	13,063	30.95
May	12,896	31.29	13,205	32.04	13,522	32.81	13,847	33.60	14,179	34.40	14,519	35.23	14,868	36.07
Jun	15,261	46.80	15,627	47.93	16,002	49.08	16,386	50.25	16,780	51.46	17,182	52.70	17,595	53.96
Jul	21,276	54.34	21,787	55.64	22,309	56.98	22,845	58.34	23,393	59.74	23,955	61.18	24,529	62.65
Aug	22,044	56.47	22,573	57.82	23,115	59.21	23,670	60.63	24,238	62.09	24,820	63.58	25,415	65.10
Sep	17,603	52.89	18,025	54.16	18,458	55.45	18,901	56.79	19,354	58.15	19,819	59.54	20,294	60.97
Oct	18,300	47.96	18,721	49.06	19,151	50.19	19,592	51.35	20,042	52.53	20,503	53.74	20,975	54.97
Nov	10,110	19.76	10,343	20.21	10,581	20.68	10,824	21.15	11,073	21.64	11,328	22.14	11,588	22.65
Dec	11,315	20.64	11,575	21.11	11,842	21.60	12,114	22.09	12,393	22.60	12,678	23.12	12,969	23.65
TOTAL:	170,987		175,020		179,149		183,374		187,700		192,127		196,659	
Summer Peak (MW)		*56.47*		*57.82*		*59.21*		*60.63*		*62.09*		*63.58*		*65.10*
Winter Peak (MW)		*47.96*		*49.06*		*50.19*		*51.35*		*52.53*		*53.74*		*54.97*

Projected Load Data 2032-2038

	2032		2033		2034		2035		2036		2037		2038	
	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW
Jan	12,723	23.38	13,016	23.91	13,315	24.46	13,621	25.03	13,935	25.60	14,255	26.19	14,583	26.79
Feb	11,506	23.44	11,771	23.98	12,041	24.53	12,318	25.09	12,602	25.67	12,891	26.26	13,188	26.86
Mar	11,946	22.74	12,221	23.26	12,502	23.80	12,790	24.35	13,084	24.91	13,385	25.48	13,693	26.07
Apr	13,377	31.69	13,698	32.45	14,027	33.23	14,363	34.03	14,708	34.84	15,061	35.68	15,422	36.54
May	15,225	36.94	15,590	37.83	15,964	38.73	16,347	39.66	16,740	40.62	17,142	41.59	17,553	42.59
Jun	18,017	55.26	18,449	56.58	18,892	57.94	19,346	59.33	19,810	60.75	20,285	62.21	20,772	63.71
Jul	25,118	64.15	25,721	65.69	26,338	67.27	26,970	68.88	27,618	70.53	28,281	72.23	28,959	73.96
Aug	26,025	66.66	26,650	68.26	27,289	69.90	27,944	71.58	28,615	73.30	29,302	75.06	30,005	76.86
Sep	20,781	62.44	21,280	63.94	21,791	65.47	22,314	67.04	22,849	68.65	23,398	70.30	23,959	71.98
Oct	21,457	56.24	21,951	57.53	22,456	58.85	22,972	60.21	23,501	61.59	24,041	63.01	24,594	64.46
Nov	11,855	23.17	12,128	23.70	12,406	24.25	12,692	24.80	12,984	25.37	13,282	25.96	13,588	26.55
Dec	13,268	24.20	13,573	24.75	13,885	25.32	14,204	25.90	14,531	26.50	14,865	27.11	15,207	27.73
TOTAL:	201,298		206,047		210,907		215,882		220,975		226,188		231,523	
Summer Peak (MW)		*66.66*		*68.26*		*69.90*		*71.58*		*73.30*		*75.06*		*76.86*
Winter Peak (MW)		*56.24*		*57.53*		*58.85*		*60.21*		*61.59*		*63.01*		*64.46*

Projected Load Data 2039-2045

	2039		2040		2041		2042		2043		2044		2045	
	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW
Jan	14,918	27.41	15,261	28.04	15,612	28.68	15,971	29.34	16,339	30.02	16,715	30.71	17,099	31.42
Feb	13,491	27.48	13,801	28.11	14,119	28.76	14,444	29.42	14,776	30.10	15,116	30.79	15,463	31.50
Mar	14,007	26.67	14,330	27.28	14,659	27.91	14,996	28.55	15,341	29.20	15,694	29.88	16,055	30.56
Apr	15,793	37.41	16,172	38.31	16,560	39.23	16,957	40.17	17,364	41.14	17,781	42.12	18,208	43.13
May	17,974	43.61	18,406	44.66	18,847	45.73	19,300	46.83	19,763	47.95	20,237	49.10	20,723	50.28
Jun	21,271	65.23	21,781	66.80	22,304	68.40	22,839	70.04	23,387	71.73	23,949	73.45	24,523	75.21
Jul	29,654	75.73	30,366	77.55	31,095	79.41	31,841	81.32	32,605	83.27	33,388	85.27	34,189	87.32
Aug	30,725	78.70	31,462	80.59	32,218	82.53	32,991	84.51	33,783	86.53	34,593	88.61	35,424	90.74
Sep	24,534	73.71	25,123	75.48	25,726	77.29	26,344	79.15	26,976	81.05	27,623	82.99	28,286	84.98
Oct	25,160	65.94	25,738	67.46	26,330	69.01	26,936	70.60	27,555	72.22	28,189	73.88	28,838	75.58
Nov	13,900	27.17	14,220	27.79	14,547	28.43	14,882	29.08	15,224	29.75	15,574	30.44	15,932	31.14
Dec	15,557	28.37	15,915	29.02	16,281	29.69	16,655	30.37	17,038	31.07	17,430	31.79	17,831	32.52
TOTAL:	236,985		242,576		248,298		254,156		260,152		266,289		272,571	
Summer Peak (MW)		*78.70*		*80.59*		*82.53*		*84.51*		*86.53*		*88.61*		*90.74*
Winter Peak (MW)		*65.94*		*67.46*		*69.01*		*70.60*		*72.22*		*73.88*		*75.58*

BANNING ELECTRIC UTILITY
2026-2045 ESMP CONCEPTUAL COINCIDENT SYSTEM FORECAST

Projected Load Data 2025 - 2031

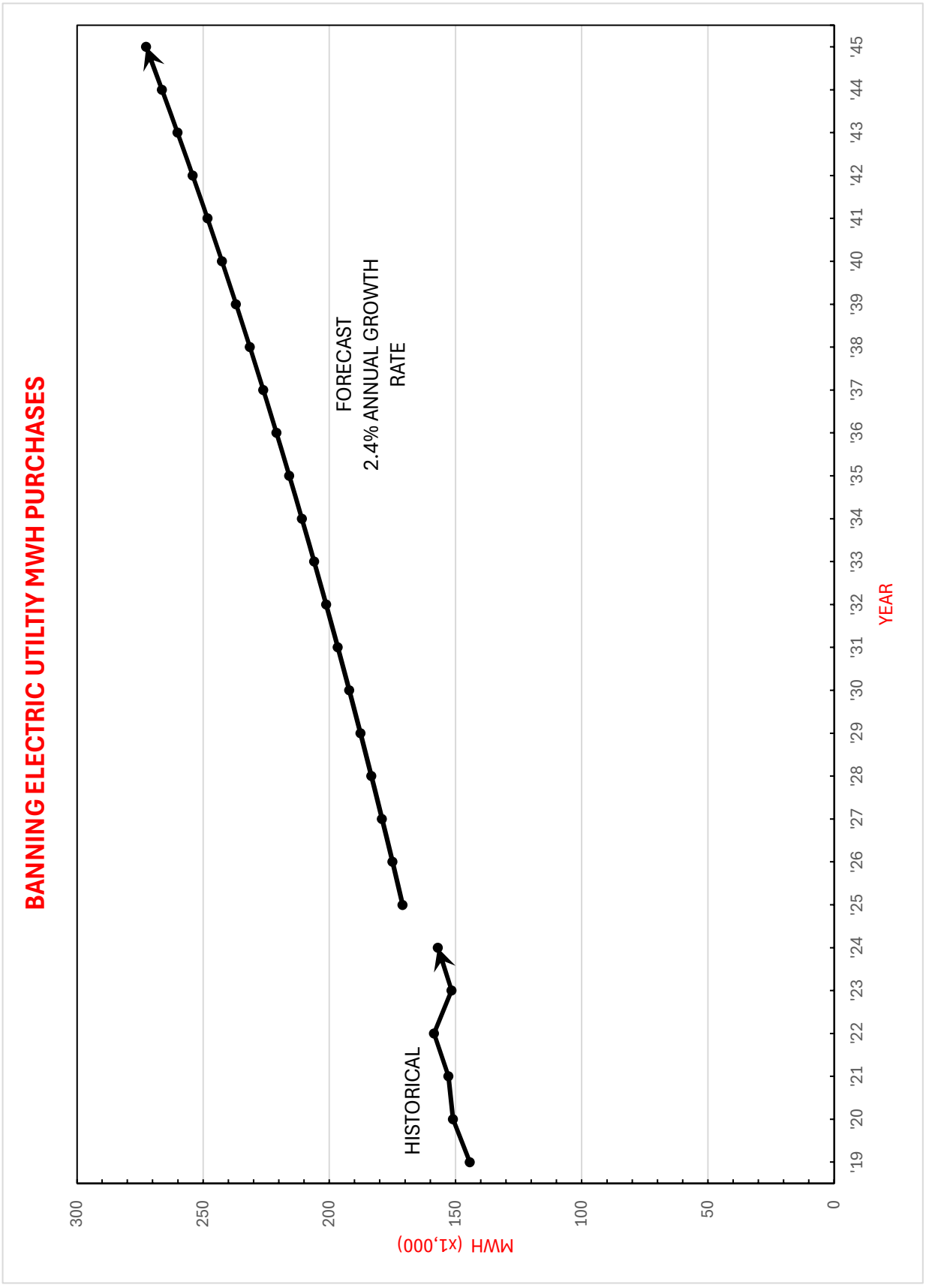
	2025		2026		2027		2028		2029		2030		2031	
	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW
Jan	10,851	19.94	11,358	20.87	11,806	21.69	13,693	25.16	15,074	27.69	17,406	31.98	20,439	37.55
Feb	9,813	19.99	10,272	20.92	10,677	21.75	12,384	25.23	13,632	27.77	15,741	32.07	18,484	37.65
Mar	10,188	19.40	10,665	20.30	11,085	21.10	12,857	24.48	14,153	26.94	16,344	31.11	19,191	36.53
Apr	11,331	26.84	11,831	28.03	12,281	29.09	14,008	33.19	15,287	36.22	17,413	41.25	20,161	47.76
May	12,896	31.29	13,466	32.67	13,977	33.91	15,943	38.68	17,399	42.22	19,818	48.08	22,946	55.67
Jun	15,261	46.80	15,935	48.87	16,540	50.73	18,867	57.86	20,590	63.15	23,453	71.93	27,154	83.28
Jul	21,276	54.34	22,216	56.74	23,060	58.89	26,303	67.18	28,705	73.31	32,696	83.50	37,856	96.68
Aug	22,044	56.47	23,018	58.96	23,892	61.20	27,253	69.81	29,742	76.18	33,877	86.78	39,223	100.47
Sep	17,603	52.89	18,380	55.22	19,078	57.32	21,762	65.38	23,749	71.35	27,051	81.27	31,320	94.10
Oct	18,300	47.96	19,156	50.20	19,911	52.18	23,094	60.53	25,421	66.63	29,356	76.94	34,470	90.34
Nov	10,110	19.76	10,583	20.68	11,001	21.50	12,759	24.94	14,045	27.45	16,219	31.70	19,044	37.22
Dec	11,315	20.64	11,844	21.60	12,312	22.45	14,280	26.04	15,719	28.67	18,151	33.10	21,314	38.87
TOTAL:	170,987		178,725		185,621		213,204		233,515		267,525		311,603	
Summer Peak (MW)	*56.47*		*58.96*		*61.20*		*69.81*		*76.18*		*86.78*		*100.47*	
Winter Peak (MW)	*47.96*		*50.20*		*52.18*		*60.53*		*66.63*		*76.94*		*90.34*	

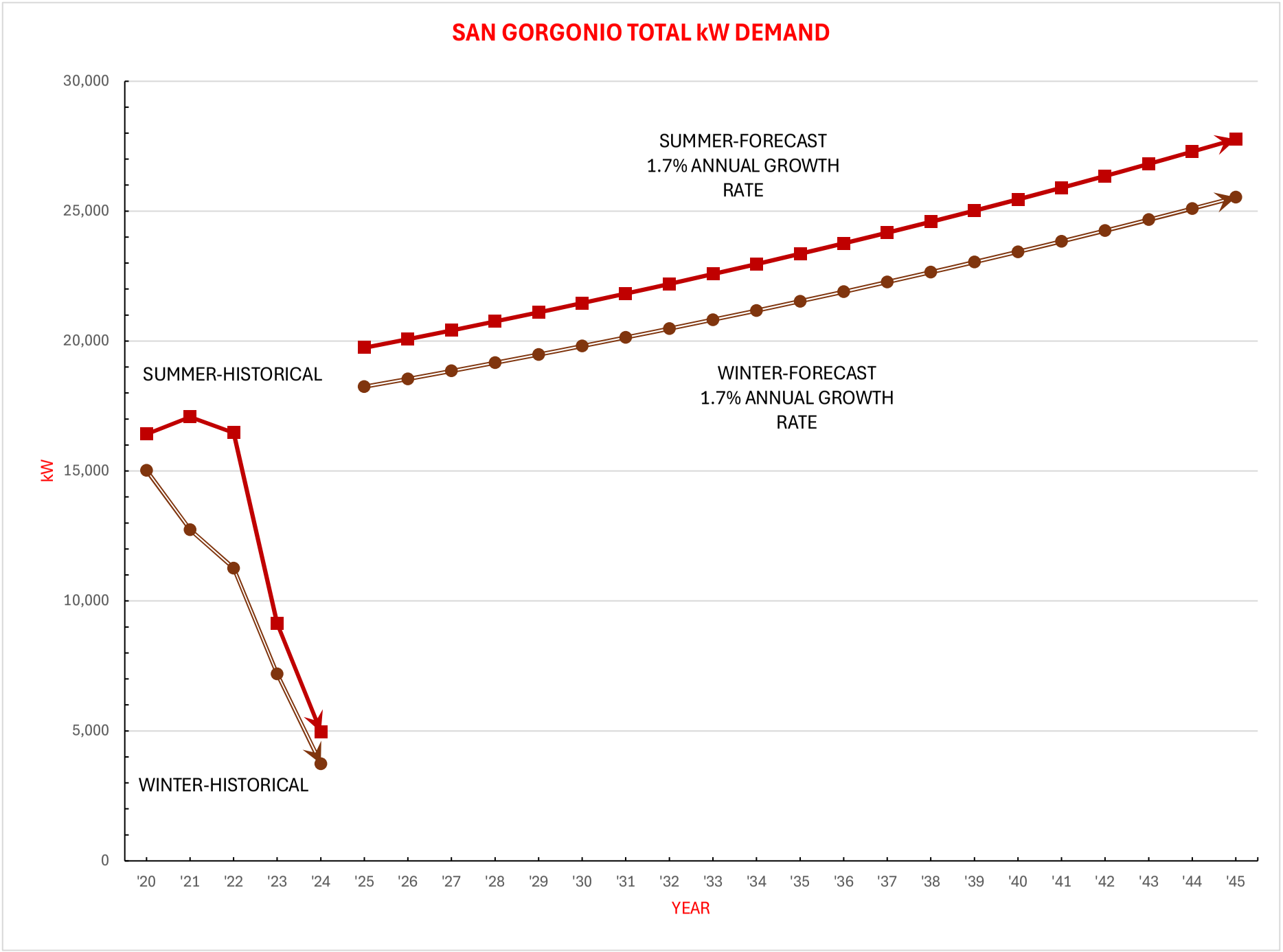
Projected Load Data 2032-2038

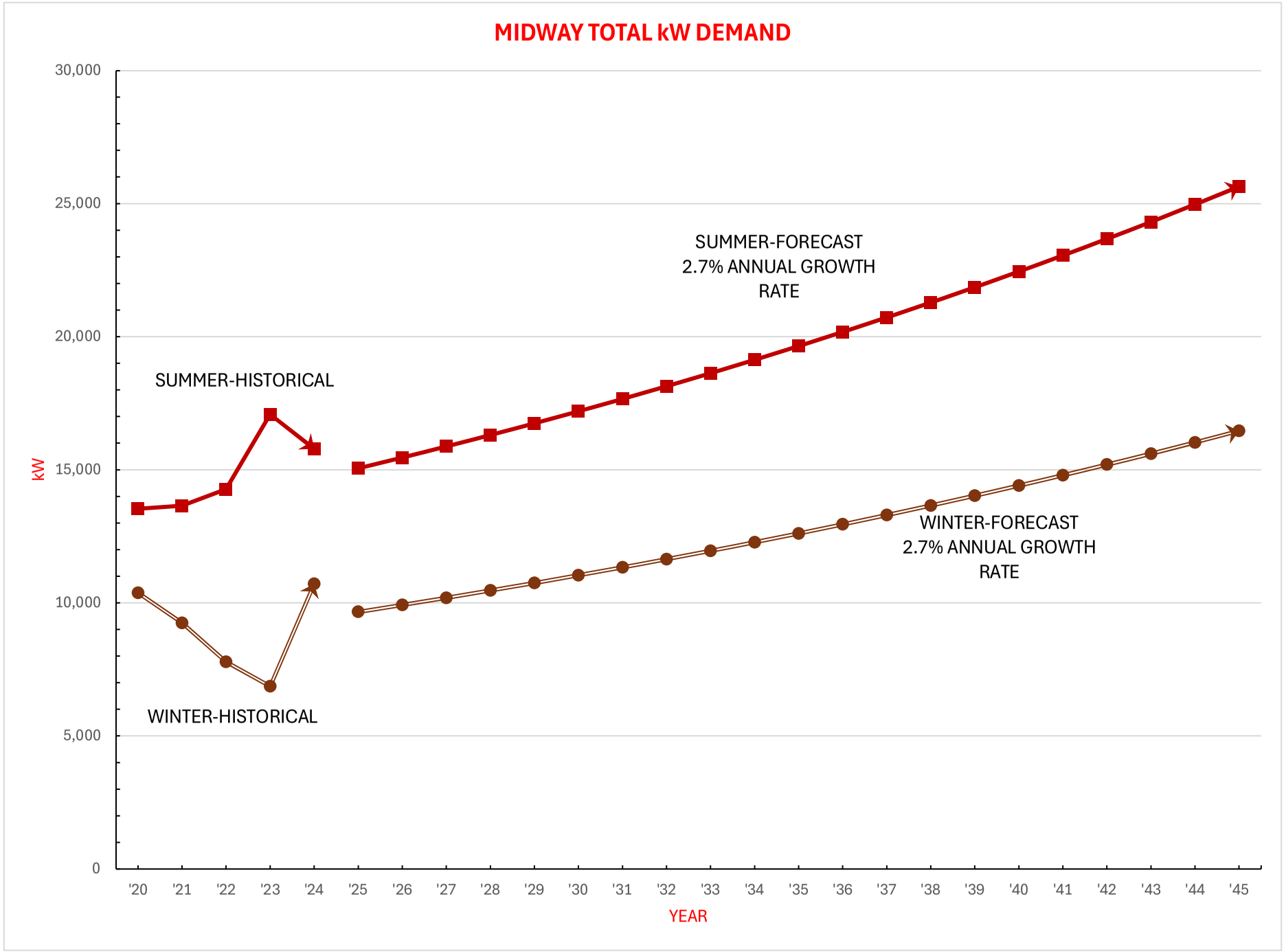
	2032		2033		2034		2035		2036		2037		2038	
	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW
Jan	22,332	41.03	24,806	45.58	26,704	49.06	28,498	52.36	30,229	55.54	31,967	58.73	32,833	60.32
Feb	20,195	41.14	22,433	45.70	24,149	49.19	25,772	52.50	27,337	55.69	28,909	58.89	29,692	60.49
Mar	20,968	39.92	23,291	44.34	25,073	47.73	26,758	50.94	28,383	54.03	30,016	57.14	30,829	58.69
Apr	21,899	51.88	24,155	57.22	25,902	61.36	27,558	65.29	29,160	69.08	30,771	72.90	31,610	74.88
May	24,924	60.47	27,492	66.70	29,480	71.53	31,365	76.10	33,188	80.53	35,021	84.97	35,976	87.29
Jun	29,495	90.46	32,534	99.78	34,886	106.99	37,117	113.83	39,275	120.45	41,444	127.10	42,574	130.57
Jul	41,121	105.02	45,356	115.84	48,637	124.21	51,746	132.15	54,755	139.84	57,779	147.56	59,354	151.58
Aug	42,606	109.14	46,994	120.38	50,393	129.08	53,615	137.34	56,732	145.32	59,866	153.35	61,498	157.53
Sep	34,021	102.21	37,526	112.74	40,239	120.90	42,812	128.63	45,301	136.11	47,803	143.62	49,107	147.54
Oct	37,662	98.71	41,835	109.64	45,036	118.03	48,061	125.96	50,981	133.62	53,913	141.30	55,373	145.13
Nov	20,808	40.66	23,113	45.17	24,882	48.63	26,553	51.89	28,166	55.05	29,786	58.21	30,593	59.79
Dec	23,287	42.47	25,867	47.17	27,847	50.78	29,718	54.20	31,523	57.49	33,336	60.79	34,239	62.44
TOTAL:	339,319		375,401		403,228		429,573		455,032		480,611		493,678	
Summer Peak (MW)	*109.14*		*120.38*		*129.08*		*137.34*		*145.32*		*153.35*		*157.53*	
Winter Peak (MW)	*98.71*		*109.64*		*118.03*		*125.96*		*133.62*		*141.30*		*145.13*	

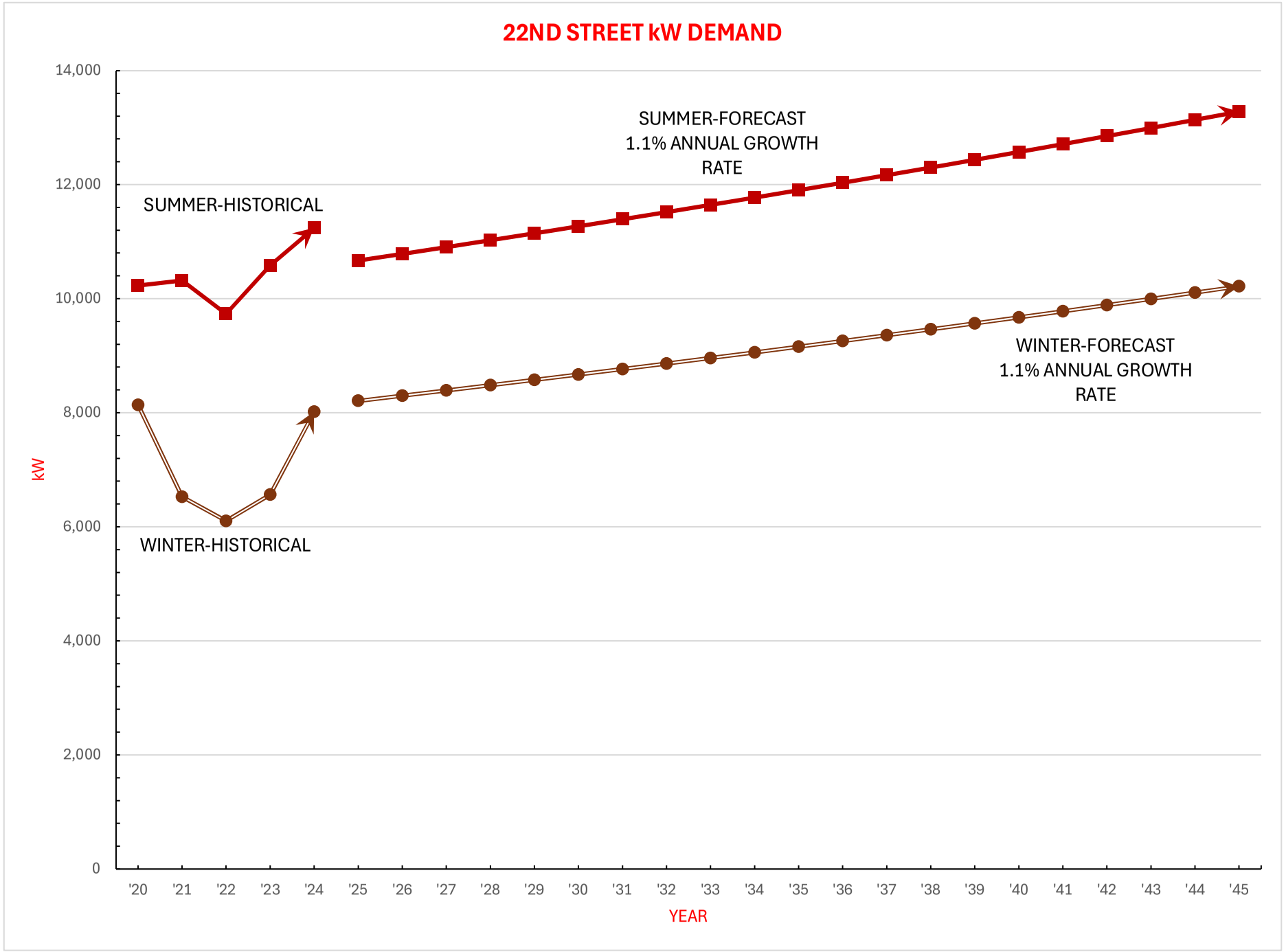
Projected Load Data 2039-2045

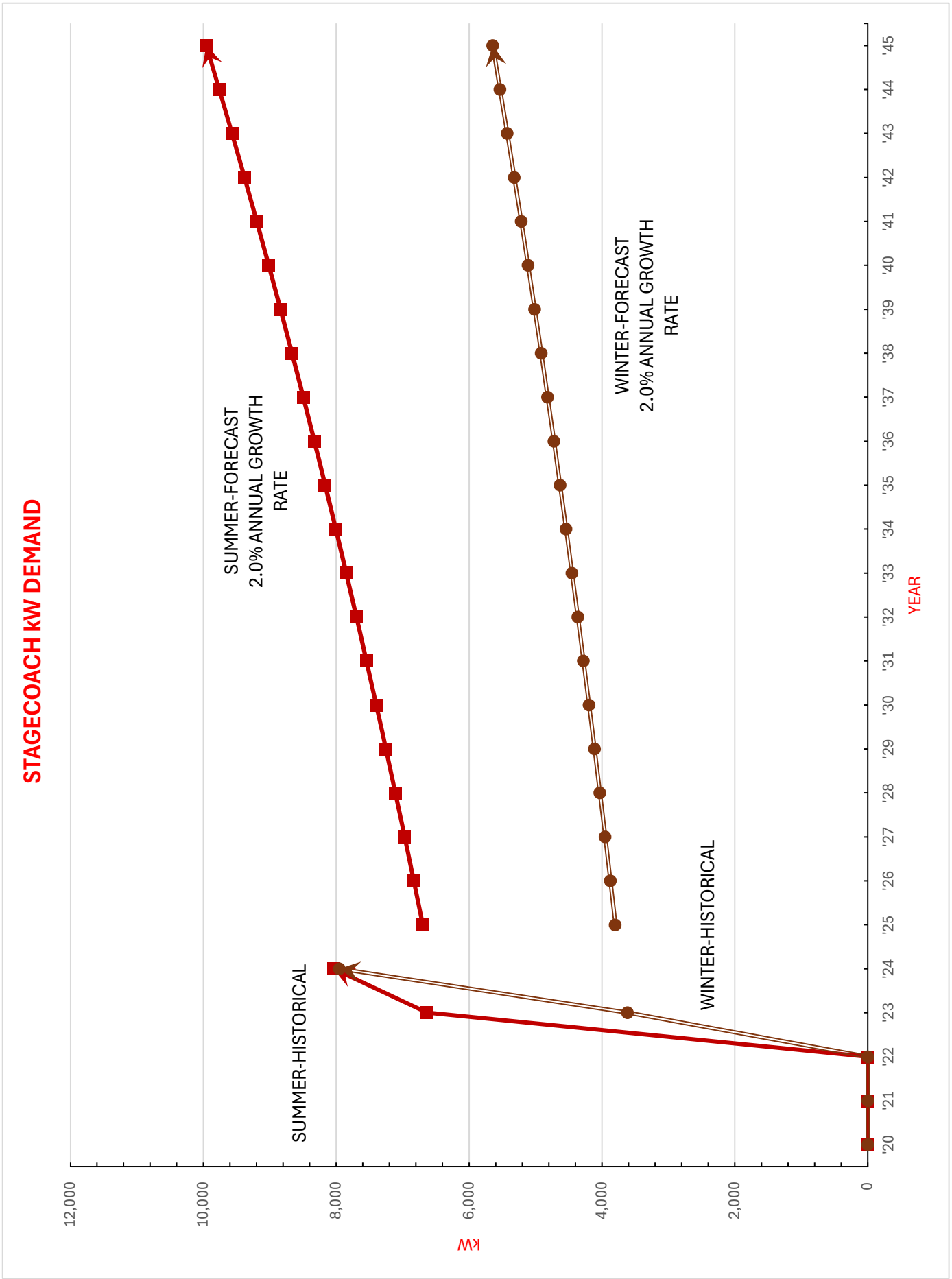
	2039		2040		2041		2042		2043		2044		2045	
	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW	Total Load for Month (MWh)	Peak MW
Jan	33,707	61.93	34,588	63.55	34,939	64.19	35,298	64.85	35,666	65.53	36,042	66.22	36,426	66.93
Feb	30,483	62.10	31,280	63.72	31,597	64.37	31,922	65.03	32,254	65.70	32,594	66.40	32,941	67.10
Mar	31,649	60.25	32,477	61.82	32,806	62.45	33,143	63.09	33,488	63.75	33,841	64.42	34,202	65.11
Apr	32,457	76.89	33,314	78.92	33,702	79.84	34,099	80.78	34,506	81.75	34,923	82.73	35,350	83.74
May	36,941	89.63	37,915	91.99	38,357	93.07	38,810	94.16	39,273	95.29	39,747	96.44	40,233	97.62
Jun	43,716	134.07	44,869	137.61	45,392	139.21	45,927	140.85	46,475	142.53	47,037	144.25	47,611	146.02
Jul	60,946	155.65	62,554	159.76	63,283	161.62	64,029	163.52	64,793	165.47	65,575	167.47	66,377	169.52
Aug	63,146	161.75	64,813	166.02	65,568	167.95	66,341	169.93	67,133	171.96	67,943	174.04	68,774	176.17
Sep	50,423	151.49	51,754	155.49	52,357	157.30	52,974	159.16	53,606	161.06	54,254	163.00	54,917	164.99
Oct	56,847	148.99	58,333	152.88	58,925	154.44	59,531	156.02	60,150	157.65	60,784	159.31	61,432	161.01
Nov	31,407	61.38	32,228	62.98	32,555	63.62	32,890	64.28	33,232	64.95	33,582	65.63	33,941	66.33
Dec	35,150	64.10	36,069	65.78	36,435	66.45	36,809	67.13	37,192	67.83	37,584	68.54	37,985	69.27
TOTAL:	506,871		520,193		525,915		531,773		537,769		543,906		550,188	
Summer Peak (MW)	*161.75*		*166.02*		*167.95*		*169.93*		*171.96*		*174.04*		*176.17*	
Winter Peak (MW)	*148.99*		*152.88*		*154.44*		*156.02*		*157.65*		*159.31*		*161.01*	

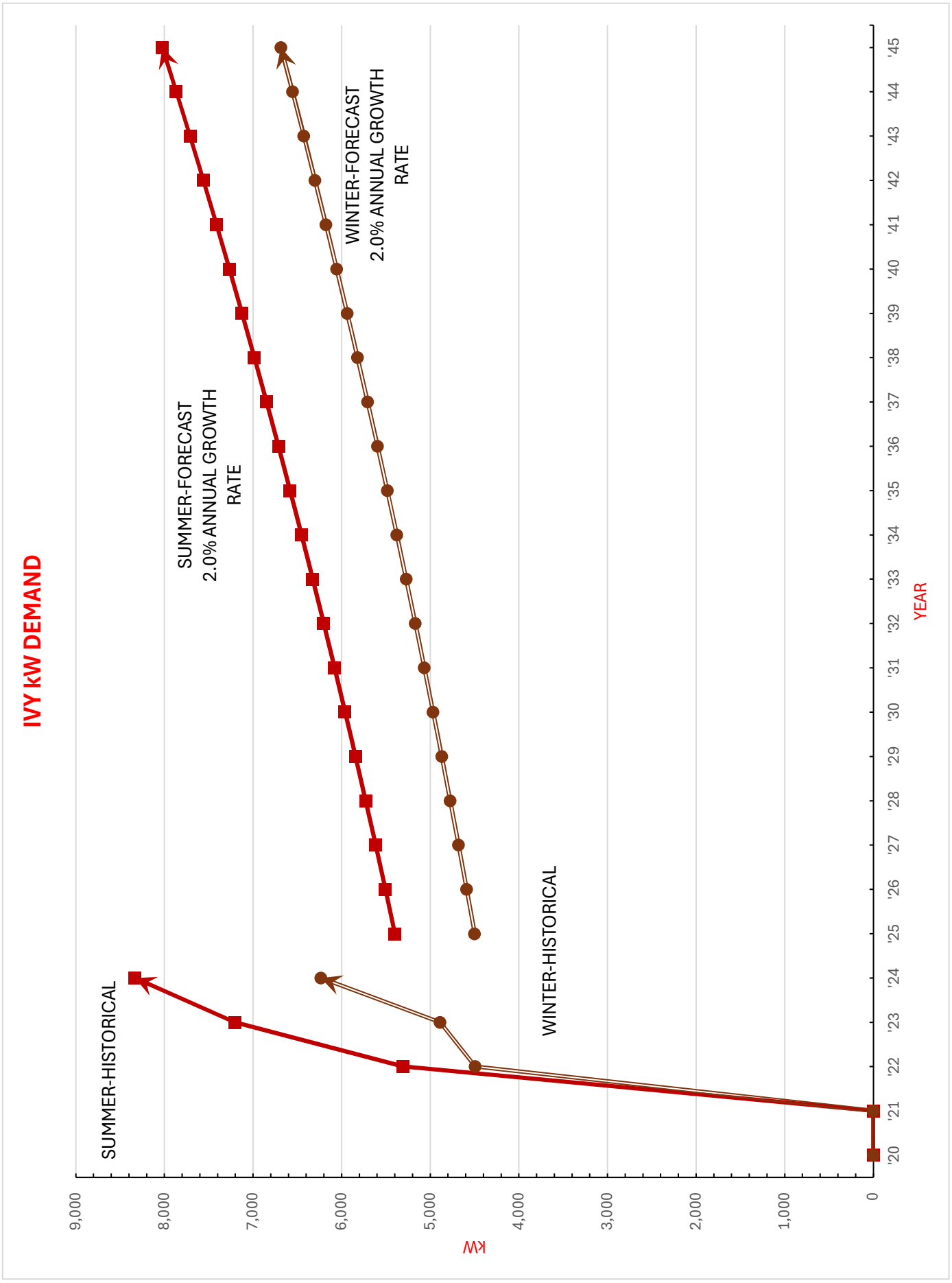

BANNING ELECTRIC UTILTIY MWH PURCHASES
FORECAST
2.4% ANNUAL GROWTH
RATE
HISTORICAL
MWH (x1,000)
YEAR
300
250
200
150
100
50
0
'19
'20
'21
'22
'23
'24
'25
'26
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'31
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'41
'42
'43
'44
'45

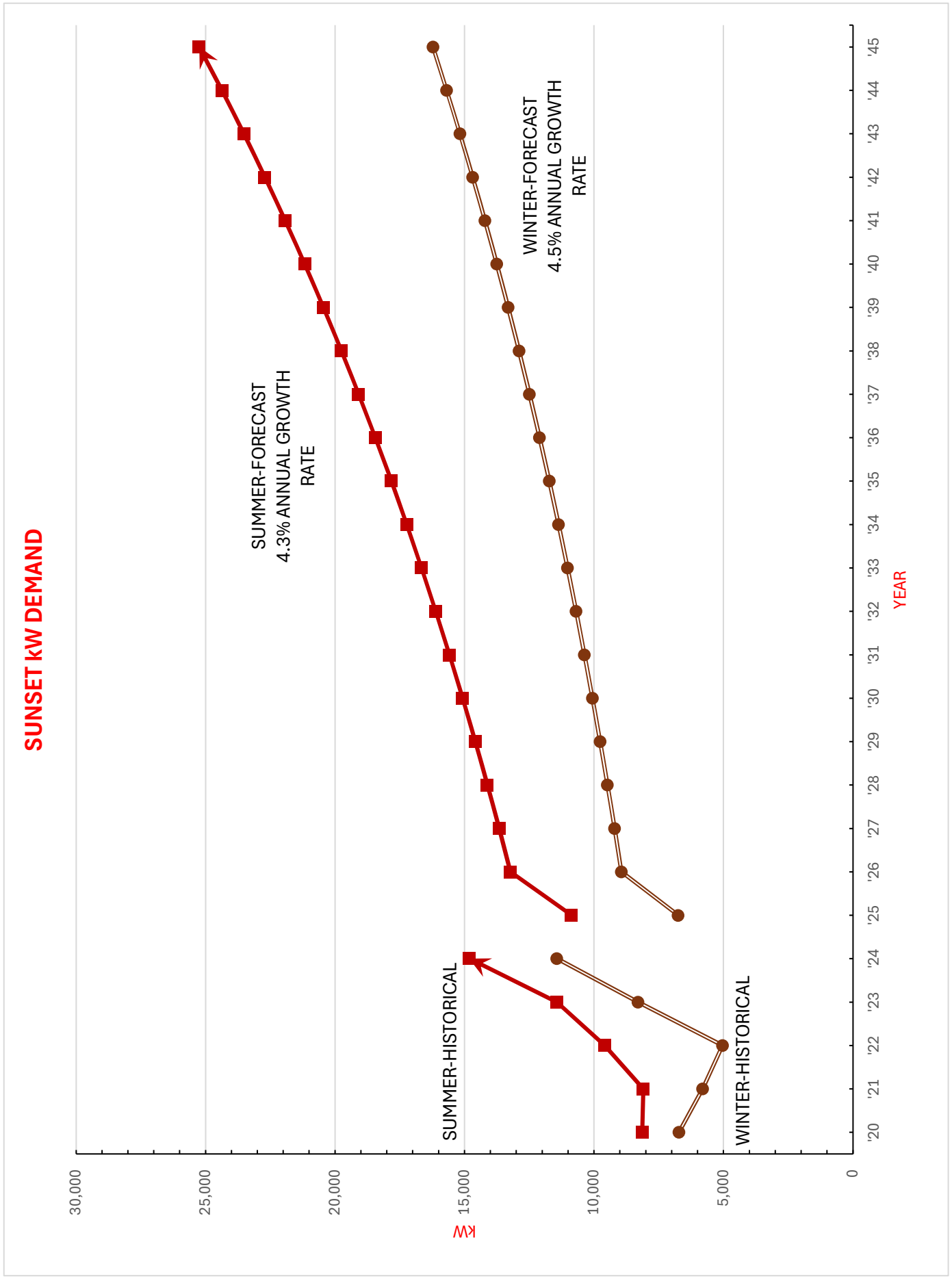

SAN GORGONIO TOTAL kW DEMAND
30,000
25,000
20,000
15,000
10,000
5,000
0
kW
SUMMER-FORECAST
1.7% ANNUAL GROWTH
RATE
SUMMER-HISTORICAL
WINTER-FORECAST
1.7% ANNUAL GROWTH
RATE
WINTER-HISTORICAL
'20
'21
'22
'23
'24
'25
'26
'27
'28
'29
'30
'31
'32
'33
'34
'35
'36
'37
'38
'39
'40
'41
'42
'43
'44
'45
YEAR


MIDWAY TOTAL kW DEMAND
30,000
25,000
20,000
15,000
10,000
5,000
0
kW
SUMMER-FORECAST
2.7% ANNUAL GROWTH
RATE
SUMMER-HISTORICAL
WINTER-FORECAST
2.7% ANNUAL GROWTH
RATE
WINTER-HISTORICAL
'20
'21
'22
'23
'24
'25
'26
'27
'28
'29
'30
'31
'32
'33
'34
'35
'36
'37
'38
'39
'40
'41
'42
'43
'44
'45
YEAR


22ND STREET kW DEMAND
14,000
12,000
10,000
8,000
6,000
4,000
2,000
0
kW
SUMMER-FORECAST
1.1% ANNUAL GROWTH
RATE
SUMMER-HISTORICAL
WINTER-FORECAST
1.1% ANNUAL GROWTH
RATE
WINTER-HISTORICAL
'20
'21
'22
'23
'24
'25
'26
'27
'28
'29
'30
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'33
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'42
'43
'44
'45
YEAR


STAGECOACH kW DEMAND
SUMMER-FORECAST
2.0% ANNUAL GROWTH
RATE
SUMMER-HISTORICAL
WINTER-FORECAST
2.0% ANNUAL GROWTH
RATE
WINTER-HISTORICAL
kW
YEAR
12,000
10,000
8,000
6,000
4,000
2,000
0
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'23
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'45


IVY kW DEMAND
SUMMER-HISTORICAL
SUMMER-FORECAST
2.0% ANNUAL GROWTH
RATE
WINTER-HISTORICAL
WINTER-FORECAST
2.0% ANNUAL GROWTH
RATE
kW
YEAR
9,000
8,000
7,000
6,000
5,000
4,000
3,000
2,000
1,000
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SUNSET kW DEMAND
SUMMER-FORECAST
4.3% ANNUAL GROWTH
RATE
WINTER-FORECAST
4.5% ANNUAL GROWTH
RATE
SUMMER-HISTORICAL
WINTER-HISTORICAL
kW
YEAR
30,000
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5.4 – Overhead Maintenance Program

The Overhead Maintenance Program include the routine inspection and replacement of poles on the sub-transmission and distribution circuits on the BEU system.

It is projected that BEU will inspect 15 poles per week for the years 2026 thru 2030. This totals to 780 poles inspected per year and 3,900 poles inspected for the duration of the 5-Year CIP. An estimated cost of $270 per pole inspection was used and a 3% inflation to this cost was assumed per year starting in 2027. The total estimated cost for pole inspections for the 5-Year CIP is $1,151,647.

It is projected that BEU will replace 50 poles per year for the years 2026 thru 2028 and 100 poles per year for the years 2029 and 2030. This totals to 350 poles replaced for the duration of the 5-Year CIP. An estimated cost of $7,520 per pole replacement was used and a 3% inflation to this cost was assumed per year starting in 2027. The total estimated cost for pole replacements for the 5-Year CIP is $2,906,791.

The total estimated cost for the Overhead Maintenance Program for the 5-year CIP is $4,058,438. The table below shows a breakdown of the Overhead Maintenance Program.

Table 5.4-1 – Overhead Maintenance Program Costs

	2026	2027	2028	2029	2030	Total
Number of Poles Inspected	780	780	780	780	780	3,900
Cost per Inspection	278	286	295	304	313	-
Total Cost of Inspection	$216,918	$223,426	$230,128	$237,032	$244,143	$1,151,647
Number of Poles Replaced	50	50	50	100	100	350
Cost per Replacement	$7,746	$7,978	$8,217	$8,422	$8,675	-
Total Cost of Replacement	$387,280	$398,898	$410,865	$842,240	$867,507	$2,906,791
Total Overhead Maintenance Program	**$604,198**	**$622,324**	**$640,994**	**$1,079,272**	**$1,111,650**	**$4,058,438**

5.5 – Capital Maintenance Projects

BEU has identified 18 Capital Maintenance projects to include in the 5-year CIP. The total estimated cost for these projects is $20,784,500. It is projected that BEU will receive $9,293,750 in contributions in aid to these projects bringing the total BEU funding cost to $11,490,750.

The following tables list the Capital Maintenance projects that have been identified for inclusion to the 5-year CIP.

Table 5.5-1 – Capital Maintenance Project Costs

Project Description	Year	Total Cost	CIAC	BEU Funding Cost
Underground Conversion Livingston to Hargrave (Backbone/Fiber loop at Ramsey/Livingston/Alola)	2027-2028	$149,500	$0	$149,500
Underground Conductor Replacement Barbour St E/O Hathaway	2027	$275,000	$0	$275,000
Underground Conductor Replacement at Mockingbird Lane and Hillside Dr	2027	$750,000	$0	$750,000
Underground Conductor Replacement at Westward Ave from 4th St to 8th St	2027	$625,000	$0	$625,000
Fiber Extension to Stagecoach Substation (UG and OH)	2027	$285,000	$0	$285,000
Midway Substation Upgrades (breaker replacement and SCADA-ready upgrades and future full replacement)	2027-2030	$6,125,000	$0	$6,125,000
34.5 kV/12.47 kV (Cir 77)/fiber UG and OH Extension to Sunset Ave	2029	$2,000,000[1]	$1,200,000	$800,000
SoCalGas Reimbursement for Feeder Circuits to Cottonwood Ave	2027	TBD	100%	$0

[1] Up to 60% contribution from WKJ Development

Table 5.5-1 – Capital Maintenance Project Costs (continued)

Project Description	Year	Total Cost	CIAC	BEU Funding Cost
Underground Conductor Replacement at Vista Serena Ave	2029	$350,000	$175,000[2]	$175,000
Fire Mitigation Tier 2/3 High Threat Area (Various)	2026-2028	$450,000	$0	$450,000
Mias Canyon Line Hardening	2027	$2,100,000	$2,100,000[3]	$0
34.5 kV/12.47 kV/fiber Underground Circuits Hathaway St from Williams St to Hoffer St	2029-2030	$2,000,000	$2,000,000[4]	$0
34.5 kV/12.47 kV/fiber Underground Circuits Lincoln St to John St	2027, 2029	$150,000	$0	$150,000
Install Two (2) Engineered base-plate pole at Sunset and Lincoln	2028-2029	$850,000	$0	$850,000
Install Reclosers on 34.5 kV and 12.47 kV system	2028	$250,000	$0	$250,000
Robertson's Ready Mix Circuit Re-route	2026-2028	$425,000	$318,750[5]	$106,250
Sun Lakes Blvd Extension - Electric Relocation	2026-2028	$3,500,000	$3,500,000[6]	$0

[2] Up to 50% contribution from Vista Serena Developer
[3] 100% grant funded
[4] 100% funded from Sansone Group and First Hathaway Industrial
[5] Up to 75% contribution from Robertson's Ready Mix
[6] 100% Public Works funded

Table 5.5-1 – Capital Maintenance Project Costs (continued)

Project Description	Year	Total Cost	CIAC	BEU Funding Cost
SCE Upfront Capital Costs	2028	$500,000	$0	$500,000
		$20,784,500	**$9,293,750**	**$11,490,750**

The following pages contain the CIP worksheets as provided by BEU.

CITY OF BANNING

5 YEAR CAPITAL IMPROVEMENT PROGRAM (FY 2027- 2031)

Project Title:	**Estimated Completion Date:**
Underground Conversion Livingston to Hargrave (Backbone/Fiber loop at Ramsey/Livingston/Alola)	**12/1/2027**

Project Description:

Complete distribution circuit ties between San Gorgonio Substation and Stagecoach Substation that will provide electric distribution to the area that had been previously served by the decommissioned Alola Substation. This project will include short distance line extensions, installation of PME switches, and fiber optic cable installation.

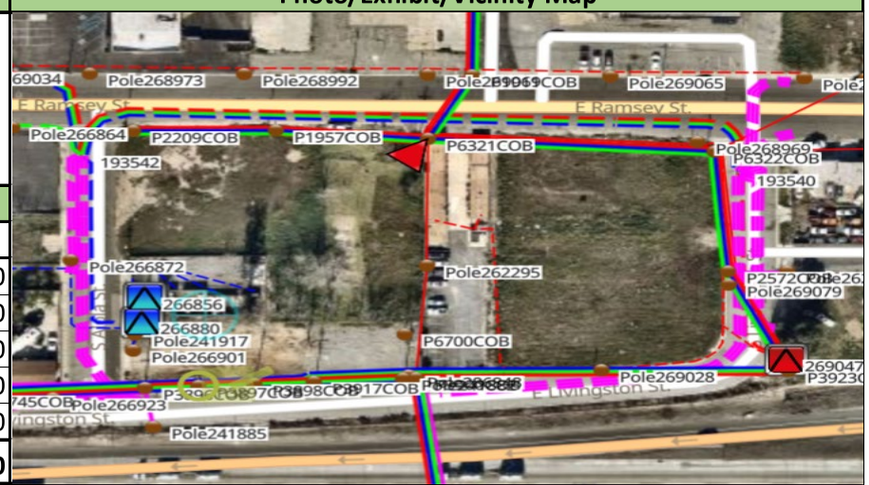
Project Benefit:

Provides added redundancy and resiliency to distribution service in the northeast section of BEU's service territory.

Project Status:

Currently in design; construction phase is tentatively scheduled to commence construction during FY 26/27 and will conclude in FY 27/28.

Photo/Exhibit/Vicinity Map



Project Budget:

Budget Distribution	Est. Amount
Design/Engineering/Enviro.	$9,500
Right of Way Acquisition	$0
Construction Support (e.g. survey, soils, etc.)	$0
Construction Management/Inspections	$5,000
Construction	$135,000
Total	**$149,500**

Funding Plan:

Funding Source	Funds	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	Funds	Total
Electric Revenue	$149,500	$9,500	$140,000					**$149,500**
								$0
								$0
Total	**$149,500**	**$9,500**	**$140,000**	**$0**	**$0**	**$0**	**$0**	**$149,500**

Department:	**Division:**	**Contacts:**
Electric	Engineering	Fred Lyn, Deputy Electric Utility Director Brandon Robinson, Electric Engineering Supervisor

CITY OF BANNING

5 YEAR CAPITAL IMPROVEMENT PROGRAM (FY 2027- 2031)

Project Title:	**Estimated Completion Date:**
Underground Conversion Barbour St (12kV Conversion at 700 S. Hathaway)	**12/1/2026**

Project Description:

Complete 12.47kV conversion for four service at 700 S. Hathaway St. Decommission Airport Substation.

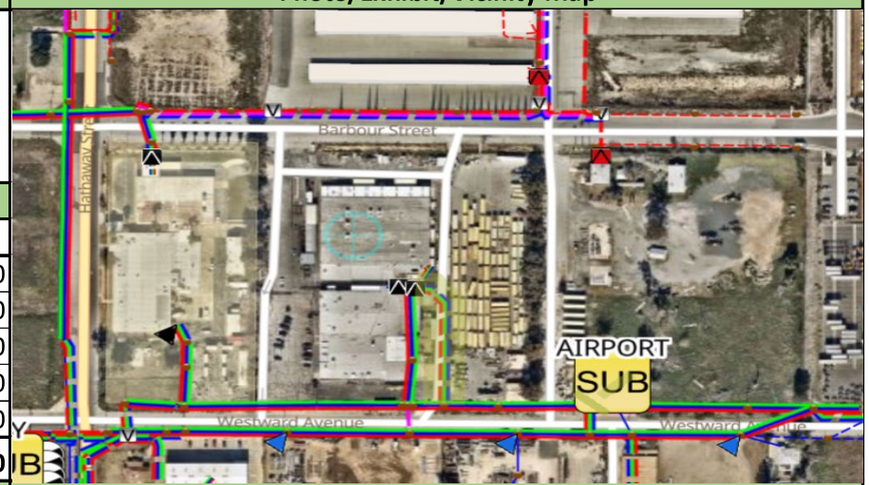
Project Benefit:

This project will conclude the 12kV Conversion project that has taken BEU nearly 50 years to complete. This will provide stable service reliability in the area.

Project Status:

Currently in design; construction phase is tentatively scheduled to commence construction during FY 26/27.

Photo/Exhibit/Vicinity Map



Project Budget:

Budget Distribution	Est. Amount
Design/Engineering/Enviro.	$20,000
Right of Way Acquisition	$0
Construction Support (e.g. survey, soils, etc.)	$0
Construction Management/Inspections	$5,000
Construction	$250,000
Total	**$275,000**

Funding Plan:

Funding Source	Funds	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	Funds	Total
Electric Revenue	$275,000	$275,000						**$275,000**
								$0
								$0
Total	**$275,000**	**$275,000**	**$0**	**$0**	**$0**	**$0**	**$0**	**$275,000**

Department:	**Division:**	**Contacts:**
Electric	Engineering	Fred Lyn, Deputy Electric Utility Director Brandon Robinson, Electric Engineering Supervisor

CITY OF BANNING

5 YEAR CAPITAL IMPROVEMENT PROGRAM (FY 2027- 2031)

Project Title:	**Estimated Completion Date:**
Underground Conductor Replacement - Mockingbird & Hillside	**12/1/2026**

Project Description:

Complete reconductoring on Hillside Dr and Mockingbird Ln.

Project Benefit:

This project will address replacement of antiquated unjacketed cable in BEU's system. The unjacketed cable has become obsolete and is prone to greater percentage of fault occurrence, which leads to longer customer outages.

Project Status:

The initial phase of this project was completed in 2023 due to the occurrence of a fault on an unjacketed primary distribution conductor within the project area; the final phase of construction phase is tentatively scheduled to commence during FY 26/27.

Photo/Exhibit/Vicinity Map



Project Budget:

Budget Distribution	Est. Amount
Design/Engineering/Enviro.	$55,000
Right of Way Acquisition	$0
Construction Support (e.g. survey, soils, etc.)	$0
Construction Management/Inspections	$18,000
Construction	$677,000
Total	**$750,000**

Funding Plan:

Funding Source	Funds	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	Funds	Total
Electric Revenue	$750,000	$750,000						**$750,000**
								$0
								$0
Total	**$750,000**	**$750,000**	**$0**	**$0**	**$0**	**$0**	**$0**	**$750,000**

Department:	**Division:**	**Contacts:**
Electric	Engineering	Fred Lyn, Deputy Electric Utility Director Brandon Robinson, Electric Engineering Supervisor

CITY OF BANNING

5 YEAR CAPITAL IMPROVEMENT PROGRAM (FY 2027- 2031)

Project Title:	**Estimated Completion Date:**
Underground Conductor Replacement - Westward Ave to Barbour St, 4th St to 8th St	**6/1/2026**

Project Description:

Complete reconductoring on between Westward Ave and Barbour St, from 4th St to 8th St.

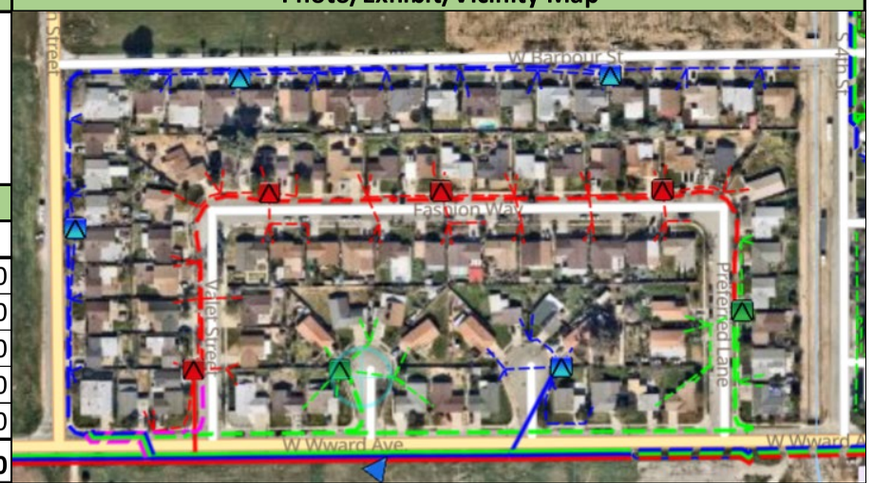
Project Benefit:

This project will address replacement of antiquated unjacketed cable in BEU's system. The unjacketed cable has become obsolete and is prone to greater percentage of fault occurrence, which leads to longer customer outages.

Project Status:

Some preliminary reconductoring occurred during a 2022 fault event involving unjacketed primary distribution conductor within the project area; construction of all improvements is tentatively scheduled to commence during FY 26/27.

Photo/Exhibit/Vicinity Map



Project Budget:

Budget Distribution	Est. Amount
Design/Engineering/Enviro.	$25,000
Right of Way Acquisition	$0
Construction Support (e.g. survey, soils, etc.)	$0
Construction Management/Inspections	$10,000
Construction	$590,000
Total	**$625,000**

Funding Plan:

Funding Source	Funds	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	Funds	Total
Electric Revenue	$625,000	$625,000						**$625,000**
								$0
								$0
Total	**$625,000**	**$625,000**	**$0**	**$0**	**$0**	**$0**	**$0**	**$625,000**

Department:	**Division:**	**Contacts:**
Electric	Engineering	Fred Lyn, Deputy Electric Utility Director Brandon Robinson, Electric Engineering Supervisor

CITY OF BANNING

5 YEAR CAPITAL IMPROVEMENT PROGRAM (FY 2027- 2031)

Project Title:	**Estimated Completion Date:**
Fiber Extension to Stagecoach	**12/30/2027**

Project Description:

Underground conversion of 34.5kV, 12.47kV and fiber optic circuits thru easement within Banning Airport property from Lincoln St to John St.

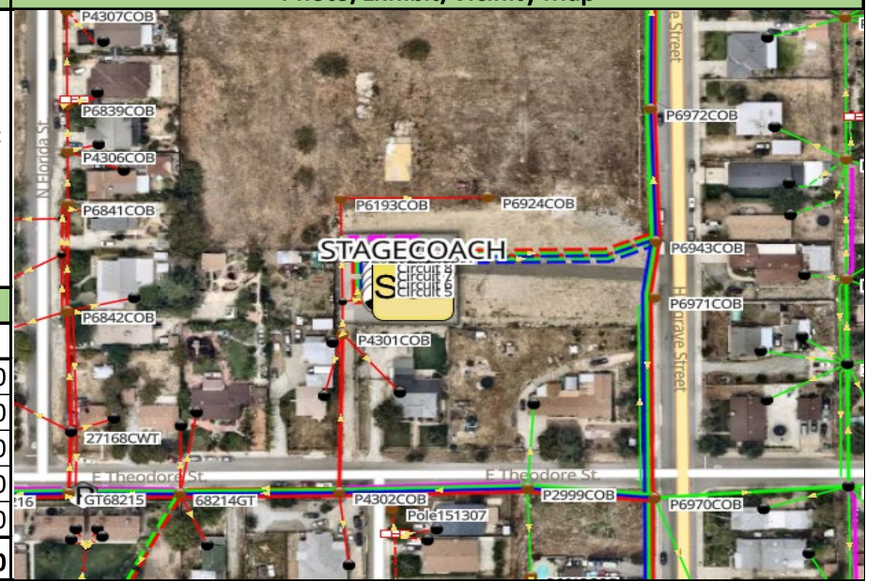
Project Benefit:

This project will help push BEU toward completion of fiber optic hard line connectivity all six substations for SCADA monitoring and control.

Project Status:

In 2022, BEU completed a line extension on Hargrave Street from the site of the decommissioned Alola Substation to the newly built Stagecoach Substation in order to energize the asset and provide service to the northeast portion of BEU's service area. The design for this pole line extension included provisions for a future utility fiber optic line attachment to support SCADA communication. BEU anticipates construction to commence during FY 26/27, but may be able to be delayed and encumbered into future fiscal year budgets if needed.

Photo/Exhibit/Vicinity Map



Project Budget:

Budget Distribution	Est. Amount
Design/Engineering/Enviro.	$15,000
Right of Way Acquisition	$0
Construction Support (e.g. survey, soils, etc.)	$0
Construction Management/Inspections	$5,000
Construction	$265,000
Total	**$285,000**

Funding Plan:

Funding Source	Funds	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	Funds	Total
Electric Revenue	$285,000	$285,000						**$285,000**
CIAC	$0							**$0**
								$0
Total	**$285,000**	**$285,000**	**$0**	**$0**	**$0**	**$0**	**$0**	**$285,000**

Department:	**Division:**	**Contacts:**
Electric	Engineering	Fred Lyn, Deputy Electric Utility Director Brandon Robinson, Electric Engineering Supervisor

CITY OF BANNING

5 YEAR CAPITAL IMPROVEMENT PROGRAM (FY 2027- 2031)

Project Title:	**Estimated Completion Date:**
Midway Substation Upgrades (breaker replacement and SCADA upgrades)	**5/30/2028**

Project Description:

Install SCADA RTU and other equipment to make Midway Substation SCADA ready. Replace distribution with spare breakers as needed. This project will also address potential full substation upgrade if direction is to utilize the existing property.

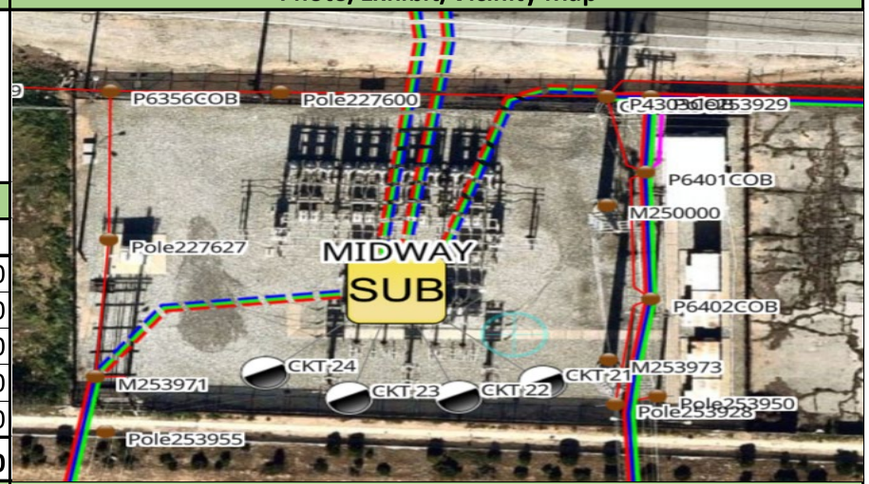
Project Benefit:

Midway is BEU's oldest Substation, built in 1972. Most of the equipment, including the transformers and distribution breakers are original and nearing the end of useful life. The SCADA upgrades will allow remote visibility at the substation, while as-needed breaker replacement will allow the substation to continue operating as intended. The eventual replacement of all equipment at the substation will help conclude modernization of all BEU's substation assets.

Project Status:

BEU has began vetting equipment that will be utilized to make Midway Substation SCADA-ready. Construction of this phase is tentatively scheduled to commence during FY 26/27. All other improvements we be evaluated later in the initial 5-yr CIP period.

Photo/Exhibit/Vicinity Map



Project Budget:

Budget Distribution	Est. Amount
Design/Engineering/Enviro.	$5,000
Right of Way Acquisition	$0
Construction Support (e.g. survey, soils, etc.)	$0
Construction Management/Inspections	$2,500
Construction	$117,500
Total	**$125,000**

Funding Plan:

Funding Source	Funds	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	Funds	Total
Electric Revenue	$125,000	$75,000	$50,000					**$125,000**
								$0
								$0
Total	**$125,000**	**$75,000**	**$50,000**	**$0**	**$0**	**$0**	**$0**	**$125,000**

Department:	**Division:**	**Contacts:**
Electric	Engineering	Fred Lyn, Deputy Electric Utility Director Brandon Robinson, Electric Engineering Supervisor

CITY OF BANNING

5 YEAR CAPITAL IMPROVEMENT PROGRAM (FY 2027- 2031)

Project Title:	**Estimated Completion Date:**
34.5kV/12.47kV (Cir 77)/fiber UG and OH Extension to Sunset Ave	**6/30/2029**

Project Description:

Extend electric sub-transmission and distribution from Mountain Ave to Sunset Ave.

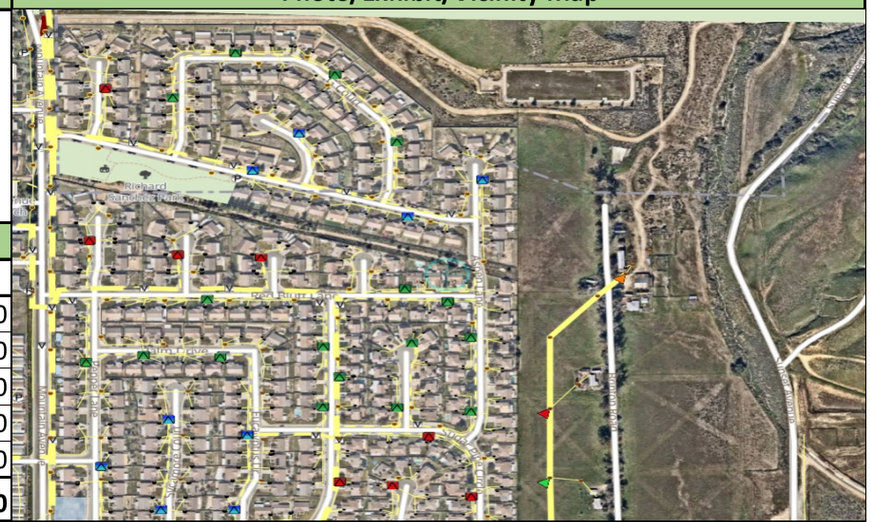
Project Benefit:

Circuit #77, which originates from Sunset Substation, is terminated in a switch cabinet on Mountain Ave. This circuit was designed to provide distribution services to newer developments along Sunset Ave north of Wilson St. Completing this line extension allows BEU to fulfill this need, while also seeking monetary contributions from these developments thru line extension agreements.

Project Status:

BEU has completed a preliminary design of the 12.47kV distribution extension thru the area. Design for the 34.5kV and fiber extension still needs to be completed. Environmental, survey, and possible ROW acquisition will be required for this project. Construction is tentatively scheduled to commence during FY 28/29, or as soon as advance on construction is received for from developers in the area that will be served with this line extension.

Photo/Exhibit/Vicinity Map



Project Budget:

Budget Distribution	Est. Amount
Design/Engineering/Enviro.	$115,000
Right of Way Acquisition	$50,000
Construction Support (e.g. survey, soils, etc.)	$75,000
Construction Management/Inspections	$45,000
Construction	$1,715,000
Total	**$2,000,000**

Funding Plan:

Funding Source	Funds	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	Funds	Total
Electric Revenue	$800,000			$800,000				**$800,000**
CIAC (WJK Development)	$1,200,000			$1,200,000				**$1,200,000**
								$0
Total	**$2,000,000**	**$0**	**$0**	**$2,000,000**	**$0**	**$0**	**$0**	**$2,000,000**

Department:	**Division:**	**Contacts:**
Electric	Engineering	Fred Lyn, Deputy Electric Utility Director Brandon Robinson, Electric Engineering Supervisor

CITY OF BANNING

5 YEAR CAPITAL IMPROVEMENT PROGRAM (FY 2027- 2031)

Project Title:	**Estimated Completion Date:**
Underground Conductor Replacement at Vista Serena	**6/30/2029**

Project Description:

Complete reconductoring of unjacketed cable in the Vista Serena development in conjunction with an ongoing development-driven project to complete buildout of the complex.

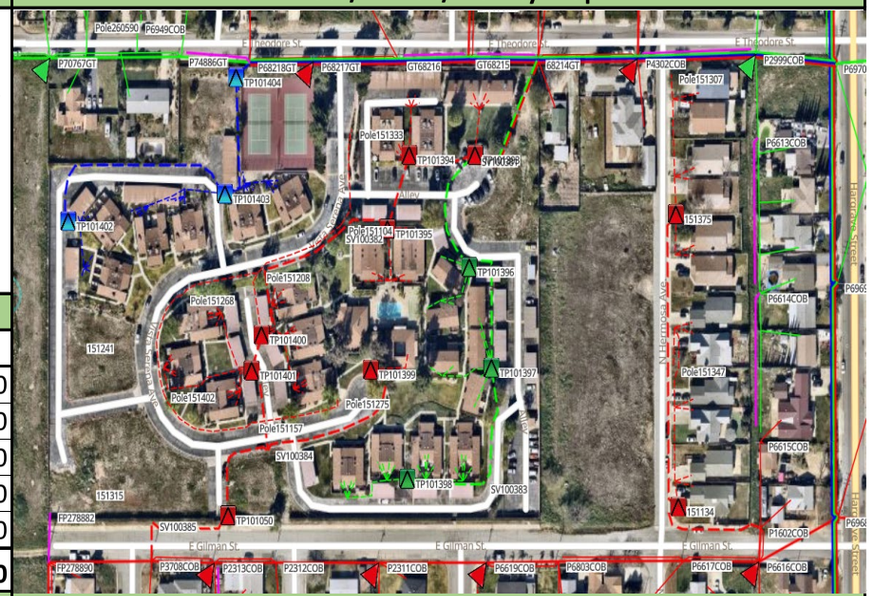
Project Benefit:

This project will address replacement of antiquated unjacketed cable in BEU's system. The unjacketed cable has become obsolete and is prone to greater percentage of fault occurrence, which leads to longer customer outages.

Project Status:

BEU has completed minor reconductoring within Vista Serena that had come as a result of outages created by cable fault/failure. Design for the complete distribution upgrades to serve the development is in progress. The developer will have a cost responsibility for new line extensions within the development, as well as replacement of some of the existing unjacketed cable. Construction is tentatively scheduled to commence during FY 26/27, or as soon as advance on construction is received from the developer. Completion of all remaining reconductoring outside of developer requirements will occur during FY 28/29.

Photo/Exhibit/Vicinity Map



Project Budget:

Budget Distribution	Est. Amount
Design/Engineering/Enviro.	$6,500
Right of Way Acquisition	$0
Construction Support (e.g. survey, soils, etc.)	$0
Construction Management/Inspections	$15,000
Construction	$328,500
Total	**$350,000**

Funding Plan:

Funding Source	Funds	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	Funds	Total
Electric Revenue	$175,000			$175,000				**$175,000**
CIAC (Vista Serena)	$175,000	$175,000						**$175,000**
								$0
Total	**$350,000**	**$175,000**	**$0**	**$175,000**	**$0**	**$0**	**$0**	**$350,000**

Department:	**Division:**	**Contacts:**
Electric	Engineering	Fred Lyn, Deputy Electric Utility Director Brandon Robinson, Electric Engineering Supervisor

CITY OF BANNING

5 YEAR CAPITAL IMPROVEMENT PROGRAM (FY 2027- 2031)

Project Title:	**Estimated Completion Date:**
Fire Mitigation Improvements in High Fire Threat District	**6/30/2029**

Project Description:

BEU will complete improvements to control of electricity in the Tiers 2 & 3 High Fire Threat District (HFTD). BEU will begin with the installation of distribution circuit reclosers to allow power to be shut off to these areas in the event that an imminent threat to public safety becomes present.

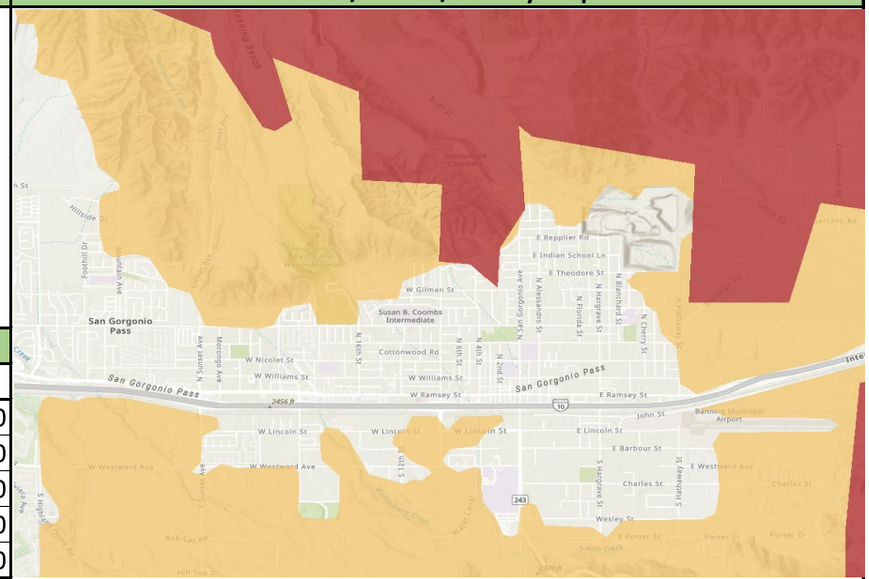
Project Benefit:

This project will assist with the continued monitoring and operation of the electric distribution facilities within the HFTD Tiers 2 & 3 areas. The California Public Utility Commission's Wildfire Safety Advisory Board (WSAB) recommended that utilities with electric transmission or distribution facilities in HFTDs make tangible improvements to the monitoring and operation of these facilities to reduce wildfire risk.

Project Status:

BEU has been required to submit a Wildfire Mitigation Plan for review to the WSAB each year since 2020. Within this time, BEU has completed minor improvements to facilities in Banning Canyon (water canyon) and has applied for grant funding to upgrade facilities within Mias Canyon. BEU is obligated to continue fire mitigation efforts, and has identified the use of reclosers as a high priority solution for circuits that enter the HFTD. BEU anticipates construction to begin during FY 26/27, and continue annually until grid hardening solutions have been met. BEU will continue to search for and apply for grant funding to offset revenue expenditures.

Photo/Exhibit/Vicinity Map



Project Budget:

Budget Distribution	Est. Amount
Design/Engineering/Enviro.	$25,000
Right of Way Acquisition	$0
Construction Support (e.g. survey, soils, etc.)	$0
Construction Management/Inspections	$5,000
Construction	$420,000
Total	**$450,000**

Funding Plan:

Funding Source	Funds	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	Funds	Total
Electric Revenue	$450,000	$150,000	$150,000	$150,000				**$450,000**
CIAC	$0							**$0**
								$0
Total	**$450,000**	**$150,000**	**$150,000**	**$150,000**	**$0**	**$0**	**$0**	**$450,000**

Department:	**Division:**	**Contacts:**
Electric	Engineering	Fred Lyn, Deputy Electric Utility Director Brandon Robinson, Electric Engineering Supervisor

Project Title:	Estimated Completion Date:
Mias Canyon Line Hardening	12/30/2028

Project Description:

This project involves replacing 75 utility poles with new fire retardant-treated poles; replacing wooden crossarms on poles with fiberglass crossarms; installing insulated/covered wire and jumpers; installing covered insulators; installing line protection measures; and completing hazardous fuels reduction.

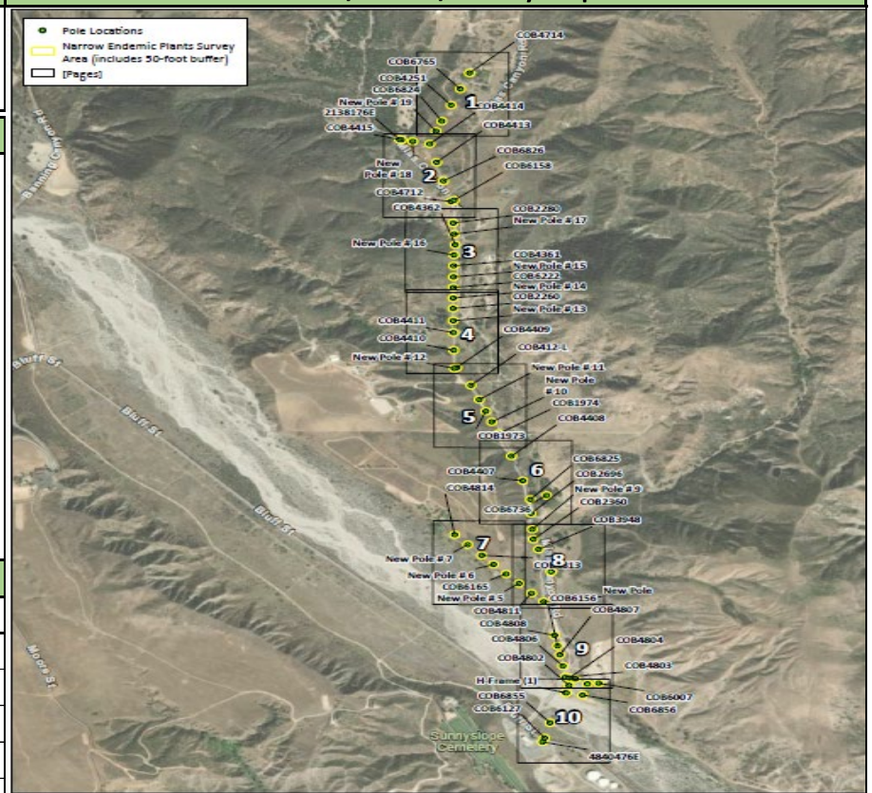
Project Benefit:

This project will help provide redundancy on our 34.5kV and 12.47kV and assist providing a point of connection to the 34.5kV system for the proposed substation to support expansion in the eastern part of the City.

Project Status:

The result from the Apple Fire in 2020 prompted BUE to search for funding to complete much needed upgrades/line hardening in areas within the service territory that are most susceptible to fire ignition. BEU began the design and grant application process for this project in 2021, and is currently awaiting funding after various design and environmental clearance activities. This project will be grant-funded thru the federal government's Hazard Mitigation Grant Program at 75% of total project cost, with 25% matching contributions form California Governor's Office of Emergency Services (CalOES) to complete the full 100% funding. Construction start for this project is dependent upon the grant funding during FY 26/27, in which BEU will be given 24 months to complete.

Photo/Exhibit/Vicinity Map



Project Budget:

Budget Distribution	Est. Amount
Design/Engineering/Enviro.	$185,000
Right of Way Acquisition	$0
Construction Support (e.g. survey, soils, etc.)	$10,000
Construction Management/Inspections	$45,000
Construction	$1,860,000
Total	**$2,100,000**

Funding Plan:

Funding Source	Funds	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	Funds	Total
Electric Revenue	$0							**$0**
CIAC (Grant)	$2,100,000	$2,100,000						**$2,100,000**
Total	**$2,100,000**	**$2,100,000**	**$0**	**$0**	**$0**	**$0**	**$0**	**$2,100,000**

Department:	Division:	Contacts:
Electric	Engineering	Fred Lyn, Deputy Electric Utility Director Brandon Robinson, Electric Engineering Supervisor

CITY OF BANNING

5 YEAR CAPITAL IMPROVEMENT PROGRAM (FY 2027- 2031)

Project Title:	**Estimated Completion Date:**
34.5kV/12.47kV/fiber Underground Circuits Hathaway St from Williams St to Hoffer St	**6/30/2030**

Project Description:

Underground conversion of 34.5kV, 12.47kV and fiber optic circuits on Hathaway St and new utility service extensions to accomodate new industrial development. This project is fully dependent on the completion of this development.

Project Benefit:

This project will accommodate street improvements required by the Sansone Group and First Hathaway Industrial warehouse developments. This will also assist with beautification of the eastern corridor due to the undergrounding of BEU utilities.

Project Status:

BEU has completed UG conversion of facilities from Ramsey St to Williams St along Hathaway St in 2022. Design for this project is in progress. The developers will have a full responsibility for relocation/conversion along Hathaway St and new line extensions within the development. Construction is tentatively scheduled to commence during FY 28/29, or as soon as advance on construction is received from the developer.

Photo/Exhibit/Vicinity Map



Project Budget:

Budget Distribution	Est. Amount
Design/Engineering/Enviro.	$55,000
Right of Way Acquisition	$0
Construction Support (e.g. survey, soils, etc.)	$0
Construction Management/Inspections	$35,000
Construction	$1,910,000
Total	**$2,000,000**

Funding Plan:

Funding Source	Funds	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	Funds	Total
Electric Revenue								**$0**
CIAC (Sansone/First Hathaway)	$2,000,000			$1,000,000	$1,000,000			**$2,000,000**
								$0
Total	**$2,000,000**	**$0**	**$0**	**$1,000,000**	**$1,000,000**	**$0**	**$0**	**$2,000,000**

Department:	**Division:**	**Contacts:**
Electric	Engineering	Fred Lyn, Deputy Electric Utility Director Brandon Robinson, Electric Engineering Supervisor

CITY OF BANNING

5 YEAR CAPITAL IMPROVEMENT PROGRAM (FY 2027- 2031)

Project Title:	**Estimated Completion Date:**
34.5kV/12.47kV/fiber Underground Circuits Lincoln St to John St	**6/30/2029**

Project Description:

Underground conversion of 34.5kV, 12.47kV and fiber optic circuits thru easement within Banning Airport property from Lincoln St to John St.

Project Benefit:

This project will help provide redundancy on our 34.5kV and 12.47kV and assist providing a point of connection to the 34.5kV system for the proposed substation to support expansion in the eastern part of the City.

Project Status:

In 2015, BEU completed a line extension thru an existing utility easement on the airport property to accommodate future redundancy needs. BEU has also completed UG line extensions to new facilities in the area which began in 2021. As the City continues to build out, more capacity will be needed in East Banning. Design for this project should begin early 2027. There may be a design/construction cost responsibility for future developers, but that cost is still unknown. BEU anticipates construction to commence during FY 28/29, as the need for additional capacity may become a requirement.

Photo/Exhibit/Vicinity Map



Project Budget:

Budget Distribution	Est. Amount
Design/Engineering/Enviro.	$20,000
Right of Way Acquisition	$0
Construction Support (e.g. survey, soils, etc.)	$0
Construction Management/Inspections	$5,000
Construction	$125,000
Total	**$150,000**

Funding Plan:

Funding Source	Funds	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	Funds	Total
Electric Revenue	$175,000	$20,000		$130,000				**$150,000**
CIAC	$0							**$0**
								$0
Total	**$175,000**	**$20,000**	**$0**	**$130,000**	**$0**	**$0**	**$0**	**$150,000**

Department:	**Division:**	**Contacts:**
Electric	Engineering	Fred Lyn, Deputy Electric Utility Director Brandon Robinson, Electric Engineering Supervisor

CITY OF BANNING

5 YEAR CAPITAL IMPROVEMENT PROGRAM (FY 2027- 2031)

Project Title:	**Estimated Completion Date:**
Engineered Base-Plate Poles at Sunset and Lincoln	**6/30/2029**

Project Description:

Installation of two engineer-base steel pole to support 69/ 34.5kV, 12.47kV and fiber optic circuits on the west side of Sunset Ave north of Lincoln St.

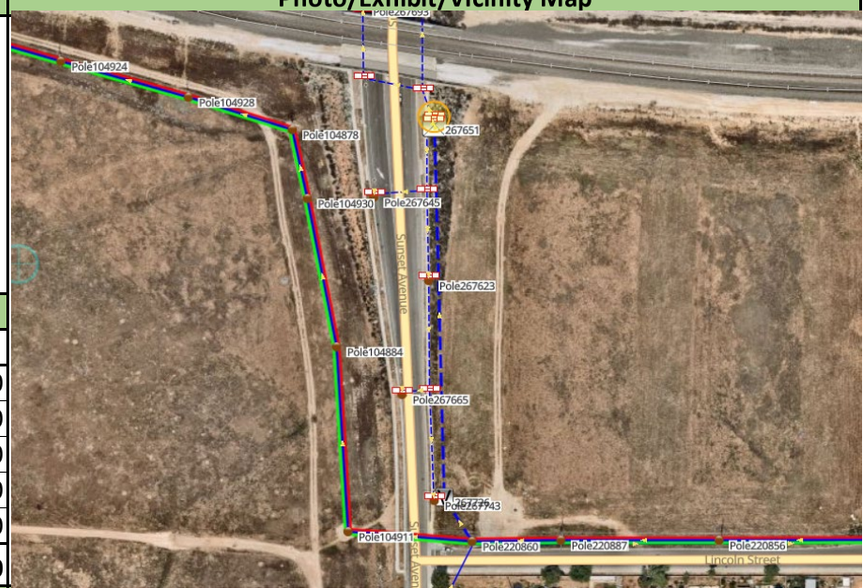
Project Benefit:

This project will provide a much needed infrastructure upgrade for a critical 69/34.5kV/12.47kV/fiber pole line that contains the capacity to support 2/3 of BEU's total energy demand. This pole line carries transmission to Midway and Subset Substations which account for the largest loads within BEU's service territory.

Project Status:

In 2014, BEU completed a relocation of the steel pole transmission line at Sunset Ave and Lincoln Street. The final phase of this project was to be completed prior to 2017, however budget constraints prevented the completion of the project. There may be a design/construction cost responsibility for future developers, but that cost is still unknown. BEU anticipates construction to commence during FY 28/29, which is anticipated to coincide with commercial development within the area.

Photo/Exhibit/Vicinity Map



Project Budget:

Budget Distribution	Est. Amount
Design/Engineering/Enviro.	$60,000
Right of Way Acquisition	$0
Construction Support (e.g. survey, soils, etc.)	$50,000
Construction Management/Inspections	$35,000
Construction	$705,000
Total	**$850,000**

Funding Plan:

Funding Source	Funds	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	Funds	Total
Electric Revenue	$850,000		$425,000	$425,000				**$850,000**
CIAC	$0							**$0**
								$0
Total	**$850,000**	**$0**	**$425,000**	**$425,000**	**$0**	**$0**	**$0**	**$850,000**

Department:	**Division:**	**Contacts:**
Electric	Engineering	Fred Lyn, Deputy Electric Utility Director Brandon Robinson, Electric Engineering Supervisor

CITY OF BANNING

5 YEAR CAPITAL IMPROVEMENT PROGRAM (FY 2027- 2031)

Project Title:	**Estimated Completion Date:**
Install Reclosers on 34.5 kV and 12.47 kV system	**6/30/2028**

Project Description:

BEU will complete a pilot project to install reclosers and other sectionalizing devices on the distribution and sub-transmission system.

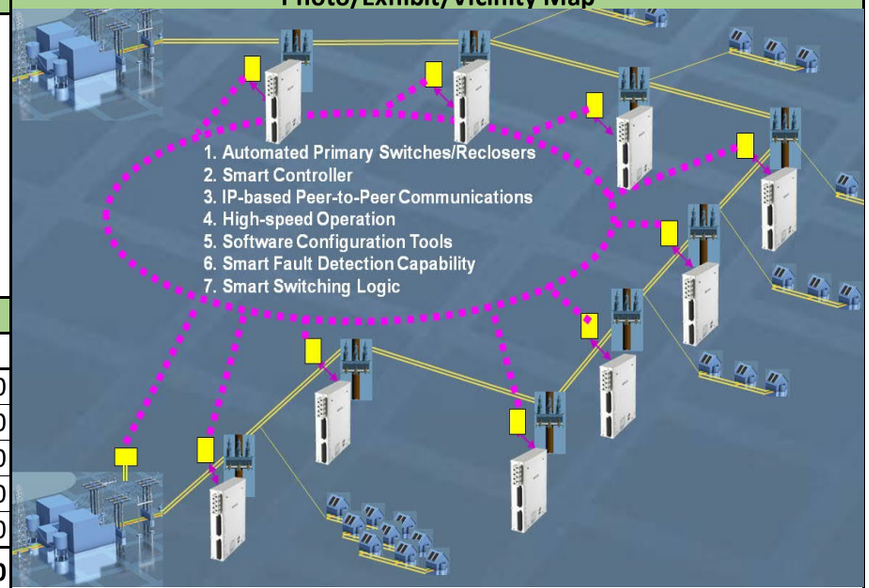
Project Benefit:

This project will allow BEU to improve redundancy and reliability within the system by isolating outages to a smaller area and reduce power restoration times.

Project Status:

Planning and equipment research for this project began in 2022 and will continue with the completion of a system impact study of the current electric grid. BEU will vet different equipment manufacturers and determine the best method for initiating the pilot. The project will be constructed using BEU's in-house power line construction services. The pilot will include investigation and implementation of distribution automation (DA) solutions to provide communication with the field devices that are installed. BEU anticipates this pilot to begin in FY 27/28.

Photo/Exhibit/Vicinity Map



Project Budget:

Budget Distribution	Est. Amount
Design/Engineering/Enviro.	$35,000
Right of Way Acquisition	$0
Construction Support (e.g. survey, soils, etc.)	$0
Construction Management/Inspections	$5,000
Construction	$210,000
Total	**$250,000**

Funding Plan:

Funding Source	Funds	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	Funds	Total
Electric Revenue	$250,000		$250,000					**$250,000**
CIAC (Grant)								**$0**
								$0
Total	**$250,000**	**$0**	**$250,000**	**$0**	**$0**	**$0**	**$0**	**$250,000**

Department:	**Division:**	**Contacts:**
Electric	Engineering	Fred Lyn, Deputy Electric Utility Director Brandon Robinson, Electric Engineering Supervisor

CITY OF BANNING

5 YEAR CAPITAL IMPROVEMENT PROGRAM (FY 2027- 2031)

Project Title:	**Estimated Completion Date:**
Robertson's Ready Mix Circuit Re-route	**6/30/2028**

Project Description:

Re-route/rebuild of 34.5kV, 12.47kV and fiber optic circuits around the Robertson's Ready Mix mining site.

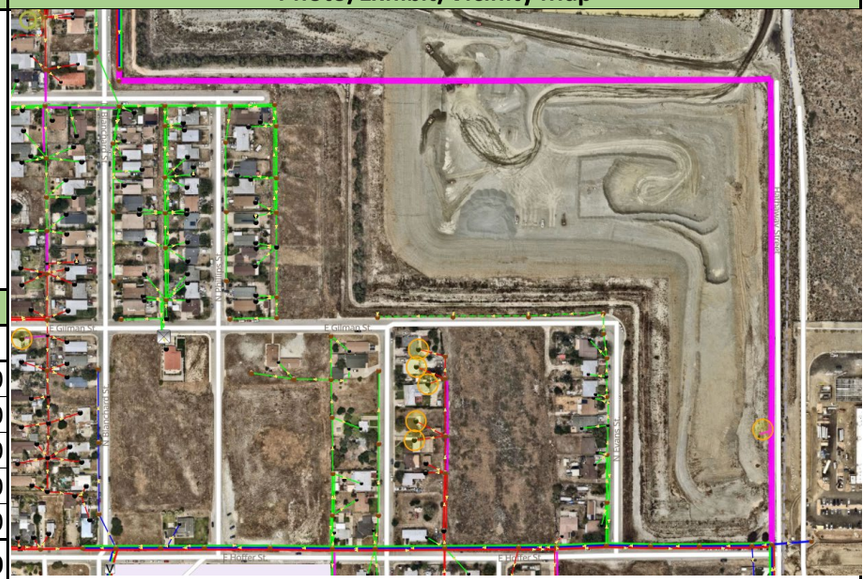
Project Benefit:

This project will be required to rebuild BEU's distribution circuit around Robertson's Ready Mix's expanded mining site that was previously removed. BEU will regain the loss in capacity and redundancy in the system be completing this circuit re-build.

Project Status:

BEU is negotiating a line extension agreement with Roberston's Ready Mix to complete the circuit re-route around the expanded mining area north of Hoffer St and west of Hathaway St. BEU has already completed removal of utility poles in conflict with the new mining activities in anticipation of beginning the construction of the circuit re-rout by 2025. There will be a design/construction cost responsibility for Robertson's that will total 75% or more of total project costs. BEU anticipates construction to commence during FY 26/27 and be completed in the following fiscal year.

Photo/Exhibit/Vicinity Map



Project Budget:

Budget Distribution	Est. Amount
Design/Engineering/Enviro.	$65,000
Right of Way Acquisition	$0
Construction Support (e.g. survey, soils, etc.)	$0
Construction Management/Inspections	$15,000
Construction	$345,000
Total	**$425,000**

Funding Plan:

Funding Source	Funds	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	Funds	Total
Electric Revenue	$106,250		$106,250					**$106,250**
CIAC	$318,750	$318,750						**$318,750**
								$0
Total	**$425,000**	**$318,750**	**$106,250**	**$0**	**$0**	**$0**	**$0**	**$425,000**

Department:	**Division:**	**Contacts:**
Electric	Engineering	Fred Lyn, Deputy Electric Utility Director Brandon Robinson, Electric Engineering Supervisor

CITY OF BANNING

5 YEAR CAPITAL IMPROVEMENT PROGRAM (FY 2027- 2031)

Project Title:	**Estimated Completion Date:**
Sun Lakes Blvd Extension - Electric Relocation	**12/30/2027**

Project Description:

BEU will relocate transmission, distribution, and fiber optic infrastructure on Westward Ave/Sun Lakes Blvd due to roadway improvements. This project will include both underground conversion and overhead line hardening as these improvements will occur in the Tier 2 High Fire Threat District (HFTD).

Project Benefit:

This project will accommodate roadway improvements to connect Sun Lakes Blvd from Highland Home Road to Sunset Ave.

Project Status:

Planning and field investigation for this project started in 2021. BEU completed a design to convert overhead facilities to underground construction to accommodate the roadway extension. The project was bid to a construction contractor and approved by City Council in late 2025. Since BEU is obligated to continue fire mitigation efforts, improvements to the overhead infrastructure that will remain will include line hardening elements to protect from and prevent wildfire in the HFTD. BEU anticipates construction to begin toward the end of FY 26/27, and continue thru FY 27/28. Electric improvements for this project will be grant funded.

Photo/Exhibit/Vicinity Map



Project Budget:

Budget Distribution	Est. Amount
Design/Engineering/Enviro.	$125,000
Right of Way Acquisition	$0
Construction Support (e.g. survey, soils, etc.)	$0
Construction Management/Inspections	$50,000
Construction	$3,325,000
Total	**$3,500,000**

Funding Plan:

Funding Source	Funds	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	Funds	Total
Electric Revenue	$0							**$0**
CIAC (Grant)	$3,500,000	$2,500,000	$1,000,000					**$3,500,000**
								$0
Total	**$3,500,000**	**$2,500,000**	**$1,000,000**	**$0**	**$0**	**$0**	**$0**	**$3,500,000**

Department:	**Division:**	**Contacts:**
Electric	Engineering	Fred Lyn, Deputy Electric Utility Director Brandon Robinson, Electric Engineering Supervisor

5.6 – Substation Capacity Analysis

The table below represents the substation capacity analysis based on the 2030 substation demand forecast. As shown in the table, the Midway, San Gorgonio, and Sunset summer forecast exceeds the base rating of their respective transformer; however, the forecast does not exceed the max rating of the transformer, therefore, no substation improvements are required in the 5-Year CIP.

The table also shows that the BEU system non-coincident peak exceeds the SCE Banning substation transformer base capacity for the summer and winter forecast and also the max capacity in the summer. Based on the non-coincident forecast, the total BEU system load is expected to exceed the max capacity by the summer of 2026. It is recommended that BEU continue to coordinate with SCE on the substation transformer capacity and develop a plan to increase the substation transformer capacity through the end of the forecast period.

Table 5.6-1 – Substation Capacity Analysis

		2030 kW Demand Forecast	Transformer Base MVA	Transformer Max MVA	Transformer High Side kV	Transformer Low Side kV	Transformer % Capacity Base	Transformer % Capacity Max
22nd Street	S	11,270	15	25	34.4	12.47	75%	45%
	W	8,672	18	29			48%	30%
Ivy	S	6,598	15	25	69x34.4	12.47	44%	26%
	W	5,604	18	29			31%	19%
Midway	S	17,197	2 x 7.5	2 x 9.375	34.4	12.47	115%	92%
	W	11,040	18	22			61%	51%
San Gorgonio	S	21,465	2 x 10	2 x 14	69x34.5	12.47	107%	77%
	W	19,809	24	32			83%	62%
Stagecoach	S	7,397	10	12.5	69x34.5	12.47	74%	59%
	W	4,196	12	14			35%	29%
Sunset	S	15,077	15	25	69x34.5	12.47	101%	60%
	W	10,064	18	29			56%	35%
SCE-Banning	S	63,576	2 x 21	2 x 28		34.5	151%	114%
	W	53,737	50.4	64			107%	83%

Notes:

1. Individual substation kW Demand forecast shown as the non-coincident peak.
2. SCE-Banning kW Demand forecast shown as the coincident peak.
3. Base winter rating determined by IEEE C57.91-1995, Table 4 (1% increase per °C)
4. Max winter rating determined by IEEE C57.91-1995, Table 4 (0.75% increase per °C)

5.7 – Distribution System Analysis

Analysis was run using Milsoft's Windmil software on the distribution system to determine system improvement projects to correct low voltage, decrease conductor and equipment loading, and reduce single phase line loading to aid in phase balancing. The analysis results include 14 projects to switch load to adjacent lines to reduce single-phase line loading at a total estimated cost of $41,700, 2 projects for new line construction of 600' totaling $336,400, 9 projects for single-phase to three-phase line rebuild of 10,107' totaling $2,142,100, and 2 projects for three-phase line rebuild using larger conductor of 2,130' totaling $285,500. The total estimated cost for distribution system improvements is $2,805,700.

The following pages detail the recommended distribution system improvements by substation and circuit.

22ND STREET SUBSTATION

CKT 63

CIP-1

Issue: UG146168, 1Ø, #2 URD line with 36 amps, 94 thru consumers.

Resolution: Close switch at vault 143589 at the intersection of Weather Way and Spring Pl. and open at the transformer at pad 146130 at the intersection of Summer Set Cir. and Amper Sky St. and feed load along Autumn Ln. from SW145671-B. Estimated cost: $2,300 (2030).

Image 5.7-1 – CIP Project 1

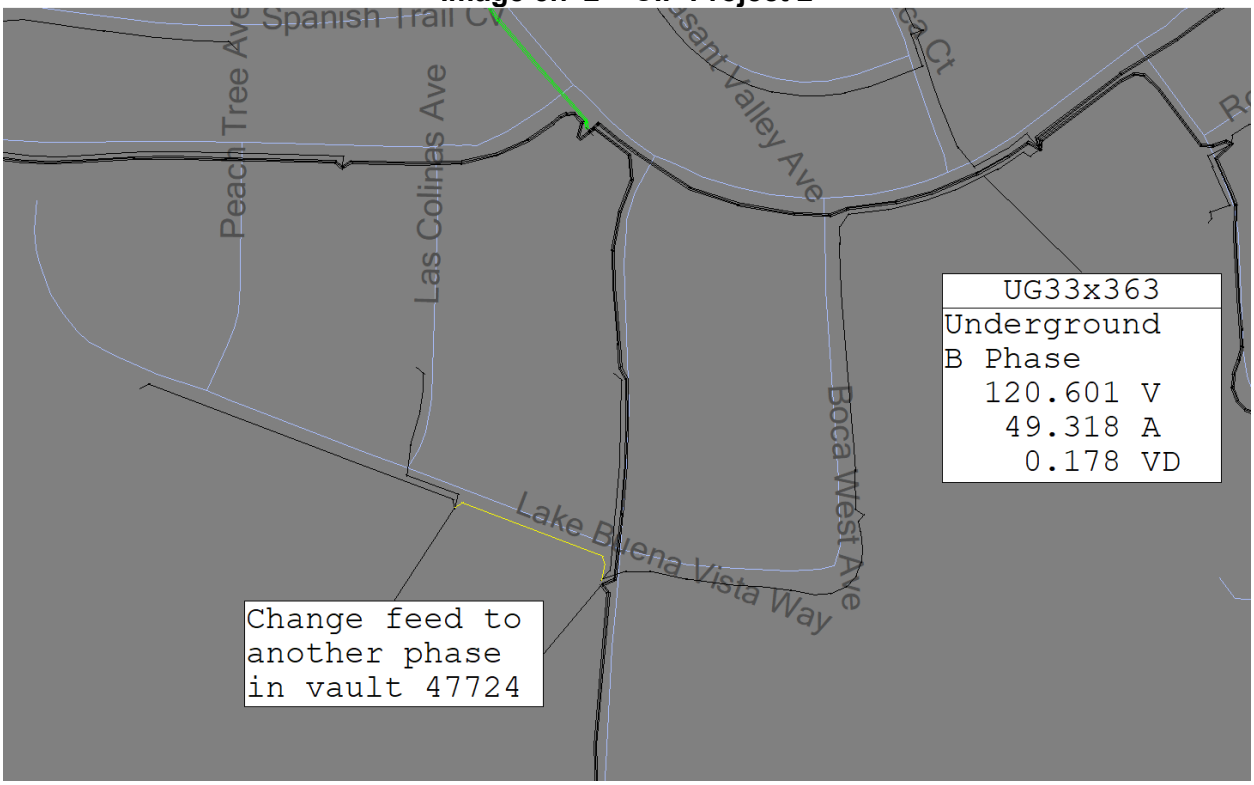


CIP-2

Issue: UG33x363, 1Ø, 1/0 URD line with 49 amps, 102 thru consumers.

Resolution: BEU will inspect the facilities at the intersection of Lake Buena Vista Way and Birdie Dr. and switch some of this B phase load along Lake Buena Vista Way west of Birdie Dr. to the 3Ø line that runs along Birdie Dr. Estimated cost: $2,000 (2028).

Image 5.7-2 – CIP Project 2



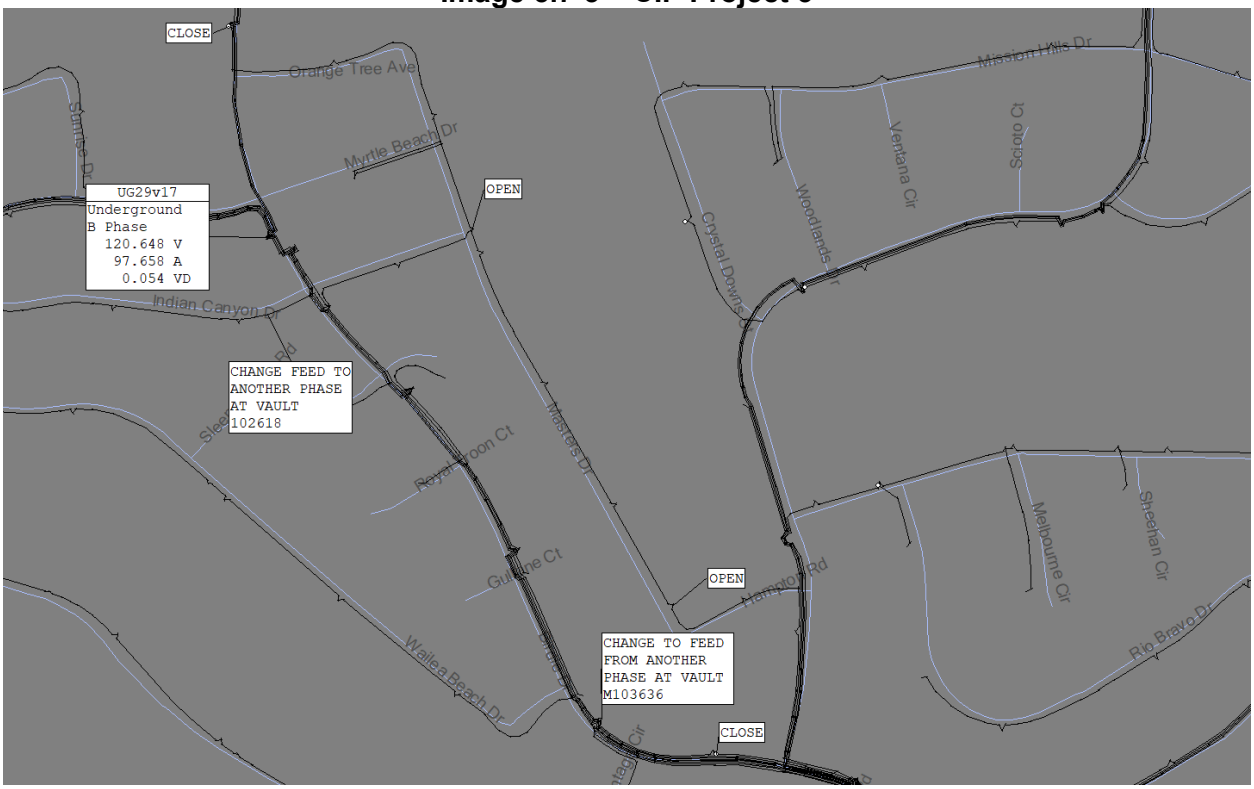
CIP-3

Issue: UG29v17, 1Ø, 1/0 URD with 97 amps, 239 thru consumers.

Resolution:

- Close switch at vault 101946 and open at vault 102621 at the intersection of Indian Canyon Dr. and Masters Dr. and backfeed all load north from SW103762-A.
- Close switch at pad 103628 and open at pad 103513 to switch load south from pad 103628A.
- Install 3Ø vault at the intersection of Indian Canyon Dr. and Birdie Dr. and change feed of UG33x433 from 3Ø line along Birdie Dr. to feed all load along Indian Canyon Dr. west of Birdie Dr. from the 3Ø vault. Estimated cost: $5,900 (2026).

Image 5.7-3 – CIP Project 3



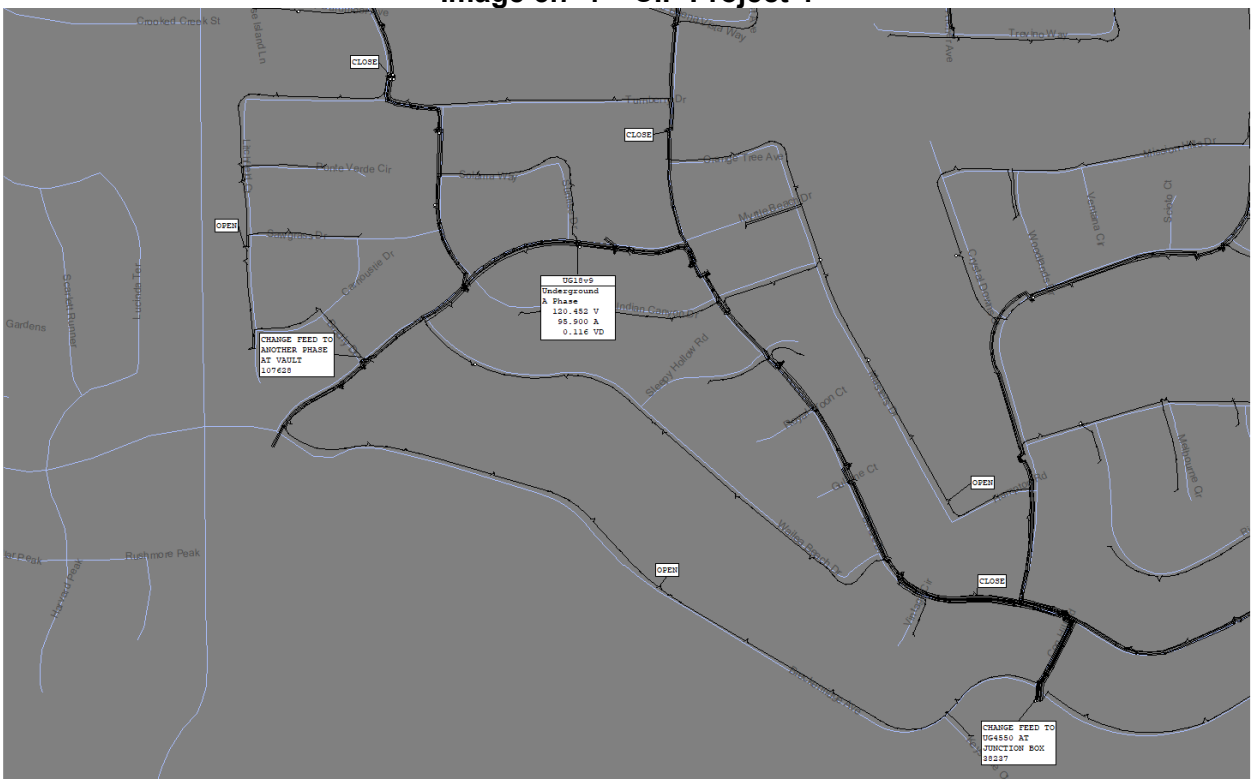
CIP-4

Issue: UG18v9, 1Ø, 1/0 URD with 96 amps, 230 thru customers.

Resolution:

- Change feed of line along Bradley St. to feed from 3Ø junction box and connect UG133185 by closing a switch at vault 103523 and open at the intersection of Sawgrass Dr. and Litchfield Ct. to serve all load north of vault 103523.
- Backfeed UG109597 from 3Ø UG4550 and open around UG33x474 along Brackenridge Ave. Estimated cost: $4,000 (2027).

Image 5.7-4 – CIP Project 4



CKT 64

Issue: None

IVY SUBSTATION

CKT 11

Issue: None

CKT 12

Issue: None

CKT 13

Issue: None

MIDWAY SUBSTATION

CKT 21

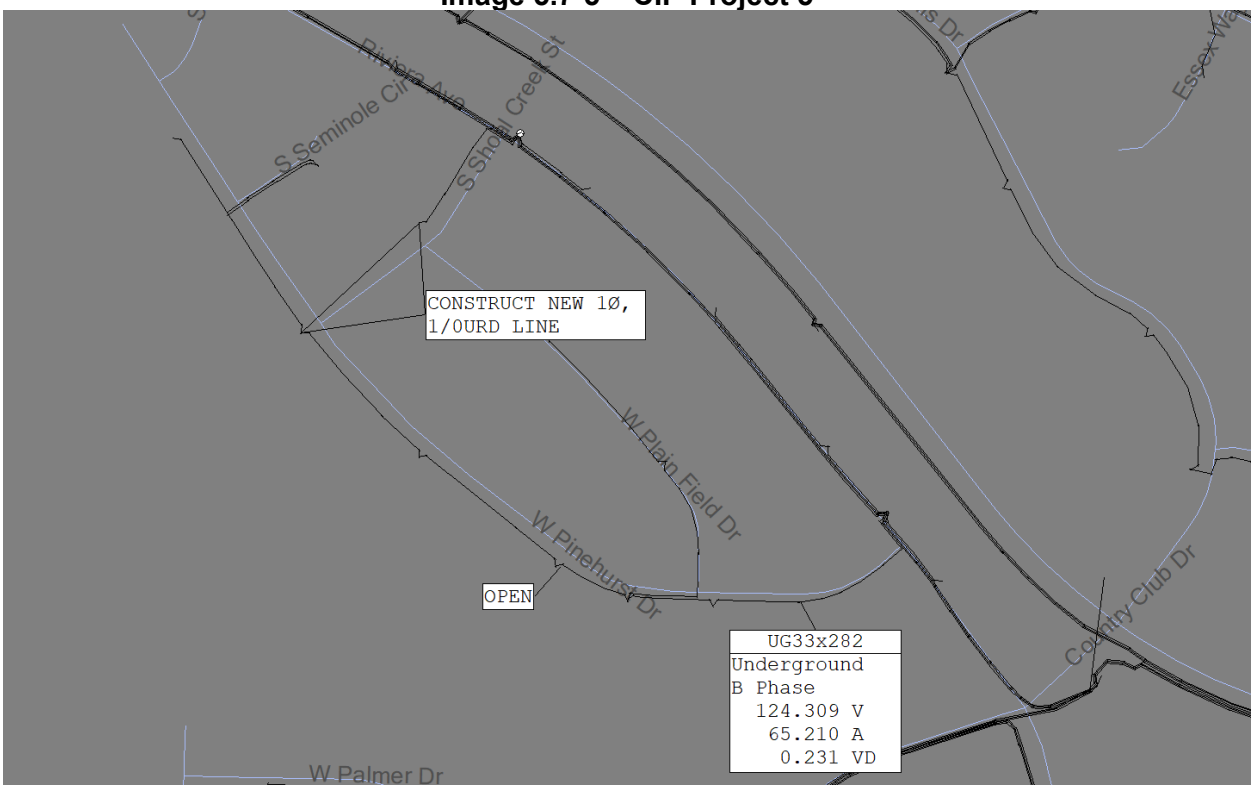
CIP-5

Issue: UG33x282, 1Ø, #2 URD with 65 amps, 97 thru consumers.

Resolution:

- Construct a new, 300', 1Ø, 1/0 AL URD primary voltage tie from pad 42503 to pad 42498, crossing W. Pinehurst Dr. and following S. Shoal Creek St.
- Open the line at pad 42491 and serve all load to the west from the 1Ø line at S. Shoal Creek St. and Riveria Ave. Estimated cost: $114,600 (2027).

Image 5.7-5 – CIP Project 5

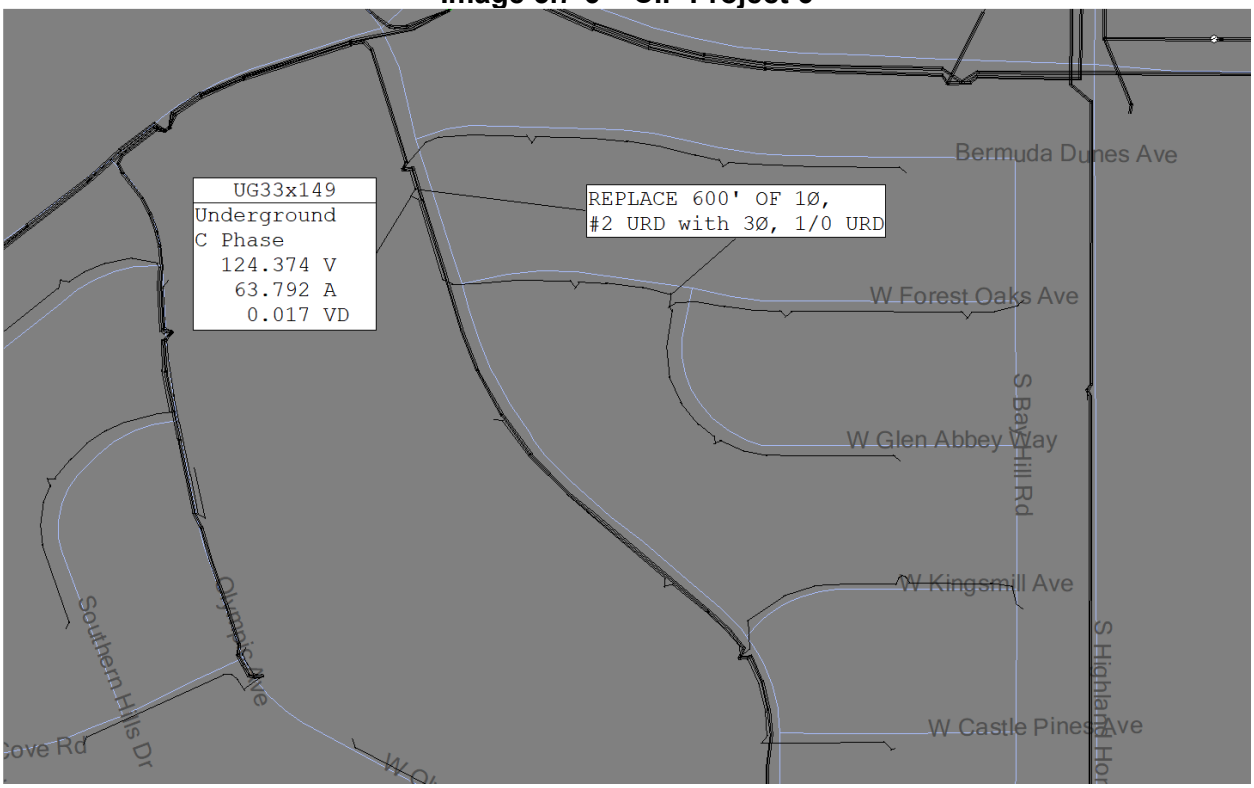


CIP-6

Issue: UG33x149, 1Ø, 2 URD with 64 amps, 86 thru consumers.

Resolution: Replace 600' of 1Ø, #2 URD line with 3Ø, 1/0 URD line from vault 36857 along Rivera Ave. just south of Bermuda Dunes Ave to vault 36879 at the intersection of W. Forest Oaks Ave and W. Glen Abbey Way and split the load between multiple phases. Estimated cost: $223,300 (2027).

Image 5.7-6 – CIP Project 6

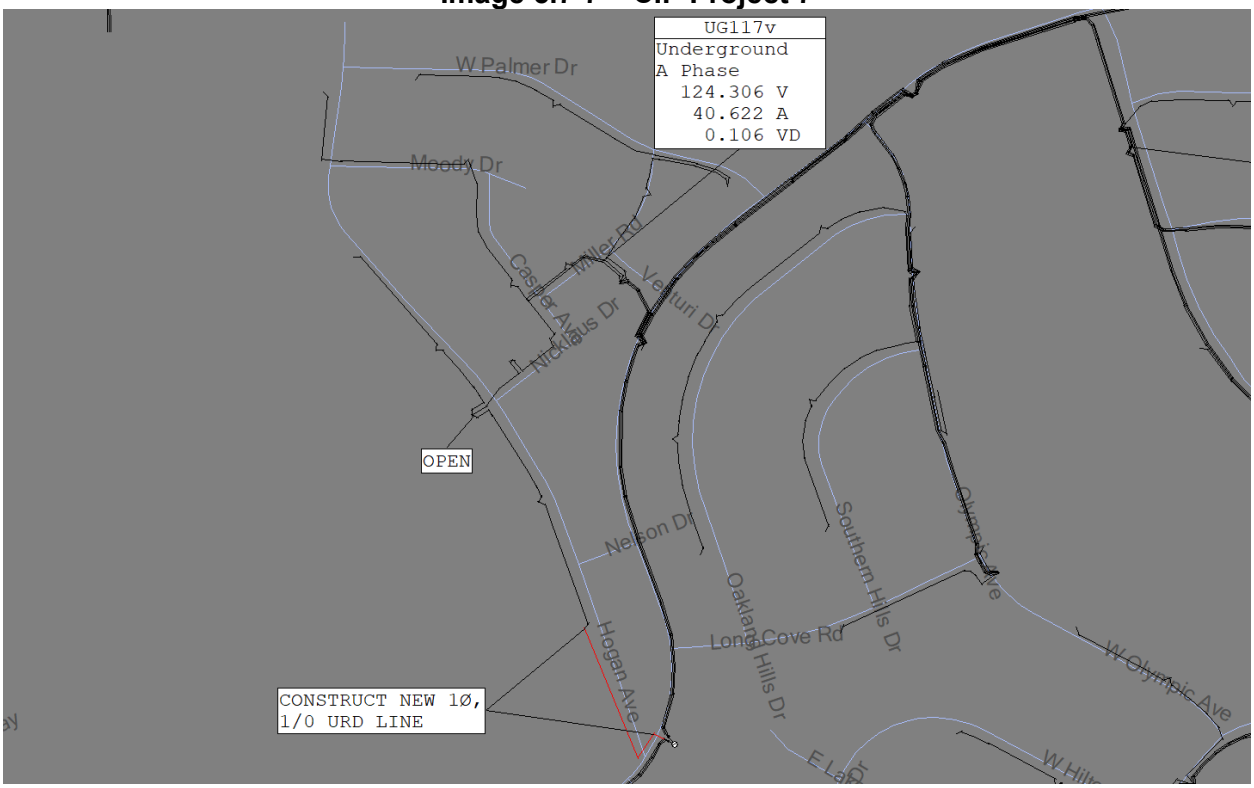


CIP-7

Issue: UG117v, 1Ø, #2 URD with 41 amps, 65 thru consumers.

Resolution: Construct a new, 600', 1Ø, 1/0 URD primary voltage tie from vault 41797 to pad 41823. Open at pad 41830 and switch all load southeast of Nicklaus Dr. along Hogan Ave. to feed from pad 41797. Estimated cost: $221,800 (2028).

Image 5.7-7 – CIP Project 7

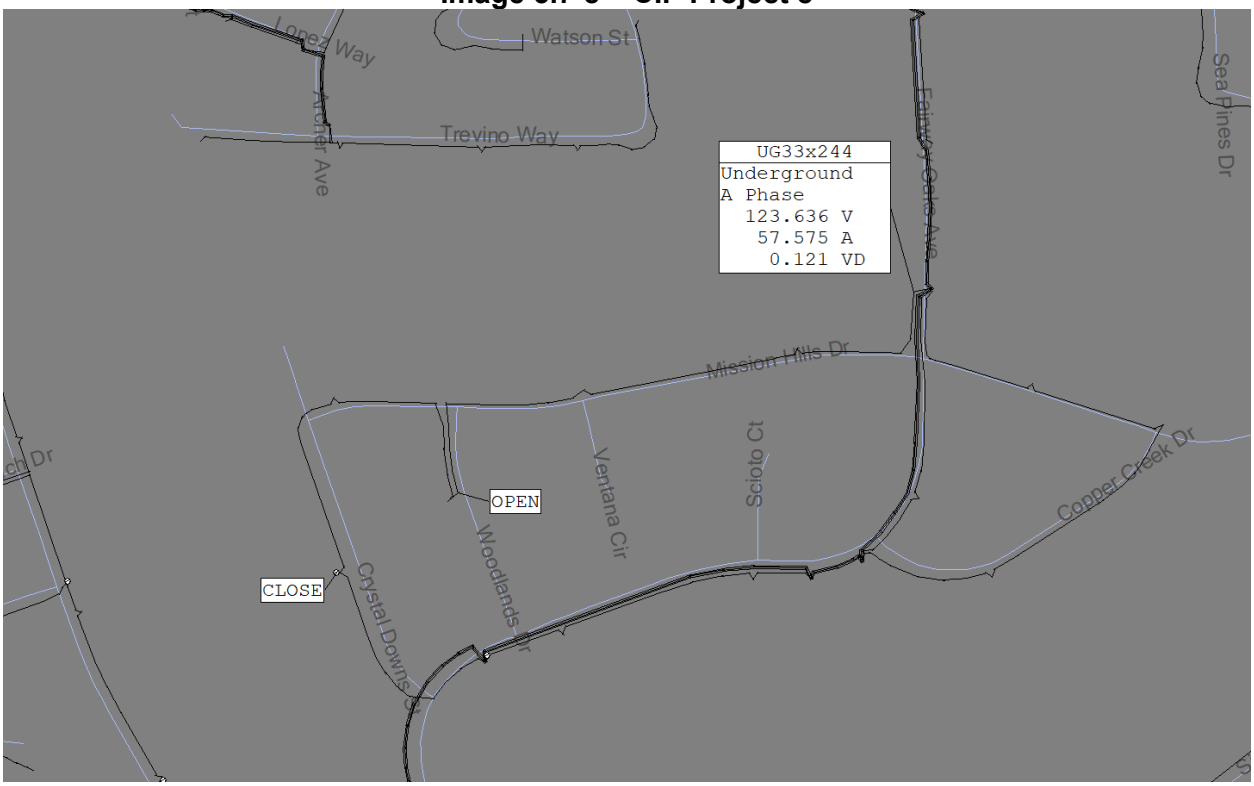


CIP-8

Issue: UG33x244, 1Ø, 1/0 URD with 58 amps, 84 thru consumers.

Resolution: Close switch at vault 40252 and open at pad 40237 along Woodland Dr. to split west of Woodland Dr. to feed from vault 40252. Estimated cost: $2,100 (2028).

Image 5.7-8 – CIP Project 8

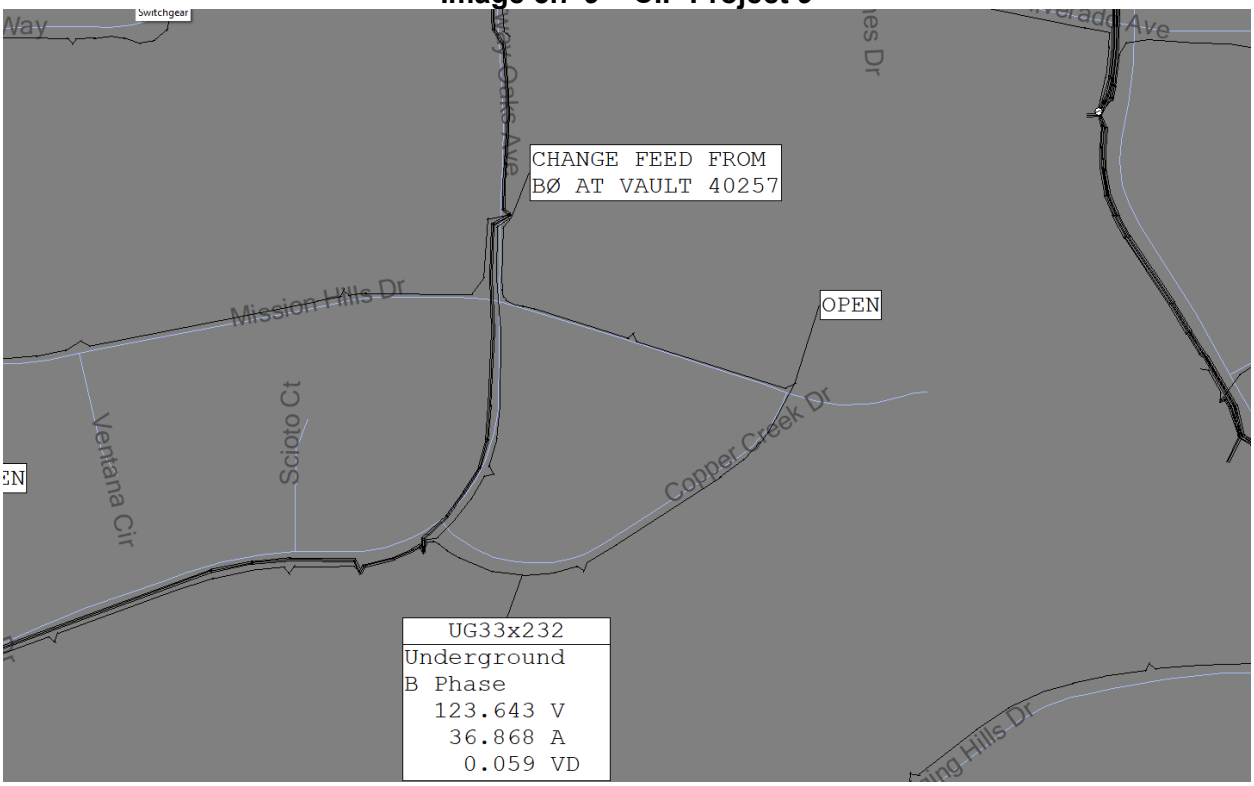


CIP-9

Issue: UG33x232, 1Ø, 1/0 URD with 37 amps, 41 thru consumers.

Resolution: Close BØ at pad 40257 along Fairway Oaks Ave. and open Transformer303 at the intersection of Mission Hills Dr. and Cooper Creek Dr. and feed load along Mission Hills Dr. from pad 40257. Estimated cost: $2,100 (2030).

Image 5.7-9 – CIP Project 9



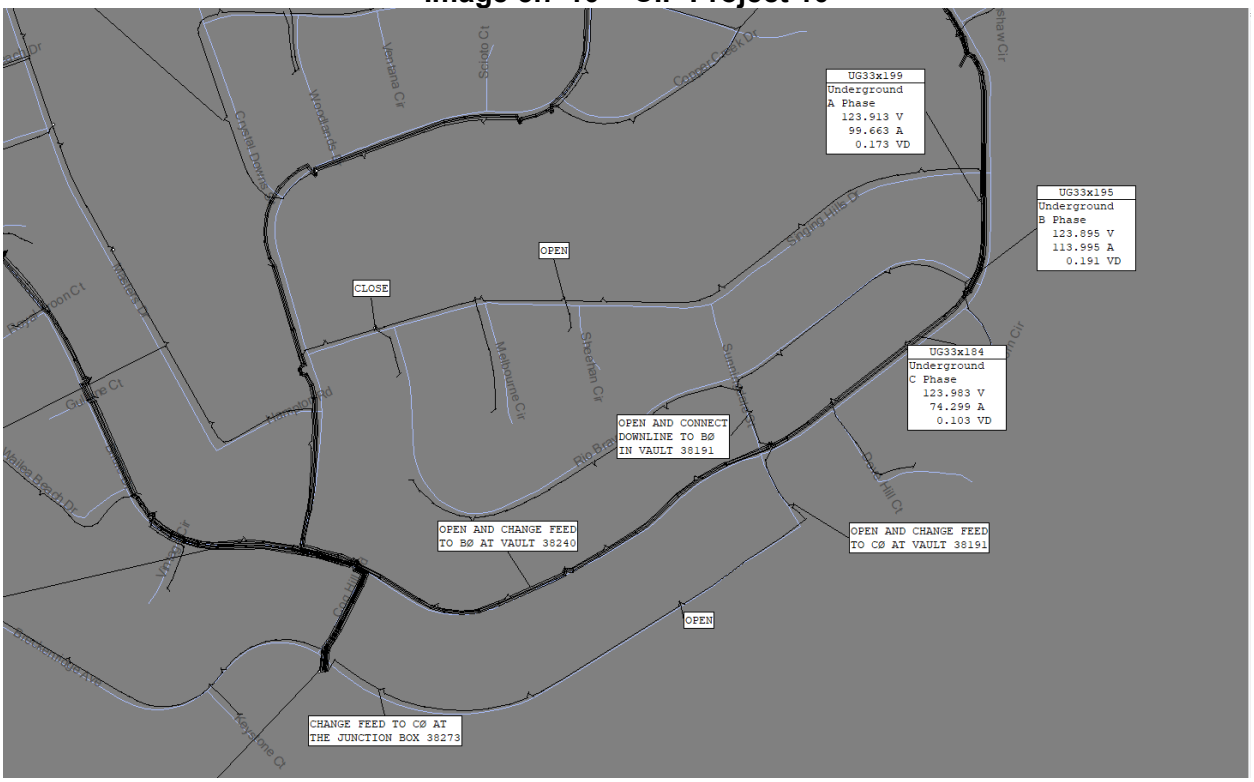
CIP-10

Issue: UG33x199, 1Ø, 1/0 URD with 100 amps, 98 thru consumers (A phase), UG33x195, 1Ø, 1/0 URD with 114 amps, 162 thru consumers (B phase), and UG33x184, 1Ø, 1/0 URD with 74 amps, 99 thru consumers (C phase).

Resolution:

- Close switch at vault 38245 and open at vault 38212 at the intersection of Spring Hills Cr. And Sheehan Cir. and backfeed all load west of Sheehan Cir. from vault 38245.
- Change the feed of UG33x189 to feed from another phase at the 3Ø vault 38191 at the intersection of Riveria Ave. and Sunningdale St.
- Change feed of UG33x190 to feed from another phase at the 3Ø vault 38240 along Birdie Dr.
- Change feed of UG33x212 to feed from another phase at the 3Ø vault 38191 at the intersection of Riveria Ave. and Sunningdale St.
- Change feed of UG33x211 to feed from the 3Ø pad 38237 at the intersection of Cog Hill Rd. and Breckenridge Ave. and open at pad 38248 and feed all load to the west along Breckenridge Ave. to feed from pad 38237. Estimated cost: $6,700 (2026).

Image 5.7-10 – CIP Project 10



CKT 22

Issue: None

CKT 23

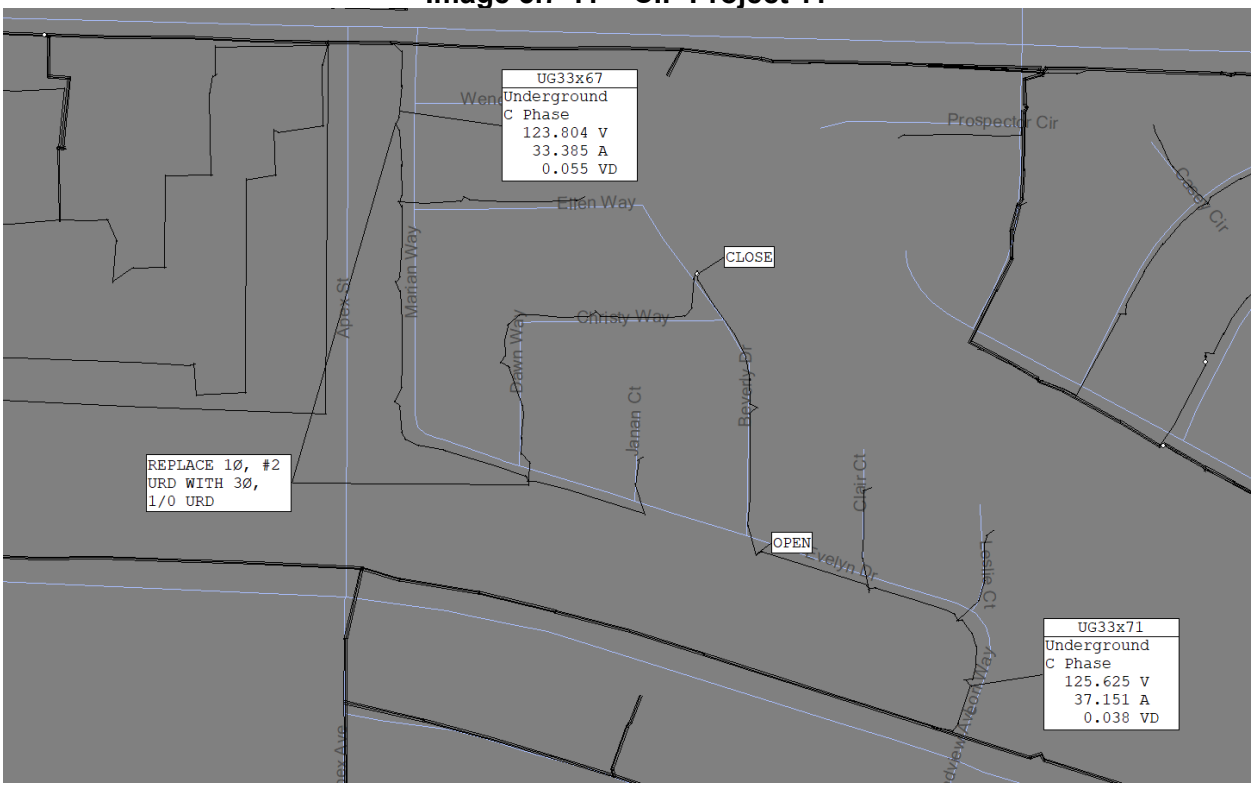
CIP-11

Issue: UG33x71, 1Ø, 1/0 URD with 37 amps, 77 thru consumers.

Resolution:

- Replace 1,300' of 1Ø, #2 URD line with 3Ø, 1/0 URD line from pullbox Pb32117 along W. Wilson St. to vault 32103 at the intersection of Marian Way and Dawn Way.
- Close switch at marker M32898 along Beverly Dr. and open at pad 35930 along Evelyn Dr. Estimated cost: $547,600 (2030).

Image 5.7-11 – CIP Project 11



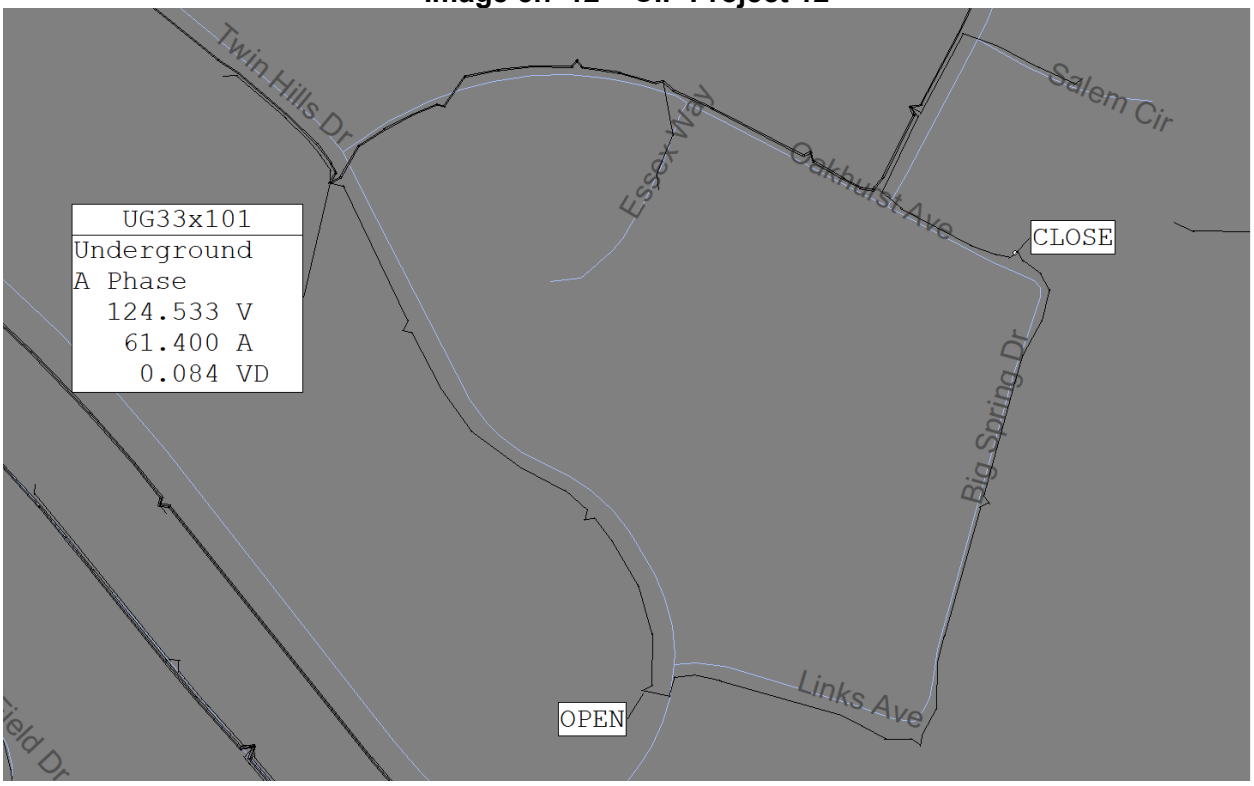
CKT 24

CIP-12

Issue: UG33x101, 1Ø, 1/0 URD with 61 amps, 93 downline customers.

Resolution: Close switch at pad 34934 and openUG33x118 at pad 34956 the intersection of Twin Hills Dr. and Links Ave. and backfeed load along Big Springs Dr. to feed from 3Ø lie to north at switch pad 34934. Estimated cost: $2,100 (2027).

Image 5.7-12 – CIP Project 12



SAN GORGONIO SUBSTATION

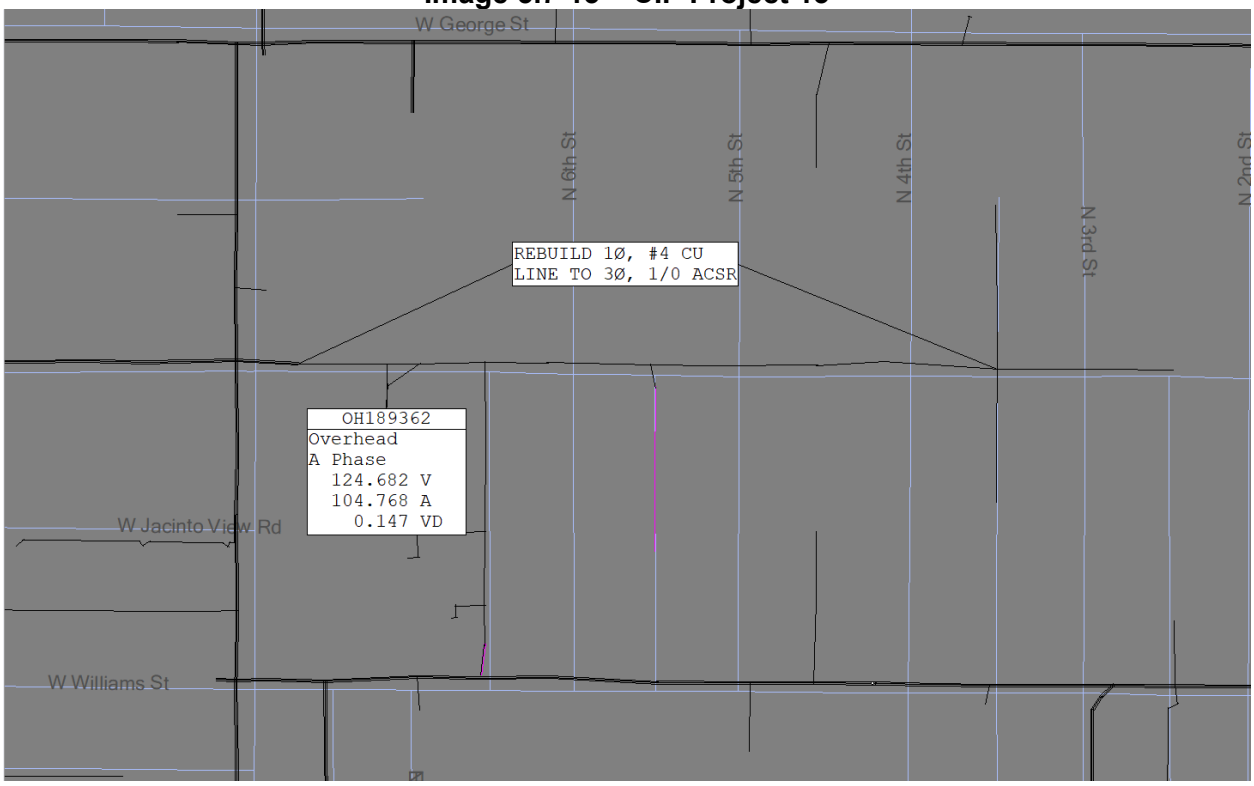
CKT 51

CIP-13

Issue: OH189362, 1Ø, #4 CU line with 105 amps, 174 thru consumers.

Resolution: Rebuild 1,391' of 1Ø, #4 Cu line to 3Ø, 1/0 ACSR along W. Nicolet St. from pole number 189371 to pole number 192590. Estimated cost: $172,200 (2026).

Image 5.7-13 – CIP Project 13

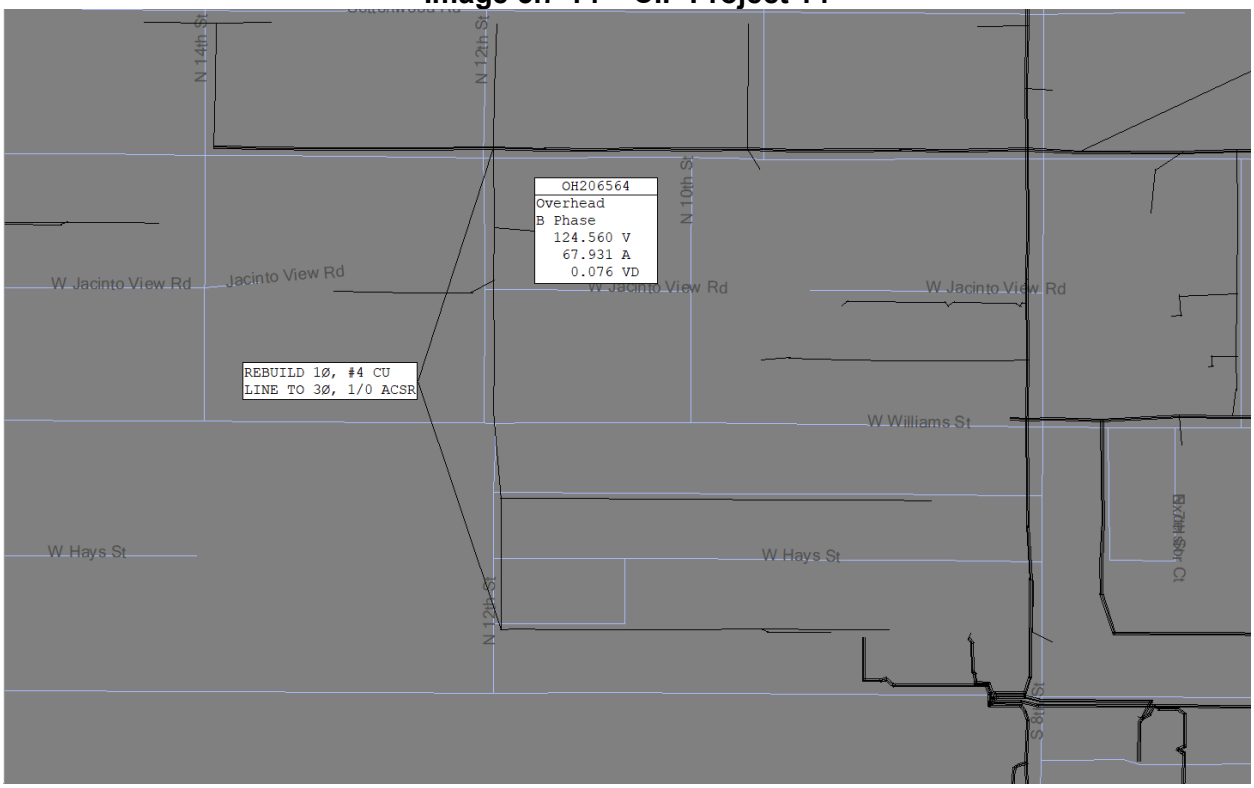


CIP-14

Issue: OH206564, 1Ø, #4 CU line with 68 amps, 106 thru consumers.

Resolution: Rebuild 1,183' of 1Ø, #4 and #6 CU line to 3Ø, 1/0 ACSR along N. 12th St. from pole number 190013 to pole number 158883. Estimated cost: $148,700 (2027).

Image 5.7-14 – CIP Project 14



CKT 52

Issue: None

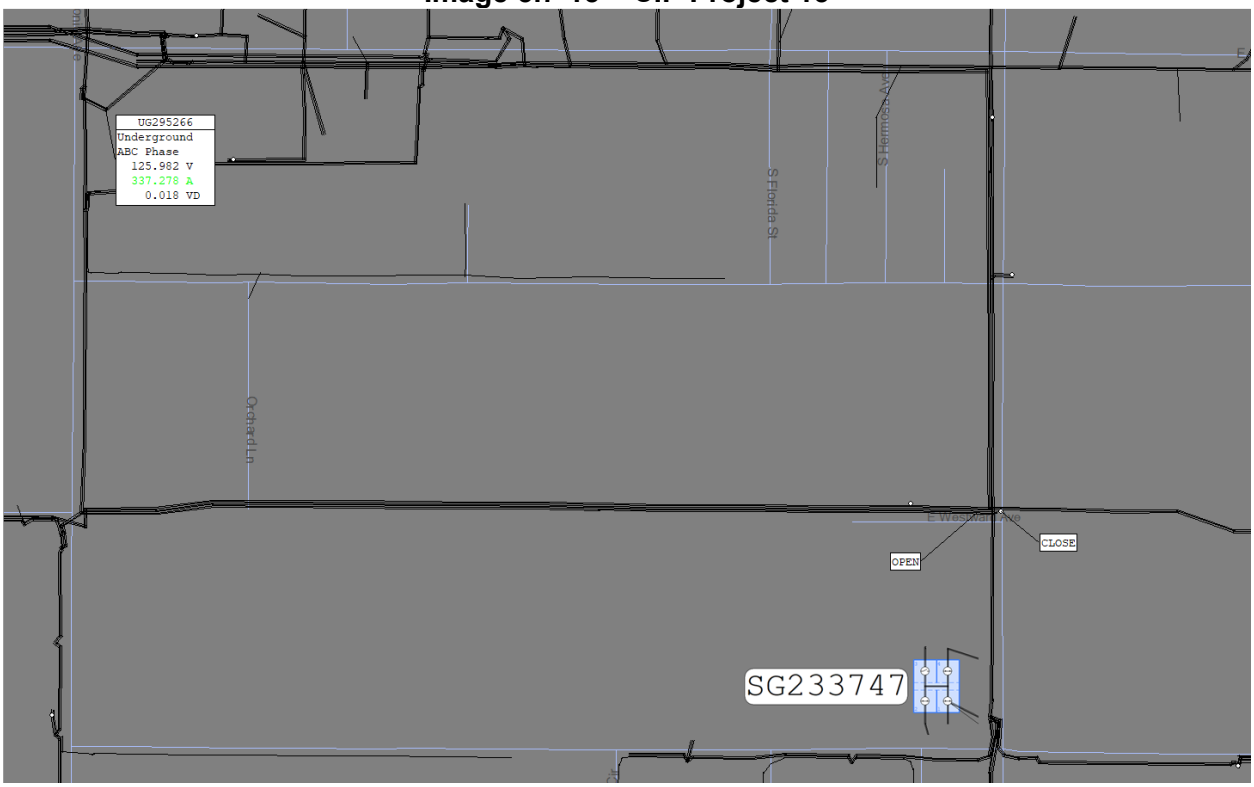
CKT 53

CIP-15

19 Issue: UG295266, 3Ø, 750 MC URD conductor reaches 63% capacity.

Resolution: Open after OH240725 and close switch at Pole23857 and reconfigure SG233747 to 4=CLOSED, 3=CLOSED, 2=CLOSED and 1=OPEN to switch load to the Ivy substation. Estimated cost: $2,000 (2026).

Image 5.7-15 – CIP Project 15



CKT 54

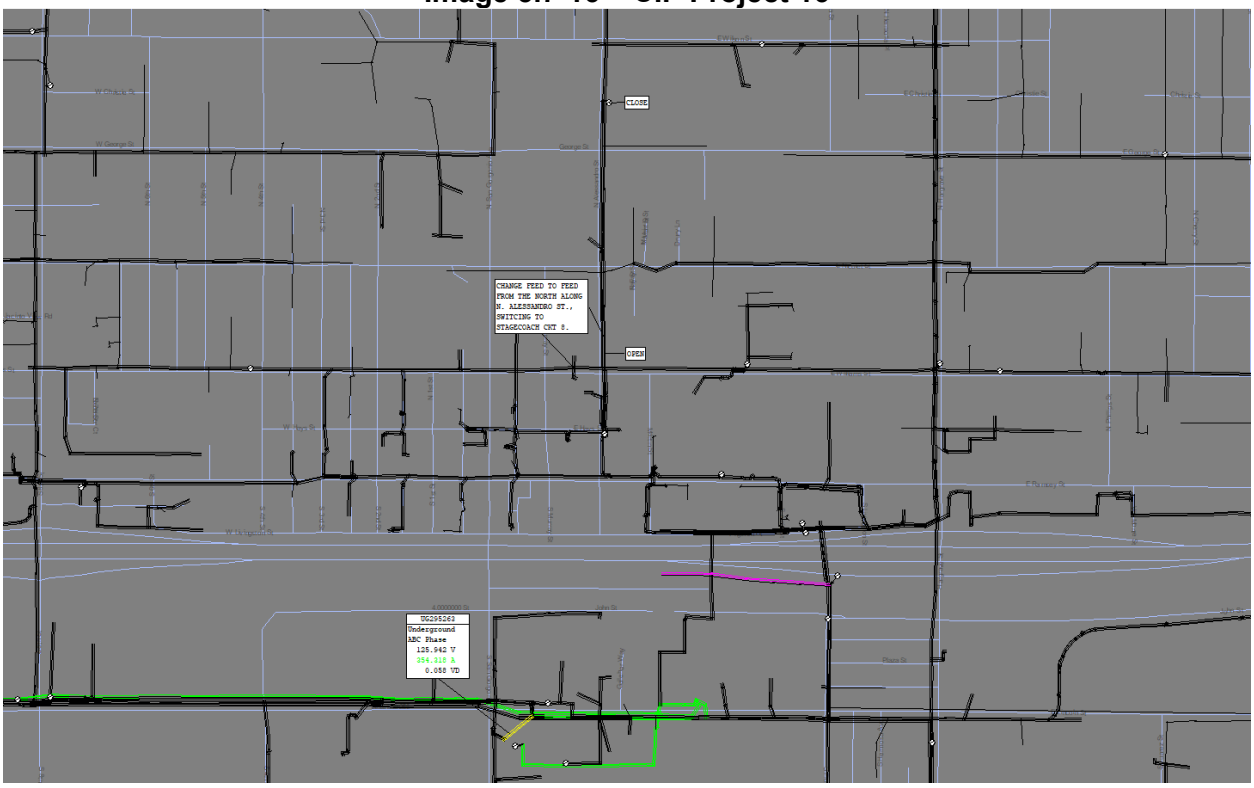
CIP-16

Issue: UG295263, 3Ø, 750 MCM feeder exit and 336 ACSR exceeds 60% capacity thru OH252561 (67% capacity is the highest).

Resolution:

- Disconnect line section OH2138 from OH2137 (line heading north on N. Alessandro St. north of E. Williams St.) and close switch at Pole284048 (along N. Alessandro St. between George St. and E. Wilson St.).
- Change the feed of line section OH194778 to feed from OH2138 (which will now be fed from Stagecoach CKT 8) and serve all the load along E. Williams St. west of N. Alesandro St. to feed from Stagecoach CKT8. Estimate cost: $3,400 (2029).

Image 5.7-16 – CIP Project 16



STAGECOACH SUBSTATION

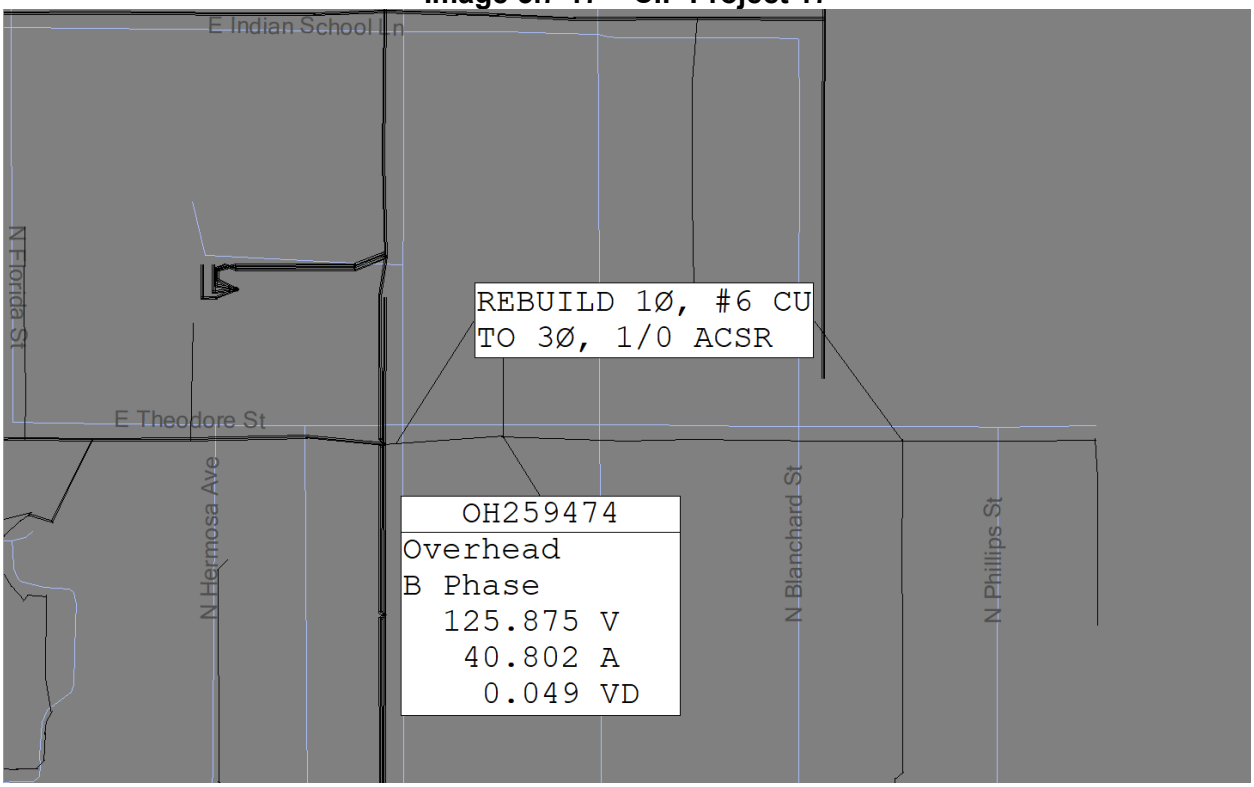
CKT 7

CIP-17

Issue: OH259474, 1Ø, #6 Cu line with 41 amps, 80 thru consumers.

Resolution: Rebuild 871' of 1Ø, #6 CU line to 3Ø, 1/0 ACSR along E. Theadore St. from pole number P6970COB to pole number P2891COB. Estimated cost: $119,800 (2029).

Image 5.7-17 – CIP Project 17

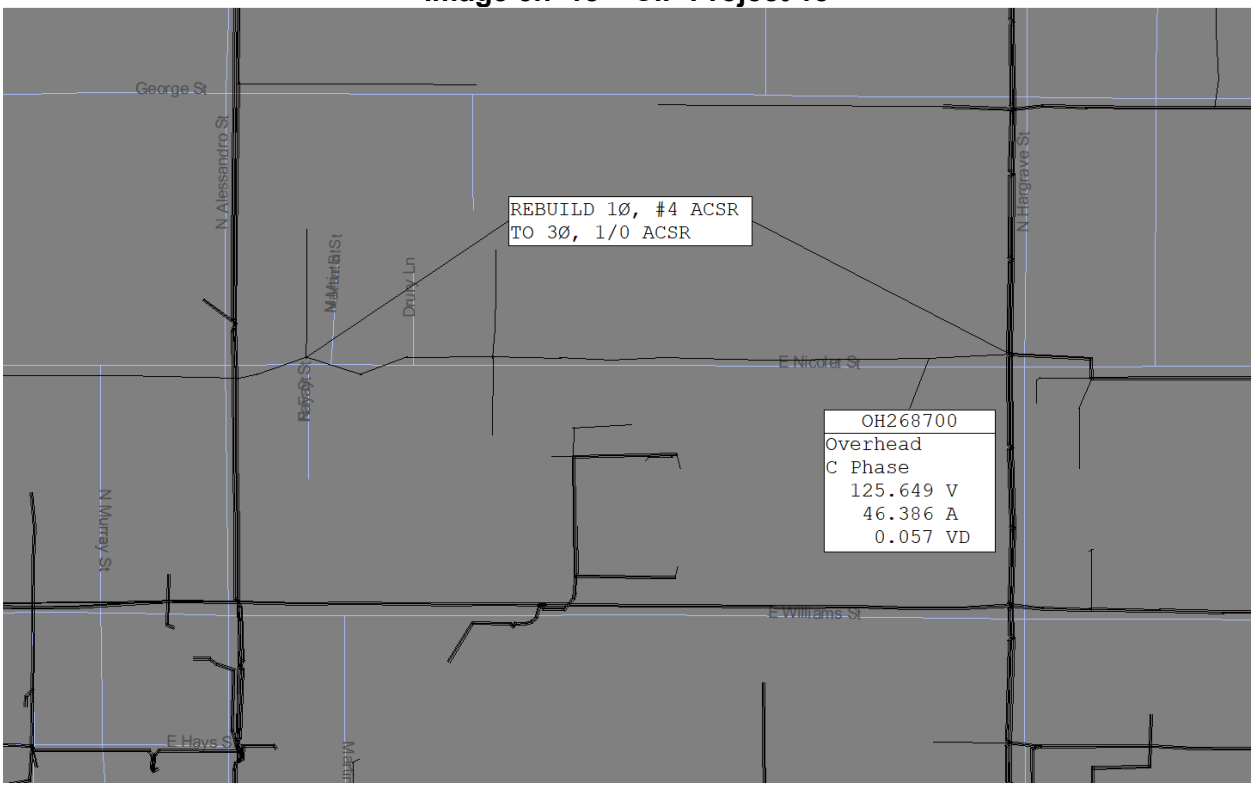


CIP-18

Issue: OH268700, 1Ø, #4 ACSR line with 46 amps, 105 thru consumers.

Resolution: Rebuild 1,790' of 1Ø, #4 ACSR line to 3Ø, 1/0 ACSR along E. Nicolet St. from pole number P6956COB to pole number Pole194713. Estimated cost: $236,700 (2029).

Image 5.7-18 – CIP Project 18

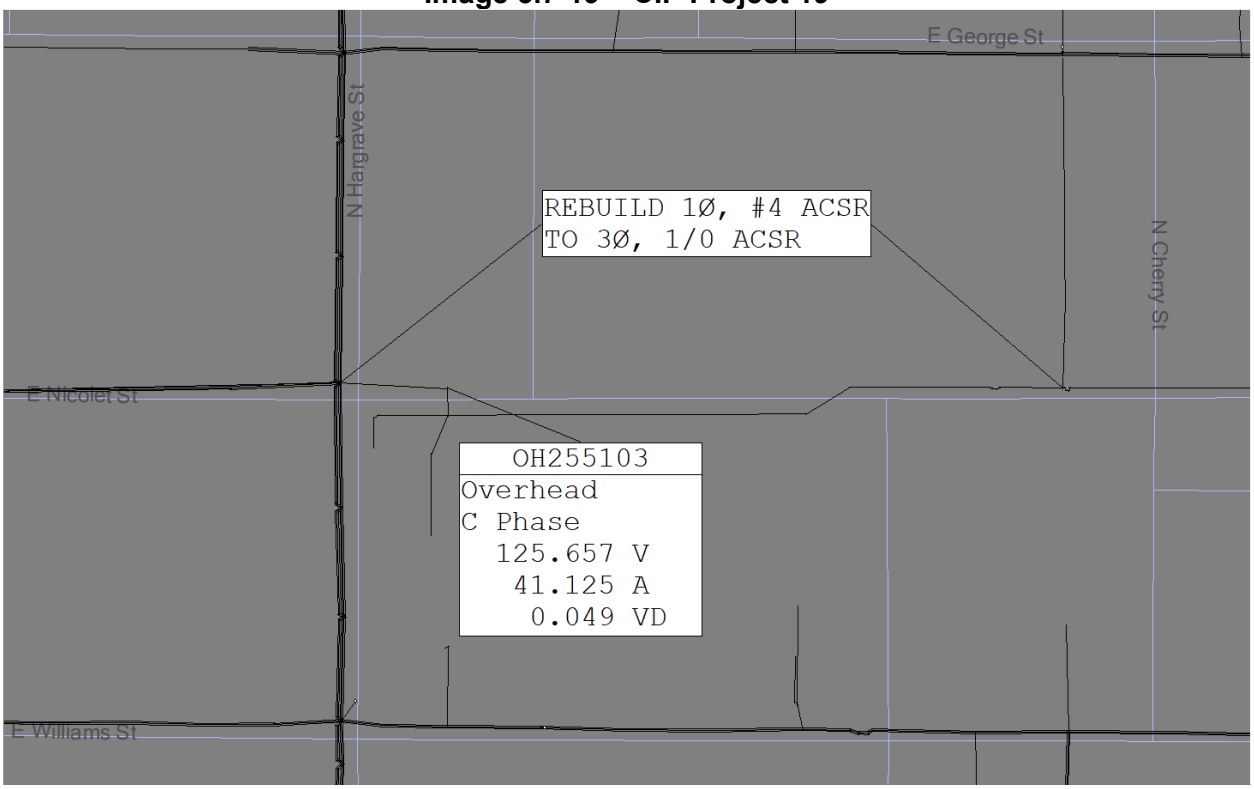


CIP-19

Issue: OH255103, 1Ø, #4 ACSR line with 41 amps, 80 thru consumers.

Resolution: Rebuild 1,417' of 1Ø, #4 ACSR line to 3Ø, 1/0 ACSR along E. Nicolet St. from pole number P6956COB to pole number FP255128. Estimated cost: $193,400 (2029).

Image 5.7-19 – CIP Project 19



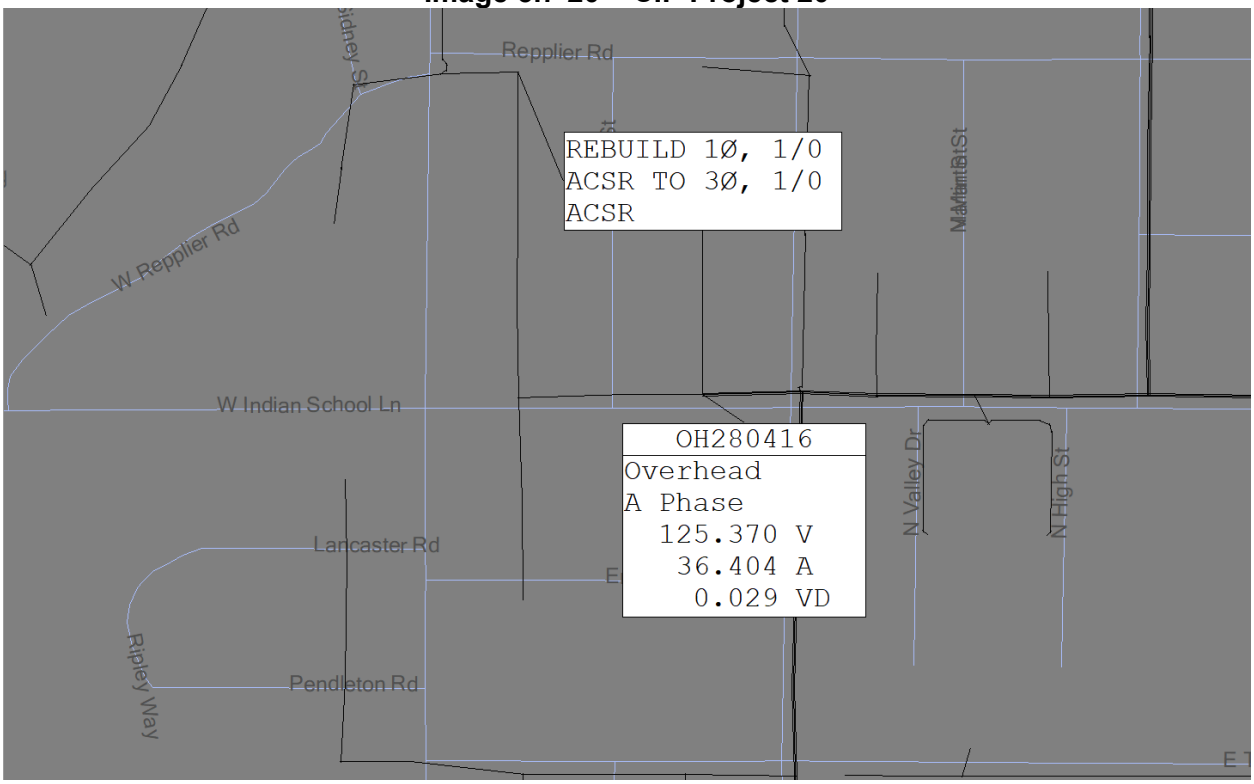
CKT 8

CIP-20

Issue: OH280416, 1Ø, 1/0 ACSR line with 36 amps, 61 consumers.

Resolution: Rebuild 955' of 1Ø, 1/0 ACSR and #2 ACSR line to 3Ø, 1/0 ACSR beginning on E. Indian School Ln. then heading north to E. Repplier Rd. from pole number P1344COB to pole number 280435. Estimated cost: $134,300 (2030).

Image 5.7-20 – CIP Project 20



SUNSET SUBSTATION

CKT 72

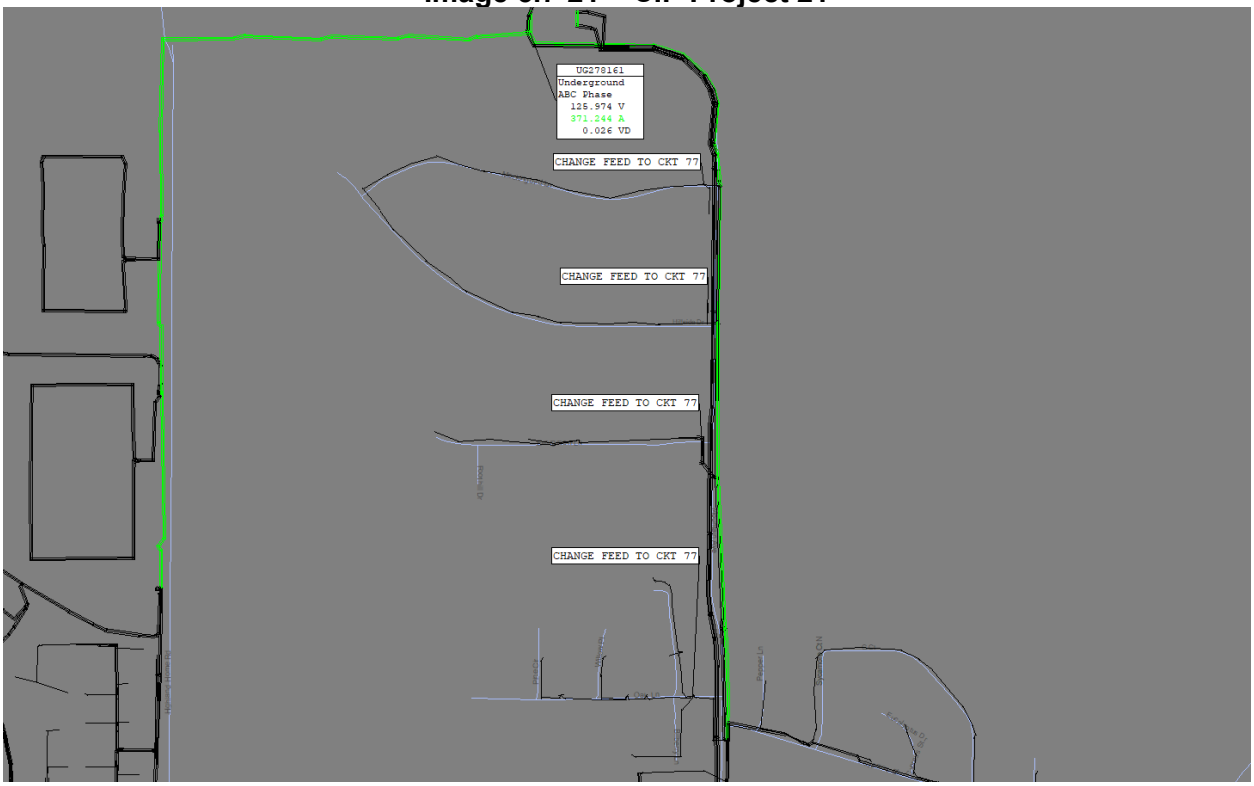
CIP-21

Issue: UG278161 Feeder Exit, 3Ø, 750 MCM URD conductor reaches 70% capacity.

Resolution: It is recommended to serve the Crestwood Communities load addition from CKT 77 at UG3.

- Change the feed of UG6 for the load along Mocking Bird Ln. to CKT 77 at vault SV100086.
- Change the feed of UG18 for the load along Hillside Dr. to CKT 77 at vault SV100180.
- Change the feed of UG33 for the load along Evergreen Ln. to CKT 77 at vault SV100084.
- Change the feed of UG82 for the load along Oak Ln. to CKT 77 at junction box Pb20340. Estimated cost: $2,800 (2026).

Image 5.7-21 – CIP Project 21

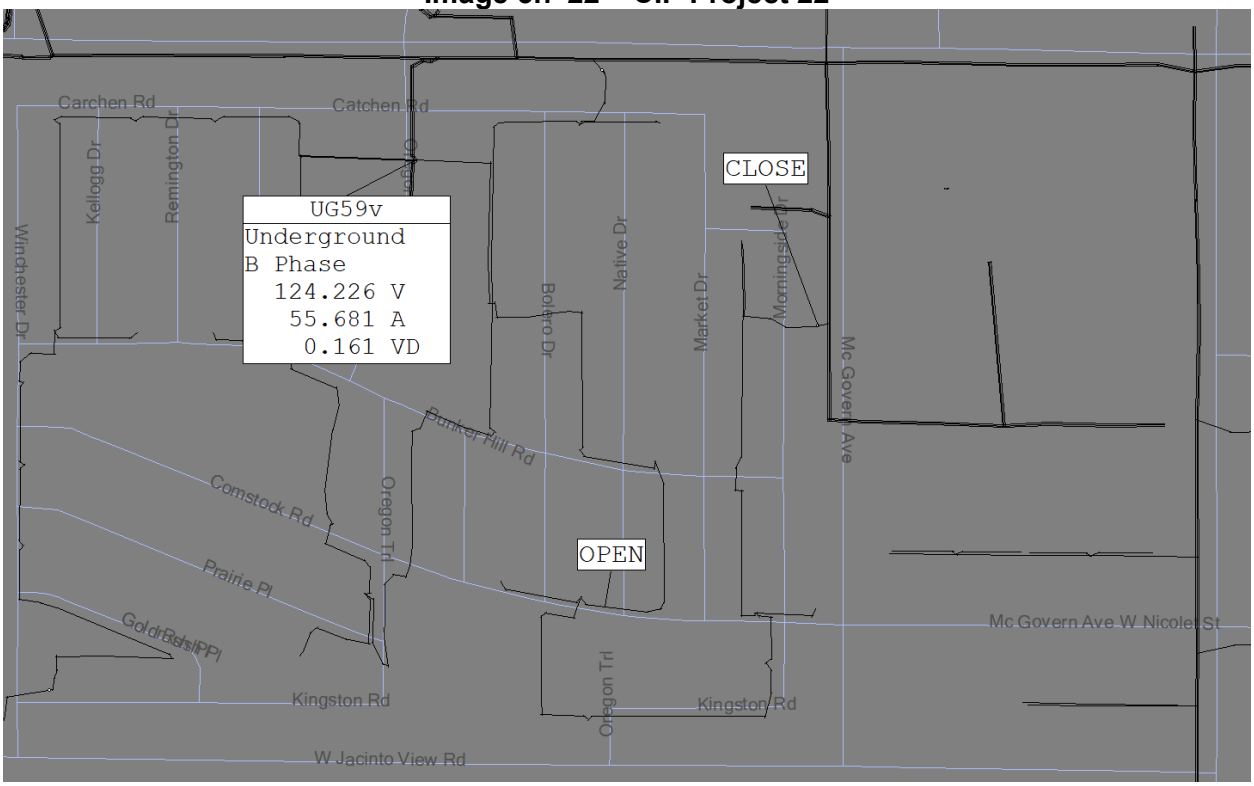


CIP-22

Issue: UG59v, 1Ø, 1/0 URD with 56 amps, 177 thru consumers.

Resolution: Close switch at pad 23132 along Mc Govern Ave. and open at pad 253139 and switch all load south and east to serve from pad 23132 along Mc Govern Ave.. Estimated cost: $2,100 (2028).

Image 5.7-22 – CIP Project 22

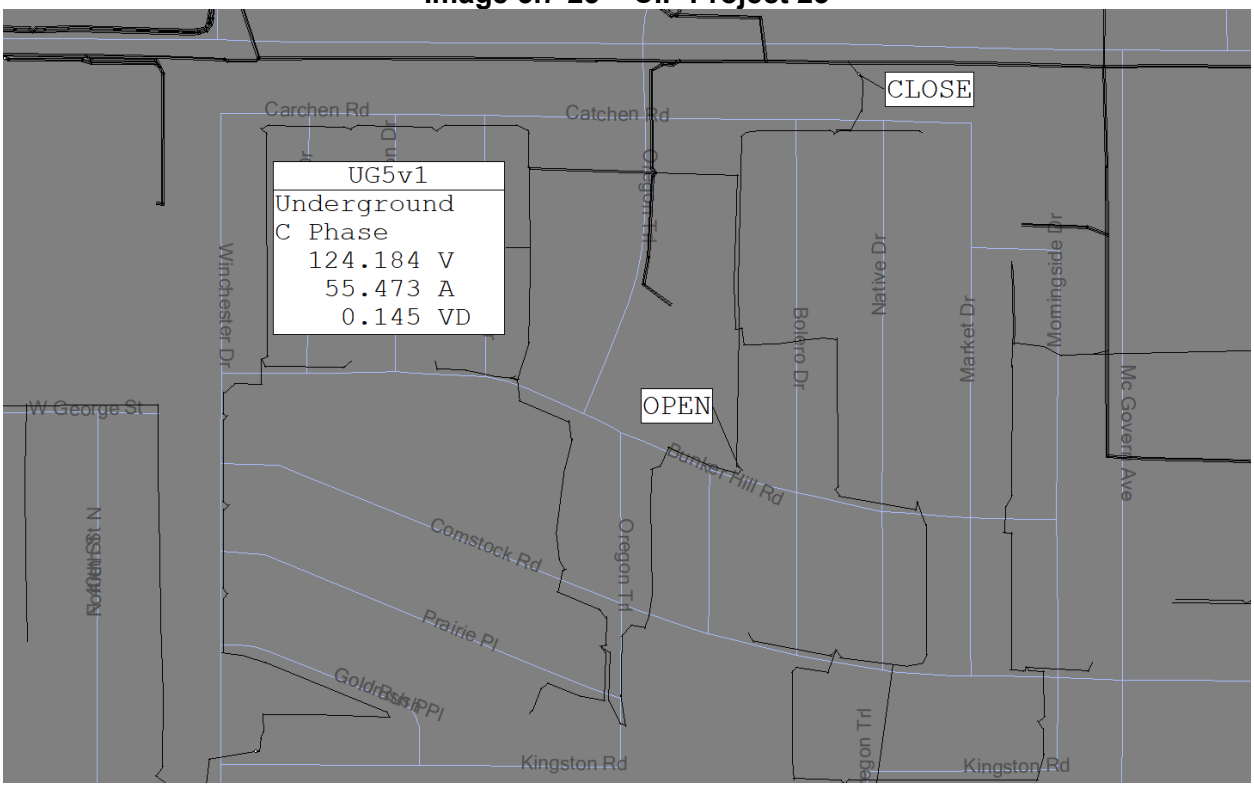


CIP-23

Issue: UG5v1, 1Ø, 4/0 URD with 55 amps, 174 thru consumers.

Resolution: Close switch at pad 23137 along W. Wilson St. and open at PAD 23138 along Bunker Hill Rd. and serve all load along Catchen Rd. from pad 23137. Estimated cost: $2,100 (2028).

Image 5.7-23 – CIP Project 23

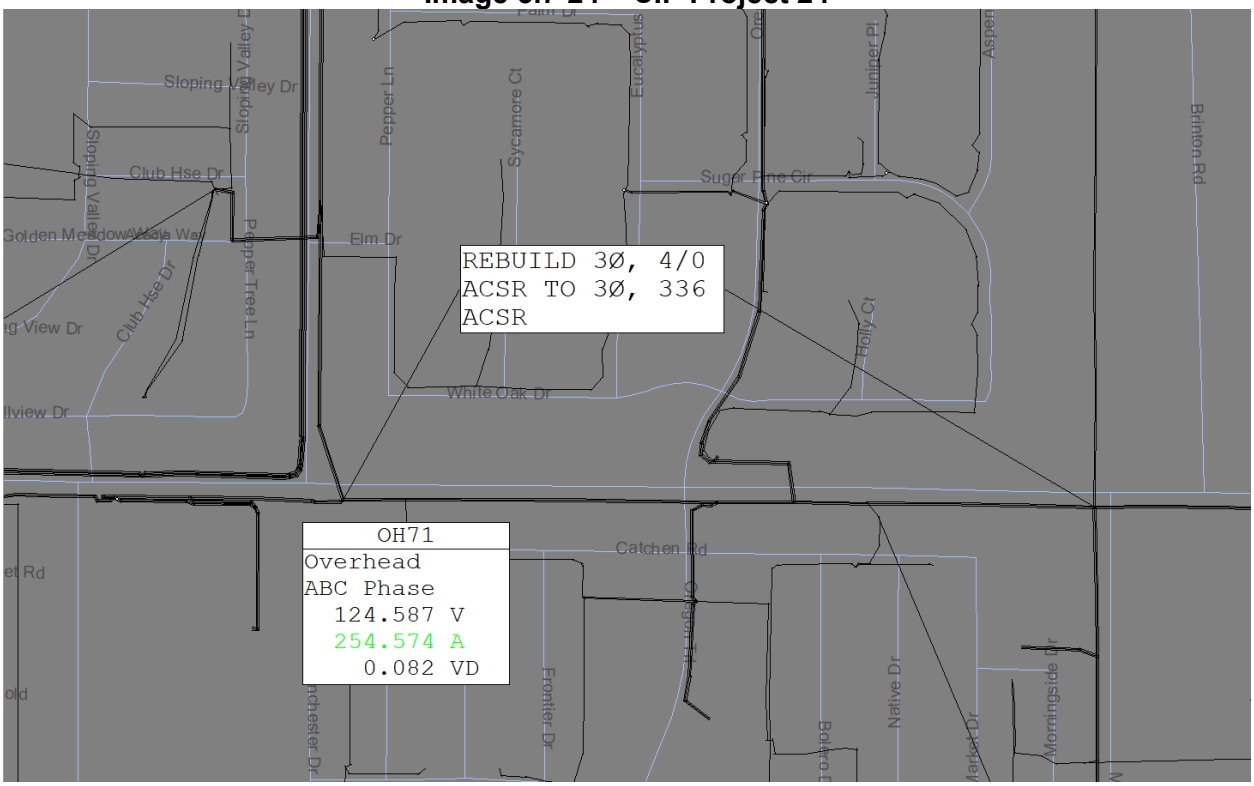


CIP-24

Issue: OH71, 3Ø, 4/0 ACSR conductor reaches 75% capacity and continued to be greater than 60% capacity thru OH143.

Resolution: Rebuild 1,693; of 3Ø, 4/0 ACSR line to 3Ø, 336 ACSR along W. Wilson St. from pole number 14759 to pole number 14817. Estimated cost: $219,300 (2026).

Image 5.7-24 – CIP Project 24

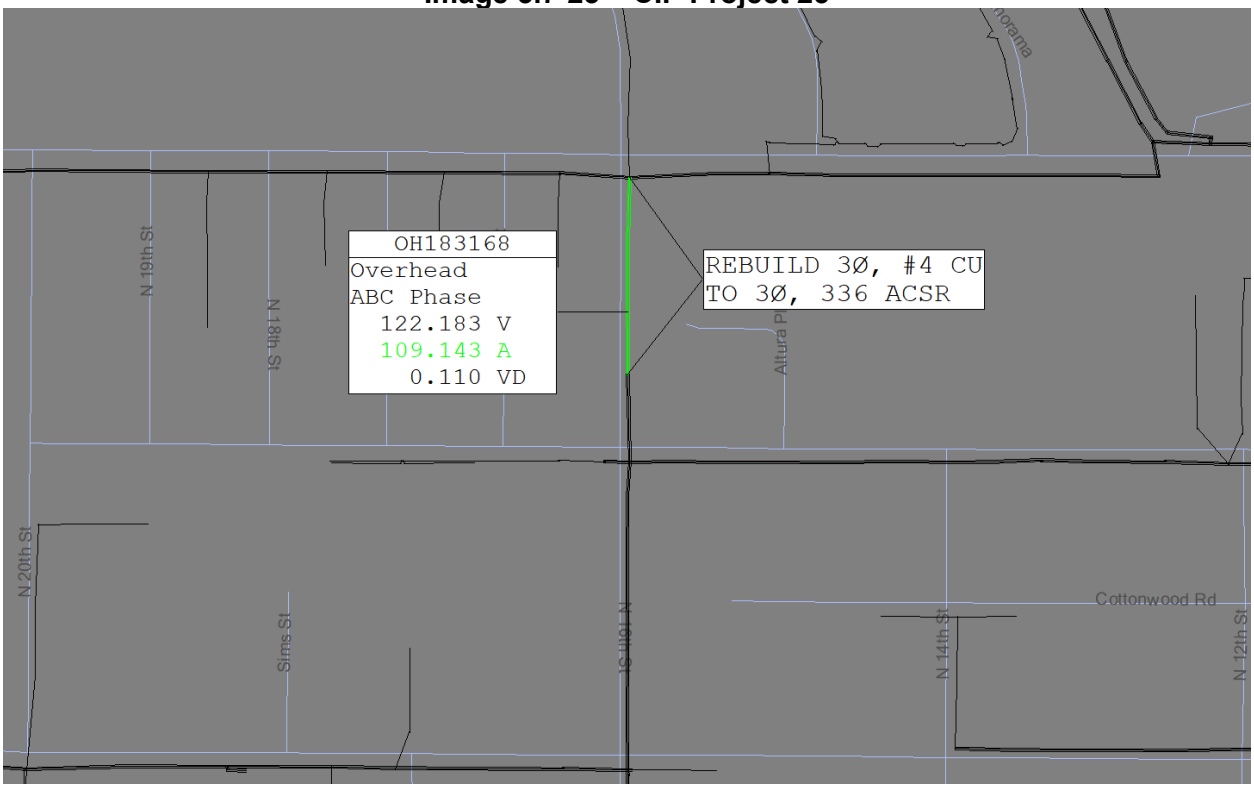


CIP-25

Issue: OH183168, OH183140, and OH183149, 3Ø, #4 ACSR conductor reaches 60% capacity.

Resolution: Rebuild 437' of 3Ø, #4 CU line to 3Ø, 336 ACSR along N. 16th St. between W. Nicolet St. and W. Wilson St. from pole number 183146 to pole number Pole183139. Estimated cost: $66,200 (2030).

Image 5.7-23 – CIP Project 25



CKT 74

Issue: None

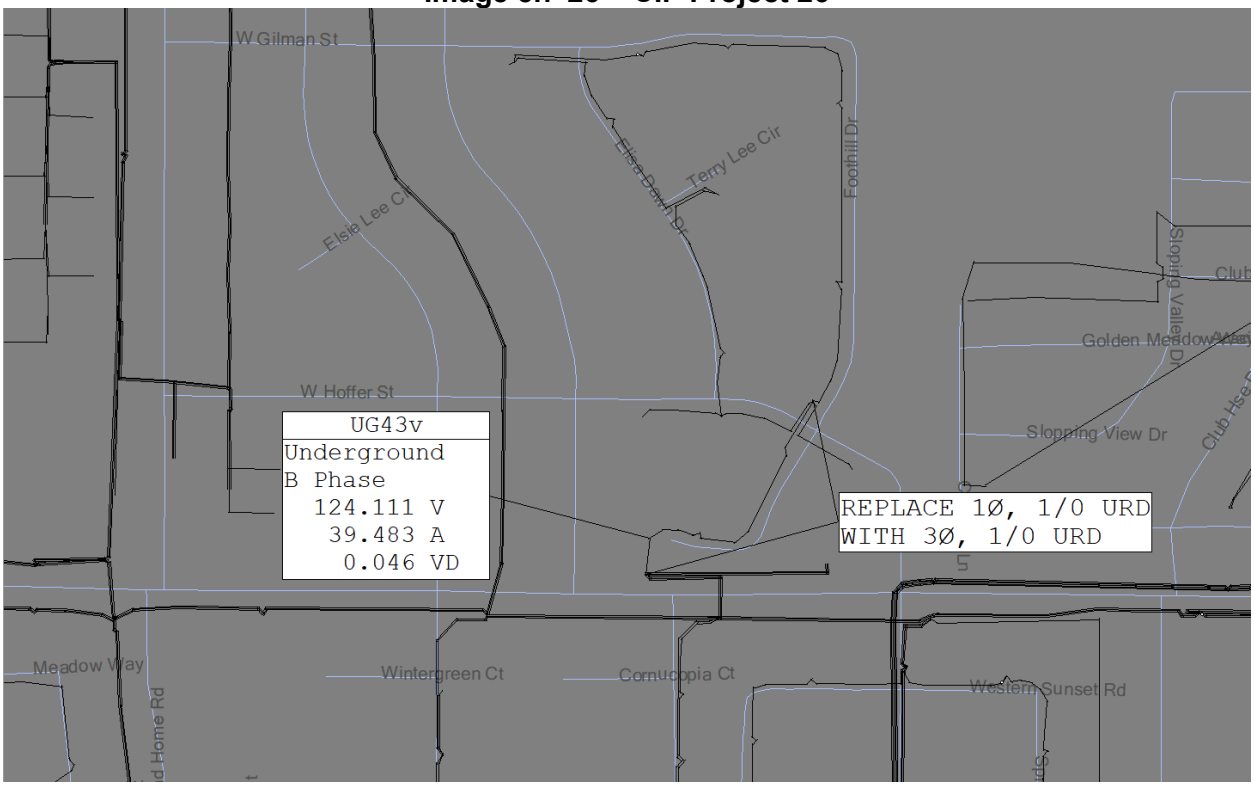
CKT 76

CIP-26

Issue: UG43v, 1Ø, 1/0 URD with 39 amps, 95 thru consumers.

Resolution: Replace 650' of 1Ø, 1/0 URD line with 3Ø, 1/0 URD line from vault 28573 along W. Wilson St. to vault 28595 at the intersection of W. Hoffer St. and Foothill Dr. Estimated cost: $336,100 (2029).

Image 5.7-26 – CIP Project 26



CKT 77

Note: The feeder extends along Mountain Ave. along with CKT 72 but does not have any load connected. SEE CKT 72 recommendations.

BANNING SUBSTATION (34.5 kV Analysis)

CKT 1

Issue: None

CKT 2

Issue: None

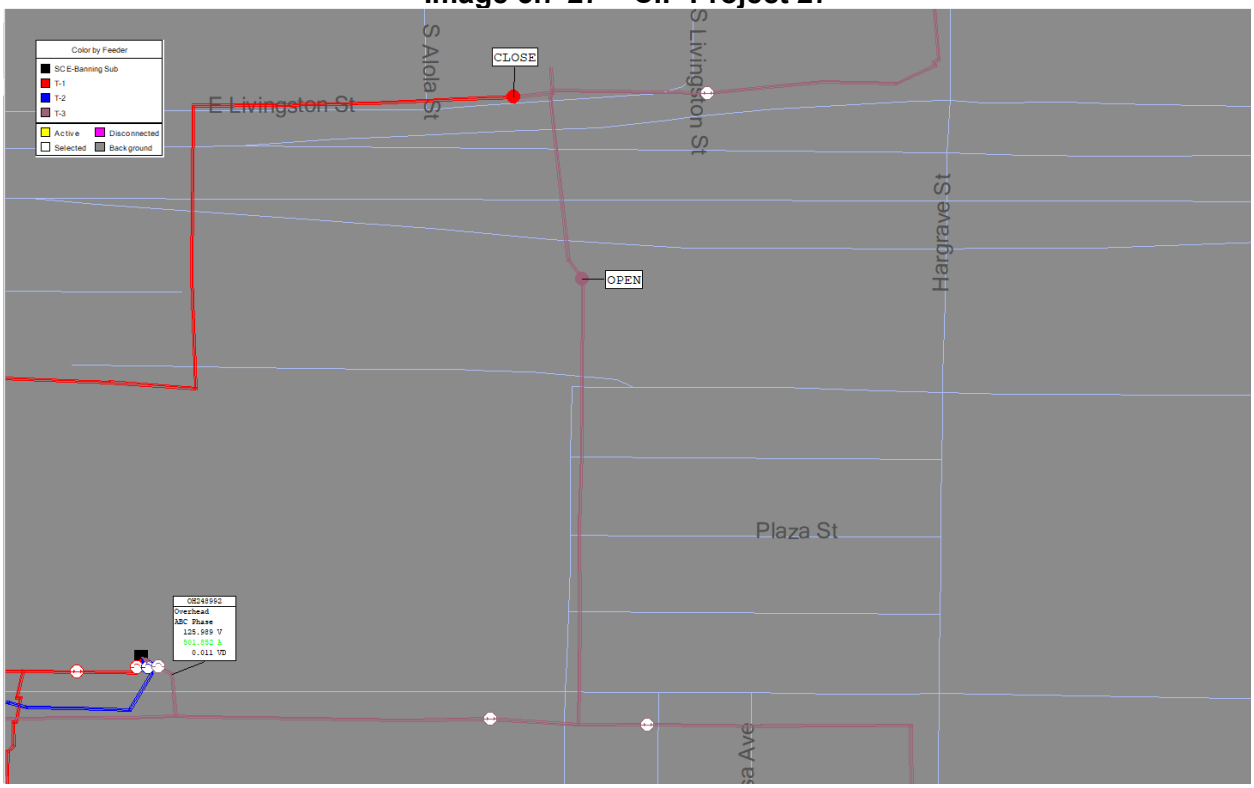
CKT 3

CIP-27

Issue: The model shows CKT 3 feeding the Midway, Ivy, and Stagecoach substations. OH248992 Feeder Exit, 3Ø, 336 ACSR reaches 95% capacity, OH2296, 3Ø, 4/0 ACSR reaches 78% capacity, and OH2316, 3Ø, 4/0 ACSR reaches 62% capacity.

Resolution: Close the tie around Pole241891 and open the line at Pole262449 to switch load from CKT 3 to CKT 1. This will change the feed of the Stagecoach substation to be served by CKT1. Estimated cost: $2,100 (2026).

Image 5.7-27 – CIP Project 27



5.8 – Total Cost Estimate

The table below contains a breakdown of the total estimated cost of the 5-Year CIP.

Table 5.8-1 – Total 5-Year CIP Cost Estimate

	2026-2030 CIP					
	2026	2027	2028	2029	2030	Totals
OH Maintenance Program						
Total Cost	$604,198	$622,324	$640,994	$1,079,272	$1,111,650	$4,058,438
CIAC	$0	$0	$0	$0	$0	$0
BEU Funding Cost	$604,198	$622,324	$640,994	$1,079,272	$1,111,650	$4,058,438
Capital-Maintenance Projects						
Total Cost	$5,460,000	$3,154,500	$1,690,000	$4,980,000	$5,500,000	$20,784,500
CIAC	$4,918,750	$1,000,000	$0	$2,375,000	$1,000,000	$9,293,750
BEU Funding Cost	$541,250	$2,154,500	$1,690,000	$2,605,000	$4,500,000	$11,490,750
System Improvements Projects						
Total Cost	$411,000	$492,700	$230,100	$919,400	$752,500	$2,805,700
CIAC	$0	$0	$0	$0	$0	$0
BEU Funding Cost	$411,000	$492,700	$230,100	$919,400	$752,500	$2,805,700
5-year CIP Cost						
Total Cost	$6,475,198	$4,269,524	$2,561,094	$6,978,672	$7,364,150	$27,648,638
CIAC	$4,918,750	$1,000,000	$0	$2,375,000	$1,000,000	$9,293,750
BEU Funding Cost	$1,156,448	$3,269,524	$2,561,094	$4,603,672	$6,364,150	$18,354,888

For the BEU funding cost, 22% is for OH Maintenance Program, 63% is for Capital Maintenance Projects, and 15% is for System-Improvement Projects.

6.0 – 15 – YEAR ESMP

6.1 – Overhead Maintenance Program

The Overhead Maintenance Program includes the routine inspection and replacement of poles on the sub-transmission and distribution circuits on the BEU system.

It is projected that BEU will inspect 20 poles per week for the years 2031 thru 2035 and 25 poles per week for the years 2036 thru 2045. This totals to 1,040 poles inspected per year between 2031 and 2035 and 1,300 poles inspected between 2036 and 2045 for a grand total of 18,200 poles inspected for the duration of the 15-Year ESMP. An estimated cost of $322 per pole inspection was used for 2031 and a 3% inflation to this cost was assumed per year every year after thru 2045. The total estimated cost for pole inspections for the 15-Year ESMP is $7,350,010.

It is projected that BEU will replace 100 poles per year for the years 2031 thru 2045. This totals to 1,500 poles replaced for the duration of the 15-Year ESMP. An estimated cost of $8,935 per pole replacement was used for 2031 and a 3% inflation to this cost was assumed per year every year after thru 2045. The total estimated cost for pole replacements for the 15-Year ESMP is $16,618,732.

The total estimated cost for the Overhead Maintenance Program for the 15-year ESMP is $23,968,742. The table below shows a breakdown of the Overhead Maintenance Program.

Table 6.1-1 – Overhead Maintenance Program Costs 2031 thru 2035

	2031	2032	2033	2034	2035	Total
Number of Poles Inspected	1,040	1,040	1,040	1,040	1,040	5,200
Cost per Inspection	□□□□	□□□□	□□□□	□□□□	□□□□	-
Total Cost of Inspection	$335,290	$345,349	$355,709	$366,380	$377,372	$1,780,100
Number of Poles Replaced	100	100	100	100	100	500
Cost per Replacement	$8,935	$9,203	$9,479	$9,764	$10,057	-
Total Cost of Replacement	$893,532	$920,338	$947,949	$976,387	$1,005,679	$4,743,885

Table 6.1-2 – Overhead Maintenance Program Costs 2036 thru 2040

	2036	2037	2038	2039	2040	Total
Number of Poles Inspected	1,300	1,300	1,300	1,300	1,300	6,500
Cost per Inspection	$374	$385	$397	$408	$421	-
Total Cost of Inspection	$485,866	$500,442	$515,455	$530,919	$546,847	$2,579,529
Number of Poles Replaced	100	100	100	100	100	500
Cost per Replacement	$10,358	$10,669	$10,989	$11,319	$11,659	-
Total Cost of Replacement	$1,035,849	$1,066,924	$1,098,932	$1,131,900	$1,165,857	$5,499,463

Table 6.1-3 – Overhead Maintenance Program Costs 2041 thru 2045

	2041	2042	2043	2044	2045	Total
Number of Poles Inspected	1,300	1,300	1,300	1,300	1,300	6,500
Cost per Inspection	$433	$446	$460	$473	$488	-
Total Cost of Inspection	$563,252	$580,150	$597,554	$615,481	$633,945	$2,990,381
Number of Poles Replaced	100	100	100	100	100	500
Cost per Replacement	$12,008	$12,369	$12,740	$13,122	$13,515	-
Total Cost of Replacement	$1,200,833	$1,236,858	$1,273,964	$1,312,182	$1,351,547	$6,375,384

6.2 – CAPITAL MAINTENANCE PROJECTS

BEU has identified 6 Capital Maintenance Projects to include in the 15-year ESMP. The total estimated cost for these projects is $8,350,000. It is projected that BEU will receive $3,000,000 in contributions in aid to these projects bringing the total BEU funding cost to $5,350,000.

The following tables list the Capital Maintenance projects that have been identified for inclusion to the 15-year ESMP.

Table 6.2-1 – Capital Maintenance Project Costs

Project Description	Year	Total Cost	CIAC	BEU Funding Cost
Midway Substation Upgrades (breaker replacement and SCADA-ready upgrades and future full replacement)	2031	$1,000,000	$0	$1,000,000
34.5/12.47/fiber Relocation on 4th St from Westward Ave to Lincoln St	2031	$1,500,000	$1,500,000[1]	$0
Underground Conversion from Apex/Ramsey to Joshua Palmer	2031	$850,000	$0	$850,000
Underground Conversion at Wilson St from Smith Creek to Highland Home Rd	2031	$500,000	$0	$500,000
34.5/12.47/fiber I-10 Crossing at Hathaway from John St to Ramsey St	2031	$1,500,000	$1,500,000[2]	$0
Overhead Transmission System Extension (Hoffer/Hathaway to Stagecoach Substation)	2031-2032	$3,000,000	$0	$3,000,000
Total 15-Year ESMP Capital Maintenance Cost		**$8,350,000**	**$3,000,000**	**$5,300,000**

[1] Up to 100% funding from Rancho San Gorgonio Development
[2] Up to 100% funding from Hillwood Development

6.3 – SUBSTATION CAPACITY ANALYSIS

The table below represents the substation capacity analysis based on the 2045 substation demand after distribution system improvements including adding the new Smith Creek Substation, new feeders out of Stagecoach and Sunset, and load switching recommendations. As shown in the table, the San Gorgonio, Stagecoach, and Sunset substations summer projected peak exceeds the base rating of their respective transformer; however, with the exception of the Stagecoach Substation, the load does not exceed the max rating of the transformer. For the Stagecoach Substation, it is recommended to replace the existing base 10 MVA transformer with a base 15 MVA transformer before the summer 2040 peak. With this improvement, the projected load will not exceed the base rating or the max rating of the new transformer thru the end of this ESMP.

The table also shows that the BEU system non-coincident peak exceeds the SCE Banning substation transformer base capacity for the summer and winter forecast and also the max capacity in the summer. Based on the non-coincident forecast, the total BEU system load is expected to exceed the max capacity by the summer of 2026. It is recommended that BEU continue to coordinate with SCE on the substation transformer capacity and develop a plan to increase the substation transformer capacity through the end of the ESMP period.

Table 6.3-1 – Substation Capacity Analysis

		2045 kW Demand Forecast	Transformer Base MVA	Transformer Max MVA	Transformer High Side kV	Transformer Low Side kV	Transformer % Capacity Base	Transformer % Capacity Max
22nd Street	S	6,250	15	25	34.4	12.47	42%	25%
	W	4,809	18	29			27%	17%
Ivy	S	11,446	15	25	69x34.4	12.47	76%	46%
	W	9,679	18	29			54%	34%
Midway	S	0	2 x 7.5	2 x 9.375	34.4	12.47	0%	0%
	W	0	18	22			0%	0%
Smith Creek	S	32,566	2 x 20	2 x 37.5	69x34.4	12.47	81%	43%
	W	20,906	48	75			44%	28%
San Gorgonio	S	19,996	2 x 10	2 x 14	69x34.5	12.47	100%	71%
	W	18,391	24	32			77%	57%
Stagecoach	S	14,764	10	12.5	69x34.5	12.47	148%	118%
	W	8,374	12	14			70%	58%
Sunset	S	20,920	15	25	69x34.5	12.47	139%	84%
	W	13,441	18	29			75%	47%
SCE-Banning	S	90,738	2 x 21	2 x 28		34.5	216%	162%
	W	75,580	50.4	64			150%	117%

Notes:

1. Individual substation kW Demand forecast shown as the non-coincident peak.
2. SCE-Banning kW Demand forecast shown as the coincident peak.
3. Base winter rating determined by IEEE C57.91-1995, Table 4 (1% increase per °C)
4. Max winter rating determined by IEEE C57.91-1995, Table 4 (0.75% increase per °C)

6.4 – DISTRIBUTION SYSTEM ANALYSIS

Analysis was run using Milsoft's Windmil software on the distribution system to determine system improvement projects to correct low voltage, decrease conductor and equipment loading, and reduce single phase line loading to aid in phase balancing for the 15-year ESMP. The analysis results include 5 projects to switch load to adjacent lines at a total estimated cost of $17,100, 2 projects for new overhead line construction totaling $1,219,000, 9 projects for rebuilding overhead lines totaling $1,926,600, 10 projects for new underground line construction totaling $7,107,100 and 4 projects for replacing underground line with larger conductor totaling $1,269,500. The total estimated cost for distribution system improvements for the 15-year ESMP is $11,539,300.

The following pages detail the recommended distribution system improvements by substation and circuit.

22ND STREET SUBSTATION

CKT 63

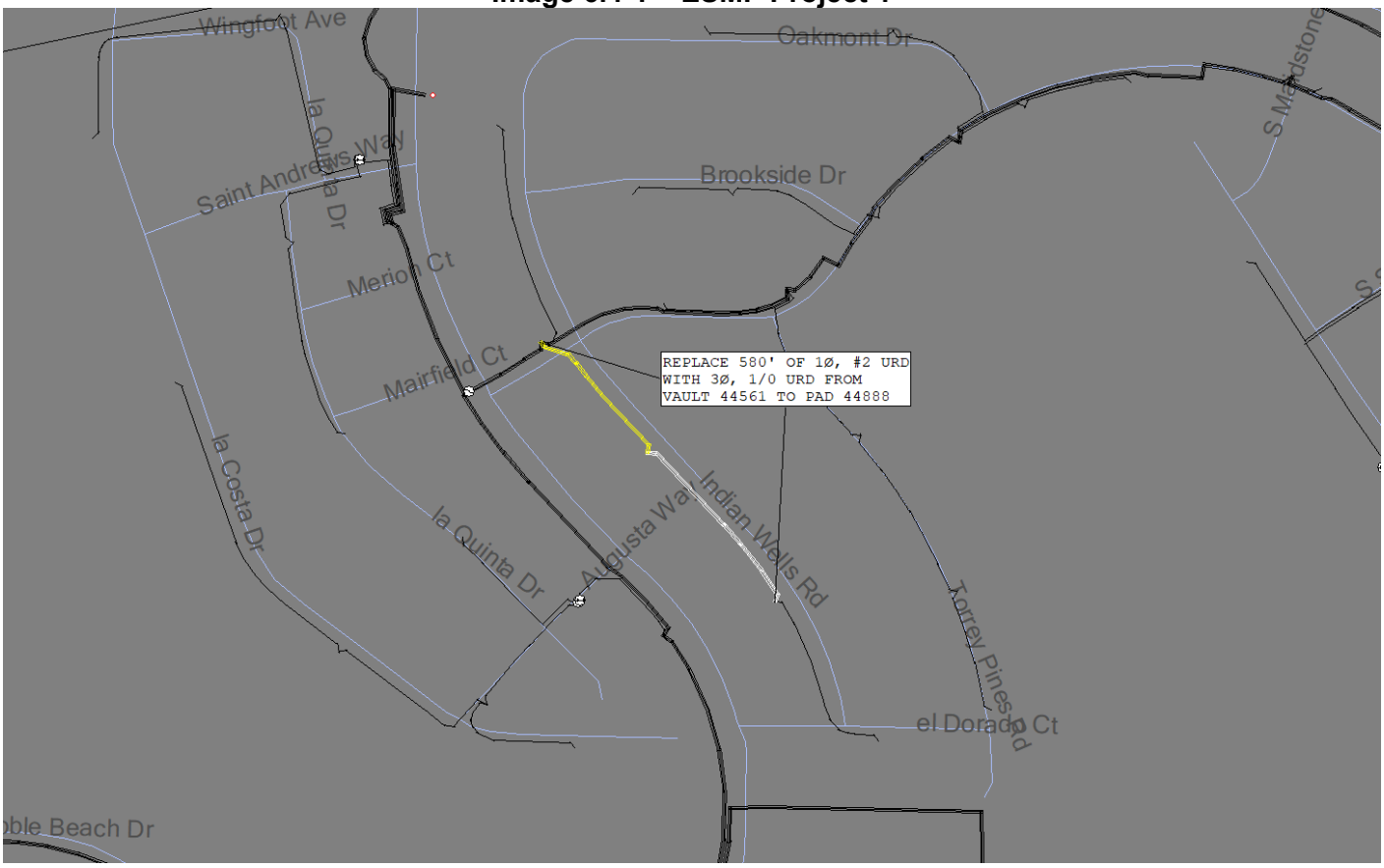
ESMP-1

Issue: UG33x303, 1Ø, #2 URD line with 41 amps, 41 thru consumers.

Resolution:

- Replace 580’ of 1Ø, #2 URD line with 3Ø, 1/0 URD line from vault 44888 to pad 44888 along Indian Wells Rd.
- Split the load between multiple phases.
- Estimated cost: $345,600 (2041).

Image 6.4-1 – ESMP Project 1



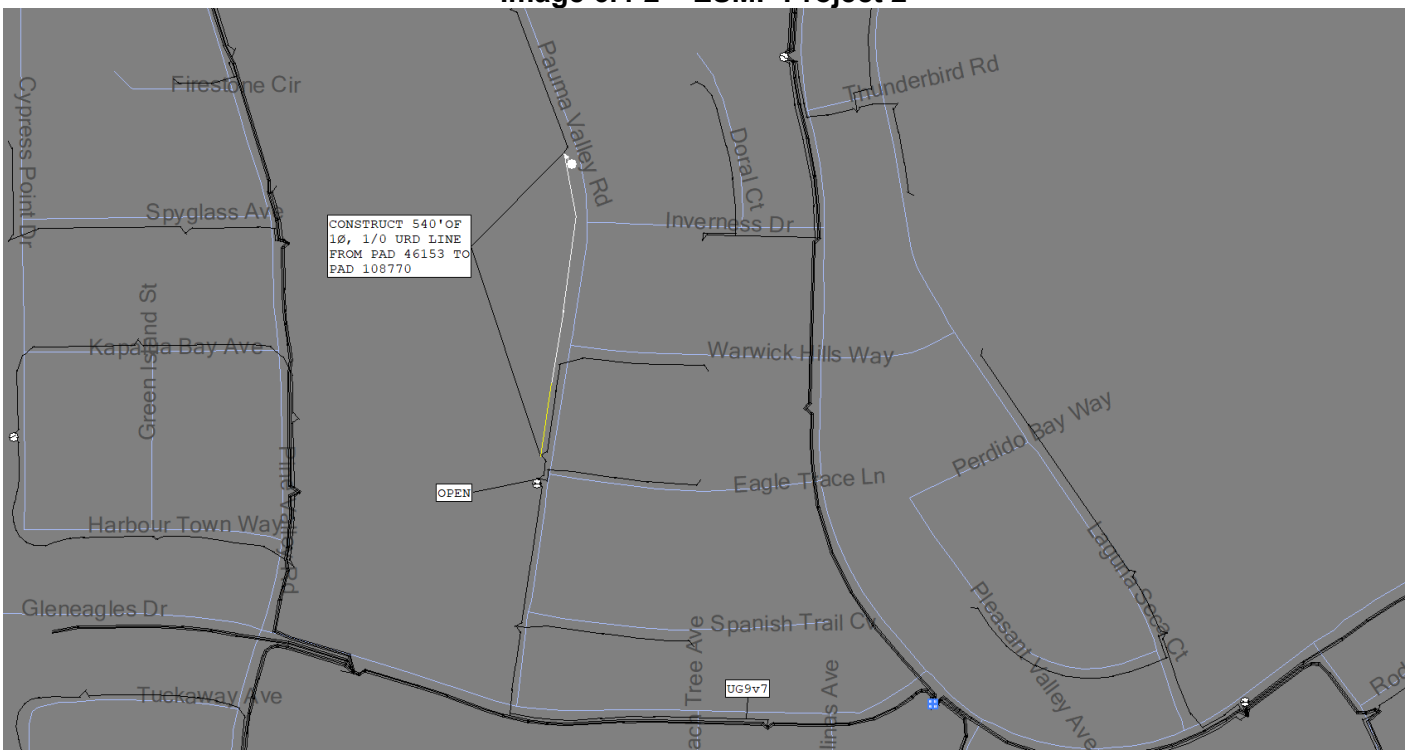
ESMP-2

Issue: UG9v7, 1Ø, 1/0 URD line with 41 amps, 86 thru consumers.

Resolution:

- Construct 540’ of 1Ø, 1/0 URD line from pad 46153 to pad 108770 along Pauma Valley Rd. utilizing pull boxes Pb101706, Pb108810, PB108831, and Pb108819
- Open after line section UG9v9 at vault 108834
- Change the feed of line section UG33x490 along Eagle Trace Ln. at vault 108834 to feed from the north.
- Change the feed of UG33x489 along Warwick Hills Way at pad 108770 to feed from the north.
- Estimated cost: $388,100 (2045).

Image 6.4-2 – ESMP Project 2



CKT 64

Issue: None

IVY SUBSTATION

CKT 11

Issue: None

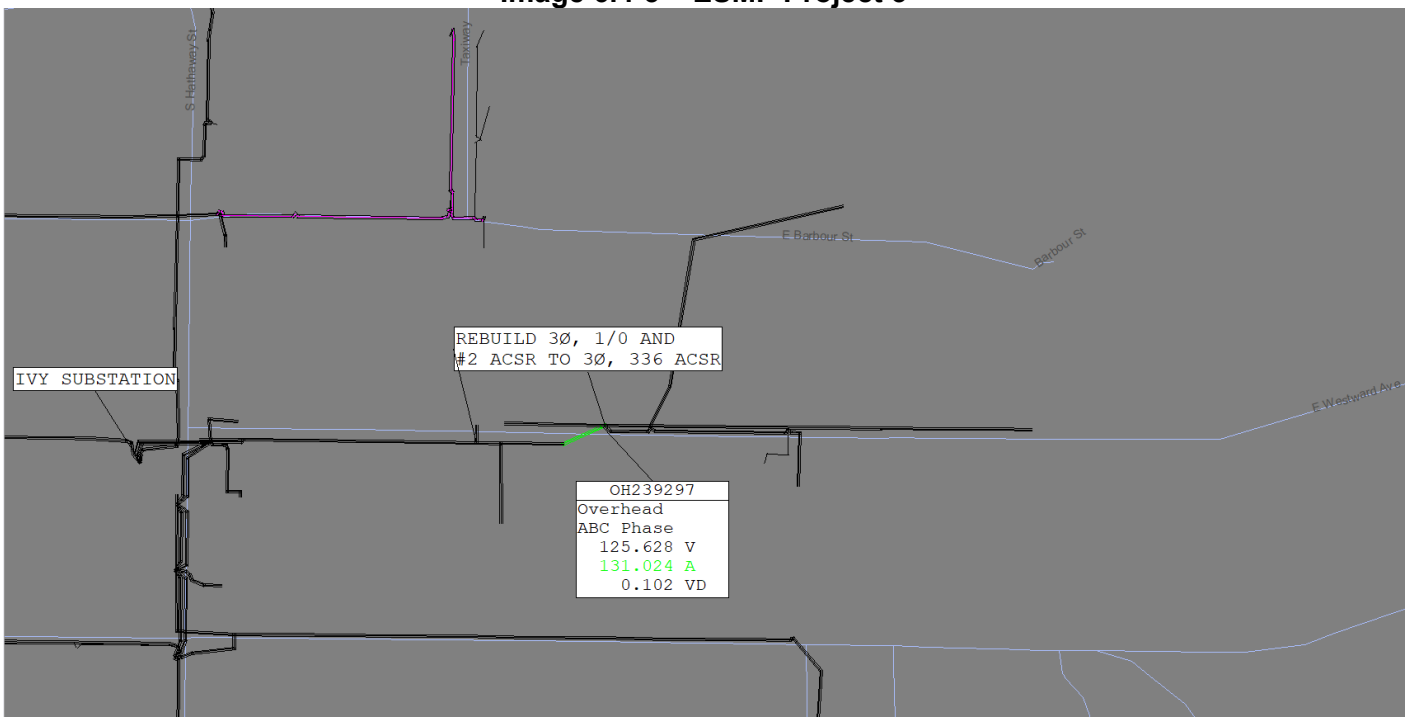
CKT 12

ESMP-3

Issue: OH239297, 3Ø, #2 ACSR OH conductor reaches 73% capacity.

Resolution: Rebuild 423' of 3Ø, 1/0 ACSR and #2 ACSR line to 3Ø, 336 ACSR along E. Westward Ave and crossing E. Woodward Ave from Pole239250 to Pole239296. Estimated cost: $120,400 (2044).

Image 6.4-3 – ESMP Project 3



CKT 13

Issue: None

MIDWAY SUBSTATION

The new Smith Creek Substation is planned for construction beginning in 2030 with a planned energization in 2031. All of the load currently served by the Midway Substation will be switched to Smith Creek. See the Smith Creek Substation writeup for system improvements required to support the load.

SAN GORGONIO SUBSTATION

CKT 51

ESMP-4

Issue: UG295264, 3Ø, 750 MCM conductor at the feeder exit reaches 66% capacity and OH1359, 3Ø, 336 ACSR conductor along W Lincoln St. reaches 62% capacity.

Resolution: Open SW209315-A at FP197794 Along George St. between N. 3rd St. and N 2nd St. and switch a portion of load to the Stagecoach substation. Note: In order for this to be completed without further problems, CKT's 5 and 6 out of the Stagecoach substation will be constructed. See the Stagecoach system improvement recommendations for projects required to complete this load switch. Estimated cost: $3,100 (2041).

Image 6.4-4 – ESMP Project 4

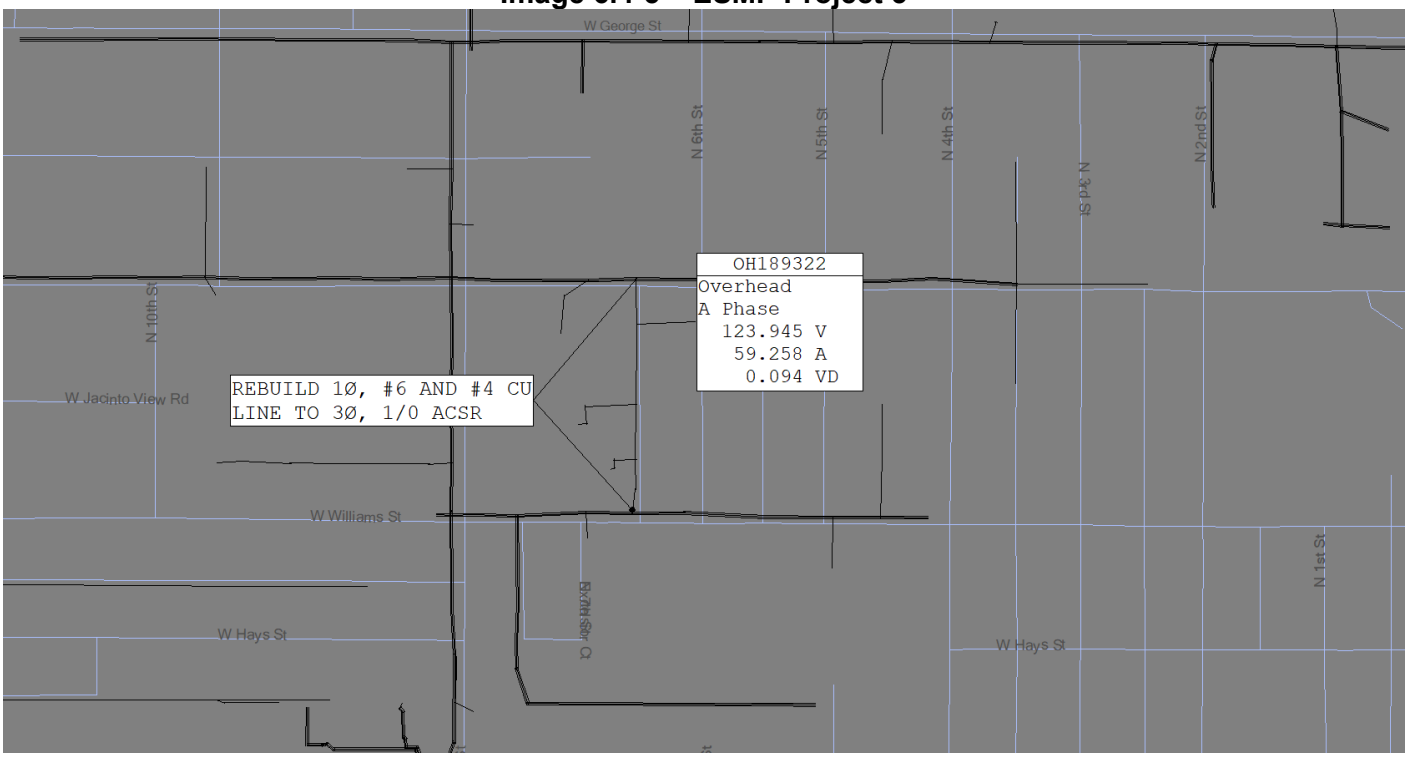


ESMP-5

Issue: OH189322, 1Ø, #6 CU line with 59 amps, 57 thru consumers.

Resolution: Rebuild 625' of 1Ø, #6 and #4 CU line to 3Ø, 1/0 ACSR from Pole189367 to Pole198056 between W. Nicolet St. and W. Williams St. and just west of N. 6th St. Once the line is rebuilt to three-phase, balance the taps between the three phases. Estimated cost: $132,800 (2040).

Image 6.4-5 – ESMP Project 5



CKT 52

Issue: None

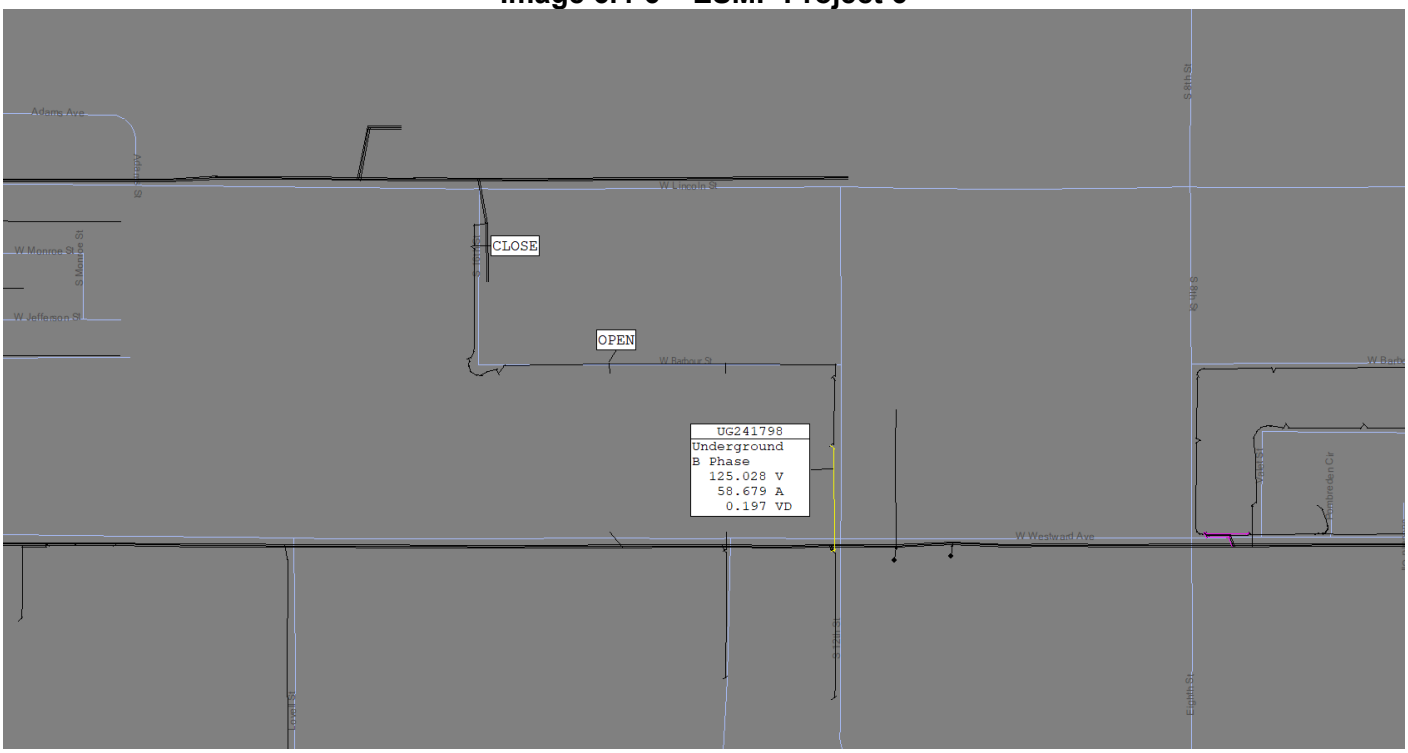
CKT 53

ESMP-6

Issue: UG241798, 1Ø, 2 URD with 59 amps, 46 thru consumers.

Resolution: Open the single-phase line at Vault 146193 and backfeed the line at Pad 146238 to split up the single-phase line and serve from another source. Estimated cost: $2,900 (2039).

Image 6.4-6 – ESMP Project 6

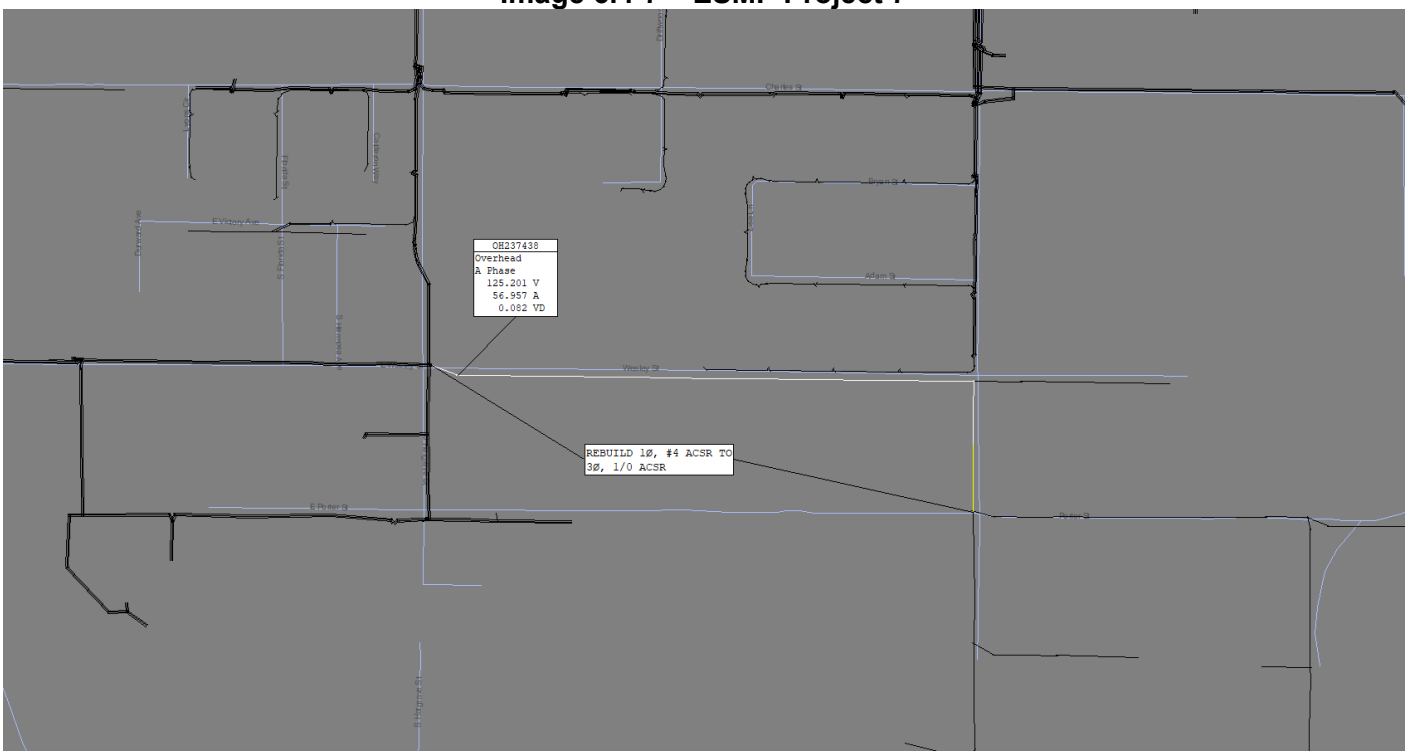


ESMP-7

Issue: OH237438, 1Ø, #4 ACSR line with 57 amps, 34 thru consumers.

Resolution: Rebuild 3,155' of 1Ø, #4 ACSR line to 3Ø, 1/0 ACSR from FP237936 to Pole237034 beginning at the intersection of S. Hargrave St. and Wesley St. and ending at the intersection of S. Hathaway St. and Porter St. Once the line is rebuilt to three-phase, balance the taps between the three phases. Estimated cost: $539,700 (2038).

Image 6.4-7 – ESMP Project 7



CKT 54

Issue: None

STAGECOACH SUBSTATION

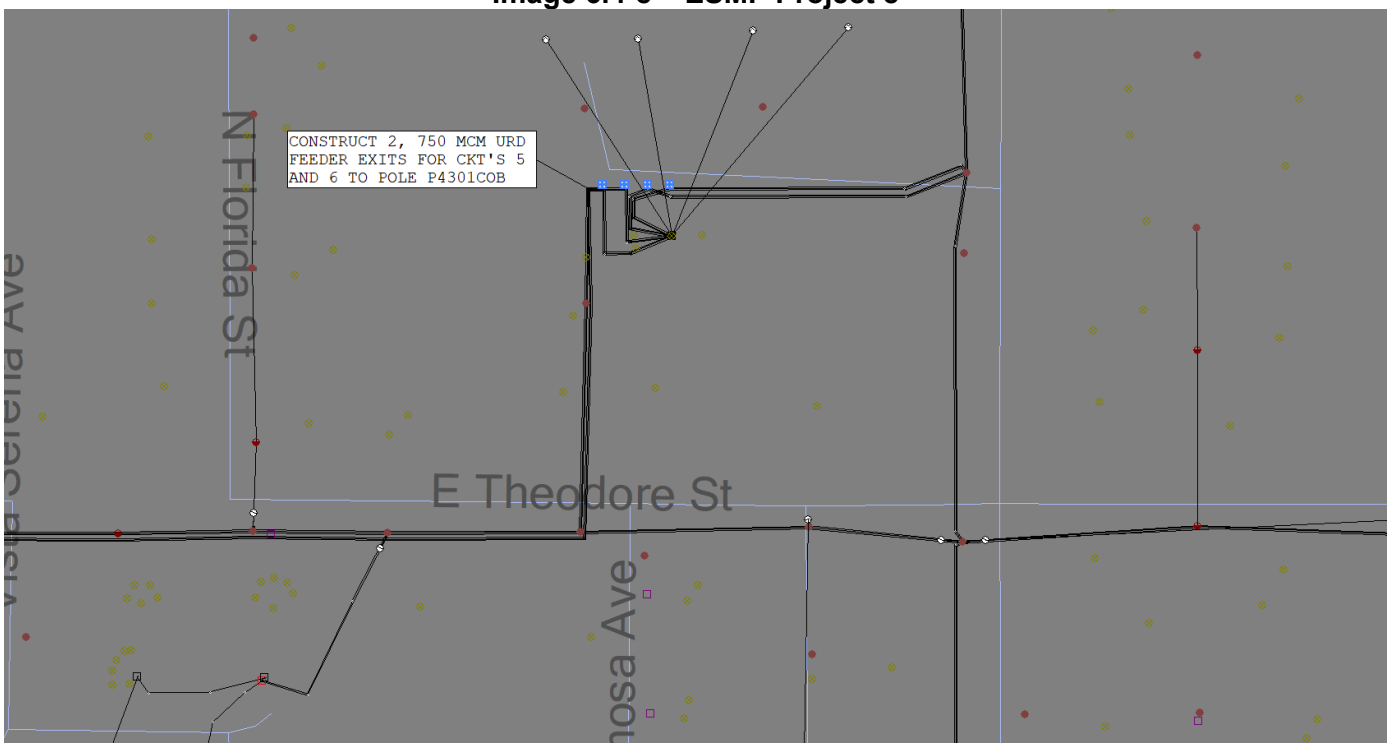
CKT 5 & 6

In order to balance the load at the Stagecoach substation and also to switch load from the San Gorgonio and Sunset substations to reduce conductor loading, it is recommended to build out CKT's 5 and 6 out of the Stagecoach substation. The projects listed below are recommended to construct CKT's 5 and 6 along with switching load from Stagecoach CKT's 7 and 8, San Gorgonio CKT 51, and Sunset CKT 72. The two need circuits will head south from the substation to E. Theodore St., head west on E. Theodore St. to N. Alessandro St., head south on N. Alessandro St. to E. Hoffer St. and then head west on E. Hoffer St. and end just west of N. San Gorgonio Ave. Circuit 5 will be express to this point.

ESMP-8

- Construct 2, 150'; 3Ø, 750 MCM feeder exits from Bay 5 and Bay 6 to pole P4301COB. Estimated cost: $165,800 (2035).

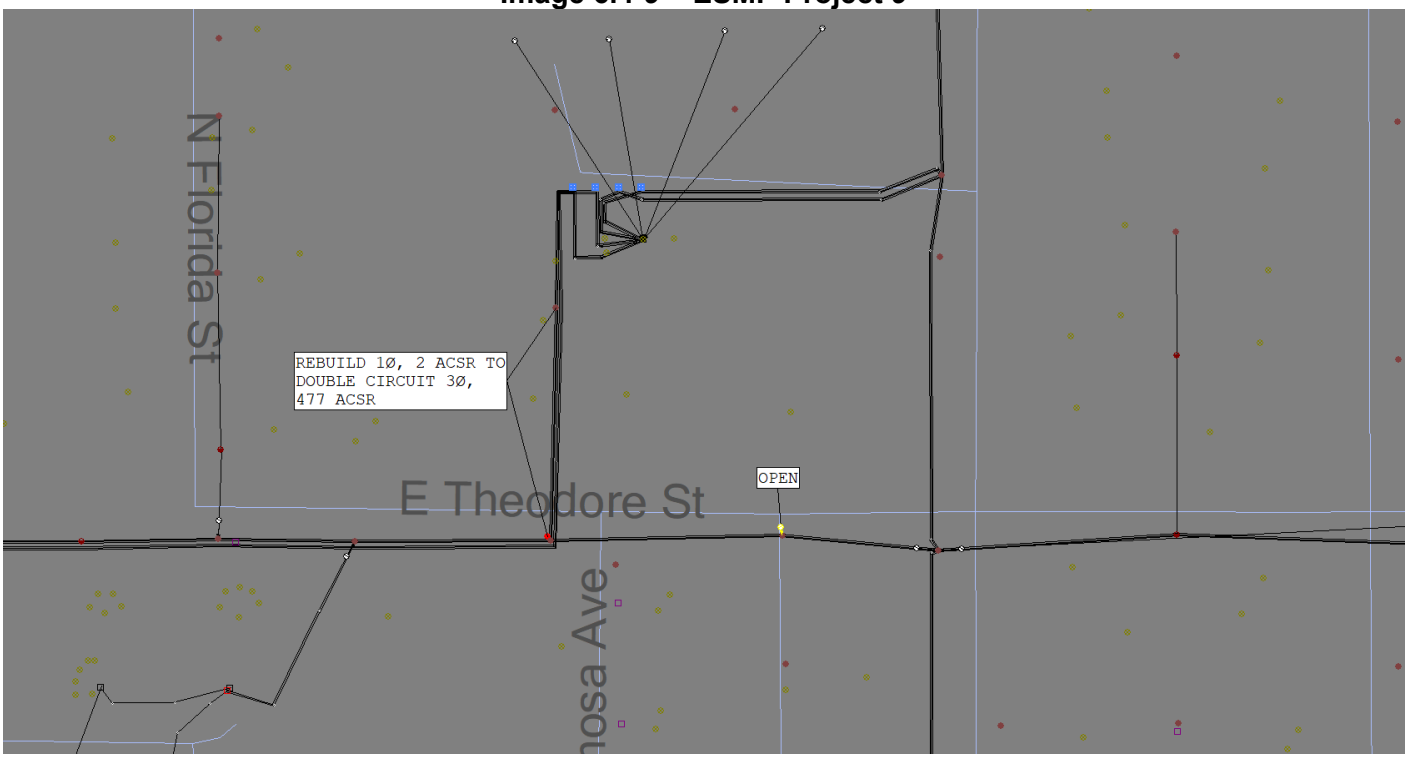
Image 6.4-8 – ESMP Project 8



ESMP-9

- Rebuild 200’ of 1Ø, #2 ACSR line to double circuit 3Ø, 477 ACSR from pole P4301COB to pole P4302COB along the substation back entrance road.
- Create open point at pole P2999COB along E. Theodore St. and switch a portion of load from CKT 7 to the new CKT 6.
- Estimated cost: $57,500 (2035).

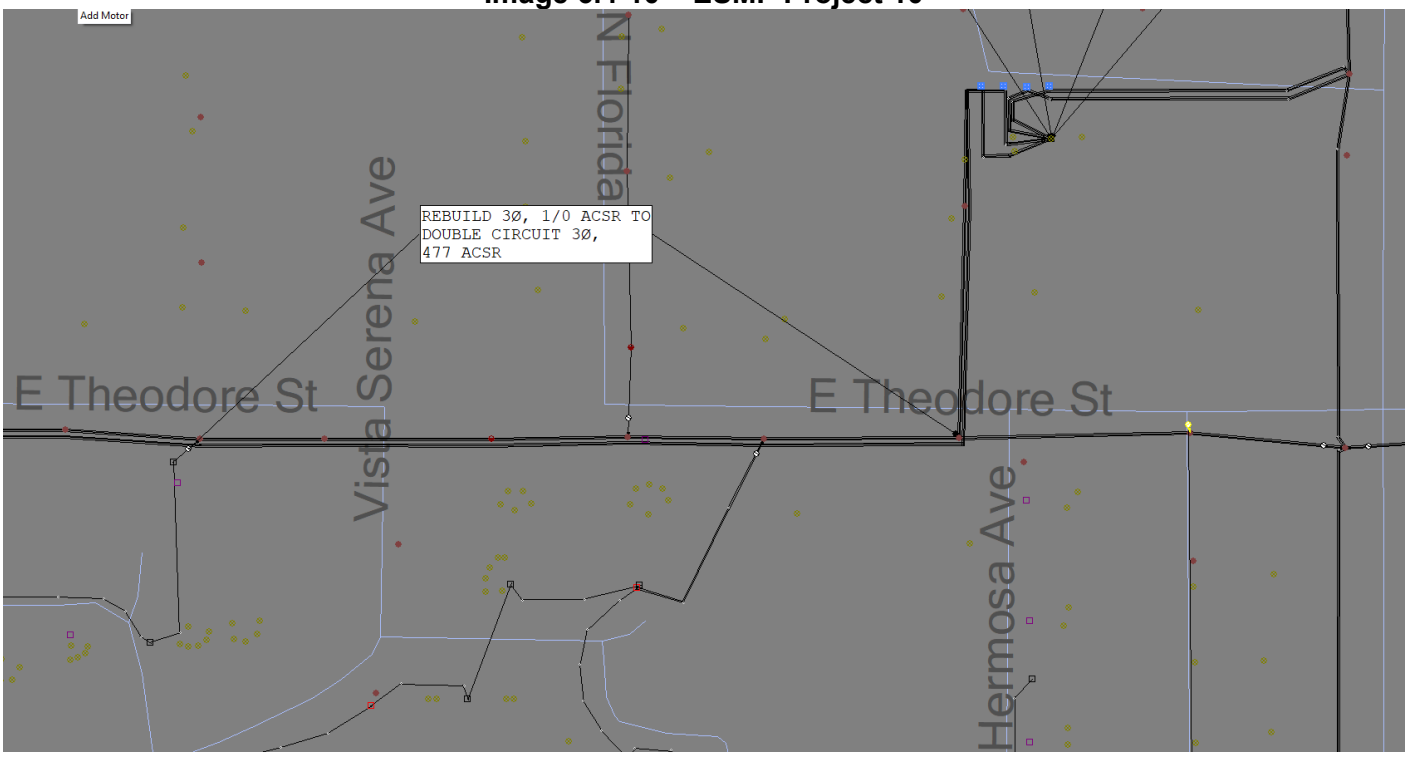
Image 6.4-9 – ESMP Project 9



ESMP-10

- Rebuild 650' of 3Ø, 1/0 ACSR line to double circuit 3Ø, 477 ACSR from pole P4302COB to pole GT68215 along E. Theodore St. from N. Hermosa Ave heading west to just past Vista Serna Ave. Estimated cost: $157,400 (2035).

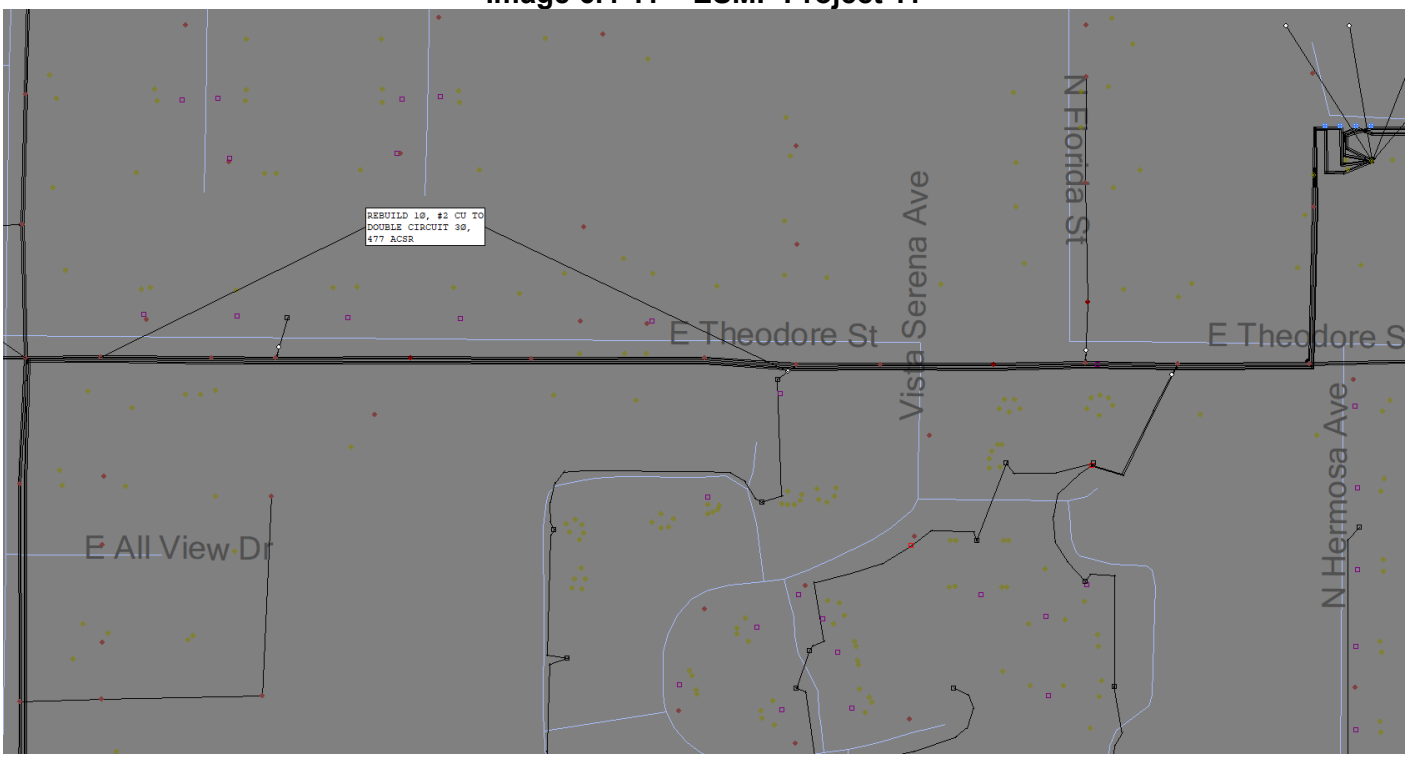
Image 6.4-10 – ESMP Project 10



ESMP-11

- Rebuild 900' of 1Ø, #2 CU line to double circuit 3Ø, 477 ACSR from pole GT68215 to pole P2330COB along E. Theadore St. east of N. Alessandro St. Estimated cost: $181,800 (2035).

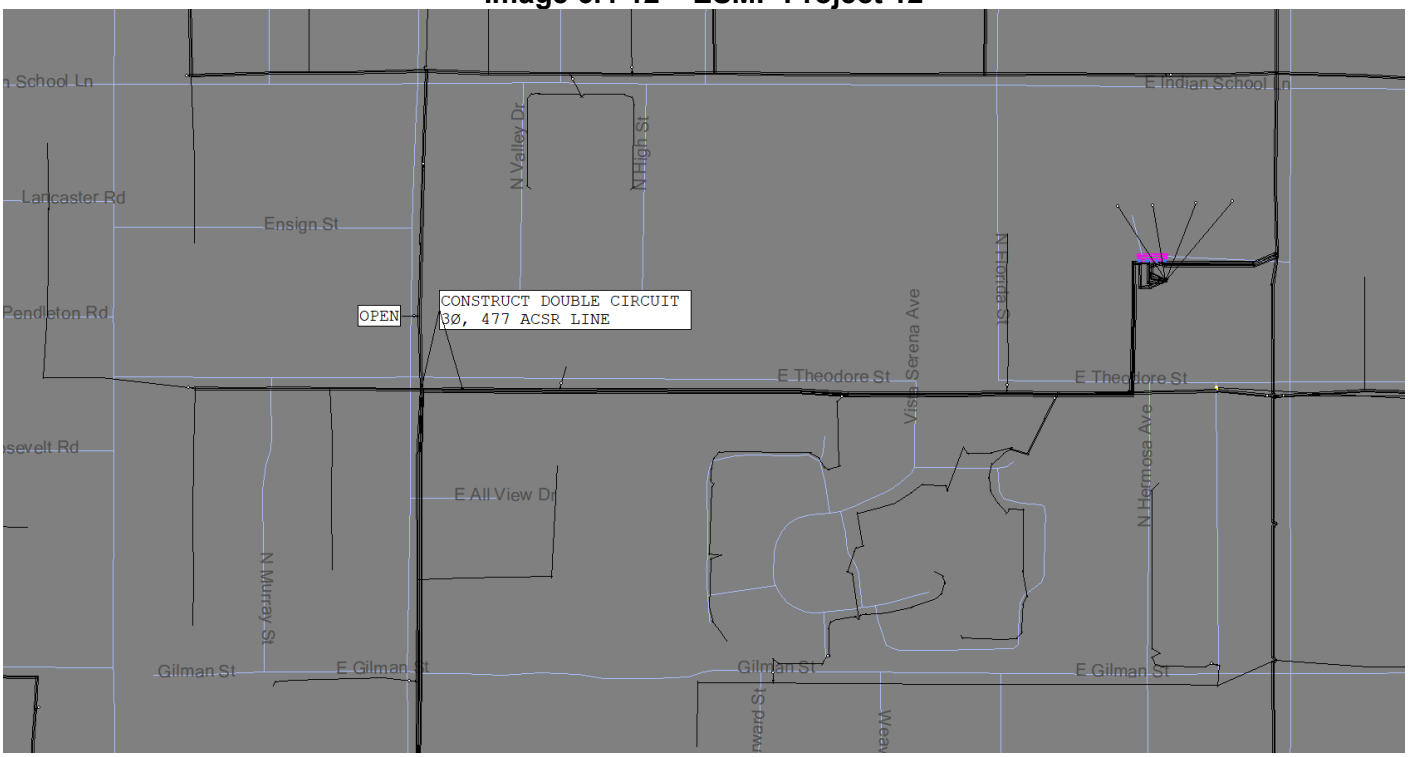
Image 6.4-11 – ESMP Project 11



ESMP-12

- Construct 100' of double circuit 3Ø, 477 ACSR line from pole P2330COB to pole P2331COB along E. Theadore St. east of N. Alessandro St.
- Create open point at Pole282646 along N. Alessandro St. just north of E. Theodore St. and switch a portion of load from CKT 8 to CKT 6.
- Estimated cost: $31,800 (2035).

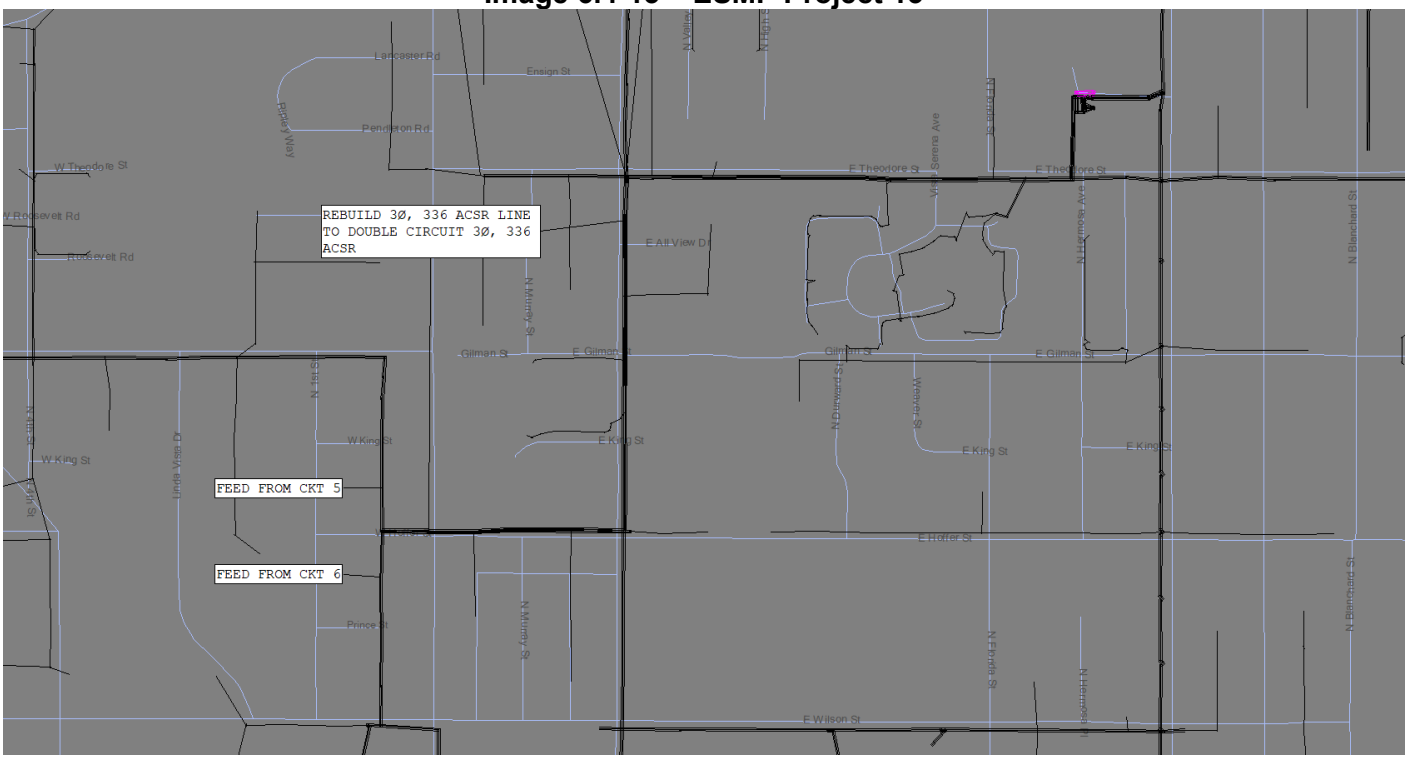
Image 6.4-12 – ESMP Project 12



ESMP-13

- Rebuild 2,150' of 3Ø, 336 ACSR line to double circuit 3Ø, 336 ACSR from pole P2331COB to Pole283017 heading south along N. Alessandro St and then west along W. Hoffer St.
- At Pole283017, switch the tap heading north towards W. Gillman St. to CKT 5 and switch the tap heading south towards E. Wilson St. to CKT 6.
- Estimated cost: $455,400 (2035).

Image 6.4-13 – ESMP Project 13



CKT 7

Issue: None

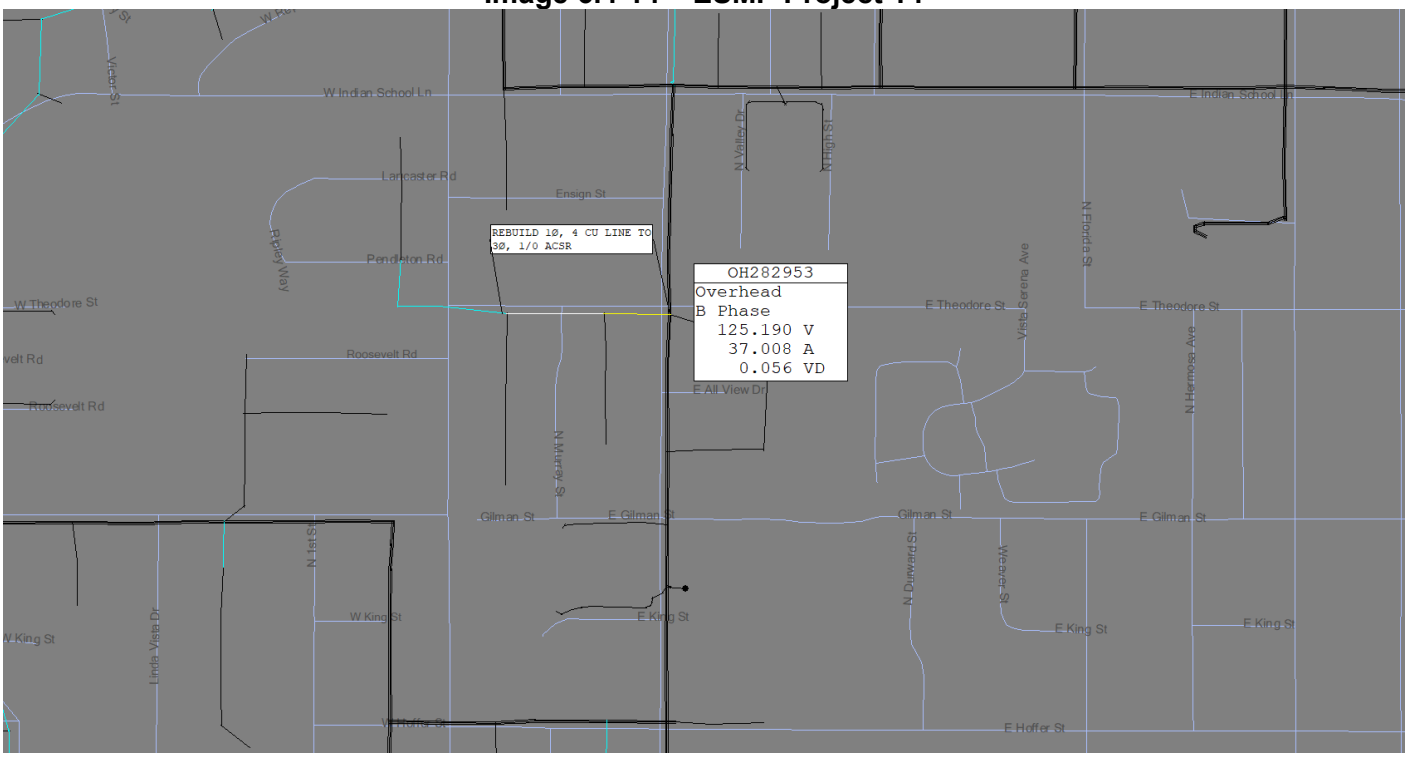
CKT 8

ESMP-14

Issue: OH282953, 1Ø, #4 CU line with 37 amps, 52 consumers.

Resolution: Rebuild 510' of 1Ø, #4 CU line to 3Ø, 1/0 ACSR along E. Theodore St. west of N. Alessandro St from pole P2331COB to pole 30733CWT. Estimated cost: $115,200 (2043).

Image 6.4-14 – ESMP Project 14



SUNSET SUBSTATION

CKT 72

ESMP-15

Issue: UG278161 Feeder Exit, 3Ø, 750 MCM URD conductor reaches 95% capacity and is greater than 80% capacity thru UG20. OH71 3Ø, 336 ACSR reaches 76% capacity and is greater than 60% capacity thru OH165. OH162 3Ø, 4/0 ACSR reaches 80% capacity and is greater than 60% capacity thru OH156.

Resolution: It is recommended to open at Pole175357 at the intersection of N. 22nd St. and W. Nicolet St. and close at Pole200537 along W. Gilman St. just west of N. 8th St. and switch load to the new Stagecoach CKT 5. Estimated cost: $2,800 (2036).

Image 6.4-15 – ESMP Project 15

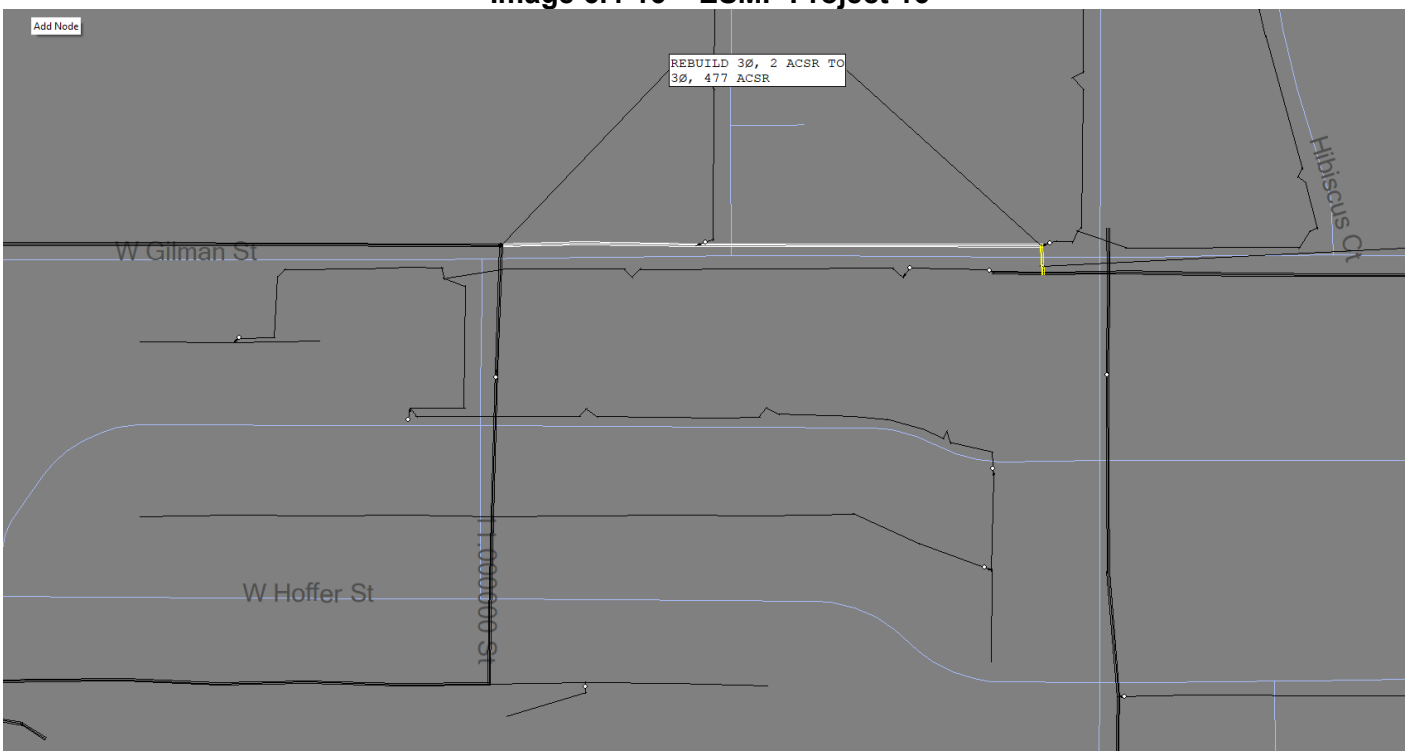


ESMP-16

Issue: With the load switch from Stagecoach CKT 72 to Stagecoach CKT 5 as described in ESMP-15, the 3Ø, #2 ACSR line at OH200538 reaches 101%

Resolution: Rebuild 875' of 3Ø, #2 ACSR line to 3Ø, 477 ACSR from Pole200537 to Pole213210 along W. Gilman St. between N. 8th St and 11th St. Estimated cost: $166,400 (2037).

Image 6.4-16 – ESMP Project 16

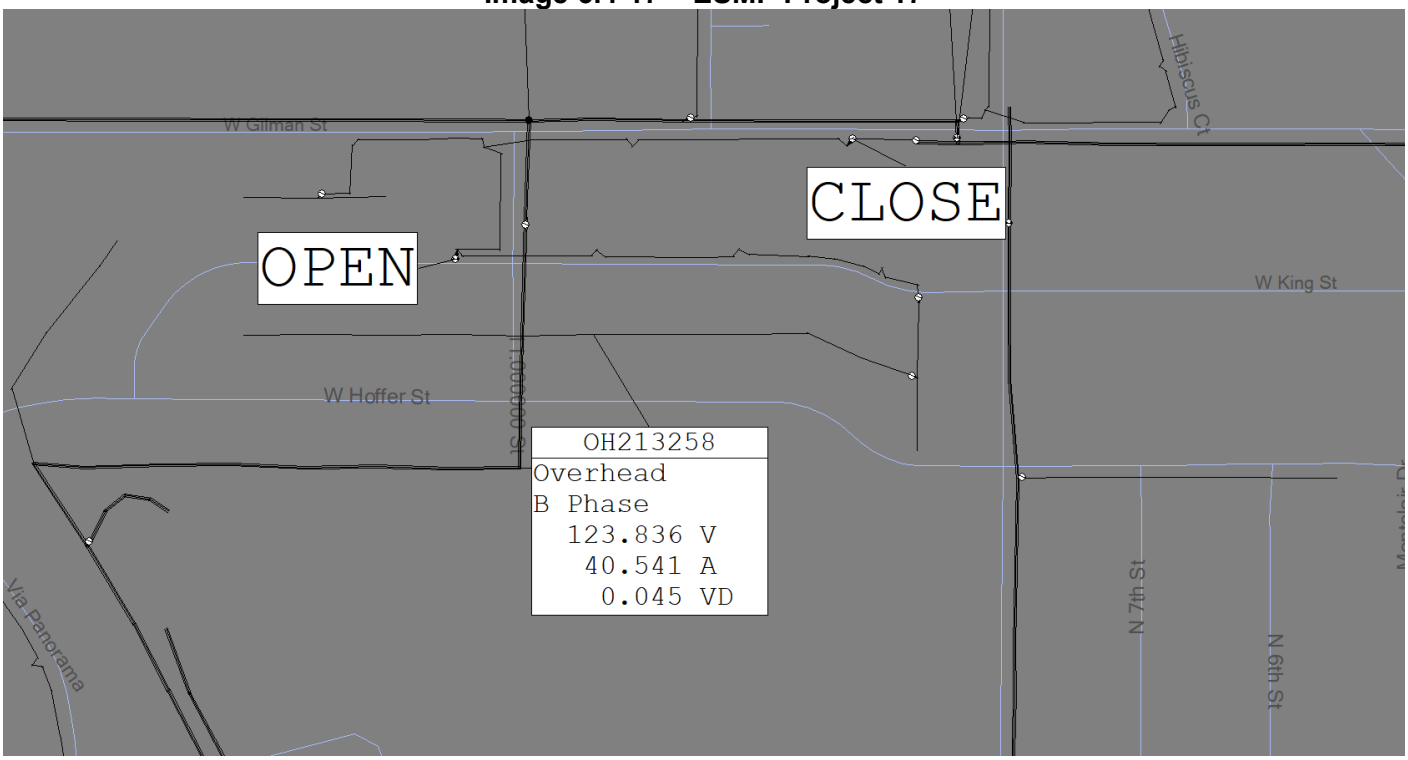


ESMP-17

Issue: OH213258, 1Ø, #2 ACSR line with 41 amps, 73 consumers

Resolution: It is recommended to open at Pad 28196 and close at Pad 28229 and split the load between W. Gilman St. and W Hoffer St. west of N. 8th St. from two different three-phase lines. Estimated cost: $3,400 (2042).

Image 6.4-17 – ESMP Project 17



CKT 74

Issue: None

CKT 76

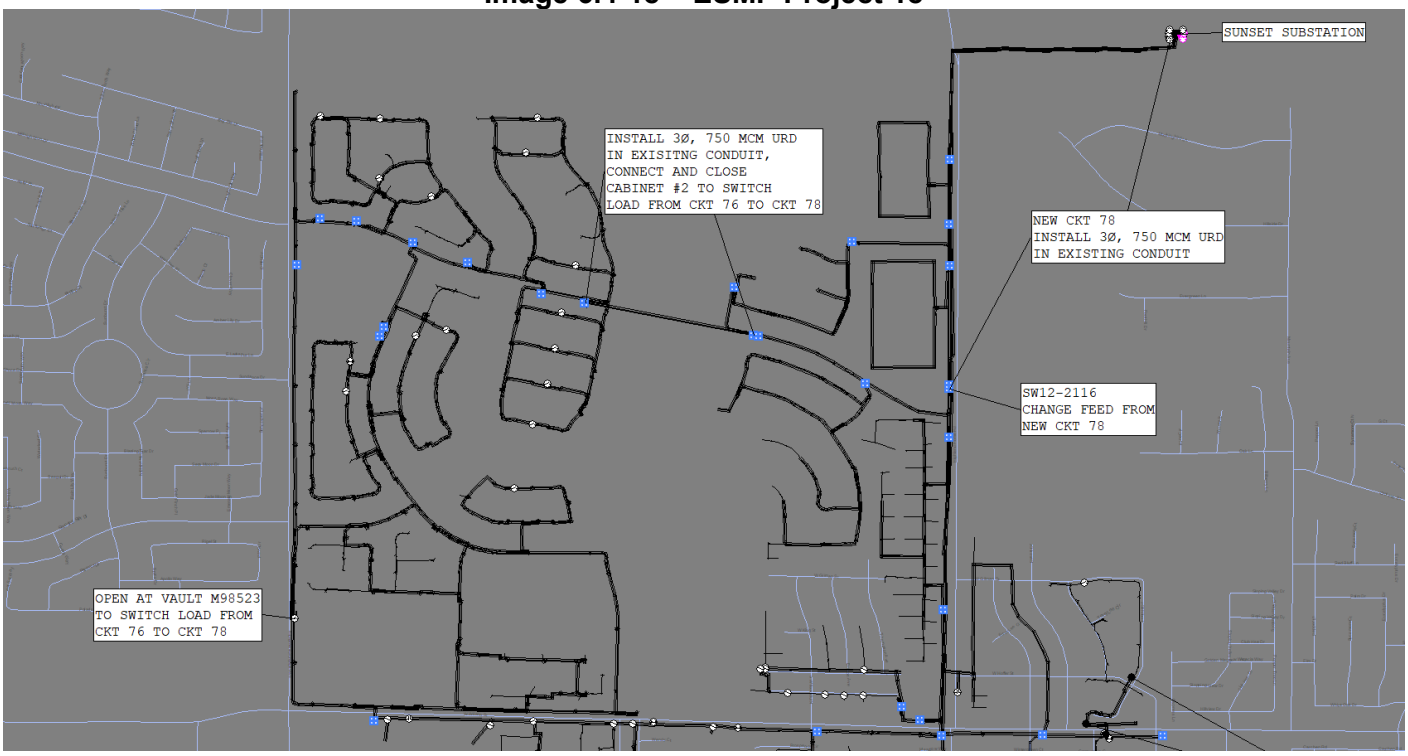
ESMP-18

Issue: Underground feeder exit, 3Ø, 750 MCM reaches 110% capacity and is greater than 60% capacity through UG2vQ6 at Vault 31064.

Resolution:

- Utilize CKT 78 and create a new feeder to serve the south west side of the Atwell Subdivision. See Image 6.4-20 below for the feeder plan recommendation.
- Using the existing empty conduit that is in the same trench as CKT 76:
  - Install 1,862' of 3Ø, 750 MCM from the feeder bay exit to Vault LV100172 at the intersection of Highland Home Rd. and Mountain Ave. using the existing conduit.
  - Install 2,706' of 3Ø, 750 MCM from Vault LV100172 to Vault SP100103 along Highland Home Rd. north of Meadowline Way using the existing conduit and connect to cabinet #2 in switchgear SW12-2116 while removing the connection between Vault SP100102 cabinet #1 and Vault SP100103 cabinet #2. This will switch all load along Meadowline Way west of Highland Home Rd. to CKT 78.
  - Install 1,400' of 3Ø, 750 MCM from Vault SP100109 cabinet 1 to Switchgear SG290766 following Meadowline Way.
  - Open at Vault M98523 along N. Highland Springs Ave. and close SG290766 cabinet #2 along Meadowline Way and switch all load currently served from CKT 76 to the new CKT 78.
  - Estimated cost: $927,000 (2031).

Image 6.4-18 – ESMP Project 18



EMSP-19

Issue: Despite the load switch to the new CKT 78, the underground feeder exit, 3Ø, 750 MCM is still over 60% capacity through Vault SP100105

Resolution:

- Utilize CKT 75 and create a new feeder to serve the south side of the Atwell Subdivision. See Image 6.4-20 below for the feeder plan recommendation.
- Using the existing empty conduit that is in the same trench as CKT 76:
  - Install 1,862' of 3Ø, 750 MCM from the feeder bay exit to Vault LV100172 at the intersection of Highland Home Rd. and Mountain Ave. using the existing conduit.
  - Install 2,706' of 3Ø, 750 MCM from Vault LV100172 to Vault SP100103 along Highland Home Rd. north of Meadowline Way using the existing conduit.
  - Install 2,953' of 3Ø, 750 MCM from Vault SP100103 to Vault 30985 along W. Wilson St. west of Highland Home Rd.
  - At Vault 30985, switch the conductor heading west along W. Wilson St. to feed from the new CKT 75.
  - Estimated cost: $1,032,400 (2032).

Image 6.4-19 – ESMP Project 19

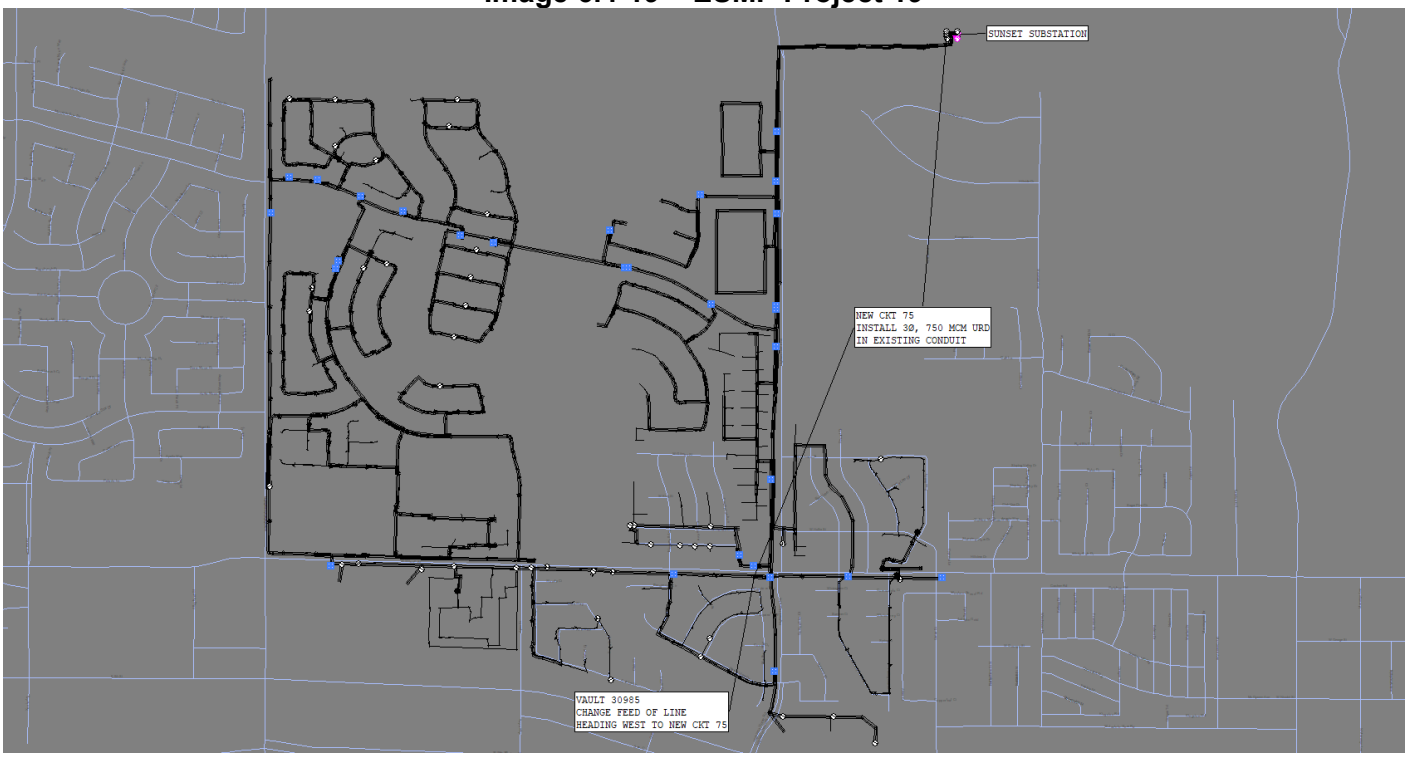
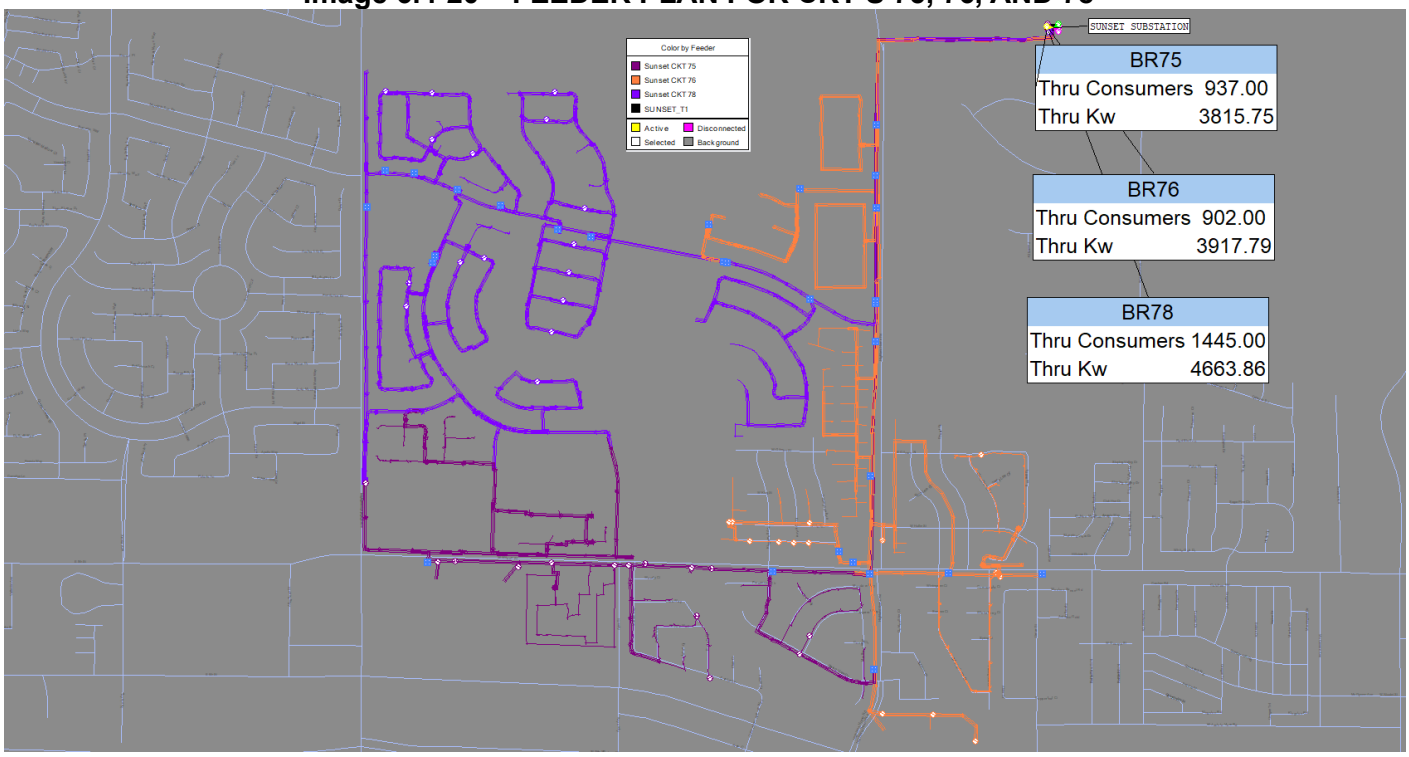


Image 6.4-20 – FEEDER PLAN FOR CKT'S 75, 76, AND 78



CKT 77

Issue: None

NEW SMITH CREEK SUBSTATION

The new Smith Creek substation is planned to be constructed at a property owned by the City of Banning on the south side of Interstate 10 and will replace the Midway substation on the north side of Interstate 10. Construction for the new Smith Creek substation will begin in 2030 with an energization date in 2031. All four feeders currently served by Midway will be switched to Smith Creek. Additionally, four new feeders will be added at Smith Creek to served planned load additions between Interstate 10 and Westward Ave. The projects below are recommended to construct the new feeders out of Smith Creek to serve the existing Midway feeders and support existing and future load additions. Refer to Image 6.4-32 for the Smith Creek feeder plan.

Smith Creek CKT 21

Circuit 21 will be constructed to serve the existing Midway CKT 21.

ESMP-20

- Construct 300' of 3Ø, 750 MCM URD from the feeder bay to Pole104936.
- Create open point at Pole104876 and serve the load on the south side of Interstate 10.
- Create an open point at Pole104926 along Highland Home Rd. between CKT 21 and 25
- Create an open point at pole P6554COB along Westward Ave. between CKT 21 and 25
- Create an open point at Vault 40257 along Fairway Oks Ave. just north of Mission Hills Dr. between CKT 21 and 25
- Tie the three-phase line together at Vault 38231 at the intersection of Birdie Dr. and Cog Hill Rd.
- Estimated cost: $144,400 (2031).

Image 6.4-21 – ESMP Project 20



Smith Creek CKT 22

Circuit 22 will be constructed to serve the existing Midway CKT 22 and CKT 23.

ESMP-21

- Construct 300' of 3Ø, 750 MCM URD from the feeder bay to Pole104876 and use the existing Midway CKT 21 Interstate 10 crossing to serve the existing Midway CKT 22. Estimated cost: $139,600 (2031).

Image 6.4-22 – ESMP Project 21



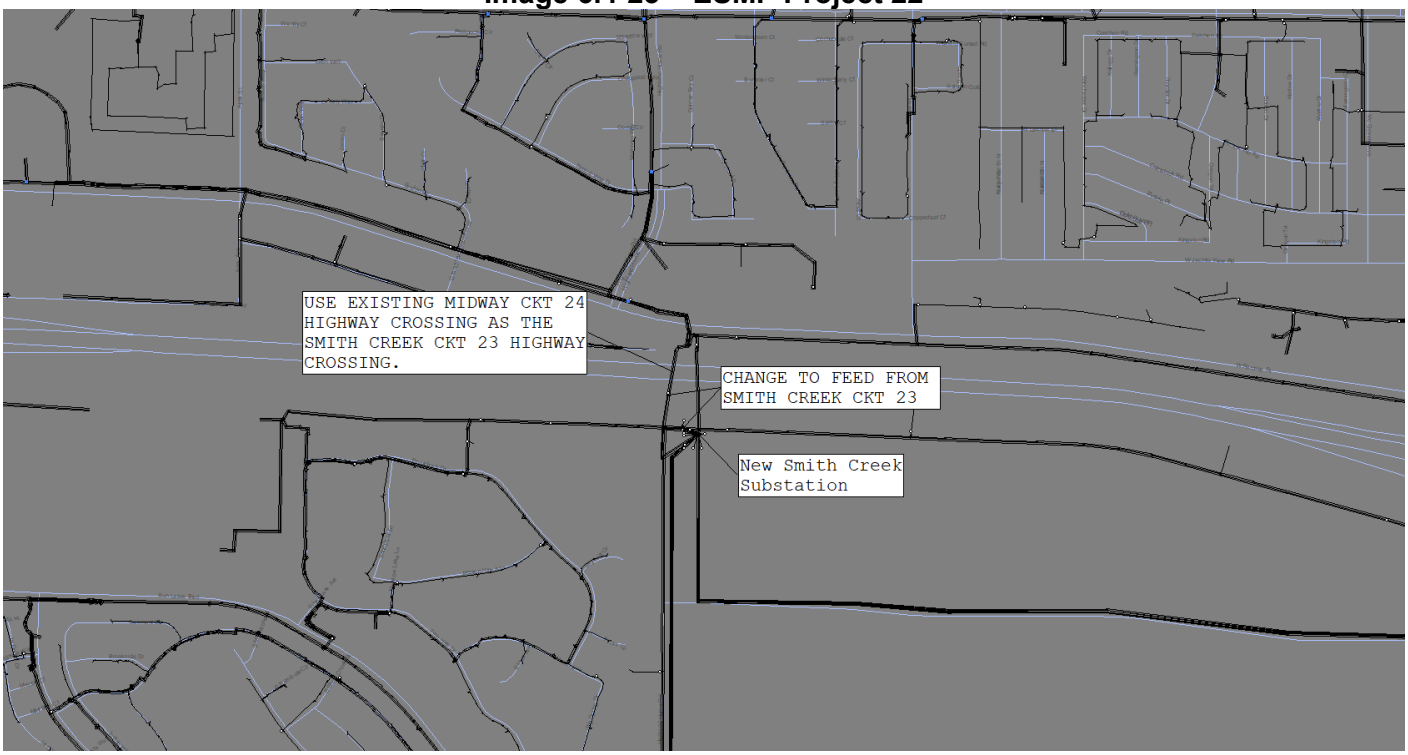
Smith Creek CKT 23

Circuit 23 will be constructed to serve the existing Midway CKT 23.

ESMP-22

- Construct 300' of 3Ø, 750 MCM URD from the feeder bay to Pole104936
- Chage the feed at Pole104936 from Midway CKT 23 to Smith Creek CKT 23
- Use the existing Midway CKT 24 Interstate 10 crossing as the new Smith Creek CKT 23 highway crossing.
- Tie Midway CKT 23 to Smith Creek CKT 23 inside the current Midway substation to switch all of Midway CKT 23 to Smith Creek CKT 23
- Estimated cost: $144,400 (2031).

Image 6.4-23 – ESMP Project 22



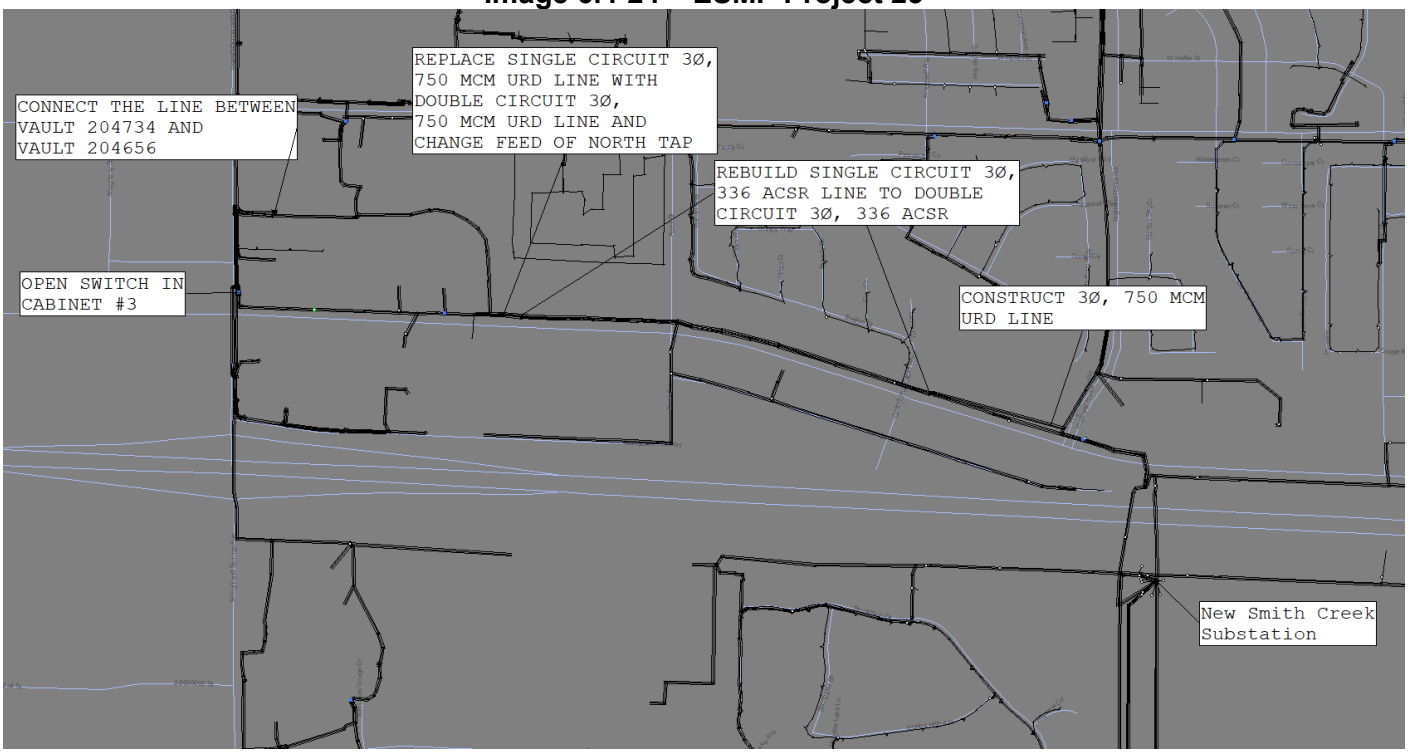
ESMP-23

Issue: The 750 MCM conductor at the feeder exit will reach 79% capacity, the 336 ACSR and 477 ACSR line up to and crossing Interstate 10 will reach 80% capacity and 64% capacity respectively, and the 750 MCM conductor at the current Midway CKT 23 feeder exit and heading along W. Ramsey St. to Lori Way exceeds 60% capacity.

Resolution:

- Construct 800' of 3Ø, 750 MCM URD line from Vault 320963 to Vault 34038 and up to riser Pole34020 along W. Ramsey St between Highland Home Rd. and Lori Way.
- Rebuild 2,165' of single circuit 3Ø, 336 ACSR to double circuit 3Ø, 336 ACSR from Pole34020 to Pole206642 along W. Ramsey St. between Lori Way and Memorial Dr.
- Rebuild 175' of single circuit 3Ø, 750 MCM URD line to double circuit 3Ø, 750 MCM from riser Pole206642 to Vault 204676 along W. Ramsey St. at Memorial Dr.
- At Vault 204676, leave the tap heading west along W. Ramey St. connected to CKT 23 and change the feed of the tap heading north along Memorial Dr. to CKT 22 using the newly constructed line.
- In SG266801 at the intersection of W. Ramsey St. and N. Highland Springs Ave., open cabinet #3
- Connect the three-phase between Vault 204734 and Vault 204656 to change the feed to Smith Creek CKT 22.
- Estimated cost: $1,187,200 (2036).

Image 6.4-24 – ESMP Project 23



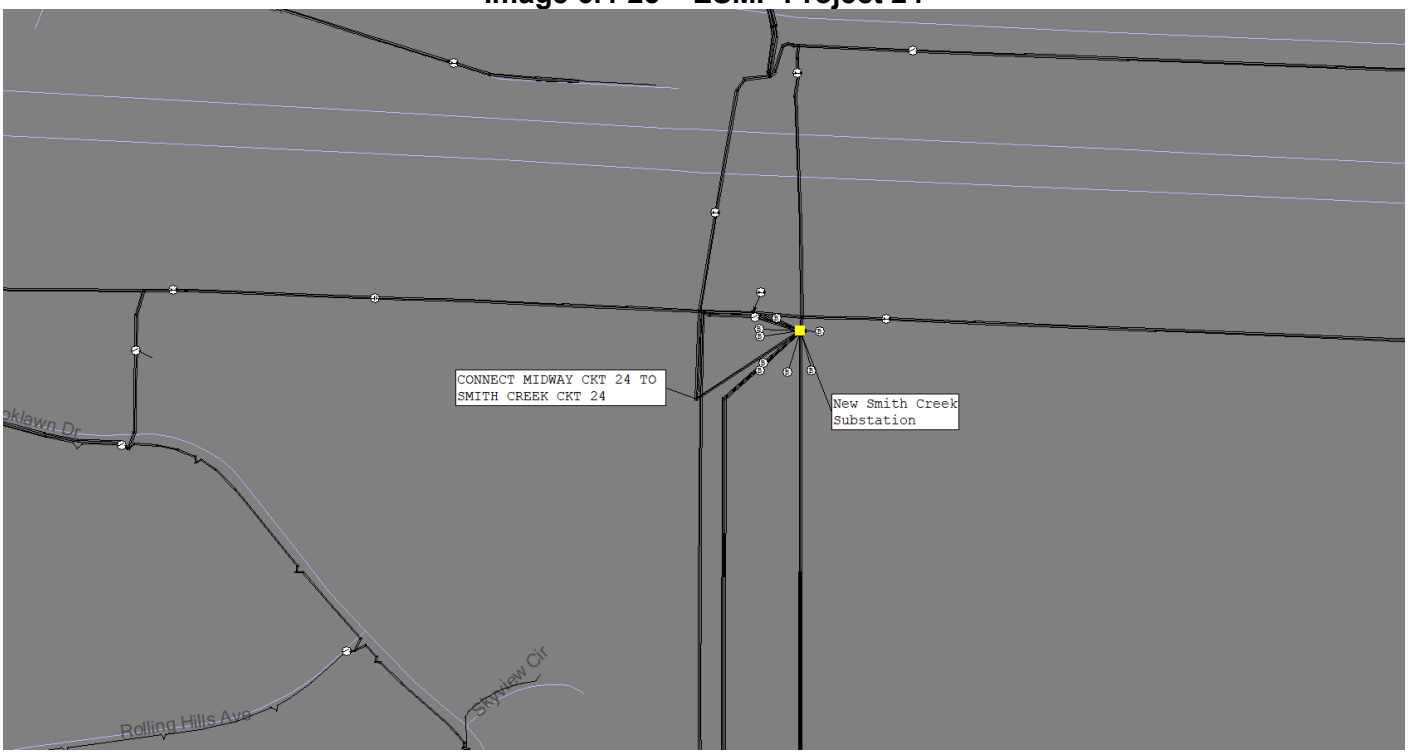
Smith Creek CKT 24

Circuit 24 will be constructed to serve the existing Midway CKT 24.

ESMP-24

- Construct 300' of 3Ø, 750 MCM URD from the feeder bay to Pole104900 and switch Midway CKT 24 to Smith Creek CKT 24. Estimated cost: $139,600 (2031).

Image 6.4-25 – ESMP Project 24

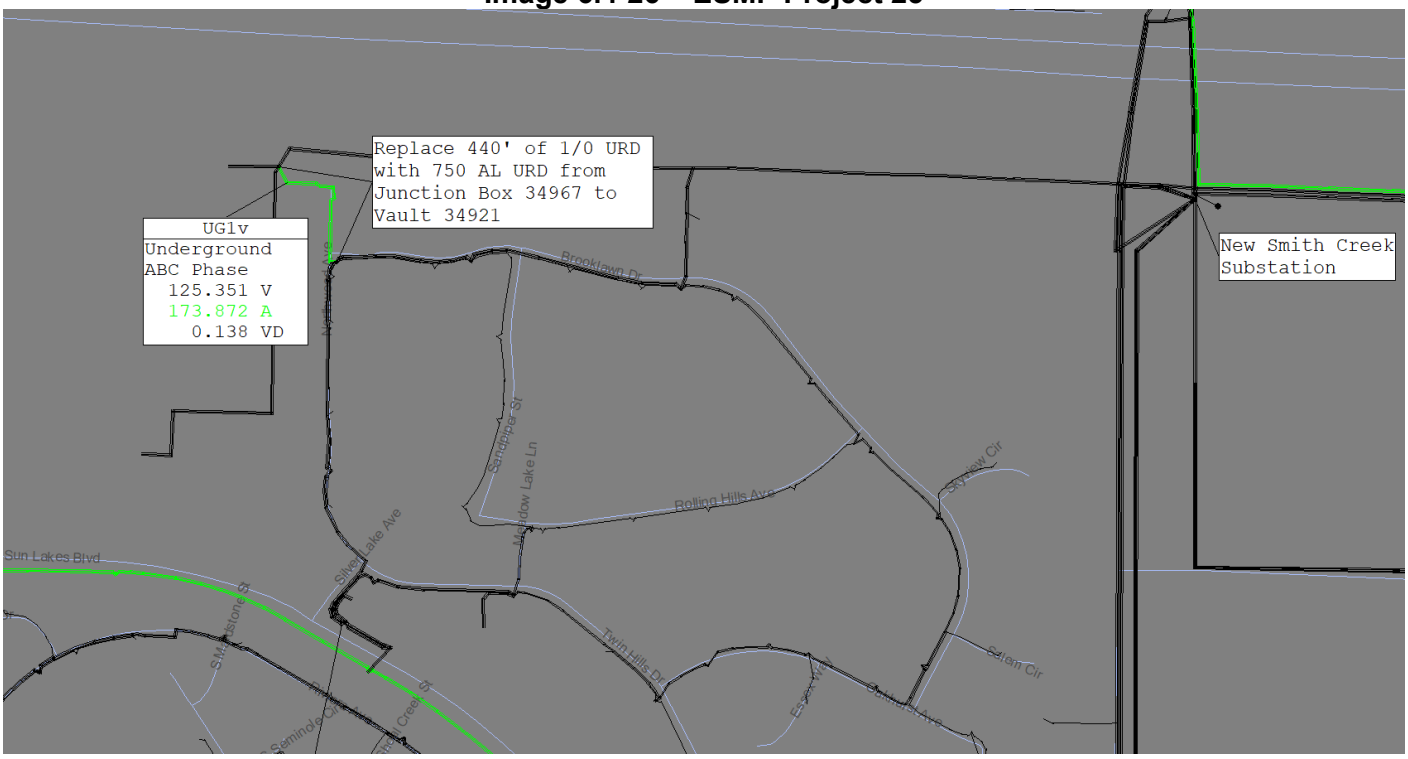


ESMP-25

Issue: UG1v, 3Ø, 1/0 URD line reaches 81% Capacity

Resolution: Replace 440' of 3Ø, 1/0 URD with 3Ø, 750 MCM from Junction Box 34967 to Vault 34921 at the intersection of Northwood Ave. and Brooklawn Dr. Estimated cost: $237,600 (2034).

Image 6.4-26 – ESMP Project 25



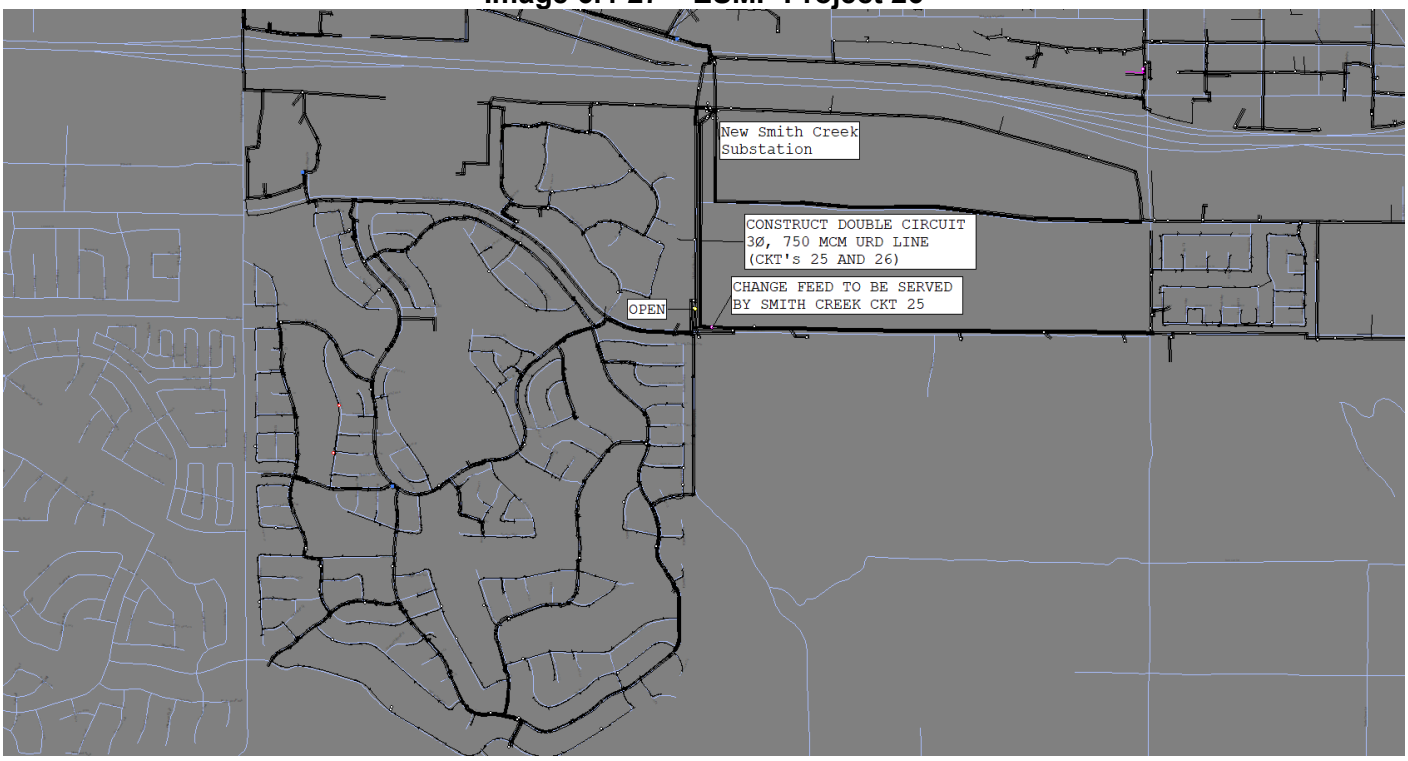
Smith Creek CKT 25

Circuit 25 will be constructed to serve a portion of the existing Midway CKT 21.

ESMP-26

- Construct 2,745’ of double circuit 3Ø, 750 MCM URD line from the feeder bay to pole P6554COB at the intersection of Westward Ave. and S. Highland Home Rd. *Note, this will also be the route for Smith Creek CKT 26.
- At pole P6554COB, change feed from Midway CKT 21 to Smith Creek CKT 25.
- Estimated cost: $1,652,900 (2031).

Image 6.4-27 – ESMP Project 26



ESMP-27

Issue: UG1v24, 3Ø, 350 MCM URD conductor reaches 79% capacity.

Resolution: Replace 2,100' of 3Ø, 350 AL MCM URD conductor with 3Ø, 750 MCM URD conductor from Vault 36923 located at the intersection of Sun Lakes Blvd. and Country Club Dr. and following Country Club Dr. to Vault 41797 at the intersection of Country Club Dr. and Hogan Ave. Estimated cost: $316,000 (2031).

Image 6.4-28 – ESMP Project 27



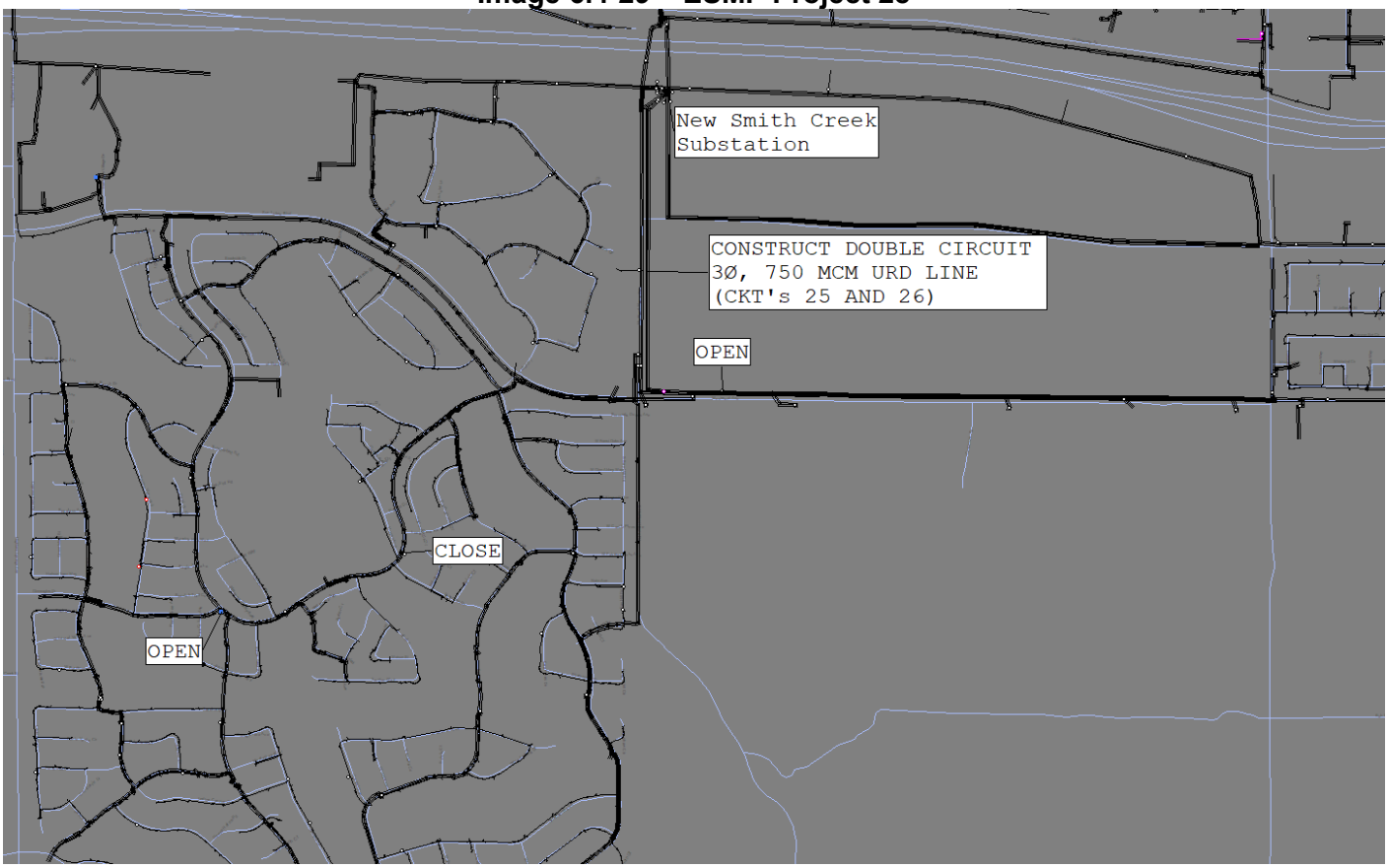
Smith Creek CKT 26

Circuit 26 will be constructed to serve a portion of the existing Midway CKT 21 and 22nd Street CKT 63. See ESMP-26 for project to construct the circuit from Smith Creek.

ESMP-28

- Create open point at Pole104842 along Westward Ave to switch a portion of load from 22nd Street CKT 63
- At SG49762 along Country Club Dr. between Birdie Dr. and Gleneagles Dr., open cabinet #2 and change feed to Smith Creek CKT 25 at Vault 41797 along County Club Dr. at Hogan Ave.
- Estimated cost: $4,900 (2031).

Image 6.4-29 – ESMP Project 28

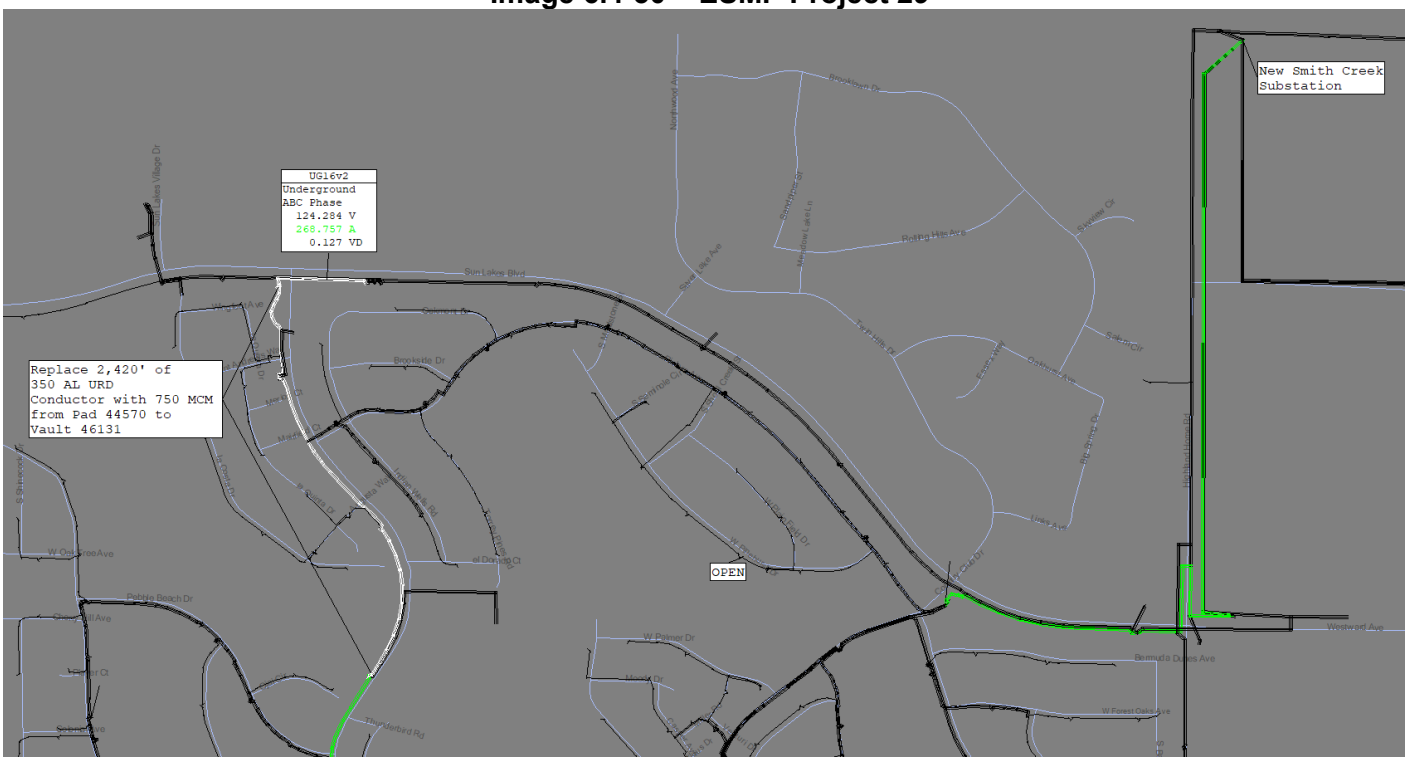


ESMP-29

Issue: UG16v2, 3Ø, 350 MCM URD conductor reaches 70% capacity.

Resolution: Replace 2,420' of 3Ø, 350 MCM URD with 3Ø, 750 MCM URD beginning at Pad 44570 along Sun Lakes Blvd, heading south on Country Club Dr. and ending at Vault 46131. Estimated cost: $370,300 (2033).

Image 6.4-30 – ESMP Project 29



Smith Creek CKT's 27 & 28

Circuits 27 and 28 will be constructed to serve new planned load in an area bordered by Interstate 10 and Westward Ave. on the north and south and Highland Home Rd. and Sunset Ave. on the east and west.

ESMP-30

- Construct 2, 3Ø, 750 MCM URD lines from the feeder bay heading due south from the substation to what will be the extension of W Lincoln St. and then heading east along W. Lincoln St. to Sunset Ave at Pole104911. Estimated cost: $2,372,900 (2032).

Image 6.4-31 – ESMP Project 30

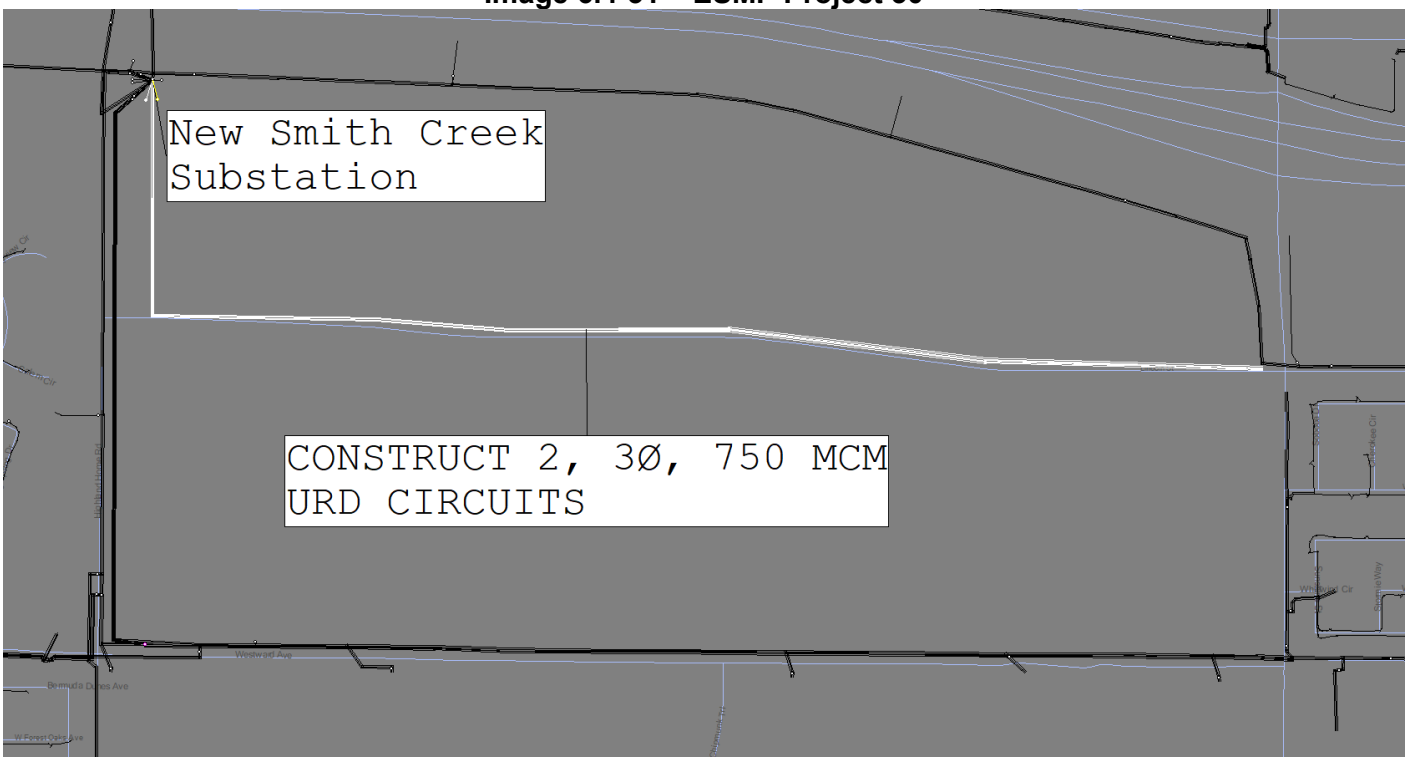
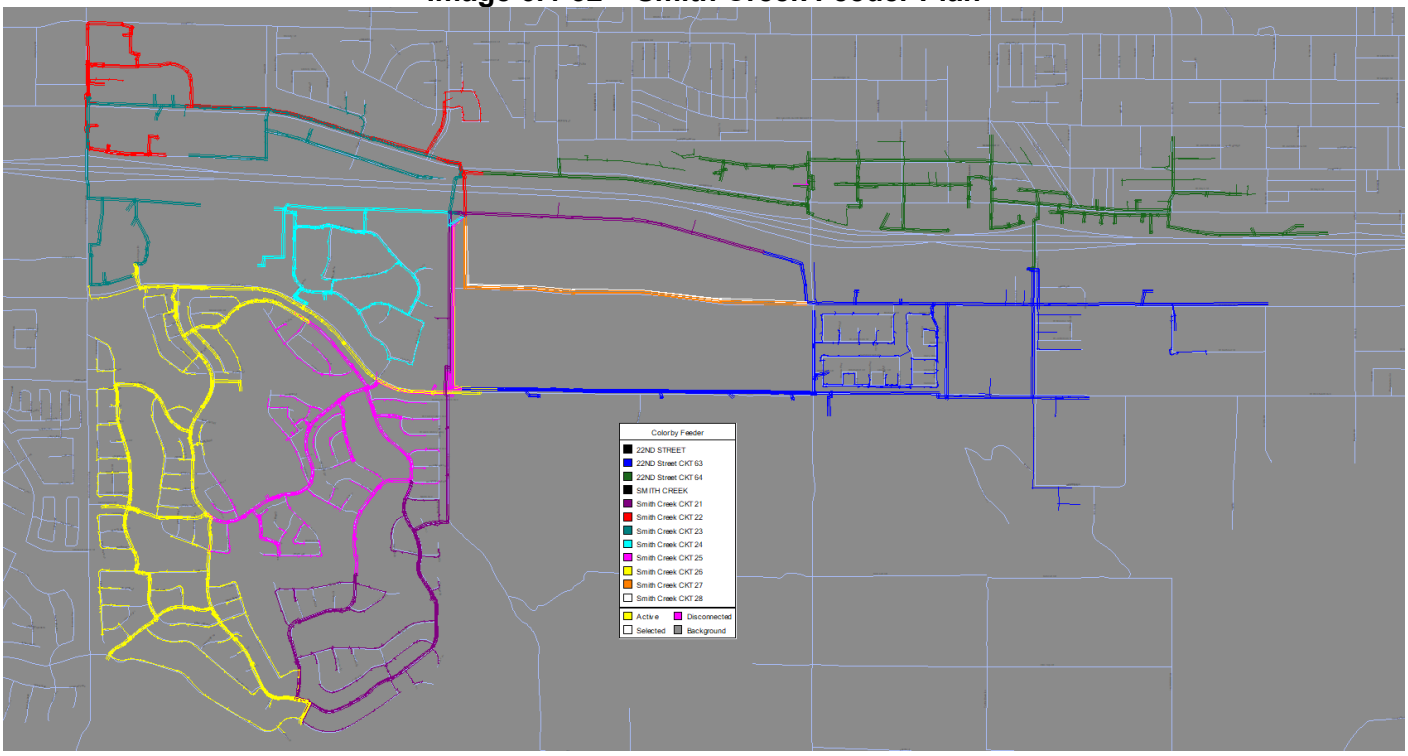


Image 6.4-32 – Smith Creek Feeder Plan



6.5 – TOTAL COST ESTIMATE

The tables below contain a breakdown of the total estimated cost of the 15-Year ESMP.

Table 6.5-1 – 15-Year ESMP Cost Estimate (2031-2035)

	2031	2032	2033	2034	2035
OH Maintenance Program					
Total Cost	$1,228,822	$1,265,687	$1,303,658	$1,342,767	$1,383,050
CIAC	$0	$0	$0	$0	$0
BEU Funding Cost	$1,228,822	$1,265,687	$1,303,658	$1,342,767	$1,383,050
Capital-Maintenance Projects					
Total Cost	$6,850,000	$1,500,000	$0	$0	$0
CIAC	$3,000,000	$0	$0	$0	$0
BEU Funding Cost	$3,850,000	$1,500,000	$0	$0	$0
System Improvement Projects					
Total Cost	$3,468,800	$3,405,300	$370,300	$237,600	$1,049,700
CIAC	$0	$0	$0	$0	$0
BEU Funding Cost	$3,468,800	$3,405,300	$370,300	$237,600	$1,049,700
15-year ESMP Cost					
Total Cost	$11,547,622	$6,170,987	$1,673,958	$1,580,367	$2,432,750
CIAC	$3,000,000	$0	$0	$0	$0
BEU Funding Cost	$8,547,622	$6,170,987	$1,673,958	$1,580,367	$2,432,750

Table 6.5-2 – 15-Year ESMP Cost Estimate (2036-2040)

	2036	2037	2038	2039	2040
OH Maintenance Program					
Total Cost	$1,521,715	$1,567,367	$1,614,387	$1,662,819	$1,712,704
CIAC	$0	$0	$0	$0	$0
BEU Funding Cost	$1,521,715	$1,567,367	$1,614,387	$1,662,819	$1,712,704
Capital-Maintenance Projects					
Total Cost	$0	$0	$0	$0	$0
CIAC	$0	$0	$0	$0	$0
BEU Funding Cost	$0	$0	$0	$0	$0
System Improvement Projects					
Total Cost	$1,190,000	$166,400	$539,700	$2,900	$132,800
CIAC	$0	$0	$0	$0	$0
BEU Funding Cost	$1,190,000	$166,400	$539,700	$2,900	$132,800
15-year ESMP Cost					
Total Cost	$2,711,715	$1,733,767	$2,154,087	$1,665,719	$1,845,504
CIAC	$0	$0	$0	$0	$0
BEU Funding Cost	$2,711,715	$1,733,767	$2,154,087	$1,665,719	$1,845,504

Table 6.5-3 – 15-Year ESMP Cost Estimate (2041-2045)

	2041	2042	2043	2044	2045	Totals
OH Maintenance Program						
Total Cost	$1,764,085	$1,817,007	$1,871,518	$1,927,663	$1,985,493	$23,968,742
CIAC	$0	$0	$0	$0	$0	$0
BEU Funding Cost	$1,764,085	$1,817,007	$1,871,518	$1,927,663	$1,985,493	$23,968,742
Capital-Maintenance Projects						
Total Cost	$0	$0	$0	$0	$0	$8,350,000
CIAC	$0	$0	$0	$0	$0	$3,000,000
BEU Funding Cost	$0	$0	$0	$0	$0	$5,350,000
System Improvement Projects						
Total Cost	$348,700	$3,400	$115,200	$120,400	$388,100	$11,539,300
CIAC	$0	$0	$0	$0	$0	$0
BEU Funding Cost	$348,700	$3,400	$115,200	$120,400	$388,100	$11,539,300
15-year ESMP Cost						
Total Cost	$2,112,785	$1,820,407	$1,986,718	$2,048,063	$2,373,593	**$43,858,042**
CIAC	$0	$0	$0	$0	$0	**$3,000,000**
BEU Funding Cost	$2,112,785	$1,820,407	$1,986,718	$2,048,063	$2,373,593	**$40,858,042**

For the BEU funding cost, 22% is for OH Maintenance Program, 63% is for Capital Maintenance Projects, and 15% is for System-Improvement Projects.

7.0 – 2026-2045 ESMP SUMMARY

7.1 – Total Overhead Maintenance Program

The Overhead Maintenance Program includes the routine inspection and replacement of poles on the sub-transmission and distribution circuits on the BEU system.

It is projected that BEU will inspect a total of 22,100 poles for the duration of the ESMP. An estimated cost of $278 per pole inspection was used for 2026 and a 3% inflation to this cost was assumed per year every year after thru 2045. The total estimated cost for pole inspections for the ESMP is $8,501,657.

It is projected that BEU will replace 1,850 for the duration of the ESMP. An estimated cost of $7,746 per pole replacement was used for 2026 and a 3% inflation to this cost was assumed per year every year after thru 2045. The total estimated cost for pole replacements for the ESMP is $19,525,523.

The total estimated cost for the Overhead Maintenance Program for the ESMP is $28,027,180.

7.2 – Total Capital Maintenance Program

BEU has identified 23 Capital Maintenance Projects to include in the ESMP. The total estimated cost for these projects is $29,134,500. It is projected that BEU will receive $12,293,750 in contributions in aid to these projects bringing the total BEU funding cost to $16,840,750.

7.3 – Total Distribution System Improvement Projects

Analysis was run using Milsoft's Windmil software on the distribution system to determine system improvement projects to correct low voltage, decrease conductor and equipment loading, and reduce single phase line loading to aid in phase balancing. The analysis results include:

- 19 projects to switch load to adjacent lines at a total estimated cost $58,800
- 12 projects for new underground line construction totaling $7,443,500
- 2 projects for new overhead line construction totaling $1,219,000,
- 9 projects for single-phase to three-phase line rebuild totaling $2,142,100
- 11 projects for overhead line rebuild using larger conductor totaling $2,212,100
- 4 projects for replacing underground line using larger conductor totaling $1,269,500

The total estimated cost for distribution system improvements is $14,345,000.

7.4 – Total 2026-2045 ESMP Cost Estimate

The table below contains a breakdown of the total estimate cost for the 2026-2045 ESMP.

2026-2045 Electric Service Master Plan

		5-year CIP	15- Year ESMP	Totals
OH Maintenance Program				
	Total Cost	$4,058,438	$23,968,742	$28,027,180
	CIAC	$0	$0	$0
	BEU Funding Cost	$4,058,438	$23,968,742	$28,027,180
Capital Maintenance. Projects				
	Total Cost	$20,784,500	$8,350,000	$29,134,500
	CIAC	$9,293,750	$3,000,000	$12,293,750
	BEU Funding Cost	$11,490,750	$5,350,000	$16,840,750
System Improvement Projects				
	Total Cost	$2,805,700	$11,539,300	$14,345,000
	CIAC	$0	$0	$0
	BEU Funding Cost	$2,805,700	$11,539,300	$14,345,000
Total ESMP Cost				
	Total Cost	$27,648,638	$43,858,042	$71,506,680
	CIAC	$9,293,750	$3,000,000	$12,293,750
	BEU Funding Cost	$18,354,888	$40,858,042	$59,212,930