Recirculated Focused Draft Initial Study/Mitigated Negative Declaration

Bowerman Power Renewable Natural Gas Plant Project

August 2025

Prepared for:

COUNTY OF ORANGE
OC Waste&Recycling
Our Community. Our Commitment.

601 N. Ross Street, 5th Floor
Santa Ana, CA 92701

Prepared by:

TETRA TECH

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Suite 500
Irvine, CA 92614

General Information About This Document

Document Overview:
OC Waste & Recycling (OCWR) has prepared this Recirculated Focused Draft Initial Study/Mitigated Negative Declaration (IS/MND), which examines revisions to the potential environmental impacts and mitigation measures for air quality, greenhouse gas, and threatened and endangered species being considered for the proposed Bowerman Power Renewable Natural Gas Project (Project) in Orange County, California. OCWR is the lead agency under the California Environmental Quality Act (CEQA).

In accordance with the California Environmental Quality Act (CEQA) Section 21091 and State CEQA Guidelines Section 15073, the original Draft IS/MND for the Project was circulated for a 30-day public review and comment period from October 17, 2024, to November 15, 2024. In response to comments received on the original Draft IS/MND, OCWR has decided that the following information/analysis should be revised and recirculated for public review:

- potential impacts to Crotch's bumble bee (*Bombus crotchii*), in response to comments from California Department of Fish and Wildlife (CDFW) (Biological Resources Special-status Species Section)
- revisions to the Air Quality, Greenhouse Gas (GHG), and Health Risk Assessments, in response to comments from South Coast Air Quality Management District (SCAQMD) (Air Quality and GHG Sections)
- analysis of the impacts of the Project on Irvine Ranch Water District (IRWD)-owned facilities (potable water, recycled water, and sewer systems). in response to comments from (IRWD) (Utilities and Service Water Section)

Pursuant to Section 15073.5 of the State CEQA Guidelines, the above sections of the Recirculated Focused Draft IS/MND are being recirculated for public review. Changes to the text in these sections are indicated in "~~strikeout~~/underline" format, which captures revisions to these documents. The reader can view all deleted text as indicated in strikethrough format.

Reader Guidance:

OCWR requests that reviewers limit their comments to the revised analysis portions of the Recirculated Focused Draft Initial IS/MND as the comment period has closed for those previously distributed portions of the original Draft IS/MND. Comments on the original Draft IS/MND and this Recirculated Focused Draft Initial IS/MND will be included in the Final MND. For ease of review, OCWR has included the Project Description, in addition to the sections that have been revised for recirculation.

The Recirculated Focused Draft Initial IS/MND will be available for a 30-day public review period from September 2, 2025, through October 1, 2025. Please submit your written comments to Leila Barker, OCWR CEQA & Habitat Program Manager, OCWR, 601 N. Ross Street, 5th Floor, Santa Ana, CA 92701 or via email to ocwr-ceqareview@ocwr.ocgov.com, by no later than 5:00 p.m. on October 1, 2025.

Next steps:

After comments are received from the public and reviewing agencies, the comments on the original Draft IS/MND and this Recirculated Focused Draft IS/MND and responses to any comments will be included in the Final MND. The Project and the Final IS/MND will be reviewed by the Orange County Board of Supervisors. A hearing to determine approval of the Project and the Final IS/MND will occur at County Administration North, Board Hearing Room, First Floor, 400 W. Civic Center Drive, Santa Ana, 92701. The proposed hearing date is December 2, 2025.

RECIRCULATED FOCUSED INITIAL STUDY/MITIGATED NEGATIVE DECLARATION AND NOTICE OF INTENT TO ADOPT THE PROPOSED MITIGATED NEGATIVE DECLARATION

This serves as the Notice of Intent by OC Waste & Recycling (OCWR) to adopt a Mitigated Negative Declaration for the Bowerman Power Renewable Natural Gas Plant Project, prepared in accordance with the California Environmental Quality Act (CEQA) and its guidelines.

Name of Project: Bowerman Power Renewable Natural Gas Plant Project ("Project").

Project Location: The proposed renewable natural gas plant is located at the Frank R. Bowerman (FRB) Landfill at 11002 Bee Canyon Access Road in unincorporated Orange County, California, north and within the sphere of influence of the City of Irvine. The Project involves constructing a renewable natural gas processing plant and a new SoCalGas pipeline connecting the processing plant to an existing SoCalGas pipeline at the corner of Portola Parkway and Jeffrey Road. FRB Landfill is located within Township 5 South, Range 8 West, and parts of Sections 143, 144, 145, and 118 of the El Toro, California, U.S. Geological Survey (USGS) 7.5-minute Quadrangle Map (1997).

Lead Agency: OCWR
601 N. Ross Street, 5th Floor
Santa Ana, CA 92701

Lead Proponent: Bowerman Power LFG, LLC (Bowerman Power)
5313 Campbells Run Road
Suite 200
Pittsburgh, PA 15205

Project Description: A renewable natural gas (RNG) plant will be designed to produce RNG from landfill gas (LFG). Most of the LFG produced by the FRB Landfill is sent to the existing Bowerman Power Plant to produce energy. Currently, when the Bowerman Power Plant reaches production capacity, excess LFG is sent to a flare station for incineration. The proposed RNG plant will process the LFG, that would otherwise require incineration at the existing adjacent flare station and deliver it to SoCalGas. The Project does not include the storage of RNG, instead RNG will be directed into the existing SoCalGas natural gas pipeline system.

This effort will promote the beneficial reuse of existing and future LFG collected by FRB Landfill, support long-term sustainability goals in the region, and help reduce

Orange County's reliance on fossil fuels. Additionally, the Project will contribute to California Public Utility Commission's Renewable Gas Program to procure RNG made by methane from organic waste from landfills and other sources. By processing LFG into RNG and delivering it to SoCalGas, the Project will reduce the volume of LFG being flared and the associated greenhouse gas (GHG) emissions from the flares. The RNG Plant will have the capacity to process 6,000 scfm of LFG is equivalent to avoiding the GHG emissions from trash landfilled over an approximately 1.5 year period.

The Project site is not designated a hazardous waste property, nor is it a hazardous waste disposal site as defined under Section 65962.5 of the California Government Code.

Revised Determination:

OCWR circulated a Draft IS/MND on October 17, 2024, for a 30-day review. Based on comments received from CDFW on potential impacts to Crotch's bumble bee (Bombus crotchii), SCAQMD on Air Quality, Greenhouse Gas (GHG), and Health Risk Assessments, and IRWD on impacts on IRWD facilities, OCWR has prepared a Recirculated Focused Draft IS/MND for this Project.

Based on the original Draft IS/MND and the comments received on the document, it was determined that the Project would have no significant impacts on Aesthetics, Agricultural Resources, Energy, Geology and Soils, Hazards and Hazardous Materials, Hydrology and Water Quality, Land Use and Planning, Mineral Resources, Noise, Population and Housing, Public Services, Recreation, Transportation, Tribal Cultural Resources, non-IRWD related Utilities and Service Systems, and Wildfire. Therefore, these issues have not been included in this Recirculated Focused Draft IS/MND.

OCWR, pending public review, expects to determine from this Recirculated Focused Draft IS/MND that the proposed Project would also not have a significant effect on to Crotch's bumble bee, Air Quality, GHG, and Health Risk Assessments, and IRWD facilities.

- **NOTICE IS HEREBY GIVEN THAT** the OCWR proposes to adopt a Mitigated Negative Declaration for the above-cited Project. This Mitigated Negative Declaration is based on the finding that, by implementing the identified mitigation measures, the Project's potential impacts will be maintained at a less than significant level. The reasons to support such a finding are documented by the Initial Study prepared by Tetra Tech, Inc. Copies of the Initial Study, the proposed Mitigated Negative Declaration, and supporting materials are available for review at: oclandfills.com/bp-rng-ceqa

- OCWR located at 601 N. Ross Street, 5th Floor, Santa Ana, California, 92701;
- FRB Landfill, 11002 Bee Canyon Access Rd, Irvine, CA 92602; and
- Irvine Heritage Park Library, 14361 Yale Avenue, Irvine, CA 92604.

For questions regarding the Mitigated Negative Declaration, please contact:

NAME: Leila Barker **PHONE**: 714.834.4013

TITLE: OCWR CEQA & Habitat Program Manager

EMAIL: ocwr-ceqareview@ocwr.ocgov.com

ADDRESS: OCWR
601 N. Ross Street, 5th Floor
Santa Ana, CA 92701

Public Review Period: **30 days** **Begins: 9/2/2025** **Ends: 10/1/2025**

Public Hearing: Adoption of the Mitigated Negative Declaration will be considered at a public hearing by the County of Orange Board of Supervisors which is proposed for December 2, 2025, at 9:30 a.m. at the County of Orange Hall of Administration Board of Supervisors - Board Hearing Room, First Floor, 400 W. Civic Center Drive, Santa Ana, California

In accordance with CEQA Guidelines, any comments concerning the findings of the Recirculated Initial Study/Mitigated Negative Declaration must be submitted in writing and **received by the OCWR no later than 5:00 p.m. on October 1, 2025**, in order to be considered prior to the final determination on the Project by OCWR. Please submit your written comments to Leila Barker, OCWR CEQA & Habitat Program Manager, OCWR, 601 N. Ross Street, 5th Floor, Santa Ana, CA 92701 or via email to ocwr-ceqareview@ocwr.ocgov.com.

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Acronyms and Abbreviations

§	Section
AQIA	Air Quality Impact Assessment
AQMP	Air Quality Management Plan
BACT	Best Available Control Technology
BMP	best management practice
Bowerman Power	Bowerman Power LFG, LLC
CAAQS	California Ambient Air Quality Standards
CalEEMod	California Emissions Estimator Model
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CFR	Code of Federal Regulations
CH4	methane
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
FRB	Frank R. Bowerman
GHG	Greenhouse Gas
GIS	geographic information system
HCP	Habitat Conservation Plan
HDD	Horizontal Directional Drilling
HRA	Health Risk Assessment
IS	Initial Study
IUSD	Irvine Unified School District
IRWD	Irvine Ranch Water District
LFG	landfill gas
LST	Localized Significance Threshold
MND	Mitigated Negative Declaration
MT	Metric Ton
NAAQS	National Ambient Air Quality Standards
NAHC	Native American Heritage Commission
NCCP	Natural Community Conservation Planning

NPDES	National Pollutant Discharge Elimination System
OC Parks	Orange County Parks
OCFA	Orange County Fire Authority
OCFCD	Orange County Flood Control District
OCWR	OC Waste & Recycling
OSR	Open Space Reserve
Plant	renewable natural gas production plant
POR	Point of Receipt
PRC	Public Resources Code
Project	Bowerman Power Renewable Natural Gas Plant Project
RELOOC	Regional Landfill Options for Orange County
RNG	renewable natural gas
RTP	Regional Transportation Plan
RWQCB	Regional Water Quality Control Board
SB	Senate Bill
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SCE	Southern California Edison
scfm	standard cubic feet per minute
SCS	Sustainable Communities Strategy
SoCalGas	Southern California Gas Company
SRA	State Responsibility Area
SSC	Species of Special Concern
Tetra Tech	Tetra Tech, Inc.
TOU	Time of Use
USACE	U.S. Army Corps of Engineers
USFWS	U.S. Fish and Wildlife Service
UWMP	Urban Water Management Plan

1.0 INTRODUCTION

This document is the Recirculated Focused IS/MND for Bowerman Power Renewable Natural Gas Plant Project (Project).

Section 15073.5 of the California Environmental Quality Act (CEQA) State Guidelines provides that an IS/MND shall be recirculated for public review and comment when the lead agency determines that new measures or project revisions are required to reduce potential impacts to a less-than-significant level. "Recirculation" simply means that agencies and the public are provided an additional opportunity to comment on the new or revised sections of the Recirculated Focused IS/MND.

The Bowerman Power Renewable Natural Gas Plant Project Draft IS/MND (SCH# 2024100760) has been revised to add mitigation for potential impacts to Crotch's bumble bee (*Bombus crotchii*), revise analysis and add mitigation for Air Quality and Health Risk Assessments, and revise analysis for greenhouse gas (GHG) and IRWD facilities.

1.1 Project Overview

Bowerman Power LFG, LLC (Bowerman Power) is working with OC Waste & Recycling (OCWR) to develop a renewable natural gas (RNG) production plant (Plant). The RNG Plant will be located on land at the Frank R. Bowerman (FRB) Landfill leased to Bowerman Power by OCWR. The Bowerman Power Renewable Natural Gas Plant Project (Project) will be designed to produce RNG from landfill gas (LFG). Most of the LFG produced by the FRB Landfill is sent to the existing Bowerman Power Plant to produce energy. Currently, when the Bowerman Power Plant reaches production capacity, excess LFG is sent to a flare station for incineration. The proposed RNG Plant will process the LFG, that would otherwise require incineration at the existing adjacent flare station, and deliver it to the existing Southern California Gas Company (SoCalGas) pipeline. The Project does not include storage of RNG, instead RNG will be directed into the existing SoCalGas natural gas pipeline system.

This effort will promote the beneficial reuse of existing and future LFG collected by FRB Landfill, support long-term sustainability goals in the region, and help reduce Orange County's reliance on fossil fuels. Additionally, the Project will contribute to the California Public Utility Commission's Renewable Gas Program to procure RNG made by methane from organic waste from landfills and other sources. By processing LFG into RNG and delivering it to SoCalGas, the Project will reduce the volume of LFG being flared and the associated GHG emissions from the flares.

Benefits of the Project include the following:

- RNG has a lifecycle Carbon Intensity (CI) that is 20 percent lower than conventional natural gas.
- The Project creates a beneficial use for the excess LFG that would otherwise be incinerated in the flares.
- When compared to flaring LFG, the Project will reduce air emissions from all criteria pollutants at the FRB Landfill by 60 percent.
- When compared to flaring LFG, an RNG Plant will reduce GHG emissions by 90 percent.

- The annual GHG emissions avoided from 6,000 standard cubic feet per minute (scfm) of LFG going to the RNG facility are equivalent to approximately the amount of trash landfilled over a 1.5-year period.
- California law specifically encourages the production and use of RNG. Senate Bill (SB) 1440 directs the California Public Utilities Commission to evaluate establishing goals or targets for RNG purchases by California gas utilities.
- The California Air Resource Board's 2022 Scoping Plan for Achieving Carbon Neutrality emphasizes the importance of relying on RNG to reduce emissions for hard-to-electrify end uses.

1.2 Prior CEQA Documentation

In accordance with the California Environmental Quality Act (CEQA) Section 21091 and State CEQA Guidelines Section 15073, the original Draft IS/MND for the Project was circulated for a 30-day public review and comment period from October 17, 2024, to November 15, 2024. The original Draft IS/MND and any supporting attachments were available during normal business hours at: the offices of OC Waste & Recycling, 601 N. Ross Street, 5th Floor, Santa Ana, CA 92701; Irvine Heritage Park Library, 14261 Yale Avenue, Irvine, CA 92604; and also available on the OCWR website.

OCWR held a virtual public information meeting on October 22, 2024, to share Project information and respond questions from stakeholders and community members. Representatives from OCWR, Bowerman Power, and the Project consultant team were available to discuss the Project and answer questions. OCWR mailed notices with information about the public information meeting and availability of the original IS/MND for the Project to properties located 1.5 miles from the FRB Landfill. This information was also advertised in the Orange County Register newspaper on October 15, 2024, and posted at the County Clerk on October 17, 2024. The meeting was recorded and was provided to the public for viewing here: www.vimeo.com/1022613976.

During the public review period, 35 comment letters or emails were received from the following sources:

- California Department of Fish and Wildlife (CDFW)
- California Department of Transportation (Caltrans)
- City of Irvine
- Irvine Ranch Water District
- Southern California Air Quality Management District (SCAQMD)
- U.S. Fish and Wildlife Service (USFWS)
- Community members

Responses to these comments will be presented in the Final IS/MND.

1.3 Statutory Authority and Requirements

This Recirculated Focused Draft IS/MND has been prepared for review and approval by OCWR with technical assistance from Tetra Tech, Inc. (Tetra Tech) to evaluate if implementation of the proposed Project would have a significant effect on the environment. Pursuant to Section 15070 of the *Guidelines for Implementation of the California Environmental Quality Act* (14 California Code of Regulations Sections [§§] 15070-15075), a public agency shall prepare or have prepared a proposed negative declaration or mitigated negative declaration for a project subject to CEQA when:

> *(a) The initial study shows that there is no substantial evidence, in light of the whole record before the agency, that the project may have a significant effect on the environment, or*
>
> *(b) The initial study identifies potentially significant effects, but:*
>
> > *(1) Revisions in the project plans or proposals made by, or agreed to by the applicant before a proposed mitigated negative declaration and initial study are released for public review would avoid the effects or mitigate the effects to a point where clearly no significant effects would occur, and*
> >
> > *(2) There is no substantial evidence, in light of the whole record before the agency, that the project as revised may have a significant effect on the environment.*

1.4 Document Review / Revised Content

Text in Section 3, Environmental Checklist, has been revised and is shown in <u>underlined</u> for additions and ~~struck-through~~ for deletions. The reader can view all deleted text as indicated in strikethrough format.

OCWR requests that reviewers limit their comments to the revised portions of the Recirculated Focused Draft Initial IS/MND as the comment period has closed for those unrevised analysis portions of the original Draft IS/MND that were found to have no significant impacts. Comments on the original Draft IS/MND and this Recirculated Focused Draft Initial IS/MND will be included in the Final MND.

2.0 PROJECT INFORMATION

Project title:	Bowerman Power Renewable Natural Gas Plant Project
Lead agency name and address:	**OC Waste & Recycling** 601 N. Ross Street, 5th Floor Santa Ana, CA 92701
Contact person and phone number:	**Francine Bangert, Public Information Officer** 714.834.4059
Project location:	The proposed renewable natural gas (RNG) plant is located at the Frank R. Bowerman (FBR) Landfill at 11002 Bee Canyon Access Road in unincorporated Orange County, California, north and within the sphere of influence of the City of Irvine. The Project involves constructing an RNG processing plant and a new SoCalGas pipeline connecting the processing plant to an existing SoCalGas pipeline at the corner of Portola Parkway and Jeffrey Road; see Figure 2-1, Project Vicinity, and Figure 2-2, Project Location, for additional details.
Project sponsor's name and address:	**Bowerman Power LFG, LLC (Bowerman Power)** 5313 Campbells Run Road Suite 200 Pittsburgh, PA 15205
Contact person and phone number:	**Sharon Frank, Vice President Environmental Health and Safety** 412.789.9370
General Plan Designation:	4LS (Public Facilities Landfill Site)
Zoning Designation:	A1 General Agriculture
Surrounding land uses:	The surrounding land uses consist of Open Space Reserve. State Routes 241 and 133 are located to the west, approximately 0.5 and 0.6 miles, respectively. Interstate 5 is located approximately 3.8 miles to the west, and Interstate 405 is located approximately 5.4 miles to the southwest.

2.1 Environmental Setting

The Project will be located at the FRB Landfill in unincorporated Orange County within the sphere of influence of the City of Irvine, except for the new SoCalGas pipeline, which will be located within the City of Irvine.

2.1.1 Regional

Orange County is located along the Pacific Ocean between Los Angeles County to the north and northwest, San Bernardino County to the northeast, Riverside County to the east, and San Diego County to the southeast, covering 798 square miles (County of Orange 2012). The FRB Landfill is in one of the unincorporated areas of Orange County. The unincorporated territory, consisting of approximately 321 square miles, is geographically diverse with unincorporated areas spread throughout Orange County.

The City of Irvine is situated in central Orange County and covers approximately 66 square miles of land (City of Irvine 2022; see Figure 2-1, Project Vicinity). The City boundaries stretch from State Route 73 in the southwest to the foothills of the Santa Ana Mountains in the northeast. The FRB Landfill is situated in these foothills northeast of the City.

Physiographically, the FRB Landfill is located in the Peninsular Ranges Geomorphic Province, which is characterized by a series of mountain ranges that are sub-parallel to the coast from Los Angeles to San Diego (CGS 2002). The Santa Ana Mountains are located in the northern end of the province, and the Project site is located on the southwestern flank of the Santa Ana Mountains, in the foothills that transition to an alluvial plain which encompasses most of the City of Irvine. The FRB Landfill is located within the Bee Canyon topographic feature providing space to accommodate a large volume of municipal solid waste. Bee Canyon is within the larger San Diego Creek watershed, which drains across the alluvial plain and into Newport Back Bay, and from there connects to the Pacific Ocean.

The FRB Landfill is surrounded by an area designated by the Orange County General Plan as Open Space Reserve (OSR) and is part of the Orange County Central and Coastal Subregion Natural Communities Conservation Plan/Habitat Conservation Plan Reserve.

2.1.2 Project Site

The Project site is situated near the northeastern edge of the City of Irvine (see Figure 2-2, Project Location) and within the FRB Landfill boundaries, except for the western end of the new SoCalGas pipeline connecting to the existing SoCalGas pipeline. The Project will consist of three “localities” where disturbances will occur: the new Project RNG Plant, the new SoCalGas pipeline, and the existing soil stockpile area (see Figure 2-3, Project RNG Plant Site and FRB Landfill Soil Stockpile Area Locations and Figure 2-4, Proposed SoCalGas Pipeline Route).

The RNG Plant site involves 3.52 acres of part of the undeveloped land leased to Bowerman Power by OCWR (see Figure 2-3). This land is adjacent to the existing Bowerman Power 19.6-megawatt landfill gas to energy facility (Bowerman Power Plant) and the FRB Landfill flare station. Approximately 90,000 cubic yards of fill material will be extracted from an existing soil stockpile area (see Figure 2-3) within the FRB Landfill boundaries and will be used to provide fill materials for the RNG Plant pad including a point of receipt (POR) facility to be developed and operated by SoCalGas.

The new SoCalGas pipeline will run from the POR within the RNG Plant boundary, down Bee Canyon Access Road to the existing SoCalGas pipeline on the corner of Portola Parkway and Jeffery Road. The new SoCalGas pipeline will be approximately 2.0 miles in length along Bee Canyon Access Road and approximately 0.4 mile in length along Portola Parkway, for a total of 2.4 miles.

2.2 Project Description

2.2.1 Background

The FRB Landfill is a state-of-the-art, Class III, municipal solid waste facility, owned by the County of Orange and operated and maintained by OCWR. FRB Landfill opened in 1990 and spans approximately 725 acres of hillside with 534 acres allocated for waste disposal. It is permitted for 11,500 tons per day maximum with an 8,500 tons per day annual average. The FRB Landfill is currently receiving approximately 8,000 tons of refuse per day. The FRB Landfill has enough projected capacity to serve

residents and businesses until approximately 2053. The current permitted capacity is 266 million cubic yards, of which approximately 105.7 million cubic yards have been placed as of June 2022.

The Regional Landfill Options for Orange County (RELOOC) defines the permitted vertical and horizontal expansions for the Master Development Plan of the FRB Landfill (P&D Consultants 2006). The permitted vertical and horizontal expansions are implemented in phases to provide for sufficient landfill operation areas and not disturb all parts of the landfill at once. The Master Development Plan includes three Phase VIII subareas (VIII-A, B, and C). The FRB Master Development Plan also includes several on-site stockpile locations for soil excavated as part of landfill phase development and operations. All soil stockpiles are within the landfill property. The soil is used for daily and intermediate cover, road construction and other related uses. Excavations are currently underway for the development of Phase VIII-A1. Soils excavated from the development of Phase VIII-A1 are stockpiled in the soil stockpile area (see Figure 2-3).

The LFG currently created by the landfill is managed via a gas collection and control system that includes vertical and horizontal gas extraction wells, a collection pipe system, and a flare station complex comprising six flares. The Bowerman Power Plant, an existing 19.6-megawatt landfill gas to energy facility, was opened in 2016 and is an award-winning, public-private partnership producing enough electricity for the City of Anaheim to power 26,000 homes. Bowerman Power currently owns and operates the Bowerman Power Plant. It is located adjacent to the flare station and processes approximately 8,350 scfm of raw LFG. The LFG not processed by the Bowerman Power Plant is incinerated at the flare station.

2.2.2 General Description

Bowerman Power, as the Project Proponent, is proposing to develop an RNG Plant at the FRB Landfill on land at the FRB Landfill leased to Bowerman Power by OCWR. Bowerman Power is a renewable energy company specializing in the recovery and processing of biogas from landfills and other non-fossil fuel sources for beneficial use as a replacement to fossil fuels. They develop, own, and operate RNG projects, using proven technologies that supply renewable fuel into the transportation and electrical power sectors. Having participated in the industry for over 30 years, they are one of the largest U.S. producers of RNG. They have an operating portfolio of 12 RNG and three Renewable Electricity projects that span six states, including the Bowerman Power electricity generation site located within FRB Landfill.

As described above, the LFG not processed by the Bowerman Power Plant is incinerated at the flare station. California law specifically encourages the production and use of RNG. SB 1440 directs the California Public Utilities Commission to evaluate establishing goals or targets for RNG purchases by California gas utilities. The California Air Resource Board's 2022 Scoping Plan for Achieving Carbon Neutrality emphasizes the importance of relying on RNG to reduce emissions for hard-to-electrify end uses.

The RNG Plant will be designed to process the excess LFG that would otherwise require incineration at the existing adjacent flare station, and then deliver the processed RNG to SoCalGas, as detailed in Table 2-1, and shown in Figure 2-5, RNG Process Design Flow. The Project does not include the storage of RNG, but will instead direct RNG to SoCalGas's existing natural gas pipeline infrastructure. The RNG

Plant layout (see Figure 2-6, Project Site Plan) will comprise two areas: the process equipment area (see Figure 2-7, RNG Process Equipment Area Layout) and the control and electrical buildings (see Figure 2-8, RNG Control / Electrical Buildings Layout).

The RNG Plant will be designed to process a maximum of 6,000 scfm of raw LFG at the inlet. The process will remove nitrogen, oxygen, carbon dioxide, sulfur hydroxide, volatile organic chemicals, hydrogen sulfide, as well as other minor impurities to meet the gas specifications of SoCalGas. The RNG Plant was sized based on the available capacity of the existing SoCalGas pipeline system, as provided by SoCalGas.

Table 2-1. Project RNG Plant Components

Component	Data
RNG Plant Owner	Bowerman Power
Project Name	Bowerman Power Renewable Natural Gas Plant
Project Site Location	Frank R. Bowerman Landfill 11002 Bee Canyon Access Road Irvine, CA 92602
Landowner	County of Orange
Project Type/Size	LFG to RNG conversion plant (Bowerman Power Plant) Maximum capacity of 6,000 scfm
Source Fuel	Landfill gas; 46-53% methane (dry basis)
Equipment Location	Primarily outdoor equipment with some enclosures (required for noise abatement or environmental control). Electrical and control equipment to be enclosed.

As noted previously, excavation is currently underway for the development of FRB Landfill Phase VIII-A1. The soils removed during the excavation are stockpiled within the FRB Landfill boundaries (see soil stockpile area on Figure 2-3). The RNG Plant pad is expected to require approximately ~~7~~90,000 cubic yards of fill material. This fill material will be extracted from within the soil stockpile area and trucked to the RNG Plant site for development of the RNG Plant pad.

SoCalGas will develop a POR facility which will receive RNG from the plant, odorize, compress, and insert the RNG into its pipeline. A 250-gallon odorant tank will be installed in the POR facility. SoCalGas will construct a new 12-inch-diameter pipeline to convey the RNG from the POR (see Figure 2-9) on the Project site to the existing SoCalGas pipeline at the corner of Portola Parkway and Jeffrey Road (see Figures 2-4.1 through 2-4.12).

The new RNG Plant will process excess LFG and deliver the resulting RNG to the SoCalGas pipeline. This effort will promote the beneficial reuse of existing and future LFG collected by FRB Landfill, support long-term sustainability goals in the region, and help reduce Orange County's reliance on fossil fuels. Additionally, the Project will contribute to California Public Utility Commission's Renewable Gas Program to procure RNG made by methane from organic waste from landfills. By processing LFG into RNG and delivering it to SoCalGas, the Project will reduce the volume of LFG being flared and the associated GHG emissions from the flares.

Benefits of the Project include the following:

- RNG has a lifecycle Carbon Intensity (CI) that is 20 percent lower than conventional natural gas.
- The Project creates a beneficial use for the excess LFG that would otherwise be incinerated in the flares.
- When compared to flaring LFG, the Project will reduce air emissions from all criteria pollutants at the FRB Landfill by 60 percent.
- When compared to flaring LFG, an RNG Plant will reduce GHG emissions by 90 percent.
- The annual GHG emissions avoided from 6,000 scfm of LFG going to the RNG facility are equivalent to approximately the amount of trash landfilled over a 1.5-year period.
- California law specifically encourages the production and use of RNG. SB 1440 directs the California Public Utilities Commission to evaluate establishing goals or targets for RNG purchases by California gas utilities.
- The California Air Resource Board's 2022 Scoping Plan for Achieving Carbon Neutrality emphasizes the importance of relying on RNG to reduce emissions for hard-to-electrify end uses.

2.2.3 Operations

The proposed RNG systems are intended to support continuous operation with appropriate equipment and components. To support minimal staffing, the Plant will be automated to allow station operations as detailed in Table 2-2 and below. Under normal conditions, maintenance personnel will be on-site for site inspections and maintenance only as needed, and typically only during daylight hours.

Table 2-2. General Plant Operations

Parameter	Design Requirements
Operation Staff	Manned operations: A total of 10 Bowerman Power employees, 8-10 hours per day/5 days per week Unmanned/remote operations: 14-16 hours per day/5 days per week, and 24-hours/2 days per week
Service Life	20 years (approximately 2026 to 2046)
Shut Down	Depressurize to facility off-spec flare and landfill flares
Shut Down Sequence	Automated
Start Up Sequence	Semi-Automated
Planned Shut Down Time	Minimize annual down time
Turn Down	Losses in recovery efficiency are expected and acceptable to achieve turn down Two-stage public service announcement system maximum turndown is 75% (25% of nameplate capacity)

The RNG Plant will be supplied LFG from the existing flare station for upgrading into RNG. The RNG Plant will be designed to produce RNG that meets the Product Gas Composition requirements as set forth pursuant to SoCalGas' Rule Number 30[1].

The RNG Plant will have two buildings: an Electric Building, which is planned to be unoccupied, and a Control Building, which will be occupied by the operational staff, see Figures 2-7 and 2-8. The process equipment will be placed outside on the RNG Plant pad. The Control Building will house the Control Center (computer stations), lavatories, and the Electric Building will house the electrical room. The type of equipment expected for operation of the RNG Plant is shown in Figure 2-10, Equipment List.

The SoCalGas POR facility located on the RNG Plant site, see Figure 2-9, will be 8,000 square feet and include an electrical shelter, analyzer shelter, automated control valve(s), filter separator, meter, odorant skid, above-ground piping and pipe supports, bollards, fencing, roadways, and gates. The POR's equipment and their functions are briefly described below:

- **Electrical Shelter:** The electrical shelter provides power to the POR's electrical equipment, gas instrumentation, and communication controls.
- **Analyzer Shelter (or Gas Analyzer System):** The analyzer shelter samples and analyzes incoming RNG, from the RNG Plant, to evaluate gas composition and quality. If inlet gas qualities deviate from the allowable limits, the analyzer shelter will trigger the overpressure protection valve to close and rejected gas will be routed back to the RNG Plant for re-processing or flaring. Once permissible gas composition and quality are confirmed by the analyzer shelter, the overpressure production valve will open, and gas will be allowed into the POR station.
- **Automated Control Valve(s):** The control valves regulate the gas pressure of the RNG that is injected into SoCalGas' existing natural gas infrastructure.
- **Filter Separator:** The filter separator separates incoming particulates, entrained liquids, and RNG entering the POR facility and allows for dry gas to flow into the flow meter.
- **Metering (or Flow Metering):** The flow meter calculates the corrected gas flow of the RNG entering the POR facility.
- **Odorant Skid (or Odorizing System):** The odorizing system injects odorant (mercaptan) into the RNG stream prior to injection into SoCalGas' existing natural gas infrastructure. Odorant is injected as a safety provision to make a gas leak readily detectable by sense of smell. The odorant skid contains a 250-gallon odorant storage tank, two expansion tanks, two injection pumps, two verometers, and four odorant filters.
- **Above-Ground Piping and Pipe Supports:** The above-ground piping and pipe supports transport the RNG through the POR facility and allow for SoCalGas personnel to perform future maintenance on the facility.
- **Bollards, Fencing, Roadways, and Gates:** The bollards, fencing, roadways, and gates protect the POR facility from vehicle collision and unauthorized access.

[1] SoCalGas Renewable Natural Gas Quality Standards, https://www.socalgas.com/1443740736978/gas-quality-standards-one-sheet.pdf

Normal operational power will be provided by Southern California Edison (SCE) service. In case of SCE power outage, a natural gas generator will be onsite to power critical facility safety and control systems. The generator will be used for temporary back-up power only. hazardous

2.2.4 Safety and Operability

Bowerman Power Plant has safely operated at the FRB Landfill since 2016. The existing Bowerman Power Plant includes a hazardous management business plan prepared in accordance with County regulations. The plan shall be updated to address new aspects of the RNG Plant equipment and operation. The current plan addresses business activities, safe handling practices, hazardous material inventory, emergency response, and employee training plans.

The Project will be designed for normal operation from the Control Building, but with the ability to have both local and remote startup, operation, shutdown, and emergency shutdown capabilities for equipment. Emergency eyewash and/or safety shower stations (meeting ANSI/ISEA Z358.1 standards) will be provided. The process equipment area will include a gas detection system.

The RNG Plant will include the following emergency systems:

- The RNG Plant control system will be designed to operate and maintain the RNG process under normal conditions. If conditions occur outside of the normal operating range, the RNG Plant will shut down due to any potentially hazardous process conditions and the LFG will be combusted in the landfill flares.
- The electronic auto-dialing system, currently in place at the adjacent Bowerman Power Plant, will be expanded to include the proposed Project. The system will notify the operator of an abnormal condition during non-business hours and will provide visual and audible warnings to assist operator response.
- In the event of planned maintenance, unplanned process changes, or other event, the RNG Plant will be either manually or automatically shut down and LFG will be redirected to landfill flares as necessary.
- The pipeline pressure and flow will be monitored and any change outside of normal operating parameters will shut off the pipeline and shut down the RNG Plant.
- The RNG Plant will have a seismic sensor. In the event of a large earthquake, the RNG Plant equipment will be shut down and pipeline valves will be closed.
- The RNG Plant will have a gas detection system.
- Access and circulation for large vehicles will be provided to the RNG Plant.
- Water supply for firefighting will be supplied by existing on-site FRB Landfill water tanks.
- In adherence to the OCFA's Fuel Modification and Maintenance Program, the RNG Plant site will be located on an area that will be devoid of vegetation or other fuel sources. An additional 0.8 acre will be cleared of vegetation; see the area shown in red and yellow on Figure 2-11. Another 0.05 acre will be cleared of vegetation and trenched for installation of a fire suppression water line. Post-construction, the areas shown in red, blue, and yellow on Figure 2-11 will be revegetated with low fuel vegetation approved by OCFA and OCWR.

The new SoCalGas pipeline wil also be designed to meet the most stringent design, pipeline class, and safety standards (Class 4 requirements) in accordance with Title 49 Code of Federal Regulations (CFR). Emergency shut-off valves, pressure monitoring devices and other control equipment shall be incorporated into the design of the pipeline. The system shall include devices required by 49 CFR 192 and as deemed appropriate by the County. These devices shall be installed on the pipeline at locations and distance intervals specified in federal regulations. In addition, SoCalGas will take the safety precaution of pressure testing the new pipeline prior to placing it in service to validate the engineering and fitness of the pipe.

2.2.5 Water Use

The Project will use an estimated 350,000 gallons of non-potable water during construction activities (soil compaction, dust suppression, etc.). Non-potable water for construction activities will either be supplied from existing on-site FRB Landfill water tanks or trucked in from an off-site provider. Initially during operations, the RNG Plant system will require 1,000 gallons of water to supply the chiller system. Typically, no additional water will be required for the system except in the case of non-routine maintenance. Personal Potable water usage (bathroom, sink, shower, etc.) is estimated to be 110,000 gallons per year. Per Bowerman Power's agreement with OCWR, water for RNG Plant maintenance and personal water use will be supplied by OCWR from the existing domestic water line that currently serves the Bowerman Power Plant. Septic waste from the RNG Plant's bathroom facilities will be pumped to a sanitary holding tank that will be regularly pumped out and hauled off-site by a licensed third-party vendor.

The fire suppression system for the Project will utilize the 46,000-gallon fire water tank that was constructed in early 2016 to service the adjacent Bowerman Power Plant. The system will draw water from the existing tank through dedicated hydrants positioned at the northeastern and southwestern ends of the RNG Plant.

2.2.6 Construction Details

Construction is anticipated to begin in the first quarter of 2026~~5~~ and is expected to occur over a span of 2 years, with the majority of the emitting construction phases overlapping during a 1-year period.

All Project equipment and building materials staging for the RNG Plant and SoCalGas POR will occur on-site within the construction site work zones. The staging area for the new SoCalGas pipeline would be on a previously disturbed unpaved area adjacent to the westbound lane of Bee Canyon Access Road, approximately 600 feet northeast from the center of the Bee Canyon Access Road Bridge (No. 55-785).

Non-hazardous waste and excess debris will be disposed of at the FRB Landfill.

Construction of the RNG Plant will include approximately 313 working days of construction and the new SoCalGas Pipeline will include approximately 239 working days of construction during normal working days and hours (Monday through Friday, except federal holidays). The construction labor force will vary from a minimum of 2 to a maximum of 35 workers per day for the duration of the construction activities. The type of heavy construction equipment expected for construction of the RNG Plant and the new SoCalGas pipeline is shown in Figure 2-10.

The approximately 3.52-acre Project site will require grading for the approximately 2.3-acre RNG Plant pad, see Figure 2-11. The pad will be composed of approximately 1.38 acres of concrete and 0.22 acres of graded land. The pad is expected to require approximately ~~7~~90,000 cubic yards of fill material, which will be extracted from an existing soil stockpile area within the FRB Landfill boundaries (see Figure 2-3). The soil stockpile area was previously graded as part of FRB Landfill Master Development Plan development and is currently used as the soil stockpile area for the soils excavated as part of the Phase VIII-A development.

An additional 0.8 acre will be cleared of vegetation, see the area shown in red and yellow on Figure 2-11, to comply with Orange County Fire Authority's (OCFA's) Fuel Modification and Maintenance Program. Another 0.05 acre will be cleared of vegetation and trenched for installation of a fire suppression water line. Post construction, the areas shown in red, blue, and yellow on Figure 2-11 will be revegetated with low fuel vegetation approved by OCFA and OCWR.

Construction of the new SoCalGas pipeline route will take place along Bee Canyon Access Road and Portola Parkway. The majority of the pipeline installation construction activities will use open-trench techniques within the paved sections of the roadways, with horizontal directional drilling techniques in some locations. The construction work area along the proposed pipelines will be approximately 50 feet wide. The disturbance for trenching activities will be approximately 30 inches wide with an average depth of 6 feet.

In order to cross the Highway 241 Transportation Corridor, it is expected that the new SoCalGas pipeline will be hung under the "Bee Canyon Access Rd. Bridge" or Bridge #55-785. The new SoCalGas pipeline will be designed and constructed to handle potential lateral hydraulic loading and buoyant forces in order to support the pipe's weight between bridge piers. The new SoCalGas pipeline will be secured under the bridge by pipe hangers made from either carbon steel or galvanized steel. If this method of crossing the Highway 241 Transportation Corridor cannot be used, SoCalGas would perform a Horizontal Directional Drilling (HDD) operation along Bee Canyon Access Road to install approximately 1,300 feet of 12.7-inch steel pipeline beneath the Highway 241 Transportation Corridor. The entry and exit workspaces would be located on private property outside of Caltrans Right of Way (see Figure 2-4, Sheets 4 and 5, and Figure 2-12). The HDD entry workspace would be approximately 150 feet by 100 feet in size and located within the "dirt lot" adjacent to the west-bound lane of Bee Canyon Access Road, approximately 600 feet northeast from the center of the "Bee Canyon Access Rd. Bridge". The HDD exit workspace would be approximately 150 feet by 60 feet in size and would be located along Bee Canyon Access Road, approximately 800 feet southwest from the center of the "Bee Canyon Access Rd. Bridge." The maximum excavation depths for both the HDD entry and exit workspaces should not exceed 10 feet.

The HDD process, if necessary, could be divided into four main phases: pilot hole, reaming, swabbing, and pullback. The pilot hole would be approximately 10 inches in diameter and would drill a complete profile from entry to exit locations. During the reaming and swabbing phases, the pilot hole would be expanded to a minimum of 18 inches. The final hole size would be determined by the HDD contractor. Prior to the pullback phase, the steel pipeline would be hydrostatically tested and upon completion, would be pulled into the hole. A bentonite mixture would be placed downhole to solidify and fill the void space and cap the ends of the entry and exit holes. The approved material would be determined

by the drilling contractor and any permitting conditions. An estimated 100 cubic feet of drill mud waste would be produced during the HDD operation. All HDD waste would be disposed of off-site at an appropriate landfill site. The specific construction approach for the crossing of the Highway 241 Transportation Corridor is preliminary and subject to change depending on permitting conditions and requirements.

A traffic control plan will be prepared to accommodate this work area corridor along the new SoCalGas pipeline route. The plan will be reviewed and approved by OCWR and the City of Irvine Department of Public Works & Sustainability prior to implementation.

2.2.7 Mitigation Measures

The following mitigation measures have been incorporated into the scope of work for the proposed Project and will be fully implemented by Bowerman Power to avoid or minimize adverse environmental impacts identified in this Initial Study/Mitigated Negative Declaration. These mitigation measures are identified in the Mitigation Monitoring and Reporting Plan (MMRP) prepared for this Project (see Appendix A) with the assigned responsibility for implementation and reporting.

Mitigation Measures:

AQ-1 Construction equipment greater than 350 HP for the trenching and pipeline construction phase must be equipped with Tier 4 Final engines.

BIO-1 To address potential Project impacts to intermediate mariposa lily (*Calochortus weedii* var. *intermedius*), an in-lieu fee shall be paid via minor amendment to the NCCP/HCP, as approved by USFWS and CDFW. The in-lieu fee will contribute to a management and monitoring program for rare plants in the Nature Reserve of Orange County.

Silt fencing or flagging shall be installed under the guidance of a biological monitor along the limits of coastal sage scrub areas that are immediately outside of the grading/impact limits. The silt fencing/flagging shall be used to minimize impacts to sensitive natural resources including special-status plant species and native plant communities outside and immediately adjacent to the grading limits. Construction activities and personnel will be restricted within these adjacent coastal sage scrub areas and a biological monitor will be present during the silt fence/flagging installation and removal.

BIO-2 Impacts to coastal sage scrub habitat shall occur outside the breeding and nesting season of the coastal California gnatcatcher (February 15 through July 15) to the extent practicable.

A pre-construction survey shall be conducted within the Project site to determine the presence/absence of coastal California gnatcatcher and coastal cactus wren prior to clearing or grading activities. The survey shall include a 100-foot buffer around the grading limits. Any coastal California gnatcatcher or coastal cactus wren observations shall be recorded and marked on the construction/grading plans.

All coastal sage scrub habitat outside of the Project impact area shall be fenced or marked with flagging materials prior to the commencement of grading. No

construction access, parking, or storage of equipment or materials will be allowed within these areas.

A qualified biologist shall conduct and document a pre-construction meeting to educate construction staff (including supervisors, equipment operators, and other site employees) on all mitigation measures required for the Project.

A qualified biologist shall monitor the clearing of coastal sage scrub and oak woodland. USFWS/CDFW shall be notified at least 7 calendar days (preferably 14 calendar days) prior to clearing habitat occupied by Target/Identified Species, if observed. The qualified biologist will ensure that clearing activities and earth-moving equipment do not harm coastal California gnatcatchers or coastal cactus wren. The biologist will also ensure that these activities do not harm other species that may occur, including western spadefoot, orange-throated whiptail, red-diamond rattlesnake, and coast patch-nosed snake.

The access road(s) shall be sprayed with water on occasion to reduce dust accumulation on the leaves of coastal sage scrub species, as overseen by the biological monitor.

BIO-3 Avoid ground-disturbing and vegetation removal activities during the nesting bird season (February 15 to September 15). If these activities must occur during the nesting season, a pre-construction nesting bird survey shall be conducted by a qualified biologist on and within 300 feet of the Project construction area. The survey shall be conducted no more than 10 days prior to initiation of ground-disturbance, vegetation clearing, or construction activities and repeated between delays of greater than 10 days during the nesting season.

If an active nest is found, an appropriate no-disturbance buffer for the species shall be visibly established in the field by a qualified biologist (e.g., flagging, staking, caution tape). No ground-disturbing or vegetation removal activities shall occur within the buffer until the nesting season has ended or the nest is vacated and juveniles have fledged, as determined by the qualified biologist. At the discretion of a qualified biologist, limited encroachment into the buffer may occur for non-listed bird species but no disturbance of active nests or nesting activities is allowed per the Migratory Bird Treaty Act.

BIO-4 For work occurring during the Crotch's bumble bee nesting season between March 15 through September 15 where potential nesting habitat occurs, a pre-construction nesting survey shall occur prior to ground-disturbing or vegetation-trimming activities within the Project's work area and a 50-foot buffer. A qualified Crotch's bumble bee biologist, whose resume has been submitted and approved by CDFW, will conduct a nest clearance survey within 2 weeks of ground-disturbing construction activities. Surveys shall be conducted during daylight hours when ambient temperatures are between 60 degrees Fahrenheit (°F) and 90 °F. In the event that a bumble bee nest is suspected (i.e bumble bee was observed to have entered a burrow or tree cavity, or

disappeared under a shrub or into thatch), the suspected nest location will be passively observed for at least 20 minutes to confirm the presence/absence of a nest. A minimum 50-foot no disturbance buffer will be established and visibly flagged for avoidance if a nest location is discovered and the discovery shall be reported to CDFW by the qualified Crotch's bumble bee biologist within 24 hours of discovery. If Crotch's bumble bee and/or Crotch's bumble bee nests are detected, surveys should record the location of the nest, nest substrate, slope, aspect, and distance to nearest active foraging areas (if known), number of Crotch's bumble bee observed, and vegetation used by individuals. During active construction, the Crotch's bumble bee biologist will monitor the nest on a weekly basis and will update the buffer size as necessary and in coordination with CDFW to ensure protection. Construction activities will not occur within the buffer until the nest is no longer active as determined by the qualified Crotch's bumble bee biologist[2] and CDFW will be notified prior to deactivation of the avoidance buffer and commencement of construction activities in this area. The Crotch's bumble bee qualified biologist shall submit results of preconstruction surveys to CDFW prior to start of vegetation removal activities and shall provide a weekly status update should a Crotch's bumble bee nest no disturbance buffer be established and until the nest is determined to be no longer active.

BIO-5 Herbicide and insecticide use shall be limited to spot spraying individual plants that are not in bloom and avoiding all rodent burrows to the greatest extent possible within suitable Crotch's bumble bee nesting areas. The qualified Crotch's bumble bee biologist will review the proposed spray areas with OCWR and contractor to ensure burrows and nectar sources are avoided to the greatest extent possible.

BIO-6 Temporary impacts to nectar sources shall be restored in place through either broadcasting of appropriate Crotch's bumble bee seed mix[3] or by incorporating the seed mix into a hydro-mulch application. Minor vegetation trimming to preferred nectar sources, that are expected to recover naturally within one year, do not require restoration.

BIO-7 A qualified Crotch's bumble bee biologist shall attend the pre-construction meeting (see BIO-2) to educate construction staff (including supervisors, equipment operators, other site employees, and biological monitors) on all Crotch's bumble bee specific mitigation measures required by this Crotch's Bumble Bee Avoidance Plan. Training Materials (tri-fold colored pamphlet) shall be provided at the training and shall include

[2] Monitoring periods of 1 hour for 3 consecutive days shall be conducted by the qualified Crotch's bumble bee biologist and shall be determined "no longer active" if no activity has been observed and supported by lack of observation of gynes and/or males foraging.

[3] Outside of fuel modification areas, the appropriate seed mix shall include at least one annual and perennial species of preferred nectar sources, that are region-specific herbs/shrubs from the following plant list: sages (*Salvia* spp.), buckwheat (*Eriogonum* spp.), lupines (*Lupinus* spp.), legumes (Fabaceae family), owl's clover (*Orthocarpus* spp.), and milkweed (*Asclepias* spp.). Within fuel modification areas, the seed mix will contain suitable nectar sources that are consistent with the Orange County Fire Authority (OCFA) Fuel Modification Zone Plant List (see Appendix C4, Crotch's Bumble Bee Habitat Avoidance Plan, Appendix B). The plant palette should be developed in conjunction with the Crotch's bumble bee qualified biologist and the OCWR biologist and approved by CDFW to develop a seed mix that satisfies all restoration/stabilization requirements.

detailed photos[4] that can be utilized as a reference for qualified biological monitors to identify Crotch's bumble bee and implement the avoidance measures appropriately. Training Materials will assist in training contractor staff in recognizing bumble bees and inform them of potential penalties (e.g., monetary fines, project delays, jail time) for take of Crotch's bumble bee or other California Endangered Species Act (CESA) violations.

BIO-8 CDFW shall be notified at least 14 calendar days prior to initial vegetation removal and ground-disturbing activities in areas identified as potential Crotch's bumble bee nesting, foraging, or overwintering habitat, regardless of time of year. All Crotch's bumble bee detections shall be reported to CDFW via email within 24 hours of detection. A qualified biological monitor who has received the Crotch's bumble bee training and is in possession of the Training Materials shall monitor the staking of limits, clearing and grubbing, and removal of stockpiled vegetation from the site until the site no longer provides potential Crotch's bumble bee habitat. The biological monitor shall be responsible for monitoring Crotch's bumble bee when they are detected and shall ensure active foraging patches are not removed until the Crotch's bumble bee(s) leave the area on their own volition. The biological monitor, shall monitor the slow and methodical removal of vegetation in patches and by hand where necessary should Crotch's bumble bee nesting or overwintering behavior be observed (scanning the ground instead of targeting flowering resources, seen entering a burrow or disappearing into thick vegetation and not re-emerging, sitting on the open ground), until it is confirmed that a Crotch's bumble bee nest or overwintering site is not present. Should the Project result in unpermitted take of a Crotch's bumble bee individual or nest, work shall immediately halt and CDFW shall be immediately notified by the Crotch's bumble bee biologist.

CUL-1 Environmental Training – Prior to construction of the Project, a Secretary of Interior-qualified archaeologist shall be retained by Bowerman Power to serve as the Project Archaeologist. Cultural resource awareness training shall be provided by the Project Archaeologist that includes all applicable laws and penalties pertaining to disturbing cultural resources, a brief discussion of the prehistoric and historic regional context and archaeological sensitivity of the area, types of cultural resources found in the area, and instruction that Project workers shall halt construction if a cultural resource is inadvertently discovered during construction, and Project personnel contact information in the event of an inadvertent discovery.

CUL-2 Archaeological Monitoring – A qualified Archaeological monitor acceptable to the OCWR shall be retained by Bowerman Power prior to Project-related ground disturbance. The selection of the qualified professional(s) shall be subject to OCWR acceptance based on generally accepted professional qualifications and certifications, as applicable. A qualified Archaeological Monitor shall have at least a BS or BA degree

[4] Appendix C4, Crotch's Bumble Bee Habitat Avoidance Plan, Appendix C.

in anthropology, archaeology, historic archaeology, or a related field and previous monitoring experience. The monitors shall conduct on-site daily archaeological monitoring of construction ground disturbance. The Archaeological monitor will provide daily documentation of construction activity and any findings. The Archaeological monitor shall prepare a daily monitoring log and submit it daily to the Project Archaeologist via email, briefly describing the field conditions, construction progress and activities, non-compliance activities, and record any finds of archaeological material. A final report summarizing the monitoring activities shall be prepared by the Project Archaeologist.

CUL-3 Monitoring and Inadvertent Discovery Plan – Prior to the start of construction, a Secretary of Interior-qualified Project Archaeologist (retained by Bowerman Power) shall prepare a Monitoring and Inadvertent Discovery Plan (Plan) for the Project. The Plan shall be submitted to OCWR for review and approval prior to the start of construction. The Plan shall include at a minimum:

- Overview of mitigation measures and responsibility for compliance;
- Project description of construction activities and maps;
- Description of relevant laws and regulations;
- Brief cultural context information and types and description of cultural resources that could be inadvertently discovered;
- Description of how monitoring shall occur;
- The roles and responsibility of the Archaeological Monitor (e.g., authority to halt construction for an inadvertent discovery, daily monitoring, daily reporting, etc.) and Project Archaeologist (e.g., oversee monitors, response to inadvertent discovery, final reporting, etc.);
- Description of protocols in the event of an inadvertent discovery (i.e., halt work) and notification procedures and contact list; and
- Description of final monitoring report.

Stop work protocols shall be implemented in the event of an inadvertent discovery of cultural resources. If a cultural resource is encountered within the new SoCalGas pipeline route, halt work protocols shall include notifying the SoCalGas Project Archaeologist designated by SoCalGas and the OCWR Environmental Engineering Specialist designated by OCWR. Cultural resources shall not be relocated without consultation with a SoCalGas Archaeologist.

GEO-1 Worker Education Program. The project proponent shall retain a qualified paleontologist, defined as a paleontologist meeting the Society for Vertebrate Paleontology's Professional Standards (SVP 2010), to carry out all mitigation measures related to paleontological resources. The qualified paleontologist shall conduct the following:

a. Prior to the start of any ground disturbing activities, the qualified paleontologist shall conduct a Paleontological Resources Awareness Training program for all construction personnel working on the project site. A Paleontological Resources Awareness Training Guide approved by the qualified paleontologist shall be provided to all personnel. A copy of the Paleontological Resources Awareness Training Guide shall be submitted to the OCWR. The training guide may be presented in video form.

b. Paleontological Resources Awareness Training may be conducted in conjunction with other awareness training requirements.

c. The training shall include an overview of potential paleontological resources that could be encountered during ground disturbing activities to facilitate worker recognition, avoidance, and subsequent immediate notification to the qualified paleontologist for further evaluation and action, as appropriate; and penalties for unauthorized artifact collecting or intentional disturbance of paleontological resources.

d. The project operator shall ensure all new employees who have not participated in earlier Paleontological Resources Sensitivity Trainings shall meet the provisions specified above.

e. The Paleontological Resources Awareness Training Guides shall be kept available for all personnel to review and be familiar with as necessary.

GEO-2 Project Monitoring. A qualified paleontologist or designated monitor shall be onsite initially to spot-check excavations below a depth of one foot below the ground surface in areas of undetermined paleontological potential. If it is determined that sediments consist of older alluvium, then full-time paleontological monitoring shall ensue within that area. If sediments are determined to consist of Holocene Quaternary alluvium, paleontological monitoring shall not be required unless an excavation depth of 15 feet below the ground surface is reached in the area. The use of post-driving or rotary drilling shall not require monitoring.

a. The duration and timing of monitoring shall be determined by the qualified paleontologist in consultation with OCWR and shall be based on a review of geologic maps and grading plans.

b. During the course of monitoring, if the paleontologist can demonstrate based on observations of subsurface conditions that the level of monitoring should be reduced, the paleontologist, in consultation with OCWR, may adjust the level of monitoring to circumstances, as warranted.

c. Paleontological monitoring shall include inspection of exposed rock units during active excavations within sensitive geologic sediments. The qualified paleontologist shall have authority to temporarily divert excavation operations

away from exposed fossils to collect associated data and recover the fossil specimens if deemed necessary.

d. Following the completion of construction, the paleontologist shall prepare a report documenting the absence or discovery of fossil resources onsite. If fossils are found, the report shall summarize the results of the inspection program, identify those fossils encountered, recovery and curation efforts, and the methods used in these efforts, as well as describe the fossils collected and their significance. A copy of the report shall be provided to OCWR and to an appropriate repository such as the Natural History Museum of Los Angeles County.

GEO-3 Inadvertent Discoveries of Paleontological Resources — If construction staff or others observe previously unidentified paleontological resources during ground disturbing activities, they will halt work within a 200-foot radius of the find(s), delineate the area of the find with flagging tape or rope (may also include dirt spoils from the find area), and immediately notify a qualified paleontologist. Construction will halt within the flagged or roped-off area. The paleontologist shall assess the resource as soon as possible and determine appropriate next steps in coordination with OCWR. Such finds shall be formally recorded and evaluated. The resource shall be protected from further disturbance or looting pending evaluation.

TCR-1 Should evidence of human remains be discovered during project construction, the Orange County Coroner (OCC) shall be immediately notified of the discovery. Evidence of human remains requires mandatory compliance with the provisions of State Health and Safety Code Section 7050.5, which restricts further disturbance in the vicinity of the discovery, defined herein as a 50-foot radius, until the OCC has made a determination within two business days of the origin and disposition pursuant to Public Resources Code Section 5097.98. If the remains are determined to be Native American, the OCC shall notify the Native American Heritage Commission (NAHC) within 24 hours that remains have been discovered. The NAHC shall determine the identity of the Most Likely Descendant (MLD). The MLD shall complete the inspection of the remains within 48 hours of notification by the NAHC. In addition, per CR-3, SoCalGas Project Archaeologist designated by SoCalGas and the OCWR Environmental Engineering Specialist designated by OCWR will be notified of the discovery.

TCR-2 If unanticipated tribal cultural resources or deposits are discovered during earth-moving activities, the following measures shall be implemented:

- All work shall halt within a 200-foot radius of the discovery. a qualified professional archaeologist shall assess the significance of the find (if a tribal cultural monitor is not present). If the resources are Native American in origin, the OCWR shall coordinate with the Tribe regarding evaluation, treatment, curation and preservation of these resources. The archaeologist shall have the authority to modify the no-work radius as appropriate, using professional judgment in consultation with OCWR. Work shall not continue within the no-work radius until

the archaeologist conducts sufficient research, evidence and data collection to establish that the resource is either: (1) not cultural in origin; or (2) not potentially eligible for listing on the California Register of Historical Resources.

TCR-3 Tribal Cultural Resource Monitor: Prior to the issuance of any grading permit in which soil would be disturbed, Montauk shall provide evidence in the form of an executed Agreement to OCWR that they have retained a qualified Native American tribal monitor to provide third-party monitoring during excavation and grading activities and to recover and catalogue tribal resources as necessary. The tribal monitor shall be from or approved by the Kizh Nation. The agreement shall include (i) professional qualifications for the tribal cultural resource monitor(s); (ii) detailed scope of services to be provided including but not limited to pre-construction education, observation, evaluation, protection, salvage, notification, and/or curation requirements, as applicable, with final documentation/monitoring report to OCWR, as applicable; (iii) contact information; (iv) communication protocols between Contractor and Tribal Cultural Resource Monitor; (v) acknowledgment that if the Kizh Nation monitor is not available, Montauk or their contractor as designee may contract with another qualified tribal monitor acceptable to the OCWR. The selection of the qualified professional(s) shall be subject to OCWR acceptance based on generally accepted professional qualifications and certifications, as applicable. The cover sheet of the grading plans shall include a note to identify that third party tribal monitoring is required during excavation and grading activities in accordance the with the OCWR Agreement.

2.3 Project Objectives

The objectives of the Project include the following:

- Safely produce RNG from LFG that is natively created by the FRB Landfill and deliver it to SoCalGas;
- Allow for the beneficial reuse of existing and future LFG collected by FRB Landfill in a manner that furthers the long-term sustainability goals of the area;
- Provide the most feasible and cost-effective method of transporting LFG from FRB Landfill to SoCalGas;
- Assist Orange County in reducing its dependence on fossil fuels and become more sustainable and energy independent;
- Contribute to goals of the California Public Utilities Commission Renewable Gas Procurement Standard to procure RNG made by methane from organic waste from landfills and other sources;
- Reduce the amount of LFG being flared at the FRB Landfill;
- Reduce and quantify greenhouse gas (GHG) emissions from the FRB Landfill; and
- Minimize adverse environmental impacts.

2.4 Incorporation By Reference

Various technical studies, analyses, and reports were used in the preparation of this IS and are incorporated by reference in accordance with Section 15150 of the CEQA Guidelines. Information from these documents, which have been incorporated by reference, has been briefly summarized in the appropriate section(s) of this IS. The documents and other sources used in preparation of this IS are identified in Section 5.0, References.

2.5 Other Public Agencies Whose Approval Is Required

Other public agencies whose approval is expected to be required in the form of permits, financing approval, or participation agreements are as follows:

- South Coast Air Quality Management District – Permit to Construct (RNG Plant - Bowerman Power, new SoCalGas pipeline – SoCalGas), Dust Control (RNG Plant - Bowerman Power, new SoCalGas pipeline – SoCalGas), Plan Permit to Operate (RNG Plant - Bowerman Power)
- Santa Ana Regional Water Quality Control Board – Stormwater Pollution Prevention Plan for construction activities and development discharge (RNG Plant - Bowerman Power, new SoCalGas pipeline – SoCalGas)
- County of Orange – Conditional Use Permit (RNG Plant - Bowerman Power), Construction Permits (RNG Plant - Bowerman Power), Encroachment/Development Permit (new SoCalGas pipeline - SoCalGas)
- USFWS – coordination regarding NCCP (RNG Plant - Bowerman Power)
- CDFW – coordination regarding NCCP (RNG Plant - Bowerman Power)
- City of Irvine – Conditional Use Permit, Right of Way Permits, Construction Permits (new SoCalGas pipeline - SoCalGas)
- Caltrans – Encroachment Permit (SoCalGas new pipeline HDD construction- SoCalGas)
- Irvine Ranch Water District - Encroachment/Development Permit (SoCalGas new pipeline construction- SoCalGas)

2.6 Tribal Cultural Resources Consultation

In conformance with Assembly Bill 52 Tribal Consultation Requirements, OCWR notified the Native American Tribes/Tribal representatives that are traditionally and culturally affiliated with the Project area. OCWR sent Project notification to the following Tribes on August 15, 2023:

- Kizh Nation
- Juaneño Band of Mission Indians
- San Gabriel Band of Mission Indians
- Soboba Band of Luiseño Indians

One Native American Tribe, the Kizh Nation, requested consultation on this Project. Following this request, representatives from the Tribe and staff from OCWR engaged in consultation via telephone conference on October 17, 2023. OC Waste & Recycling sent the cultural resources report for the Project on May 24, 2024. The Kizh Nation representative provided comments on the report on May 28,

2024. These comments were incorporated into the cultural report and the final report was shared with the Tribe on July 8, 2024, and consultation was completed and closed out.

Conducting consultation early in the CEQA process allows tribal governments, lead agencies, and project proponents to discuss the level of environmental review, identify and address potential adverse impacts to tribal cultural resources, and reduce the potential for delay and conflict in the environmental review process (see Public Resources Code [PRC] Section 21083.3.2). Information may also be available from the California Native American Heritage Commission's (NAHC) Sacred Lands File per PRC Section 5097.94 and the California Historical Resources Information System administered by the California Office of Historic Preservation. Please also note that PRC Section 21082.3(c) contains provisions specific to confidentiality.

3.0 ENVIRONMENTAL CHECKLIST

3.1 Environmental Factors Potentially Affected

The environmental factors checked would be potentially affected by this Project, involving impacts that are a "Potentially Significant Impact" as indicated by the checklist on the following pages.

☐ Aesthetics	☐ Agriculture & Forestry Resources	☒ Air Quality
☒ Biological Resources	☒ Cultural Resources	☐ Energy
☒ Geology/Soils	☐ Greenhouse Gas Emissions	☐ Hazards & Hazardous Materials
☐ Hydrology/Water Quality	☐ Land Use/Planning	☐ Mineral Resources
☐ Noise	☐ Population/Housing	☐ Public Services
☐ Recreation	☐ Transportation	☒ Tribal Cultural Resources
☐ Utilities/Service Systems	☐ Wildfire	☐ Mandatory Findings of Significance

3.2 Determination: (To be completed by the Lead Agency)

On the basis of this initial evaluation:

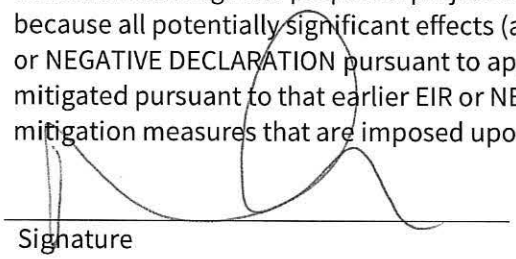
☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

☒ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the Project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

☐ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

☐ I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT (EIR) is required, but it must analyze only the effects that remain to be addressed.

☐ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.



Signature

8/22/2025

Date

Dagmar Barker

Print Name

3.3 Evaluation of Environmental Impacts

(1) A brief explanation is required for all answers except "no impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A "no impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A "no impact" answer should be explained if it is based on project-specific factors as well as general standards (e.g., the project would not expose sensitive receptors to pollutants, based on a project-specific screening analysis).

(2) All answers must take account of the whole action involved, including off-site as well as on site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.

(3) Once the lead agency has determined that a particular physical impact may occur, the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially significant impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "potentially significant impact" entries when the determination is made, an EIR is required.

(4) "Negative declaration: less than significant with mitigation incorporated" applies when the incorporation of mitigation measures has reduced an effect from a "potentially significant impact" to a "less than significant impact." The lead agency must describe the mitigation measures and briefly explain how they reduce the effect to a less than significant level.

(5) Earlier analyses may be used if, pursuant to tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration (Section 15063[c][3][D]). In this case, a brief discussion should identify the following:

   a. Earlier analysis used. Identify and state where earlier analyses are available for review.

   b. Impacts adequately addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards and state whether such effects were addressed by mitigation measures based on the earlier analysis.

   c. Mitigation measures. For effects that are "less than significant with mitigation incorporated," describe the mitigation measures that were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.

(6) Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, when appropriate, include a reference to the page or pages where the statement is substantiated.

(7) Supporting information sources. A source list should be attached and other sources used or individuals contacted should be cited in the discussion.

(8) This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project's environmental effects in whatever format is selected.

(9) The explanation of each issue should identify:

a. The significance criteria or threshold, if any, used to evaluate each question, and

b. The mitigation measure identified, if any, to reduce the impact to a less than significant level.

3.4 Environmental Impact Analysis

3.4.3 Air Quality

		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make the following determinations. Would the project:					
a.	Conflict with or obstruct implementation of the applicable air quality plan?			X	
b.	Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?			X	
c.	Expose sensitive receptors to substantial pollutant concentrations?		X	~~X~~	

An air quality impact study was conducted for the Project and is provided in Appendix B. The following summarizes the results and conclusions.

Existing Conditions:

Table 3-1 presents the maximum observed ambient background data for each pollutant and averaging time at the nearest representative monitoring station for the most recent data available. The nearest monitoring sites with available data (Central Orange County and Downtown Los Angeles) are located in an area that likely has higher ambient pollutant concentrations than the proposed Project site. The tabulated values were used to represent background levels for the indicated pollutants and averaging times in the Air Quality Impact Assessment (AQIA) to evaluate compliance with the California Ambient Air Quality Standards (CAAQS) or National Ambient Air Quality Standards (NAAQS). The monitoring data indicates that air quality in the Project area complies with all NAAQS and CAAQS for NO2, CO, and SO2. However, the CAAQS and NAAQS are periodically exceeded in the Project area for PM2.5 and PM10.

Table 3-1. AQIA Background Concentrations

Pollutant	Averaging Time	Standard	Monitoring Station	Ambient Background Data (concentration units)					AAQS (concentration units)	Exceeds Standard?	Background Concentration Notes
				~~2020~~	2021	2022	2023	Summary			
NO_2 (Concentration Units = ppb)	1-Hour	California	SCAQMD; Central Orange County	~~70.9~~	67.1	53	50.9	67.1 ~~70.9~~	180	No	Highest of most recent 3 years.
	Annual	Federal	SCAQMD; Central Orange County	~~13.3~~	12.4	11.8	10.5	12.4 ~~13.3~~	53	No	Highest of most recent 3 years.
		California	SCAQMD; Central Orange County	~~13.3~~	12.4	11.8	10.5	12.4 ~~13.3~~	30	No	Highest of most recent 3 years.
CO (Concentration Units = ppm)	1-Hour	Federal	SCAQMD; Central Orange County	~~2.3~~	2.1	2.4	2.5	2.5 ~~2.4~~	35	No	Highest of most recent 3 years.
		California	SCAQMD; Central Orange County	~~2.3~~	2.1	2.4	2.5	2.5 ~~2.4~~	20	No	Highest of most recent 3 years.
	8-Hour	Federal	SCAQMD; Central Orange County	~~1.7~~	1.5	1.4	1.6	1.6 ~~1.7~~	9	No	Highest of most recent 3 years.
		California	SCAQMD; Central Orange County	~~1.7~~	1.5	1.4	1.6	1.6 ~~1.7~~	9	No	Highest of most recent 3 years.
SO_2 (Concentration Units = ppb)	1-Hour	Federal	EPA; Main St, Los Angeles	~~3~~	2	2	2	2 ~~2.3~~	75	No	The design value (=3-year average of 99th percentile of 1-hour daily max).
		California	EPA; Main St, Los Angeles	~~3.8~~	2.2	6.5	7.7	7.7 ~~6.5~~	250	No	Highest of most recent 3 years.
	24-Hour	California	EPA; Main St, Los Angeles	~~0.9~~	1.2	1.2	2.3	2.3 ~~1.2~~	40	No	Highest of most recent 3 years.
PM_{10} (Concentration Units = µg/m^3)	24-Hour	Federal	SCAQMD; Central Orange County	~~120~~	115	90	146	146 ~~120~~	150	No	Highest of most recent 3 years.
		California	SCAQMD; Central Orange County	~~120~~	115	90	146	146 ~~120~~	50	Yes	Highest of most recent 3 years.
	Annual	California	SCAQMD; Central Orange County	~~23.9~~	22.9	22.3	24	24 ~~23.9~~	20	Yes	Highest of most recent 3 years.

Pollutant	Averaging Time	Standard	Monitoring Station	Ambient Background Data (concentration units)					AAQS (concentration units)	Exceeds Standard?	Background Concentration Notes
				~~2020~~	2021	2022	2023	Summary			
$PM_{2.5}$ (Concentration Units = $\mu g/m^3$)	24-Hour	Federal	SCAQMD; Central Orange County	~~27.10~~	36.70	22.10	22.00	26.93 ~~28.63~~	35	No	The design value (=3-year average of 98th percentile of 24-hour daily max).
	Annual	Federal	SCAQMD; Central Orange County	~~11.27~~	11.4	9.87	9.07	11.4	9	Yes	Highest of most recent 3 years.
		California	SCAQMD; Central Orange County	~~11.27~~	11.4	9.87	9.07	11.4	12	No	Highest of most recent 3 years.

Notes: SCAQMD = South Coast Air Quality Management District

Discussion:

a. Would the project conflict with or obstruct implementation of the applicable air quality plans?

Less Than Significant Impact. The Project site (RNG Plant site and new SoCalGas pipeline route) is located in the South Coast Air Basin, comprising all of Orange County and the non-desert regions of Los Angeles, Riverside, and San Bernardino Counties. The South Coast Air Quality Management District (SCAQMD) is the agency primarily responsible for comprehensive air pollution control in the South Coast Air Basin and reducing emissions from area and point sources, mobile, and indirect sources. The SCAQMD prepared the 2022 Air Quality Management Plan (AQMP) to meet federal and State ambient air quality standards. The 2022 AQMP contains a comprehensive list of pollution control strategies directed at reducing emissions and achieving ambient air quality standards. These strategies are developed, in part, based on regional population, housing, and employment projections prepared by the Southern California Association of Governments (SCAG). SCAG is the regional planning agency for Los Angeles, Orange, Ventura, Riverside, San Bernardino, and Imperial Counties and addresses regional issues relating to transportation, the economy, community development, and the environment. With regard to future growth, SCAG has prepared the 2020-2045 Regional Transportation Plan/Sustainable Communities Strategy (2020-2045 RTP/SCS), which provides population, housing, and employment projections for cities under its jurisdiction. These growth projections are based in part on projections originating under County and City General Plans. These growth projections were utilized in the preparation of the air quality forecasts and consistency analysis included in the 2022 AQMP. The 2020-2045 RTP/SCS was approved in September 2020.

The 2022 AQMP was adopted by the SCAQMD Governing Board on December 2, 2022, as a program to lead the South Coast Air Basin into compliance with several criteria pollutant standards and other federal requirements. It relies on emissions forecasts based on demographic and economic growth projections provided by SCAG's 2020-2045 RTP/SCS. SCAG is charged by California law to prepare and approve "the portions of each AQMP relating to demographic projections and integrated regional land use, housing, employment, and transportation programs, measures and strategies." Projects whose growth is included in the projections used in the formulation of the AQMP are considered to be consistent with the plan and not to interfere with its attainment. The SCAQMD recommends that, when determining whether a project is consistent with the current AQMP, a lead agency must assess whether the project would directly obstruct implementation of the plan and whether it is consistent with the demographic and economic assumptions (typically land use-related, such as resultant employment or residential units) upon which the plan is based.

A significant air quality impact may occur if a project is inconsistent with the AQMP or would in some way represent a substantial hindrance to employing the policies or obtaining the goals of that plan. As shown in Table 3-2, the incremental emissions from the proposed Project do not exceed the SCAQMD's established thresholds of potential significance for air quality impacts. The proposed Project would provide a beneficial use for the LFG generated at the landfill and would be consistent with the goals and objectives of the AQMP. Therefore, the Project would not increase the frequency or severity of an air quality standards violation or cause a new violation. Furthermore, the Project is consistent with the land use and zoning designation through development of the proposed Project.

Table 3-2. AQIA Modeling Results for Project Operations

Pollutant	Averaging Time	Federal or State Standard	Modeled Concentration[1] (Concentration Units)	Background Concentration (Concentration Units)	Modeled + Background Concentration (Concentration Units)	CEQA Threshold (Concentration Units)	Significance
NO_2 (Concentration Units = ppb)	1-Hour[F]	California[1]	16.591~~0.825~~[F]	67.1~~70.9~~	83.7~~71.7~~	180	No ~~LTS~~
	Annual[E]	Federal	0.184~~0.027~~[E]	12.4~~13.3~~	12.6~~13.3~~	53	No ~~LTS~~
		California	0.184~~0.027~~[E]	12.4~~13.3~~	12.6~~13.3~~	30	No ~~LTS~~
CO (Concentration Units = ppm)	1-Hour[F]	Federal	0.045~~0.003~~[F]	2.5~~2.4~~	2.5~~2.4~~	35	No ~~LTS~~
		California	0.045~~0.003~~[F]	2.5~~2.4~~	2.5~~2.4~~	20	No ~~LTS~~
	8-Hour[F]	Federal	0.026~~0.001~~[F]	1.6~~1.7~~	1.6~~1.7~~	9	No ~~LTS~~
		California	0.026~~0.001~~[F]	1.6~~1.7~~	1.6~~1.7~~	9	No ~~LTS~~
SO_2 (Concentration Units = ppb)	1-Hour[E]	Federal	30.37~~2.135~~[F]	2~~2.3~~	32.4~~4.4~~	75	No ~~LTS~~
		California	40.89~~2.341~~[F]	7.7~~6.5~~	48.6~~8.8~~	250	No ~~LTS~~
	24-Hour[E]	California	5.157~~0.612~~[E]	2.3~~1.2~~	7.5~~1.8~~	40	No ~~LTS~~
PM_{10} (Concentration Units = µg/m^3)	24-Hour[F]	SCAQMD CEQA Significant Change Threshold	0.913~~.068~~[E]	–	–	2.5	No ~~LTS~~
	Annual[E]		0.071~~.010~~[E]	–	–	1	
$PM_{2.5}$ (Concentration Units = µg/m^3)	24-Hour[F]		0.913~~0.068~~[E]	–	–	2.5	

Notes:

1. The modeled concentration presented is the model predicted maximum hourly value using full NO_2 conversion. ~~Superscript E indicates elevated terrain AERMOD run; superscript F indicates flat terrain AERMOD run.~~
2. "E" indicates modeled concentration was higher in Elevated Terrain modeling run and is presented here. ~~The modeled concentration presented is the model predicted maximum hourly value using full NO2 conversion.~~
3. "F" indicates modeled concentration was higher in Flat Terrain modeling run and is presented here.

Because the Project would be consistent with the City's General Plan, it is also consistent with the regional growth projections adopted in the 2022 AQMP. Air quality emissions generated by the proposed Project are considered to be evaluated in the AQMP, and Project development in accordance with the City's General Plan would not conflict with or obstruct implementation of the regional 2022 AQMP. Thus, the proposed Project is not expected to conflict with or obstruct the implementation of the AQMP and SCAQMD rules. Therefore, impacts would be less than significant, and no mitigation is required.

Mitigation Measures: No mitigation is required.

b. Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?

Less Than Significant Impact. To evaluate impacts, quantitative significance criteria established by the local air quality agency, such as the SCAQMD, may be relied upon to make significance determinations based on mass emissions of criteria pollutants.

A significant impact would occur if the proposed Project would violate any air quality standard or contribute substantially to an existing or projected air quality violation. Project construction emissions were estimated using CalEEMod, the statewide land use emissions computer model designed to quantify potential criteria pollutant and GHG emissions associated with both construction and operations from land use projects. According to the CalEEMod model results, as outlined in this report, overall construction (maximum daily emissions) for the proposed Project would not exceed the SCAQMD thresholds for the criteria pollutants ROG, NOx, CO, oxides of sulfur (SOx), and respirable and fine particulate matter (PM10 and PM2.5, respectively). As shown in Table 3-3, the Project is estimated to generate less than the SCAQMD threshold of 75 pounds per day ROG, 100 pounds per day NOx, 550 pounds per day CO, 150 pounds per day SOx, 150 pounds per day PM10, and 55 pounds per day PM2.5 during the construction phase and no mitigation is needed.

Table 3-3. Construction Emissions Summary and Significance Evaluation

Criteria Pollutants	Construction Emissions (pounds/day)	Threshold (pounds/day)	Significance
ROG (VOC)	20.9~~11.1~~	75	No ~~LTS~~
NOx	56.6~~56.8~~	100	No ~~LTS~~
CO	39.0~~50.0~~	550	No ~~LTS~~
SOx	0.22~~.16~~	150	No ~~LTS~~
Total PM10	16.4~~24.9~~	150	No ~~LTS~~
Total PM2.5	4.6~~6.5~~	55	No ~~LTS~~

Sources: SCAQMD 2023, CalEEMod version 2022.1.1.29. Yorke Engineering, LLC, ~~2024~~2025, see Appendix B,
Notes: Pounds/day are winter or summer maxima for planned land use. Total PM10/PM2.5 comprises fugitive dust plus engine exhaust.

The primary sources of operations phase emissions are the three stationary sources (i.e., thermal oxidizer, flare, and Internal Combustion Engine), on-road vehicles traveling to and from the site buildings, and operational activities such as landscape equipment, consumer products, and energy use. As shown in Table 3-4, the Project is estimated to generate less than the SCAQMD threshold of 55 pounds per day ROG, 55 pounds per day NOx, 550 pounds per day CO, 150 pounds per day SOx, 150

pounds per day PM10, and 55 pounds per day PM2.5 during the operational phase. As shown in Table 3-4, line G, the proposed Project will reduce emissions of criteria pollutants as compared to existing conditions and provide a beneficial use for the LFG generated from the landfill.

Table 3-4. Operational Emissions Summary and Significance Evaluation

Emission Source		Criteria Pollutant Emissions on Peak Operating Day[8] (pounds/day)					
		VOC	NOx	CO	SOx[9]	PM10[10]	PM2.5[10]
[A]	Baseline Existing LFG Flare Emissions[1] ~~(6,000 scfm LFG)~~	84.14~~25.92~~	304.37~~108.00~~	236.73~~259.20~~	140.94~~124.01~~	138.75~~52.70~~	138.75~~52.70~~
[B]	Proposed TOU[2]	4.33~~4.34~~	25.27~~25.29~~	57.75~~57.81~~	124~~124.26~~	5.16	05.16
[C]	Proposed Flare[3]	0.01	0.14	0.14	0.001	0.01	0.01
[D]	Proposed Engine[4]	0.66~~0.11~~	4.01~~0.70~~	6.69~~1.17~~	0.02~~0.00~~	0.40~~0.07~~	0.40~~0.07~~
[E]	Proposed Miscellaneous Operational Sources[5]	0.83~~0.75~~	0.32~~0.32~~	1.59~~1.59~~	0.00	0.12	0.05
[F] = [B + C + D + E]	**Proposed Project[6]**	**5.83~~5.22~~**	**29.74~~26.46~~**	**66.17~~60.72~~**	**124.28~~124.27~~**	**5.69~~5.37~~**	**5.62~~5.29~~**
[G] = [F] - [A]	**Proposed Project - Baseline Existing LFG Flare Emissions**	**-78.31~~-20.70~~**	**-274.63~~-81.54~~**	**-170.56~~-198.48~~**	**-16.65~~0.25~~**	**-133.07~~-47.34~~**	**-133.07~~-47.34~~**
[H]	SCAQMD Mass Daily Thresholds for Operation[7]	55	55	550	150	150	150
[G] > [H]?	Significance?	No ~~LTS~~	No ~~LTS~~	No ~~LTS~~	No ~~LTS~~	No ~~LTS~~	No ~~LTS~~

[1] Baseline is calculated as the emissions associated with the highest daily LFG consumption at the FRB Landfill's flare station for the prior two calendar years (2023 and 2024). Engines located at the existing Bowerman Power Plant are not affected by the proposed Project, and thus are not included in the baseline. ~~Baseline is calculated as the emissions from flaring 6,000 scfm LFG (~180 mmBtu/hr) for 24 hours at the Flare I-6 emission factors.~~

[2] Proposed TOU: 2,309 scfm Tail Gas 1 (~6.3 mmBtu/hr) + 883 scfm Tail Gas 2 (~6.1 mmBtu/hr) + 280 scfm Supplemental Fuel (~17.6 mmBtu/hr), 24 hours. Further information regarding tail gas compositions and fuel heat ratings are provided in Appendix B. ~~Proposed Time of Use (TOU): 2,315 scfm Tail Gas 1 (~6.4 mmBtu/hr) + 885 scfm Tail Gas 2 (~6.1 mmBtu/hr) + 280 scfm Supplemental Fuel (~17.6 mmBtu/hr), 24 hours. Note: RNG Plant inlet compression removes approximately 400 scfm moisture from the incoming LFG. The RNG Plant is projected to generate on the order of 2,400 scfm RNG. Tail Gas 1 + Tail Gas 2 + RNG = 2,315 scfm + 885 scfm + 2,400 scfm = 5,600 scfm. RNG Plant Inlet – Moisture Removal = 6,000 scfm – 400 scfm = 5,600 scfm.~~

[3] Proposed Flare: ~1.6 scfm Supplemental Fuel for natural gas pilot light (0.1 mmBtu/hr), 24 hours.

[4] Proposed Engine: Engine is natural gas fired and has a maximum permitted daily usage of 24 hours per day (including maintenance and testing and emergency use). ~~used for maintenance and testing.~~

[5] Proposed Miscellaneous Operational Sources: Includes Mobile, Area, and Energy sources from CalEEMod.

[6] Proposed Project: Proposed TOU + Proposed Flare + Proposed Engine + Proposed Miscellaneous Operational Sources.

[7] Source: SCAQMD (2023).

[8] Peak operating day with emergency engine usage is shown here. A typical day would not involve emergency generator usage. ~~, which is limited to maintenance and testing hours only.~~

[9] SOx EF is based on daily/hourly Best Available Control Technology (BACT) basis (85 ppm or 14.354 lb/mmscf). Proposed TOU SOx emissions include 100 percent of the Landfill Tail Gas SOx emissions + SOx from supplemental fuel. Proposed Flare SOx emissions include SOx from supplemental fuel.

[10] Total PM10 / PM2.5 comprises fugitive dust plus engine exhaust.

The proposed Project site is approximately 4.2 acres in SRA Zone 19 – Saddleback Valley. As a conservative estimate, the 2-acre screening lookup tables were used to evaluate NOx, CO, PM10, and PM2.5 impacts on nearby receptors. The nearest receptor is approximately 50 meters (165 feet) away from the proposed RNG facility. Therefore, the impact evaluation was performed using the closest distance within SCAQMD LST tables of 50 meters for construction. As shown in Table 3-5, on-site emissions from construction would meet the less than significant threshold passing criteria at the

nearest receptors (50 meters). ~~The nearest receptor is approximately 1,300 meters (4,200 feet) away from the proposed RNG Plant. Therefore, the impact evaluation was performed using the closest distance within SCAQMD Localized Significance Threshold (LST) tables of 500 meters for construction. As shown in in Table 3-5, on-site emissions from construction would meet the LST passing criteria at the nearest receptors (500 meters).~~

Table 3-5. Construction Localized Significance Threshold Evaluation

Criteria Pollutants	Construction Emissions (pounds/day)	Threshold (pounds/day)	Significant?
NOx	56.6~~56.8~~	127~~233~~	No
CO	39.0~~50.0~~	1,227~~8,454~~	No
PM10	16.4~~24.9~~	18~~129~~	No
PM2.5	4.6~~6.5~~	~~674~~	No

Sources: SCAQMD 2008a, CalEEMod version 2022.1.1.29.
Notes: SRA: Zone 19 – Saddleback Valley. 2-acre area, 50~~0~~ meters to receptor.

Additionally, the AQIA conducted shows that operational activities would not cause an exceedance of the NO2, SO2, or CO NAAQS or CAAQS. Furthermore, the model-predicted PM10 and PM2.5 concentrations from the operational sources would not exceed the 24-hour and annual significant change thresholds (see Table 3-2~~6~~). Thus, the proposed Project would not cause a violation of the NAAQS or CAAQS or contribute substantially to an existing air quality violation, and therefore, the proposed Project would have a less than significant impact on air quality.

SCAQMD Guidance

The SCAQMD's 2003 guidance on addressing cumulative impacts for air quality is as follows: "As Lead Agency, the SCAQMD uses the same significance thresholds for project specific and cumulative impacts for all environmental topics analyzed in an Environmental Assessment or EIR [Environmental Impact Report]. […] Projects that exceed the project- specific significance thresholds are considered by the SCAQMD to be cumulatively considerable. This is the reason project-specific and cumulative significance thresholds are the same. Conversely, projects that do not exceed the project-specific thresholds are generally not considered to be cumulatively significant" (SCAQMD 2003).

CEQA Guidelines

As referenced above, the SCAQMD cumulative air quality significance thresholds are the same as the project-specific air quality significance thresholds. Because the criteria pollutant mass emissions impacts shown in Tables 3-2~~3~~ through 3-5~~6~~ would not be expected to exceed any of the SCAQMD air quality significance thresholds, cumulative air quality impacts from comparable development projects would also be expected to be less than significant. Therefore, potential adverse impacts from implementing the proposed Project would not be "cumulatively considerable" as defined by CEQA Guidelines Section 15064(h)(1) for air quality impacts. Per CEQA Guidelines Section 15064(h)(4), the mere existence of significant cumulative impacts caused by other projects alone shall not constitute substantial evidence that the proposed Project's incremental effects would be cumulatively considerable.

As shown in Tables 3-23 through 3-56, the proposed Project would result in a less than significant impact related to regional emissions, and no mitigation is required.

Table 3-6. AQIA Modeling Results for Project Operations

Pollutant	Averaging Time	Federal or State Standard	Modeled Concentration/1 (Concentration Units)	Background Concentration (Concentration Units)	Modeled + Background Concentration (Concentration Units)	CEQA Threshold (Concentration Units)	Significance
NO2 (Concentration Units = ppb)	1 Hour[F]	California/1	00.825[F]	070.9	071.7	180	No LTS
	Annual[E]	Federal	00.027[E]	013.3	013.3	53	No LTS
		California	00.027[E]	013.3	013.3	30	No LTS
CO (Concentration Units = ppm)	1 Hour[F]	Federal	00.003[F]	02.4	02.4	35	No LTS
		California	00.003[F]	02.4	02.4	20	No LTS
	8 Hour[E]	Federal	00.001[F]	01.7	01.7	9	No LTS
		California	00.001[F]	01.7	01.7	9	No LTS
SO2 (Concentration Units = ppb)	1 Hour[E]	Federal	02.135 [F]	02.3	04.4	75	No LTS
		California	02.341[F]	06.5	08.8	250	No LTS
	24 Hour[E]	California	00.612[E]	01.2	01.8	40	No LTS
PM10 (Concentration Units = µg/m^3)	24 Hour[F]	SCAQMD CEQA Significant Change Threshold	00.068[E]	–	–	2.5	No LTS
	Annual[E]		00.010[E]	–	–	1	
PM2.5 (Concentration Units = µg/m^3)	24 Hour[F]		00.068[E]	–	–	2.5	

/1 Superscript E indicates elevated terrain air quality dispersion modeling run; superscript F indicates flat terrain air quality dispersion modeling run.
/2 The modeled concentration presented is the model predicted maximum hourly value using full NO2 conversion.

Mitigation Measures: No mitigation is required.

c. Would the project expose sensitive receptors to substantial pollutant concentrations?

Less Than Significant Impact with Mitigation Incorporated. A significant impact would occur if the proposed Project were to expose sensitive receptors to pollutant concentrations. The SCAQMD identifies the following as sensitive receptors: long-term health care facilities, rehabilitation centers, convalescent centers, retirement homes, residences, schools, playgrounds, childcare centers, and athletic facilities. There are residential land uses approximately 0.87 mile west of the Project site. The Project would be subject to grading and construction standards to mitigate air pollution and dust impacts. In addition, the Project would implement the mitigation measure MM AQ-1.

A Health Risk Assessment (HRA) was conducted for Project, see Section 4.0 of Appendix B. The construction HRA results predict that all health risk factors impacts would be less than the CEQA significance thresholds at all actual receptors. The operational HRA results predict that all health risk factors would be less than the CEQA significance thresholds at all actual receptors. As demonstrated

by the HRA, the Project is not expected to substantially contribute to pollutant concentrations or expose surrounding residences and other sensitive receptors during construction or operation. The Project is required to meet SCAQMD Rule 403 requirements for controlling fugitive dust, as well as the City's requirements for grading and construction related to air pollution. Therefore, with implementation of the proposed mitigation measure MM AQ-1, construction and operation of the Project would result in a less than significant impact for both localized and regional air pollution emissions~~, and no mitigation is required~~.

Mitigation Measures: ~~No mitigation is required.~~

MM AQ-1: Construction equipment greater than 350 HP for the trenching and pipeline construction phase must be equipped with Tier 4 Final engines.

3.4.4 Biological Resources

		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:					
a.	Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?		X		

A biological resources report, ~~and~~ wetlands delineation report, Crotch's bumble bee (*Bombus crotchii*) survey report, and Crotch's bumble bee avoidance plan, were conducted for the Project and are provided in Appendix C. The following summarizes the results and conclusions.

Existing Conditions:

Readily available information, including relevant literature, databases, agency web sites, various previously completed reports and management plans, GIS data, topographic maps, aerial imagery from public sources, and in-house records were reviewed to:

1. Assess habitats, special-status plant and wildlife species, jurisdictional waters, Critical Habitat, and wildlife corridors that may occur in and near the Project site; and
2. Identify local or regional plans, policies, and regulations that may apply to the Project.

The following data sources were accessed during the literature review.

- **California Department of Fish and Wildlife**
  - California Natural Diversity Database (CNDDB; CDFW 2025~~3~~a).
  - Biogeographic Information and Observation System (CDFW 2025~~3~~b).
- **U.S. Fish and Wildlife Service**
  - Critical Habitat Portal (USFWS 2023a).

  - National Wetlands Inventory and Wetlands Mapper (USFWS 2023b).
- **California Native Plant Society**
  - Rare Plant Inventory (CNPS 2023).
- **Other**
  - County of Orange Municipal Codes.
  - Natural Community Conservation Plan/Habitat Conservation Plan for the Central/Coastal Subregion of Orange County (County of Orange 1996).
  - iNaturalist (iNaturalist 2025)

A biological field survey and jurisdictional wetlands delineation were conducted at the Project site on June 19 and 20, 2023, which included the proposed Project RNG Plant, Fuel Modification Area, and the proposed SoCalGas pipeline. Although imported soil for the RNG Plant pad will come from the existing stockpile area on the FRB Landfill, this area was not surveyed in 2023. This area is already disturbed, and impacts have been analyzed by a separate project. No new biological impacts are anticipated from obtaining soil from the existing stockpile. Crotch's bumble bee surveys of the Project site (proposed Project RNG Plant, Fuel Modification Area, and the proposed SoCalGas pipeline) were also performed on March 19, April 22, and May 7, 2025.

The proposed Project RNG Plant and Fuel Modification Area is covered primarily by sagebrush scrub, with bands of coast live oak (*Quercus agrifolia*) habitat present. Sagebrush scrub covers about 73 percent of the Project RNG Plant and Fuel Modification Area. The dominant shrub within this habitat is California sagebrush (*Artemisia californica*). There is minimal to no tree canopy within this habitat. Coast live oak trees dominate along the slopes with an understory comprising non-native grasses. Within the sagebrush scrub and along the margins of the coast live oak habitat are populations of a California rare plant, intermediate mariposa lily (*Calochortus weedii* var. *intermedius*). In addition, within the bounds of the RNG Plant is an approximately 35-foot-wide, unvegetated concrete channel. Multiple smaller concrete-lined channels of approximately one-foot width run downslope from the existing Landfill Gas to Energy plant or Bee Canyon Road into the wider concrete channel. Soils covered in natural vegetation were generally loose and gravelly within the Project RNG Plant and vicinity, and small mammal burrows were sparse due to dense vegetation coverage.

The proposed pipeline impact area will be limited to the existing developed roads. Directly outside of the proposed pipeline area are some naturally occurring (i.e., sagebrush scrub) or naturalized habitats (i.e., eucalyptus [*Eucalyptus* sp.] grove), as well as artificial (i.e., ornamental trees) and disturbed habitats. Ornamental trees included typical roadside species such as acacias (*Acacia* spp.) and conifers (*Pinus* spp.).

One raptor species, red-tailed hawk (*Buteo jamaicensis*), was observed during the surveys, as well as other common bird species that may nest in the Project RNG Plant, Fuel Modification Area, or in the vicinity of the proposed pipeline such as Anna's hummingbird (*Calypte anna*), common raven (*Corvus corax*), northern mockingbird (*Mimus polyglottos*), and song sparrow (*Melospiza melodia*). However, no nests were observed during the survey. One reptile, western fence lizard (*Sceloporus occidentalis*), and

various common invertebrates were also observed such as honeybees (*Apis* sp.) and tarantula hawks (*Pepsis* sp.).

One queen Crotch's bumble bee was observed foraging in the landscaped plants along the landfill entry road during the March 19, 2025, survey. During the survey, it was determined that the entire Project site supports moderate to high quality foraging habitat for Crotch's bumble bee and potential nesting habitat. During the survey on April 22, 2025, no Crotch's bumble bee individuals were observed. During the May 7, 2025 survey, a second queen Crotch's bumble bee was observed foraging on a black sage (*Salvia mellifera*), approximately 50 feet from the RNG Plant site, along the proposed SoCalGas pipeline. Both Crotch's bumble bee individuals were not collecting or carrying pollen. No Crotch's bumble bee workers, males, or nests were detected during 2025 focused surveys.

Discussion:

a. Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or the U.S. Fish and Wildlife Service?

Less Than Significant With Mitigation Incorporated. A query of the CDFW CNDDB and CNPS Rare Plant Inventory was conducted to determine known occurrences of candidate, sensitive, or special-status species or habitats within the Project site or vicinity (CDFW 2025~~3~~a; CNPS 2023). The species presented in Table 3-6~~7~~ are those with potential of occurring within or adjacent to the site. Species that do not have habitat in the Project site, such as freshwater marsh and open water habitats, have not been included in the table.

Table 3-6~~7~~. Special-Status Species with Potential to Occur

Scientific Name	Common Name	Federal Status / State Status	Other Status
Plants			
Calochortus weedii var. *intermedius**	Intermediate mariposa-lily*	None / None	CRPR 1B.2, NCCP/HCP
Dudleya multicaulis	Many-stemmed dudleya	None / None	CRPR 1B.2
Lepidium virginicum var. *robinsonii*	Robinson's pepper-grass	None / None	CRPR 4.3
Monardella hypoleuca ssp. *intermedia*	Intermediate monardella	None / None	CRPR 1B.3
Amphibians			
Spea hammondii	Western spadefoot	None / SSC	NCCP/HCP
Reptiles			
Aspidoscelis hyperythra	Orange-throated whiptail	None / WL	NCCP/HCP
Crotalus ruber	Red-diamond rattlesnake	None / SSC	NCCP/HCP
Phrynosoma blainvillii	Coast horned lizard	None / SSC	None
Salvadora hexalepis virgultea	Coast patch-nosed snake	None / SSC	None
Birds			
Campylorhynchus brunneicapillus sandiegensis	Coastal cactus wren	None / SSC	NCCP/HCP
Icteria virens	Yellow-breasted chat	None / SSC	None
Polioptila californica californica	Coastal California gnatcatcher	FT / SSC	NCCP/HCP

Scientific Name	Common Name	Federal Status / State Status	Other Status
Vireo bellii pusillus	Least Bell's vireo	FE / SE	NCCP/HCP
Invertebrates			
Bombus crotchii	***Crotch's bumble bee***	***None / SC***	***None***

Notes:
* Intermediate mariposa-lily was observed during the biological survey within the Project RNG Plant in 2023.
FE = Federally Listed Endangered SSC = CDFW Species of Special Concern
FT = Federally Threatened WL = CDFW Watch List
SC = State Candidate SE = State Listed Endangered
NCCP/HCP = Central Coastal Subregion Natural Community Conservation Plan and Habitat Conservation Plan
California Native Plant Society, California Rare Plant Rank (CRPR)
1B = Plants Rare, Threatened, or Endangered in California and elsewhere
4 = Watch List: Plants of limited distribution
0.2 = Moderately threatened in California (20-80% occurrences threatened)
0.3 = Not very threatened in California (less than 20% of occurrences threatened)
Sources: CDFW 2025~~3~~a, CNPS 2023.

The biological field survey conducted in June 2023 assessed habitats and potential occurrence of candidate, sensitive, or special-status species. One special-status species, intermediate mariposa lily, was found during the survey. Intermediate mariposa lily is a CNPS California Rare Plant Rank 1B.2 species and Conditionally Covered Species under the Central Coastal Subregion NCCP/HCP. A population of this species with a total of 17 individuals occurred within the center of the proposed RNG Plant. In addition, a population with two individuals was found outside the RNG Plant and Fuel Modification Area near the existing Landfill Gas to Energy plant and flare station. The individuals within the RNG Plant would likely be impacted during Project construction. No other rare plants were found during the survey.

The western spadefoot (*Spea hammondii*) is a CDFW Species of Special Concern (SSC) and an Identified Species under the NCCP/HCP that has been previously documented about 0.3 mile south of the RNG Plant (CDFW 2025~~3~~a). The closest documented breeding habitat is about 1.5 miles northwest of the RNG Plant (CDFW 2025~~3~~a). Although there are no pools within the RNG Plant and Fuel Modification Area that would allow for breeding, upland habitat is present that may support transient individuals moving from breeding habitat to estivating habitat. This species is unlikely to occur in all habitats within the proposed pipeline area.

Orange-throated whiptail (*Aspidoscelis hyperythra*) is a CDFW Watch List species and is a Target Species under the NCCP/HCP. This species has been previously recorded less than about 0.1 miles of the RNG Plant (CDFW 2025~~3~~a). Preferred habitat characteristics for this species, including loose soils and coastal sage scrub and oak habitats, are present within the RNG Plant and Fuel Modification Area. This species may also occur adjacent to the proposed pipeline in sagebrush scrub areas.

Red-diamond rattlesnake (*Crotalus ruber*) is a CDFW SSC and an Identified Species under the NCCP/HCP. This species has been previously recorded about 2 miles northeast of the RNG Plant (CDFW 2025~~3~~a). Preferred habitats for this species are present within the RNG Plant and Fuel Modification Area including sagebrush scrub and oak habitats, and adjacent to the proposed pipeline in sagebrush scrub areas.

Coast horned lizard (*Phrynosoma blainvillii*) is a CDFW SSC that has been recorded about 2 miles northeast of the RNG Plant (CDFW 2025~~3~~a). Given the dense vegetation present throughout the RNG

Plant and Fuel Modification Area, the lack of ants and other insect prey species, and that no visible burrows or burrowing species were observed, coast horned lizard is unlikely to occur.

The coast patch-nosed snake (*Salvadora hexalepis virgultea*) is a CDFW SSC that has been recorded about 2 miles northwest of the RNG Plant (CDFW 2025~~3~~a). Preferred habitat characteristics for this species, including semi-arid brushy areas, are present within the RNG Plant, Fuel Modification Area, and adjacent to the proposed pipeline.

Special-status bird species that have been previously recorded within 2 miles of the RNG Plant include the following (CDFW 2025~~3~~a): coastal cactus wren (*Campylorhynchus brunneicapillus sandiegensis*), yellow-breasted chat (*Icteria virens*), coastal California gnatcatcher (*Polioptila californica californica*), and least Bell's vireo (*Vireo bellii pusillus*). Minimal nesting habitat for coastal cactus wren occurs in the Project site but the species could forage on-site. Yellow-breasted chat and least Bell's vireo are unlikely to occur on-site since preferred habitat in proximity to water is not present. The coastal California gnatcatcher could nest and forage in the Project site and vicinity.

Crotch's bumble bee is a CDFW candidate for listing under the CESA; it is not a covered species under the NCCP/HCP. The species has been recently discovered near the landfill in Round Canyon, less than a mile east of the Project site, in April 2024 (however, no records less than a mile from the Project site were in the CNDDB prior to the records search and surveys conducted in 2023). Crotch's bumble bee has also been previously recorded within 5 miles to the east of the RNG Plant (CDFW 2025a) and along Bee Canyon Access Road and just north of this road, which is along the proposed pipeline route and west of the proposed RNG Plant (iNaturalist 2025). Preferred food plant genera include snapdragon, phacelia, clarkia, tree poppy, poppy, and buckwheat (Koch et al. 2012). Nuttall's snapdragon (*Antirrhinum nuttallianum*), Parry's phacelia (*Phacelia parryi*), California poppy (*Eschscholzia californica*), and California buckwheat (*Eriogonum fasciculatum*), which were observed at the Project site during the field surveys in June 2023, March 2025, and April 2025, are plant resources for Crotch's bumble bee. Crotch's bumble bee nesting habitat includes bare ground, abandoned rodent burrows or bird nests, thatched grasses, brush piles, rock piles, and fallen logs. Due to the dense vegetation, no bare ground or rodent burrows were observed in the proposed RNG Plant during the field survey in June 2023. Rock outcrops were present at the top of the steep slopes in the sagebrush scrub bordering the existing facility to the west. Overwintering habitat for Crotch's bumble bee may include leaf litter and woody forest edge but little is known about Crotch's bumble bee overwintering behavior. Leaf litter was observed in the Eucalyptus vegetation community along the pipeline route and may be present in the oak woodland understory at the proposed RNG Plant. Therefore, the Project site provides moderate to high quality foraging habitat for the Crotch's bumble bee, and Crotch's bumble bee may nest and/or overwinter in the Project site and vicinity.

The special-status species listed in Table 3-6~~7~~ could be impacted by Project construction activities including ground disturbance or vegetation clearing if present on-site. Intermediate mariposa lily was found on-site and is covered in the NCCP/HCP. Per requirements in the NCCP/HCP, if less than 20 individuals of intermediate mariposa lily are observed in the impact area, no mitigation would be required. If more than 20 individuals are observed, mitigation would be required. Mitigation Measure **BIO-1** would assume presence of 20 intermediate mariposa lily individuals and require an in-lieu fee to be paid via minor amendment to the NCCP/HCP and installation of silt fencing or flagging. Wildlife

species that have potential to occur at the Project site and vicinity that qualify as Target Species or Identified Species under the NCCP/HCP include western spadefoot, orange-throated whiptail, red-diamond rattlesnake, coastal cactus wren, coastal California gnatcatcher, and least Bell's vireo. Mitigation Measure **BIO-2** would require implementation of the Construction Minimization Measures required by the NCCP/HCP to minimize impacts to these species. Adhering to the requirements of the NCCP policies and procedures ensures no further mitigation is necessary. In addition, Mitigation Measure **BIO-3** would be implemented to protect raptors and nesting birds. Mitigation Measures BIO-4 through BIO-8 would be implemented to protect Crotch's bumble bee and avoid impacts to Crotch's bumble bee during Project construction activities. Therefore, with implementation of mitigation measures **BIO-1, BIO-2,** ~~and~~ **BIO-3**, BIO-4, BIO-5, BIO-6, BIO-7, and BIO-8**,** Project impacts to candidate, sensitive, or special-status species would be reduced to less than significant.

Mitigation Measures:

BIO-1 To address potential Project impacts to intermediate mariposa lily, an in-lieu fee shall be paid via minor amendment to the NCCP/HCP, as approved by USFWS and CDFW. The in-lieu fee will contribute to a management and monitoring program for rare plants in the Nature Reserve of Orange County.

Silt fencing or flagging shall be installed under the guidance of a biological monitor along the limits of coastal sage scrub areas that are immediately outside of the grading/impact limits. The silt fencing/flagging shall be used to minimize impacts to sensitive natural resources including special-status plant species and native plant communities outside and immediately adjacent to the grading limits. Construction activities and personnel will be restricted within these adjacent coastal sage scrub areas and a biological monitor will be present during the silt fence/flagging installation and removal.

BIO-2 Impacts to coastal sage scrub habitat shall occur outside the breeding and nesting season of the coastal California gnatcatcher (February 15 through July 15) to the extent practicable.

A pre-construction survey shall be conducted within the Project site and Fuel Modification Area to determine the presence/absence of coastal California gnatcatcher and coastal cactus wren prior to clearing or grading activities. The survey shall include a 100-foot buffer around the grading limits. Any coastal California gnatcatcher or coastal cactus wren observations shall be recorded and marked on the construction/grading plans.

All coastal sage scrub habitat outside of the Project impact area shall be fenced or marked with flagging materials prior to the commencement of grading. No construction access, parking, or storage of equipment or materials will be allowed within these areas.

A qualified biologist shall conduct and document a pre-construction meeting to educate construction staff (including supervisors, equipment operators, and other site employees) on all mitigation measures required for the Project.

A qualified biologist shall monitor the clearing of coastal sage scrub and oak woodland. USFWS/CDFW shall be notified at least 7 calendar days (preferably 14 calendar days) prior to clearing habitat occupied by Target/Identified Species, if observed. The qualified biologist shall ensure that clearing activities and earth-moving equipment do not harm coastal California gnatcatchers or coastal cactus wren. The biologist shall also ensure that these activities do not harm other species that may occur, including western spadefoot, orange-throated whiptail, red-diamond rattlesnake, and coast patch-nosed snake.

The access road(s) shall be sprayed with water on occasion to reduce dust accumulation on the leaves of coastal sage scrub species, as overseen by the biological monitor.

BIO-3 Avoid ground-disturbing and vegetation removal activities during the nesting bird season (February 15 to September 15). If these activities must occur during the nesting season, a pre-construction nesting bird survey shall be conducted by a qualified biologist on and within 300 feet of the Project construction area. The survey shall be conducted no more than 10 days prior to initiation of ground-disturbance, vegetation clearing, or construction activities and repeated between delays of greater than 10 days during the nesting season.

If an active nest is found, an appropriate no-disturbance buffer for the species shall be visibly established in the field by a qualified biologist (e.g., flagging, staking, caution tape). No ground-disturbing or vegetation removal activities shall occur within the buffer until the nesting season has ended or the nest is vacated and juveniles have fledged, as determined by the qualified biologist. At the discretion of a qualified biologist, limited encroachment into the buffer may occur for non-listed bird species but no disturbance of active nests or nesting activities is allowed per the Migratory Bird Treaty Act.

BIO-4 For work occurring during the Crotch's bumble bee nesting season between March 15 through September 15 where potential nesting habitat occurs, a pre-construction nesting survey shall occur prior to ground disturbing or vegetation trimming activities within the Project's work area and a 50-foot buffer. A qualified Crotch's bumble bee biologist, whose resume has been submitted and approved by CDFW, will conduct a nest clearance survey within two weeks of ground-disturbing construction activities. Surveys shall be conducted during daylight hours when ambient temperatures are between 60 °F and 90 °F. In the event that a bumble bee nest is suspected (i.e. bumble bee was observed to have entered a burrow or tree cavity, or disappeared under a shrub or into thatch), the suspected nest location will be passively observed for at least 20 minutes to confirm the presence/absence of a nest. A minimum 50-foot no

disturbance buffer will be established and visibly flagged for avoidance if a nest location is discovered and the discovery shall be reported to CDFW by the qualified Crotch's bumble bee biologist within 24 hours of discovery. If Crotch's bumble bee and/or Crotch's bumble bee nests are detected, surveys should record the location of the nest, nest substrate, slope, aspect, and distance to nearest active foraging areas (if known), number of Crotch's bumble bee observed, and vegetation used by individuals. During active construction, the Crotch's bumble bee biologist will monitor the nest on a weekly basis and will update the buffer size as necessary and in coordination with CDFW to ensure protection. Construction activities will not occur within the buffer until the nest is no longer active as determined by the qualified Crotch's bumble bee biologist[5] and CDFW will be notified prior to deactivation of the avoidance buffer and commencement of construction activities in this area. The Crotch's bumble bee qualified biologist shall submit results of preconstruction surveys to CDFW prior to start of vegetation removal activities and shall provide a weekly status update should a Crotch's bumble bee nest no disturbance buffer be established and until the nest is determined to be no longer active.

BIO-5 Herbicide and insecticide use shall be limited to spot spraying individual plants that are not in bloom and avoiding all rodent burrows to the greatest extent possible within suitable Crotch's bumble bee nesting areas. The qualified Crotch's bumble bee biologist will review the proposed spray areas with OCWR and contractor to ensure burrows and nectar sources are avoided to the greatest extent possible.

BIO-6 Temporary impacts to nectar sources shall be restored in-place through either broadcasting of appropriate Crotch's bumble bee seed mix[6] or by incorporating the seed mix into a hydro-mulch application. Minor vegetation trimming to preferred nectar sources, that are expected to recover naturally within one year, do not require restoration.

BIO-7 A qualified Crotch's bumble bee biologist shall attend the pre-construction meeting (see BIO-2) to educate construction staff (including supervisors, equipment operators, other site employees, and biological monitors) on all Crotch's bumble bee specific mitigation measures required by this Crotch's Bumble Bee Avoidance Plan. Training materials (tri-fold colored pamphlet) shall be provided at the training and shall include detailed photos[7] that can be utilized as a reference for qualified biological

[5] Monitoring periods of 1 hour for 3 consecutive days shall be conducted by the qualified Crotch's bumble bee biologist and a determination of "no longer active" shall be rendered if no activity has been observed and supported by lack of observation of gynes and/or males foraging.

[6] Outside of fuel modification areas, the appropriate seed mix shall include at least one annual and perennial species of preferred nectar sources, that are region-specific herbs/shrubs from the following plant list: sages (*Salvia* spp.), buckwheat (*Eriogonum* spp.), lupines (*Lupinus* spp.), legumes (Fabaceae family), owl's clover (*Orthocarpus* spp.), and milkweed (*Asclepias* spp.). Within fuel modification areas, the seed mix will contain suitable nectar sources that are consistent with the Orange County Fire Authority (OCFA) Fuel Modification Zone Plant List (see Appendix C4, Crotch's Bumble Bee Habitat Avoidance Plan, Appendix B). The plant palette should be developed in conjunction with the Crotch's bumble bee qualified biologist and the OCWR biologist and approved by CDFW to develop a seed mix that satisfies all restoration/stabilization requirements.

[7] Appendix C4, Crotch's Bumble Bee Habitat Avoidance Plan, Appendix C.

monitors to identify Crotch's bumble bee and implement the avoidance measures appropriately. Training Materials will assist in training contractor staff in recognizing bumble bees and inform them of potential penalties (e.g., monetary fines, project delays, jail time) for take of Crotch's bumble bee or other CESA violations.

BIO-8 CDFW shall be notified at least 14 calendar days prior to initial vegetation removal and ground disturbing activities in areas identified as potential Crotch's bumble bee nesting, foraging, or overwintering habitat, regardless of time of year. All Crotch's bumble bee detections shall be reported to CDFW via email within 24 hours of detection. A qualified biological monitor that has received the Crotch's bumble bee training and is in possession of the Training Materials shall monitor the staking of limits, clearing and grubbing, and removal of stockpiled vegetation from the site until the site no longer provides potential Crotch's bumble bee habitat. The biological monitor shall be responsible for monitoring Crotch's bumble bee when they are detected and shall ensure active foraging patches are not removed until the Crotch's bumble bee(s) leave the area on their own volition. The biological monitor, shall monitor the slow and methodical removal of vegetation in patches and by hand where necessary should Crotch's bumble bee nesting or overwintering behavior be observed (scanning the ground instead of targeting flowering resources, seen entering a burrow or disappearing into thick vegetation and not re-emerging, sitting on the open ground), until it is confirmed that a Crotch's bumble bee nest or overwintering site is not present. Should the project result in unpermitted take of a Crotch's bumble bee individual or nest, work shall immediately halt and CDFW shall be immediately notified by the Crotch's bumble bee biologist.

3.4.8 Greenhouse Gas Emissions

		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
	Would the project:				
a.	Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?			X	

A greenhouse gas emissions impact study was conducted for the Project and is provided in Appendix B. The following summarizes the results and conclusions.

Existing Conditions:

GHGs – primarily CO2, methane (CH4), and nitrous oxide (N2O), collectively reported as carbon dioxide equivalents (CO2e) – are directly emitted from stationary source combustion of natural gas in equipment such as water heaters, boilers, process heaters, and furnaces. GHGs are also emitted from mobile sources, such as on-road vehicles and off-road construction equipment, burning fuels such as

gasoline, diesel, biodiesel, propane, or natural gas (compressed or liquefied). Indirect GHG emissions result from electric power generated elsewhere (i.e., power plants) used to operate process equipment, lighting, and utilities at a facility. Also, included in GHG quantification is electric power used to pump the water supply (e.g., aqueducts, wells, pipelines) and disposal and decomposition of municipal waste in landfills (CARB 2022a).

Discussion:

a. Would the project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

Less Than Significant Impact. Using CalEEMod, direct on-site and off-site GHG emissions were estimated for construction and operation of the Project, and indirect off-site GHG emissions were estimated to account for electric power used by the proposed Project, water conveyance, and solid waste disposal. In addition, stationary source emission calculations were performed for the RNG thermal oxidizer and the RNG flare, ~~as well as~~ emergency generator usage, fugitive emissions, as well as product gas combustion. ~~All CO2 derived from LFG is considered biogenic (i.e., are part of the natural biological/physical carbon cycle) and does not result in a net increase in atmospheric CO2. Therefore, for the tail gas streams, only the combustion byproducts of CH4 and N2O (i.e., anthropogenic GHGs) are included in this analysis.~~

The SCAQMD has officially adopted an industrial facility mass emissions threshold of 10,000 metric tons (MT) CO2e per year. Table 3-7 shows the incremental GHG emissions and evaluates them against SCAQMD significance thresholds. Operational measures incorporate typical code-required energy and water conservation features. Off-site traffic impacts are included in these emissions estimates, along with construction emissions amortized over 30 years.

Table 3-7. Greenhouse Gas Emissions Device Breakdown and Significance Evaluation

Emission Source		CO_2	CH_4	N_2O	R	Total CO_{2e}
[A]	Baseline Existing LFG Flare Station Emissions[1]	135,768	1.39	0.14	–	135,844
[B]	TOU/Flare[2] (from Tail Gas)	66,681	0.11	0.01	–	66,687
[C]	Off-site Combustion of Product Gas[3]	69,061	1.28	0.13	–	69,132
[D] = [B] + [C]	**Total GHGs associated with Proposed Landfill Gas Usage[4]**	**135,742**	**1.39**	**0.14**	**–**	**135,818**
[E]	TOU[2] (from Pilot Gas)	8,195	0.15	0.02	–	8,204
[F]	Flare[5] (from Pilot Gas)	46	0.00	0.00	–	46.51
[G]	Emergency Engine[6]	18	0.00	0.00	–	18.45
[H]	Fugitive Emissions[7]	1	12.23	–	–	306.44
[I]	Construction[8]	40	0.00	0.00	0.02	40.70
[J]	Miscellaneous Operational Sources[9]	148	0.46	0.01	0.98	162.17
[K] = [B + C + E + F + G + H + I + J]	**Proposed Project**	**144,191**	**14.23**	**0.16**	**1.00**	**144,596**
[L] = [K] – [A]	Proposed Project – Baseline Existing LFG Flare Emissions	**8,423**	**12.85**	**0.02**	**1.00**	**8,752**
[M]					SCAQMD GHG Threshold	10,000
Is [L] > [M]?					**Significant?**	**No**

Sources: SCAQMD 2008b, Yorke Engineering, LLC, 2025 (Appendix B), CalEEMod version 2022.1.1.29.

Notes:

[1] Baseline existing flare station emissions are based on total inlet flow rate of 6,000 scfm, the equivalent fuel rate being directed to the proposed RNG facility (Yorke Engineering, LLC, 2025, Appendix B), Continuous operation. The total inlet flow rate was separated into CO_2 and CH_4 components in the stream, with CO_2 emissions directly emitted from the flare and CH_4 combustion estimated using natural gas GHG emission factors.

[2] Proposed TOU: 2,309 scfm Process Gas 1 (~6.3 mmBtu/hr) + 883 scfm Process Gas 2 (~6.1 mmBtu/hr) + 280 scfm Supplemental Fuel (~17.6 mmBtu/hr), Continuous operation. The control of process gas is exclusively through the thermal oxidizer or the flare. Maximum GHG emissions results from the combustion of process gas from the TOU and Flare were evaluated in Appendix B. The combustion from the TOU, representing the maximum potential GHG emissions and normal operations is shown in this table.

[3] Off-site Combustion of Product Gas is based on 2,412 scfm product gas stream flowrate from PFD (Yorke Engineering LLC, 2025, Appendix B), Continuous operation.

[4] Note that the total GHGs associated with Proposed LFG usage is roughly equivalent to the GHGs from baseline LFG Flare Station

[5] Proposed Flare: ~1.6 scfm Supplemental Fuel (0.1 mmBtu/hr), Continuous operation. Off-Spec Flare Gas is not included since the flare will not be used concurrently with the Thermal Oxidizer, under which condition, only pilot gas consumption would occur at flare. Off-Spec Flare will only be operated in case of a system upset or if RNG is off-spec.

[6] Proposed Engine: Engine is natural gas fired and used for maintenance and testing.

[7] Fugitive Emissions: Component counts from Tent Engineering and SoCalGas, using SCAQMD Guidelines for Reporting VOC Emissions from Component Leaks, Continuous Leaking (SCAQMD 2015)

[8] Construction emissions shown in Appendix B (Yorker Engineering LLC) Table 3-9 (1,221 MT CO2e), amortized over 30 years.

[9] Miscellaneous Operational Sources: Include Mobile, Area, and Energy sources from CalEEMod.

~~**Table 3-8. Greenhouse Gas Emissions Summary and Significance Evaluation**~~

~~GHGs~~	~~Baseline (MT/yr)[1]~~	~~Construction (MT/yr)~~	~~Operation (MT/yr)~~ [2]	~~Total[2] (MT/yr)~~	~~Expected Net Change in Emissions (MT/yr)~~	~~Threshold (MT/yr)~~	~~Significance~~
~~Anthropogenic CO2~~	~~0~~	~~1,174.70~~	~~199.10~~	~~238.26~~	~~238.26~~	~~–~~	~~–~~
~~CH4~~	~~6~~	~~0.06~~	~~0.74~~	~~0.75~~	~~-4.80~~	~~–~~	~~–~~
~~N2O~~	~~1~~	~~0.06~~	~~0.06~~	~~0.06~~	~~-1.03~~	–	–
~~R~~	~~0~~	~~0.4~~	~~0.98~~	~~0.99~~	~~0.99~~	~~–~~	~~–~~
~~Anthropogenic Total (as CO2e)~~	~~464~~	~~1,194~~	~~236.89~~	~~276.70~~	~~-188~~	~~10,000~~	~~LTS~~

~~Sources: SCAQMD 2008b, Yorke 2024 (Appendix B), CalEEMod version 2022.1.1.26.~~

~~[1]All CO2 derived from LFG is considered biogenic and does not result in a net increase in atmospheric CO2. All CH4 and N2O emissions are anthropogenic and result in net increases in atmospheric GHG. Thus, the combustion byproducts of CH4 and N2O are included in this analysis.~~

~~[2]Total CO2e emissions comprises annual operational emissions plus construction emissions amortized over 30 years.~~

The proposed Project would provide a beneficial use and as shown in Table 3-~~8~~7, incremental GHG emissions would be below the proposed GHG significance threshold for land use projects.

Additionally, the Project will contribute to California Public Utility Commission's Renewable Gas Program to procure RNG made by methane from organic waste from landfills and other sources. By processing LFG into RNG and delivering it to SoCalGas, the Project will reduce the volume of LFG being flared and the associated GHG emissions from the flares. ~~reduce the volume of LFG being flared, and help reduce greenhouse gas (GHG) emissions from the FRB Landfill~~ The annual CH_4 emissions avoided from 6,000 scfm of LFG is equivalent to 30,051.4 metric tons of CH_4 per year. Based on 2020 Bowerman Landfill GHG data, the 2020 disposable quantity of 1,998,625 metric tons of waste resulted in 14,179.32 metric tons of CH_4. Based on this ratio and the Bowerman Landfill permitted capacity of 8,000 tons per day or 2.9 million metric tons per year, the 6,000 scfm of LFG collected and sent into the SCE pipeline would reduce the equivalent amount of CH_4 from waste collected at the landfill for an approximately 1.5-year period. ~~The RNG plant will have the capacity to process 6,000 standard cubic feet per minute of LFG which is equivalent to avoiding the GHG emissions from 60,196 tons of landfilled waste each year.~~ Thus, impacts would be less than significant.

Mitigation Measures: No mitigation is required.

3.4.19 Utilities and Service Systems

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project: Require or result in the relocation or construction of new or expanded water, wastewater				

		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a.	treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?			X	

Existing Conditions:

Reclaimed water is supplied to the FRB Landfill by an Irvine Ranch Water District (IRWD) reclaimed water line that feeds into a 100,000-gallon reclaimed water tank, located adjacent to the FRB landfill administration building (about 400 feet north of the Project RNG site). Potable water is supplied by an IRWD potable water line that currently supplies water to the Bowerman Power Plant and the FRB Landfill site operations building and crew quarters. Sewage from the FRB landfill administration and crew quarters buildings currently goes to an on-site septic system and leach field. The Bowerman Power Plant is served by a separate on-site septic system and leach field.

Stormwater runoff generated within the FRB Landfill boundary is contained in concrete sedimentation basins owned, operated, and maintained by OCWR. Stormwater contained in the concrete detention basins discharge to the Bee Canyon Retarding Basin owned by the OCFCD via Bee Canyon Wash.

Electrical power service is provided by SCE and natural gas will be provided by SoCalGas. SCE, SoCalGas, and local telecommunications companies operate and maintain transmission and distribution infrastructure in the Project area.

Discussion:

a. Would the project require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?

Less Than Significant Impact. A Water Infrastructure and Availability Study was prepared for the Project; see Appendix D. The FRB Landfill is contractually obligated to provide non-potable water to Bowerman Power; therefore, it is assumed that the FRB Landfill's non-potable water use assumptions consider the demands of Bowerman Power. The RNG Plant will tie into the existing non-potable water system. Non-potable water demands will include handwashing stations and toilet flushing in the bathroom facilities. The bathroom facilities at Bowerman Power Plant utilize an on-site disinfection system. Non-potable water is pumped to a tank on top of the building housing the bathroom facilities and treated for potable use. Non-potable water used at the RNG Plant will be treated the same way. Due to the small number of employees, the limited hours of occupation, and the minimal demand for non-potable water in the RNG Plant bathroom facilities, the Project is anticipated to have minimal impacts on IRWD-owned non-potable water systems.

New on-site distribution lines will be needed for both potable and non-potable water systems, as well as a new collection line for the wastewater system (an on-site septic process) for the RNG Plant. Neither addition will cause significant changes in the volumes of water consumed or treatment capacity needs of the FRB landfill operations. No changes will be needed to the existing sediment basins within the FRB landfill, though a site-specific bioretention basin will be provided on the proposed Project site. Other utilities and service systems would require only minor connection modifications, which will all meet design and construction code requirements for the RNG Plant. The environmental effects associated with these necessary on-site utilities and service systems improvements will be in compliance with established regulatory requirements. Therefore, any environmental effects from the proposed utility improvements would be less than significant.

Mitigation Measures: No mitigation is required.

3.4.21 Mandatory Findings of Significance

		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Mandatory Findings of Significance					
a.	Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?		X		
b.	Does the project have impacts that are individually limited but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)			X	
c.	Does the project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?		X	~~X~~	

Discussion:

a. Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?

Less than Significant Impact with Mitigation Incorporated. As discussed in Section 3.4.4, Biological Resources, with adherence to Mitigation Measures **BIO-1, BIO-2, ~~and~~ BIO-3, BIO-4, BIO-5, BIO-6,**

BIO-7, and BIO-8, the proposed Project would not have the potential to substantially degrade the quality of the existing environment, reduce habitat of fish or wildlife species, threaten plant or animal communities, and/or reduce the number or restrict the range of rare plants or animals.

In addition, as discussed in Section 3.4.5, Cultural Resources and 3.4.7, Geology and Soils, development of the FRB Landfill and associated infrastructure has disturbed the natural surface and subsurface deposits of the Project site and pipeline route. Intact cultural material may exist within undisturbed deposits. Adherence to Mitigation Measures **CUL-1, CUL-2, CUL-3**, **GEO-1, TCR-1, TCR-2, and TCR-3** would be required in the event unexpected resources are uncovered during the grading and excavation process. With implementation of recommended mitigation, the proposed Project is not expected to eliminate important examples of the major periods of California history or prehistory, and impacts would be less than significant.

Mitigation Measures: Mitigation Measures **BIO-1, BIO-2, BIO-3, BIO-4, BIO-5, BIO-6, BIO-7, BIO-8, CUL-1, CUL-2, CUL-3, GEO-1, TCR-1, TCR-2, and TCR-3.**

b. Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)

Less than Significant Impact. The Project would enable fuller utilization of the LFG gas generated at FRB Landfill that would otherwise be burned in the flares. The Project would not result in substantial population growth within the area, either directly or indirectly. Although the Project may incrementally affect other resources at a less than significant level, the Project's contribution to these effects is not considered "cumulatively considerable," in consideration of the relatively nominal impacts of the Project and the mitigation measures provided to lessen impacts. In addition, the proposed project will help reduce greenhouse gas emissions in the long-term by converting landfill gas that is currently flared into electricity, thereby utilizing a renewable energy resource. Therefore, cumulative impacts would be considered less than significant.

Mitigation Measures: No additional mitigation is required beyond what is already included previously.

c. Does the project have environmental effects that would cause substantial adverse effects on human beings, either directly or indirectly?

Less than Significant Impact with Mitigation Incorporated. Previous sections of this Initial Study/Mitigated Negative Declaration reviewed the proposed Project's potential impacts related to aesthetics, air quality, geology and soils, greenhouse gases, hydrology/water quality, noise, hazards and hazardous materials, traffic, and other issues. As concluded in these previous discussions, with the implementation of mitigation measure **AQ-1**, the proposed Project would result in less than significant environmental impacts; therefore, the proposed Project would not result in environmental impacts that would cause substantial adverse effects on human beings and impacts would be less than significant.

Mitigation Measures: No mitigation is required.

4.0 LIST OF PREPARERS

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5.0 REFERENCES

California Air Resources Board (CARB). 2022a. 2022 Scoping Plan for Achieving Carbon Neutrality. Website (https://ww2.arb.ca.gov/our-work/programs/ab-32-climate-change-scopingplan/2022-scoping-plan-documents).

California Air Resources Board (CARB). 2022b. Hotspots Analysis and Reporting Program Version 2 (HARP2) Air Dispersion Modeling and Risk Tool (ADMRT). Website (https://ww2.arb.ca.gov/our-work/programs/hot-spots-analysis-reporting-program).

California Department of Fish and Wildlife (CDFW). 2023. Survey Considerations for California Endangered Species Act (CESA) Candidate Bumble Bee Species. Available online at: https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=213150&inline (Accessed January 2025).

CDFW ~~(California Department of Fish and Wildlife)~~. 2025~~3~~a. California Natural Diversity Database. Accessed July 2025~~3~~.

CDFW. 2025~~3~~b. Biogeographic Information and Observation System (BIOS) Habitat Connectivity Viewer. Accessed July 2025~~3~~.

City of Irvine. 2022. City of Irvine General Plan, 2021-2029 Housing Element, May 6, 2022. Available online at: https://legacy.cityofirvine.org/civica/filebank/blobdload.asp?BlobID=34118. (Accessed August 2023).

CNPS (California Native Plant Society). 2023. Rare Plant Inventory. Available online at: https://rareplants.cnps.org/ (Accessed July 2023).

County of Orange. 1996. Natural Community Conservation Plan/Habitat Conservation Plan for the Central/Coastal Subregion of Orange County. Santa Ana, CA. July 17.

County of Orange. 2012. Orange County General Plan. Amended 2012. https://ocds.ocpublicworks.com/service-areas/oc-development-services/planning-development/codes-and-regulations/general-plan#:~:text=The%20County%20of%20Orange%20General%20Plan%20consists%20of,Resources%2C%20Recreation%2C%20Noise%2C%20Safety%2C%20Housing%2C%20and%20Growth%20Management.

iNaturalist. 2025. Available from https://www.inaturalist.org. Accessed January 2025.

Koch, J., J. Strange, and P. Williams. 2012. *Bumble Bees of the Western United States.*

P&D Consultants. 2006. Final Environmental Impact Report No. 804 for the RELOOC Strategic Plan – Frank T. Bowerman Landfill Implementation. August 2006.

Southern California Association of Governments (SCAG). 2024. The 2024-2050 Regional Transportation Plan/ Sustainable Communities Strategy. Website (scag.ca.gov/sites/main/files/file-attachments/23-2987-connect-socal-2024-final-complete040424.pdf?171417554

South Coast Air Quality Management District (SCAQMD). 2003. South Coast AQMD Cumulative Impacts Working Group, White Paper on Potential Control Strategies to Address Cumulative Impacts From Air Pollution, August 2003, Appendix D, Cumulative Impact Analysis Requirements Pursuant to CEQA, at D-3. Website (http://www.aqmd.gov/docs/defaultsource/Agendas/Environmental-Justice/cumulative-impacts-working-group/cumulative-impactswhite-paper.pdf).

USFWS (United States Fish and Wildlife Service). 2023a. Critical Habitat. Available online at: https://www.fws.gov/project/critical-habitat (Accessed July 2023).

USFWS. 2023b. National Wetlands Inventory. Available online at: https://www.fws.gov/program/national-wetlands-inventory/wetlands-mapper (Accessed July 2023).

USGS (United States Geological Survey). 1997. 7.5-minute Quadrangle Map, El Toro.

FIGURES

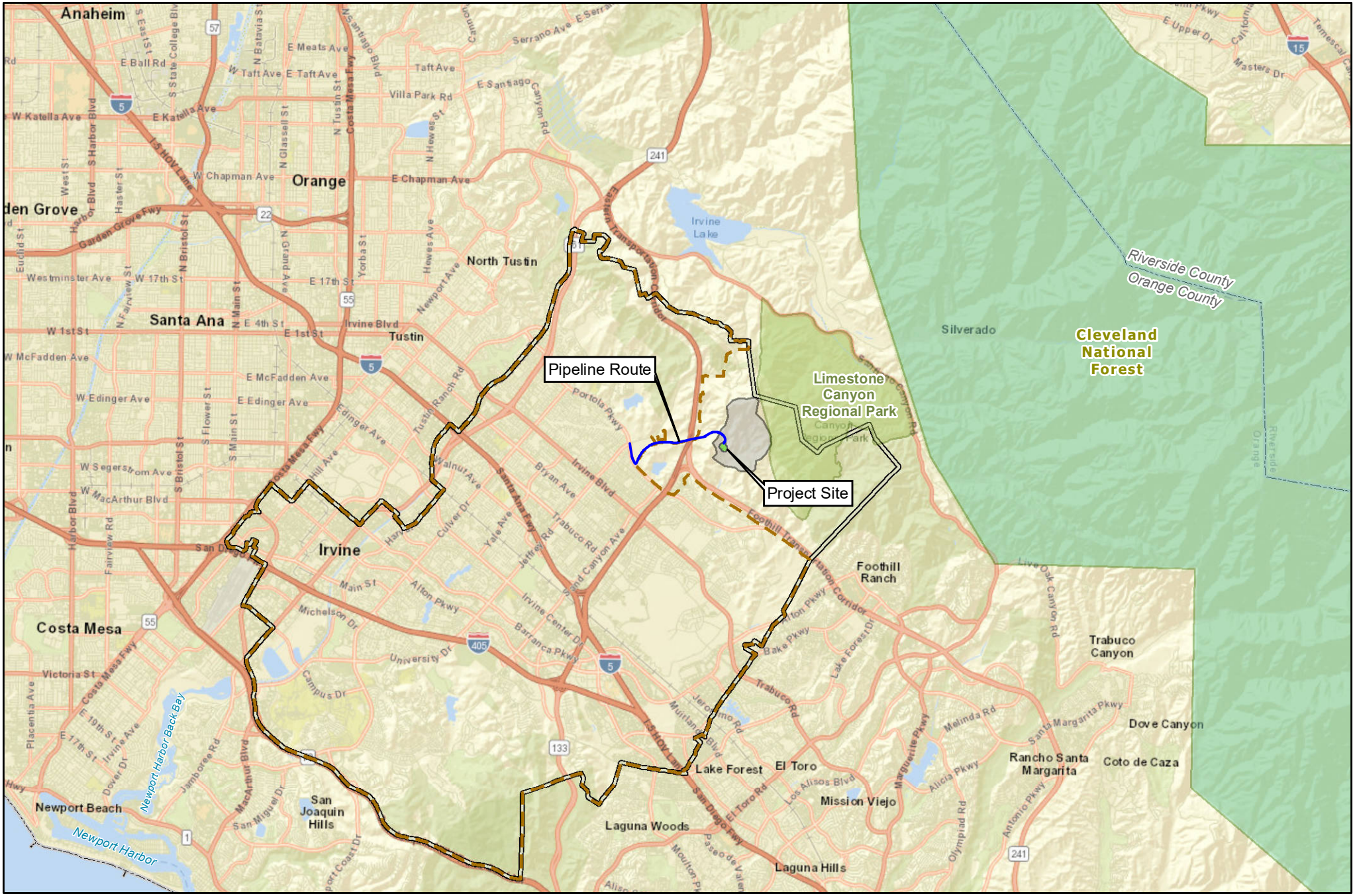
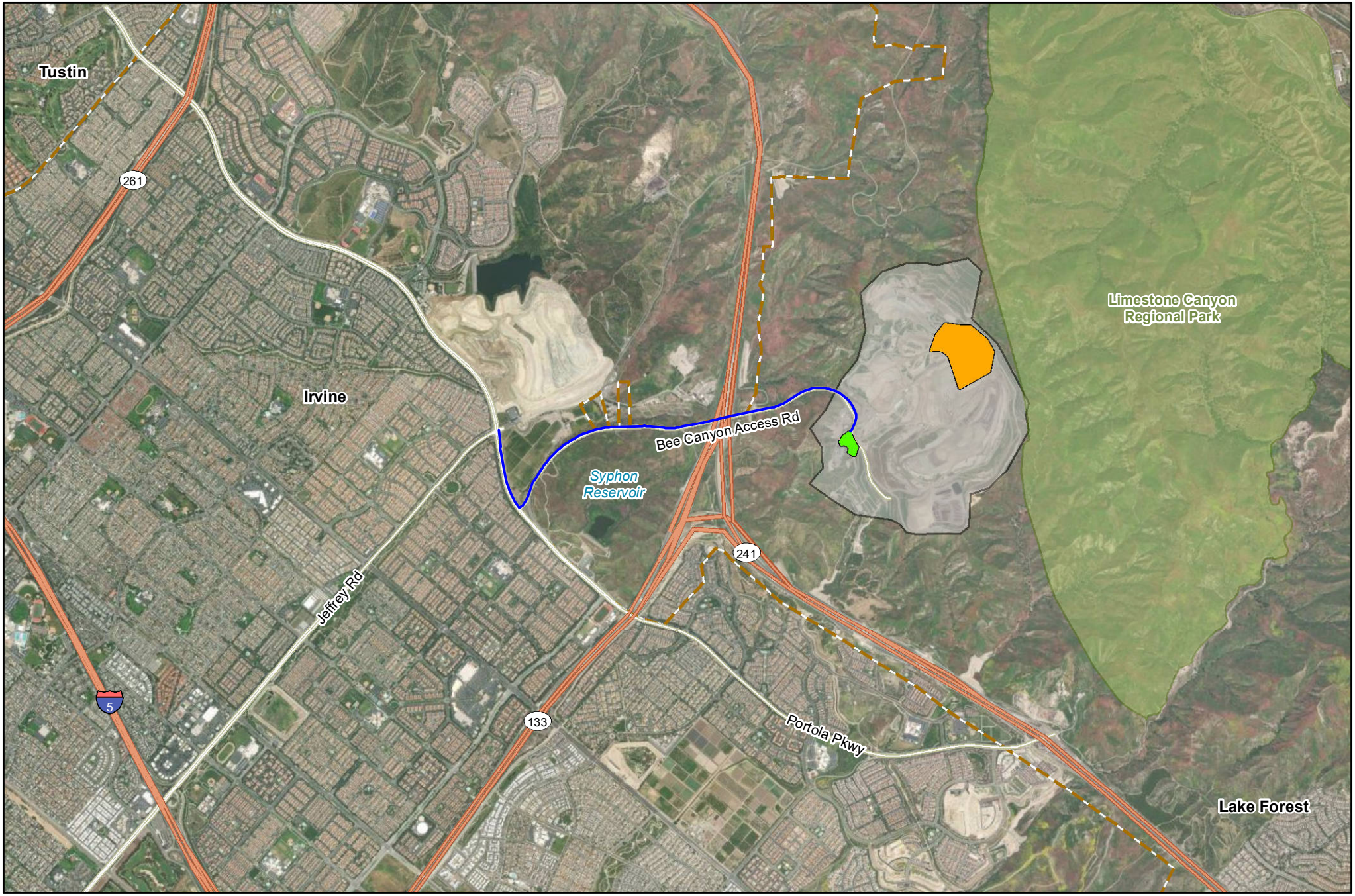


Figure 2-1
Project Vicinity

Bowerman Power RNG Plant Project
Orange County, CA



NOT FOR CONSTRUCTION

Figure 2-2
Project Location

Bowerman Power RNG Plant Project
Orange County, CA

Project Lease Boundary
Project Site
Pipeline Route

Bowerman Landfill
Bowerman Landfill Soil Stockpile Area

Disturbed Area for Grading Replanted for Fire Fuel Modification
Fuel Modification Area
Temporary Disturbed Area for Trenching
Fire Water Line

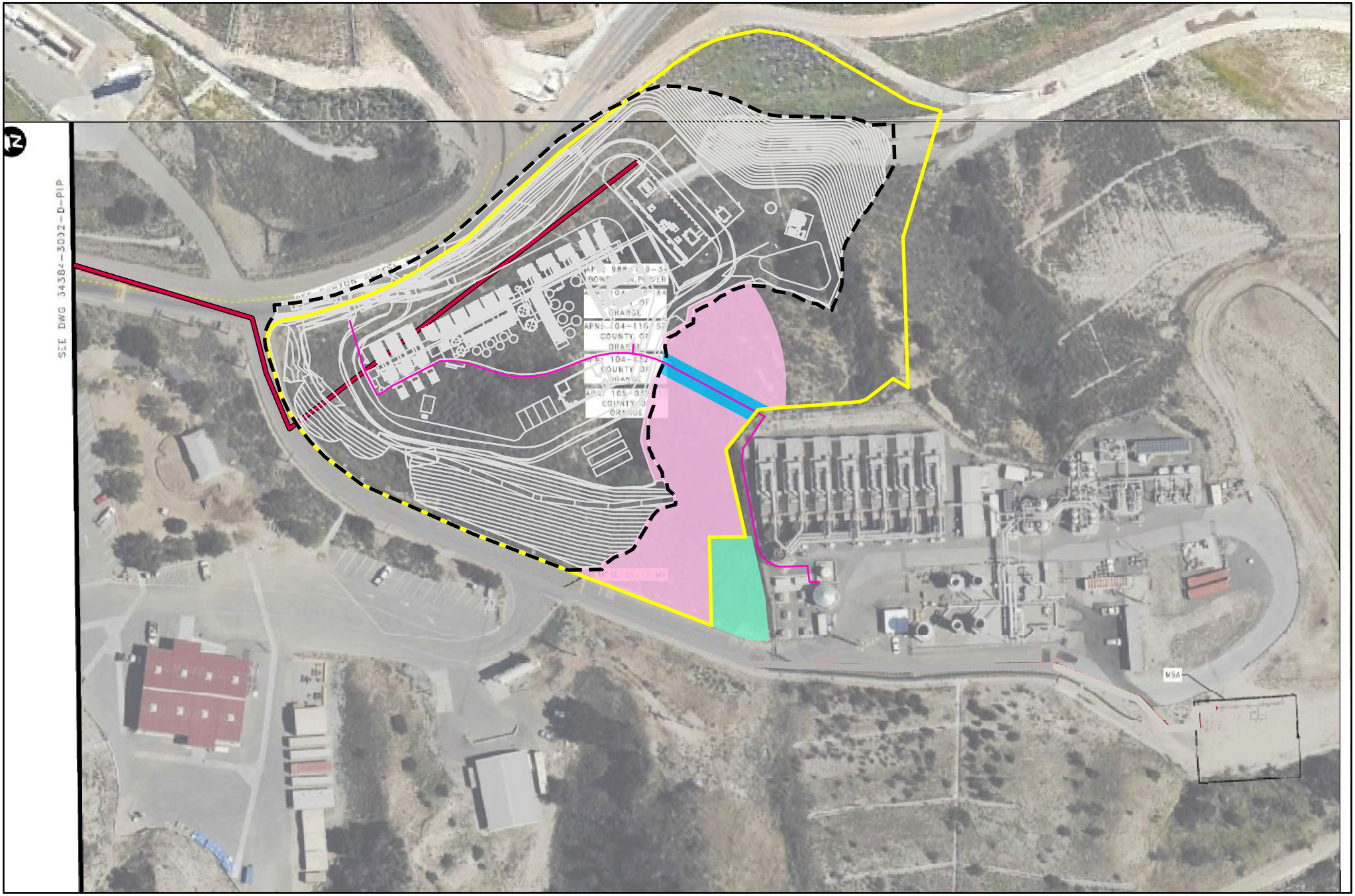
N

0 250 500 1,000 Feet

NOT FOR CONSTRUCTION

Figure 2-3
Project RNG Plant Site and Borrow Area Locations

Bowerman Power RNG Plant Project
Orange County, CA



Pipeline Route (underground)

Project Lease Boundary

Project Site

NOT FOR CONSTRUCTION

Fire Water Line (underground)

Disturbed Area for Grading Replanted for Fire Fuel Modification

Fuel Modification Area

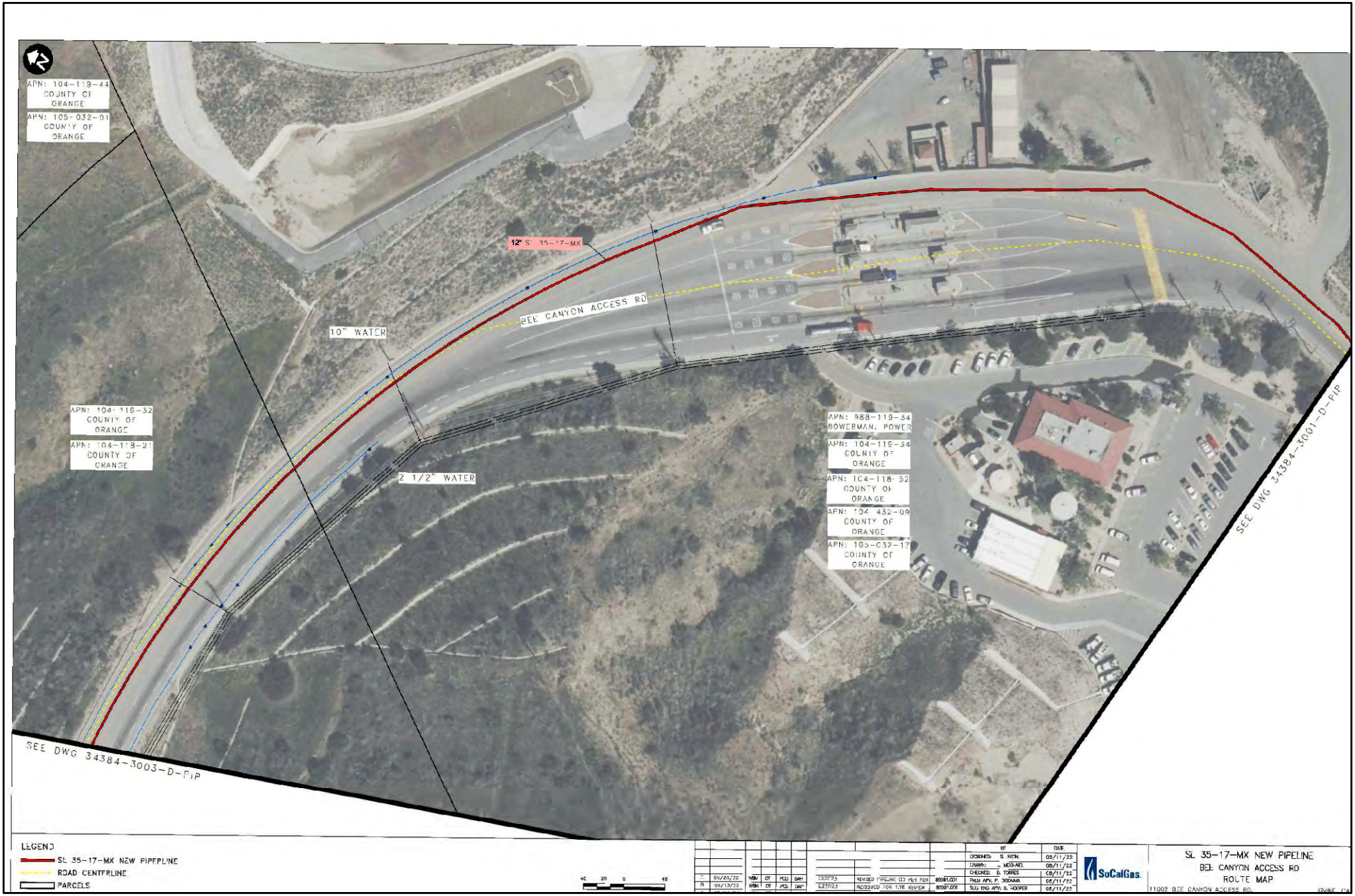
Temporary Disturbed Area for Trenching

N

0 25 50 100 Feet

Figure 2-4.1
Pipeline Route
Sheet 1 of 12

Bowerman Power RNG Plant Project
Orange County, CA



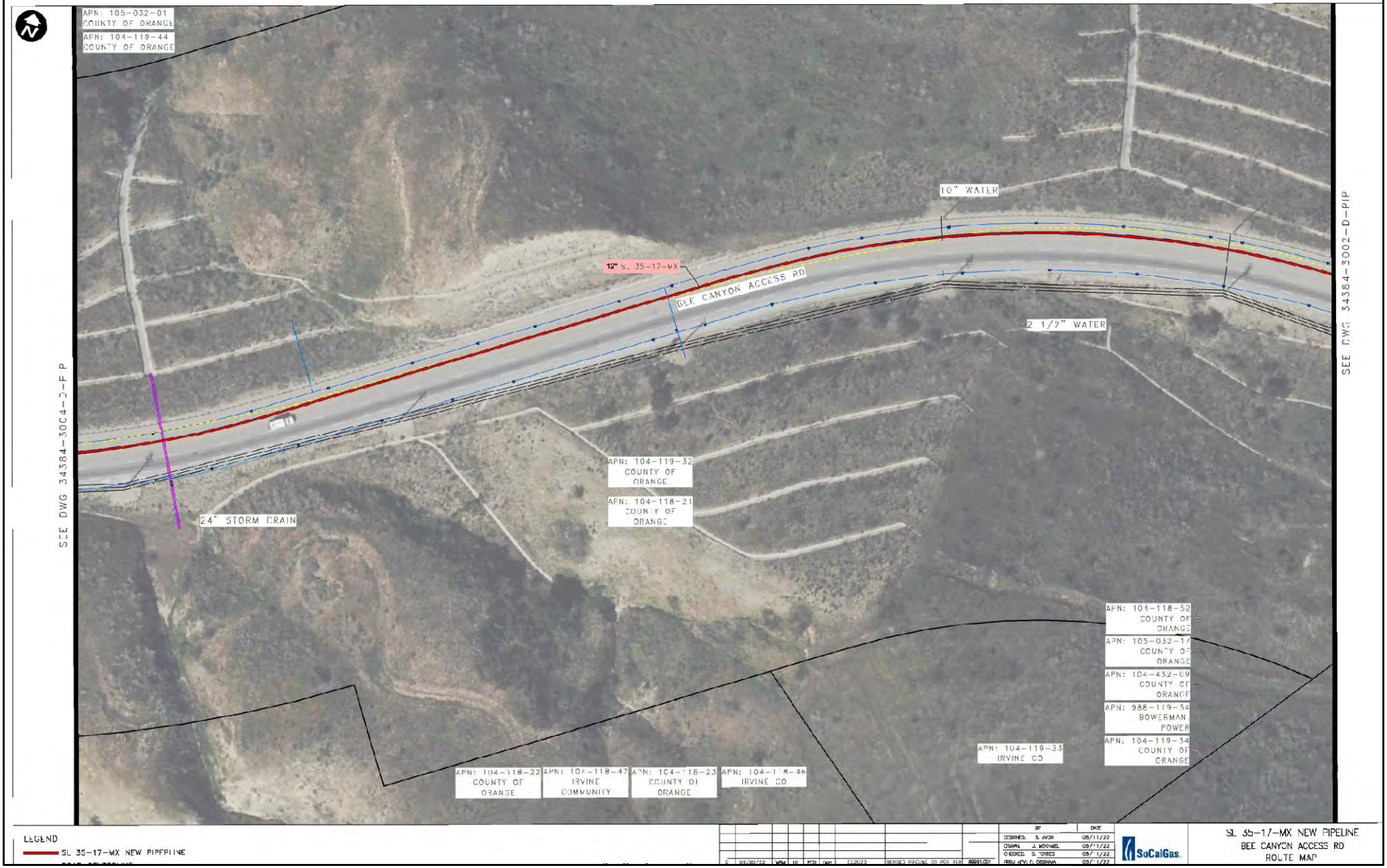
Pipeline Route (underground)

0 25 50 100 Feet

NOT FOR CONSTRUCTION

Figure 2-4.2
Pipeline Route
Sheet 2 of 12

Bowerman Power RNG Plant Project
Orange County, CA



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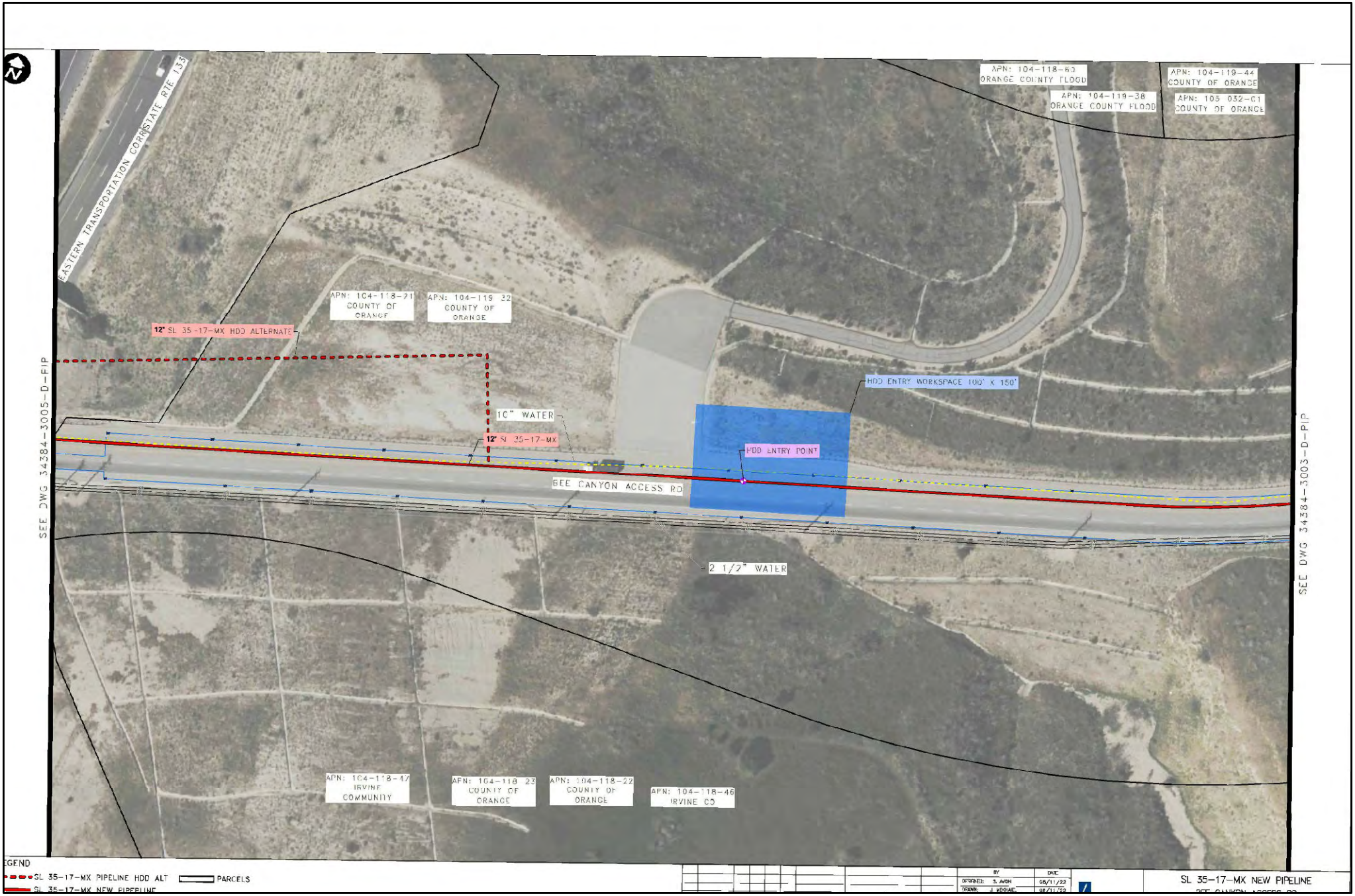
N

0 25 50 100 Feet

NOT FOR CONSTRUCTION

Figure 2-4.3
Pipeline Route
Sheet 3 of 12

Bowerman Power RNG Plant Project
Orange County, CA



Pipeline Route (underground)

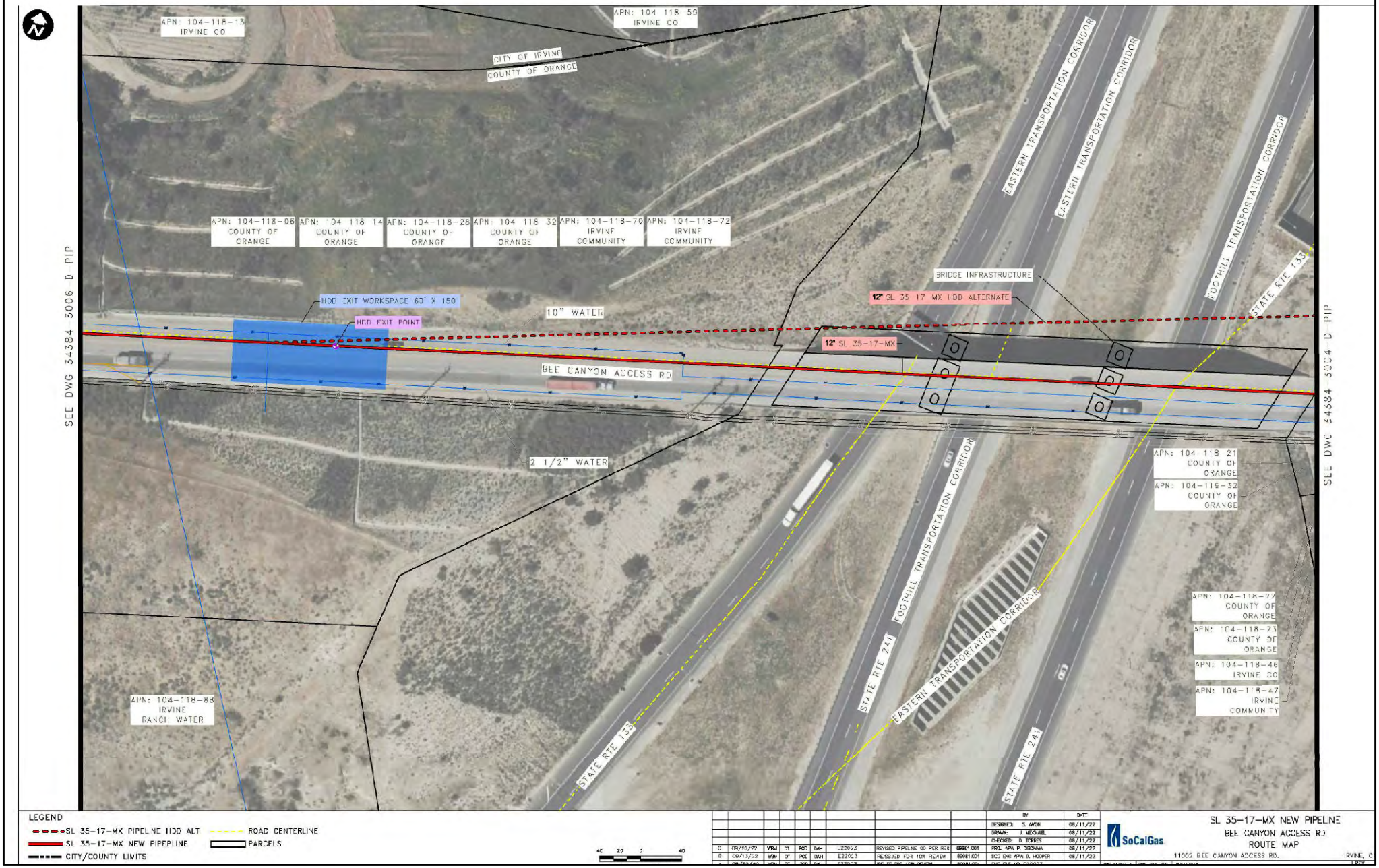
N

0 25 50 100 Feet

NOT FOR CONSTRUCTION

Figure 2-4.4
Pipeline Route
Sheet 4 of 12

Bowerman Power RNG Plant Project
Orange County, CA



Pipeline Route (underground)

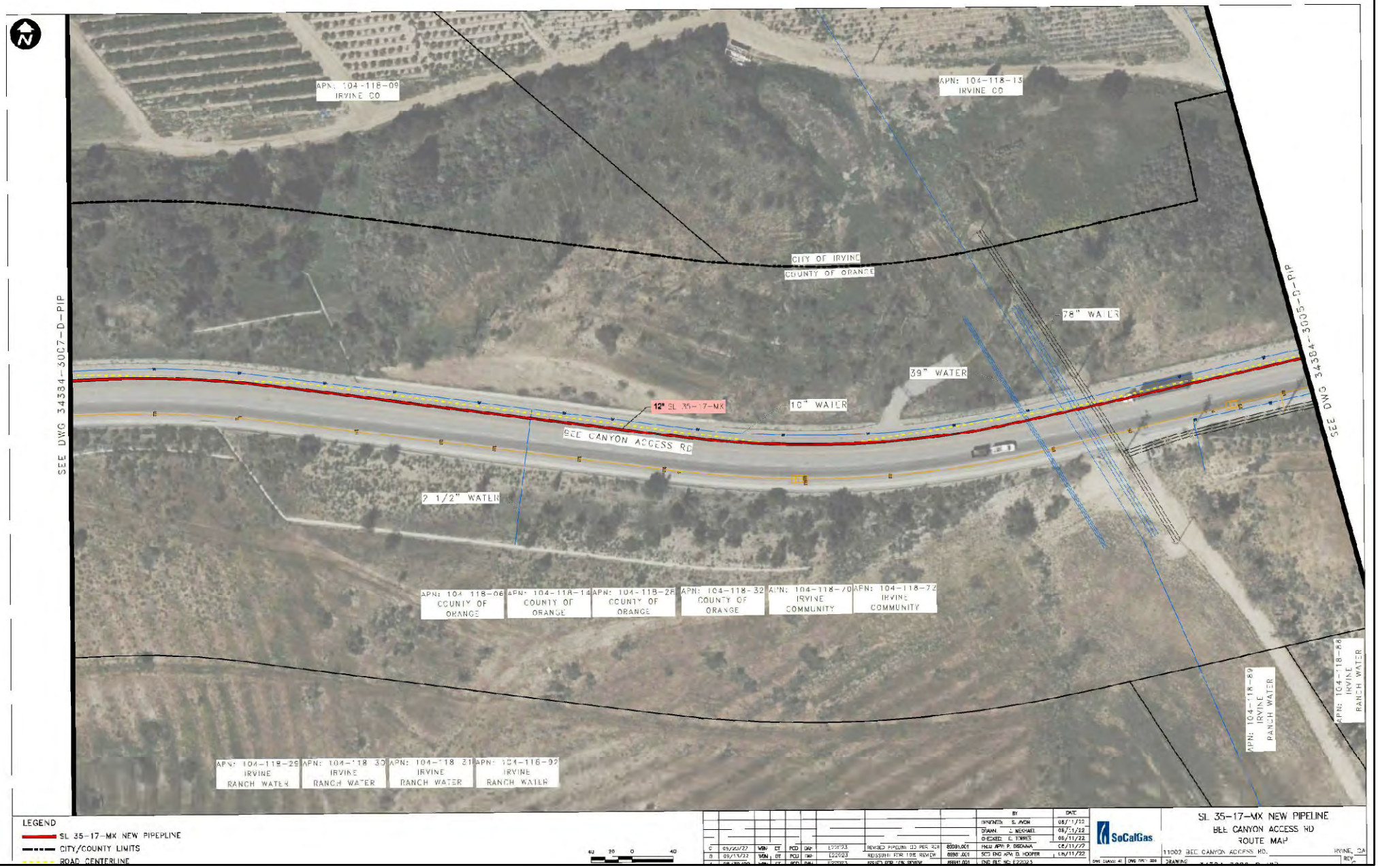
NOT FOR CONSTRUCTION

N

0 25 50 100 Feet

Figure 2-4.5
Pipeline Route
Sheet 5 of 12

Bowerman Power RNG Plant Project
Orange County, CA



Pipeline Route (underground)

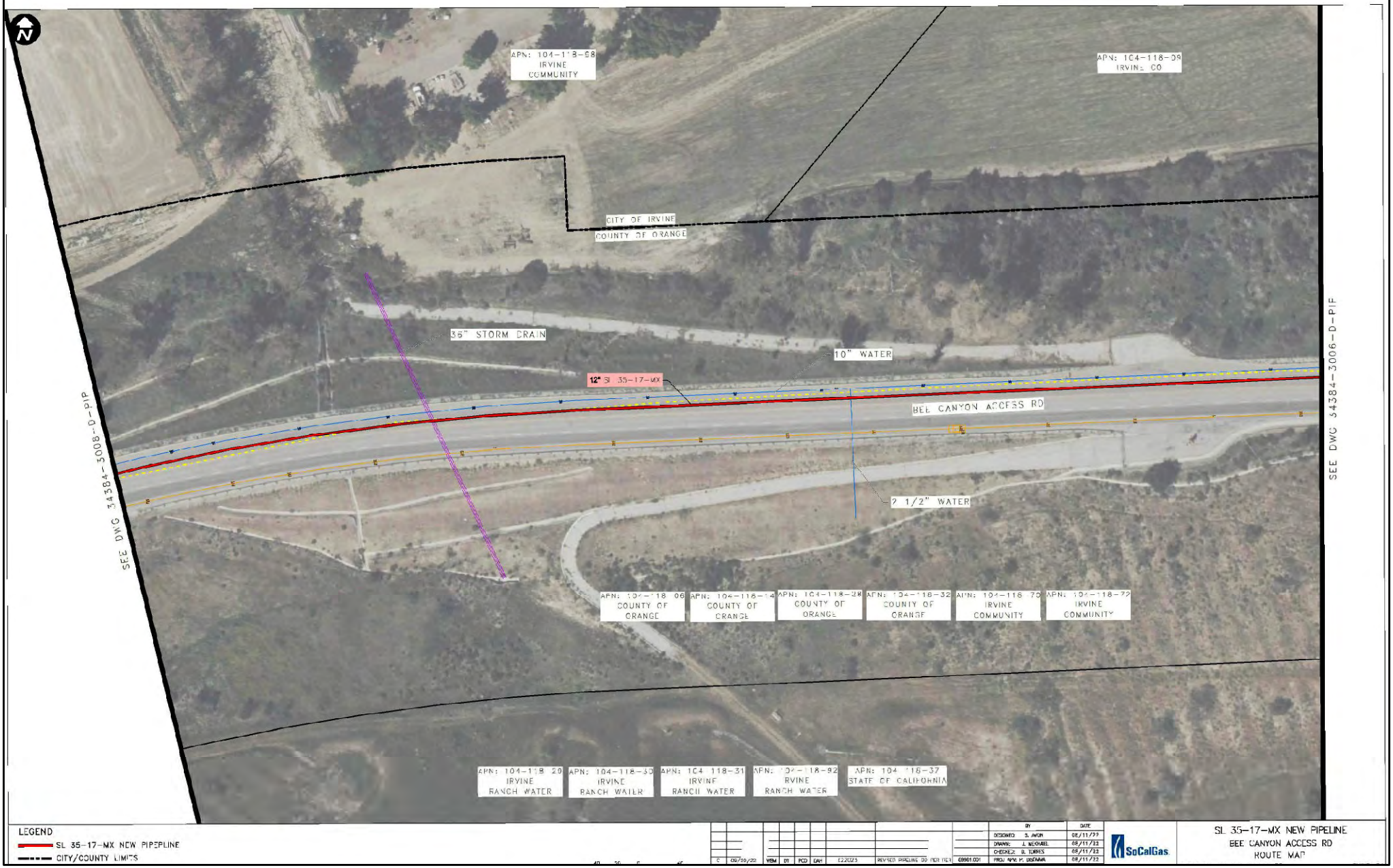
N

0 25 50 100 Feet

NOT FOR CONSTRUCTION

Figure 2-4.6
Pipeline Route
Sheet 6 of 12

Bowerman Power RNG Plant Project
Orange County, CA



Pipeline Route (underground)

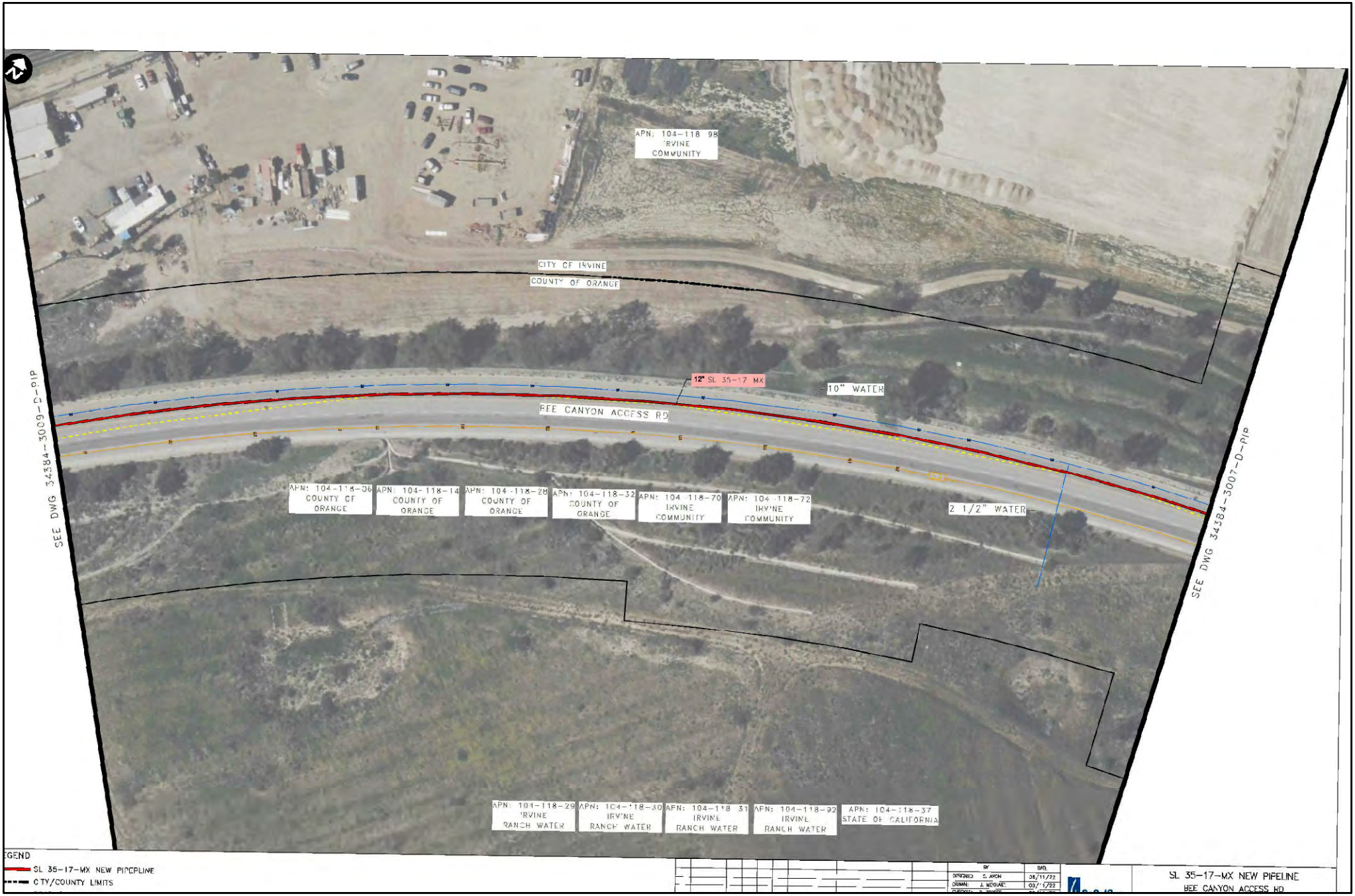
N

0 25 50 100 Feet

NOT FOR CONSTRUCTION

Figure 2-4.7
Pipeline Route
Sheet 7 of 12

Bowerman Power RNG Plant Project
Orange County, CA



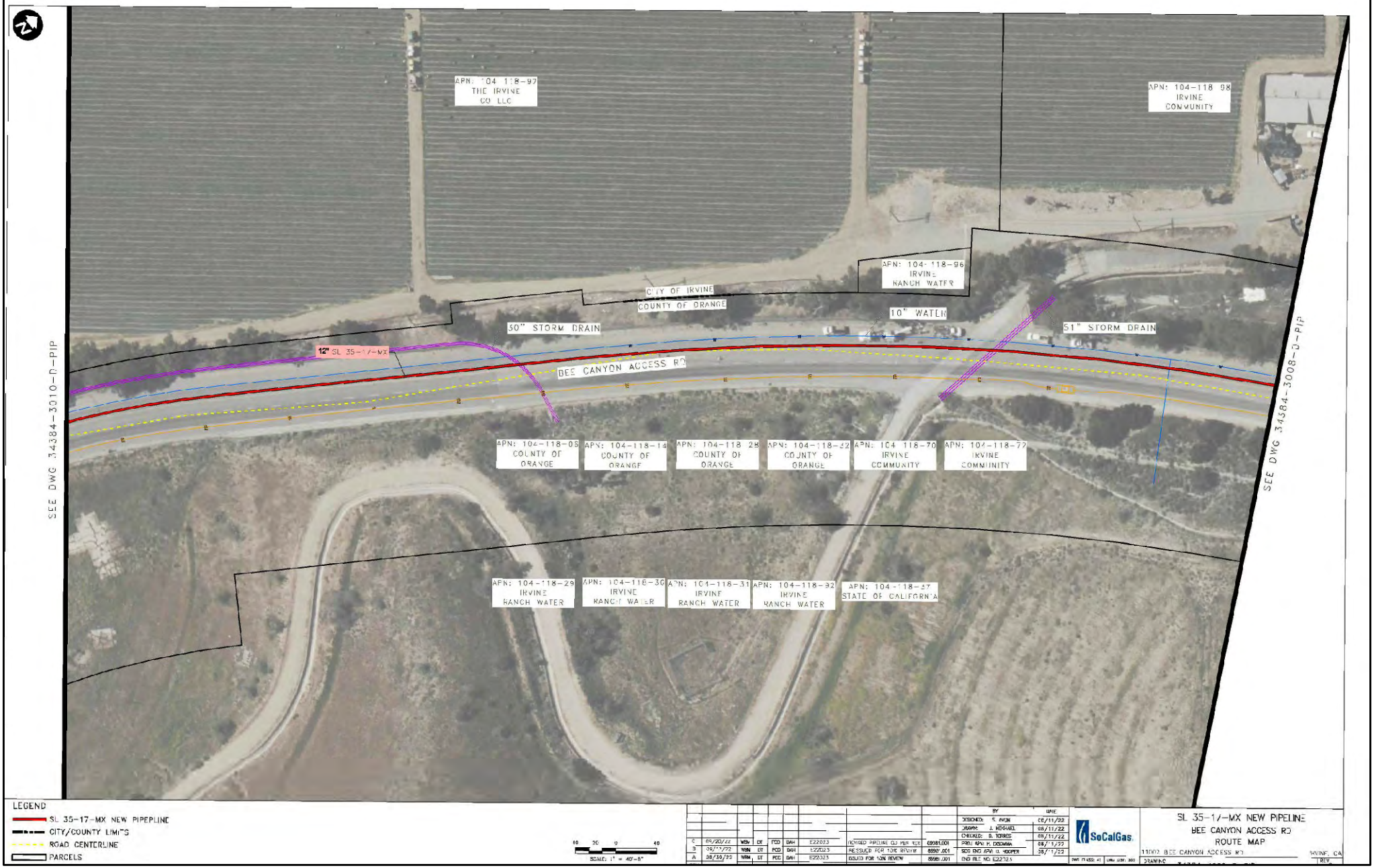
Pipeline Route (underground)

0 25 50 100 Feet

NOT FOR CONSTRUCTION

Figure 2-4.8
Pipeline Route
Sheet 8 of 12

Bowerman Power RNG Plant Project
Orange County, CA



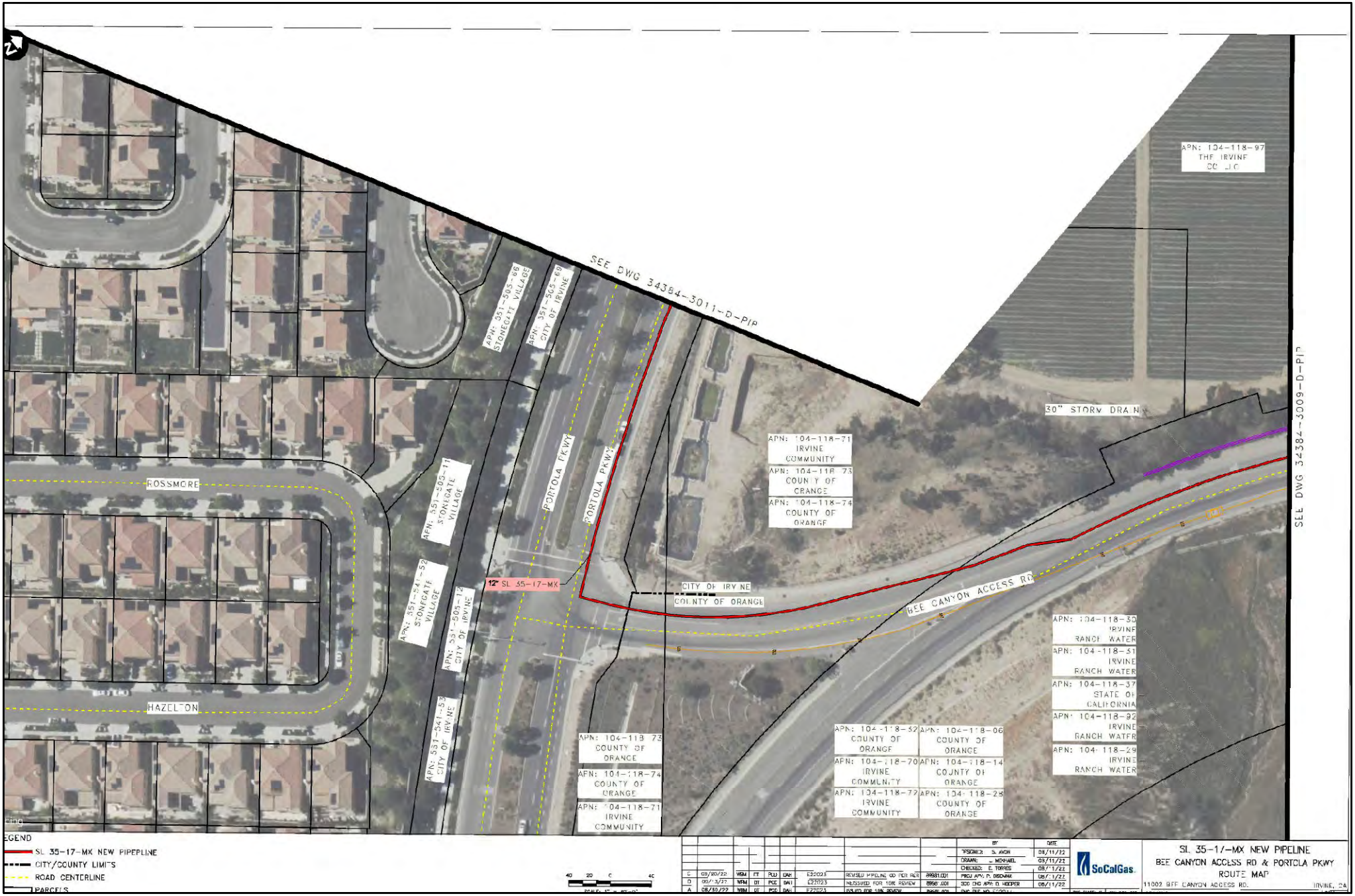
Pipeline Route (underground)

0 25 50 100 Feet

NOT FOR CONSTRUCTION

Figure 2-4.9
Pipeline Route
Sheet 9 of 12

Bowerman Power RNG Plant Project
Orange County, CA



Pipeline Route (underground)

0 25 50 100 Feet

NOT FOR CONSTRUCTION

Figure 2-4.10
Pipeline Route
Sheet 10 of 12

Bowerman Power RNG Plant Project
Orange County, CA

Pipeline Route (underground)

N

0 25 50 100 Feet

NOT FOR CONSTRUCTION

Figure 2-4.11
Pipeline Route
Sheet 11 of 12

Bowerman Power RNG Plant Project
Orange County, CA

Pipeline Route (underground)

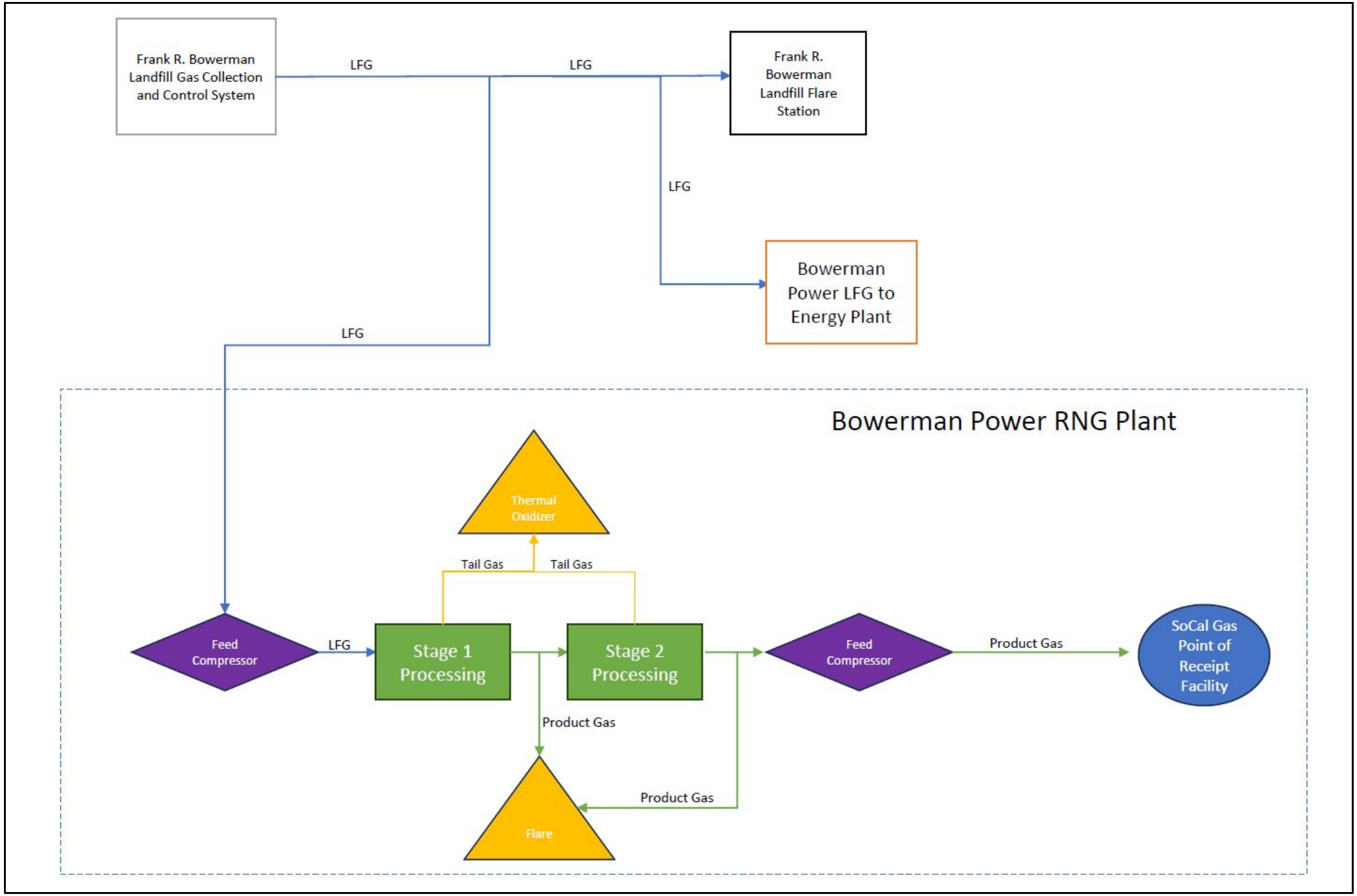
N

0 25 50 100 Feet

NOT FOR CONSTRUCTION

Figure 2-4.12
Pipeline Route
Sheet 12 of 12

Bowerman Power RNG Plant Project
Orange County, CA



NOT FOR CONSTRUCTION

Figure 2-5
RNG Process Design Flow

Bowerman Power RNG Plant Project
Orange County, CA

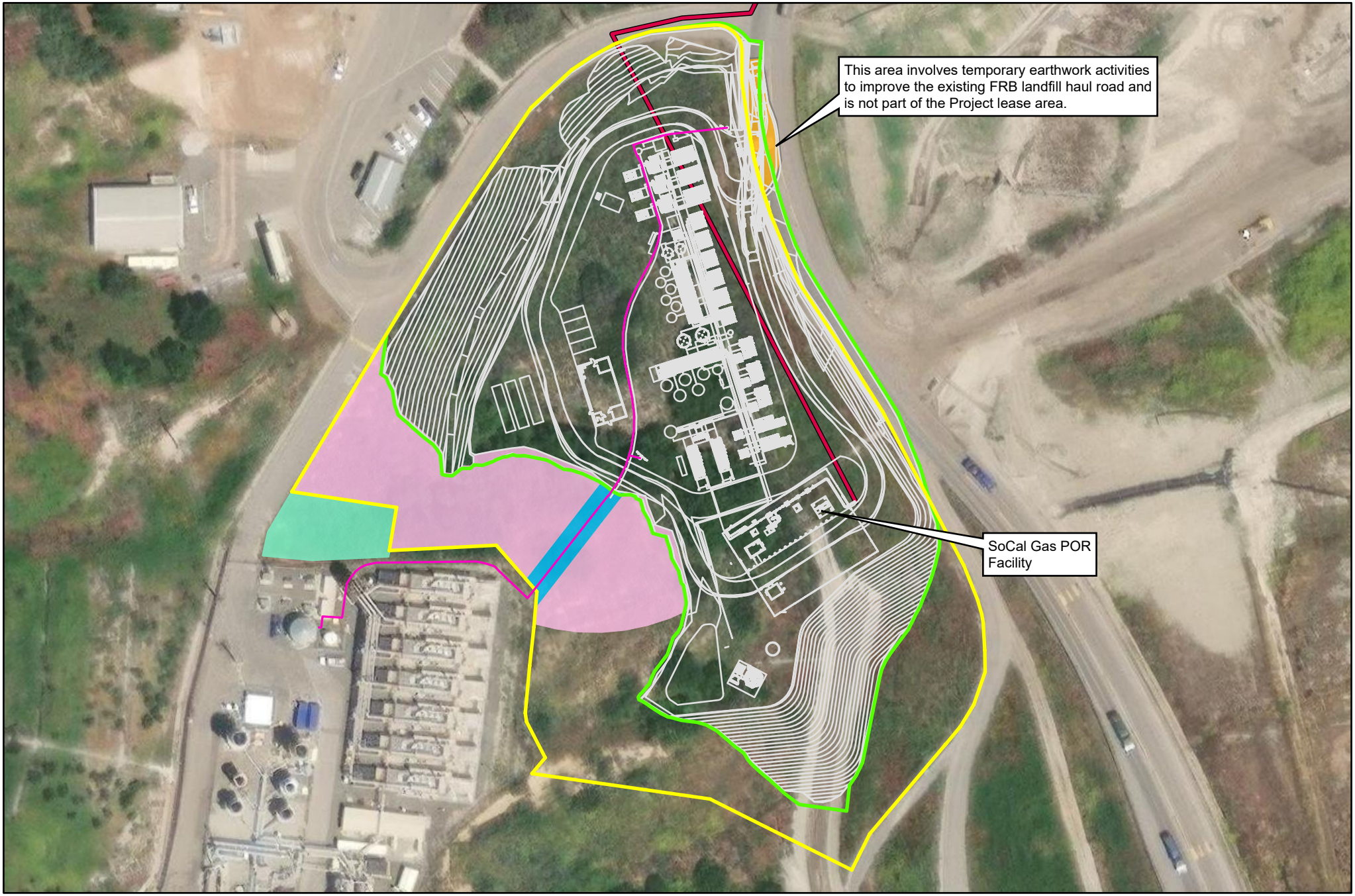
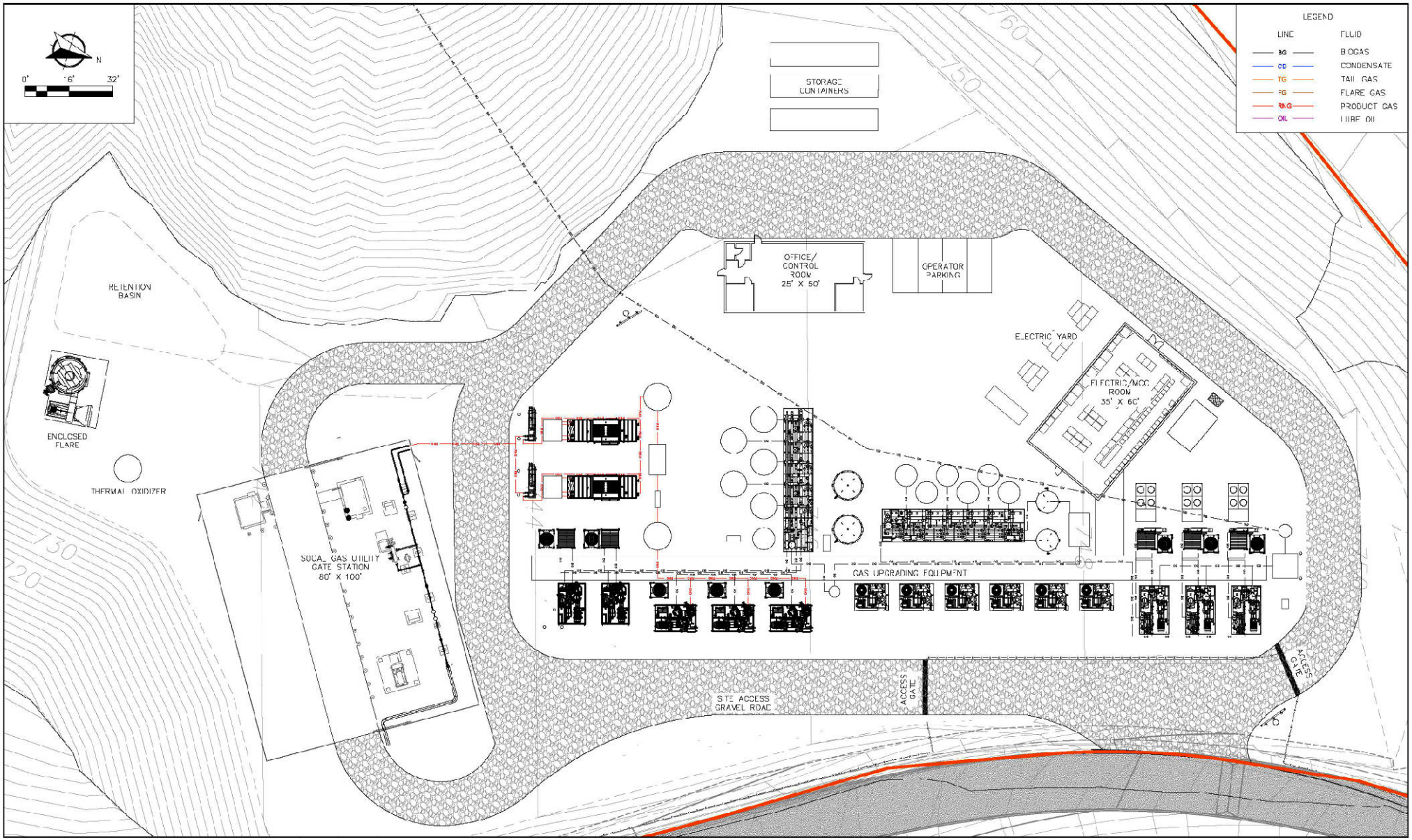


Figure 2-6
Project Site Plan

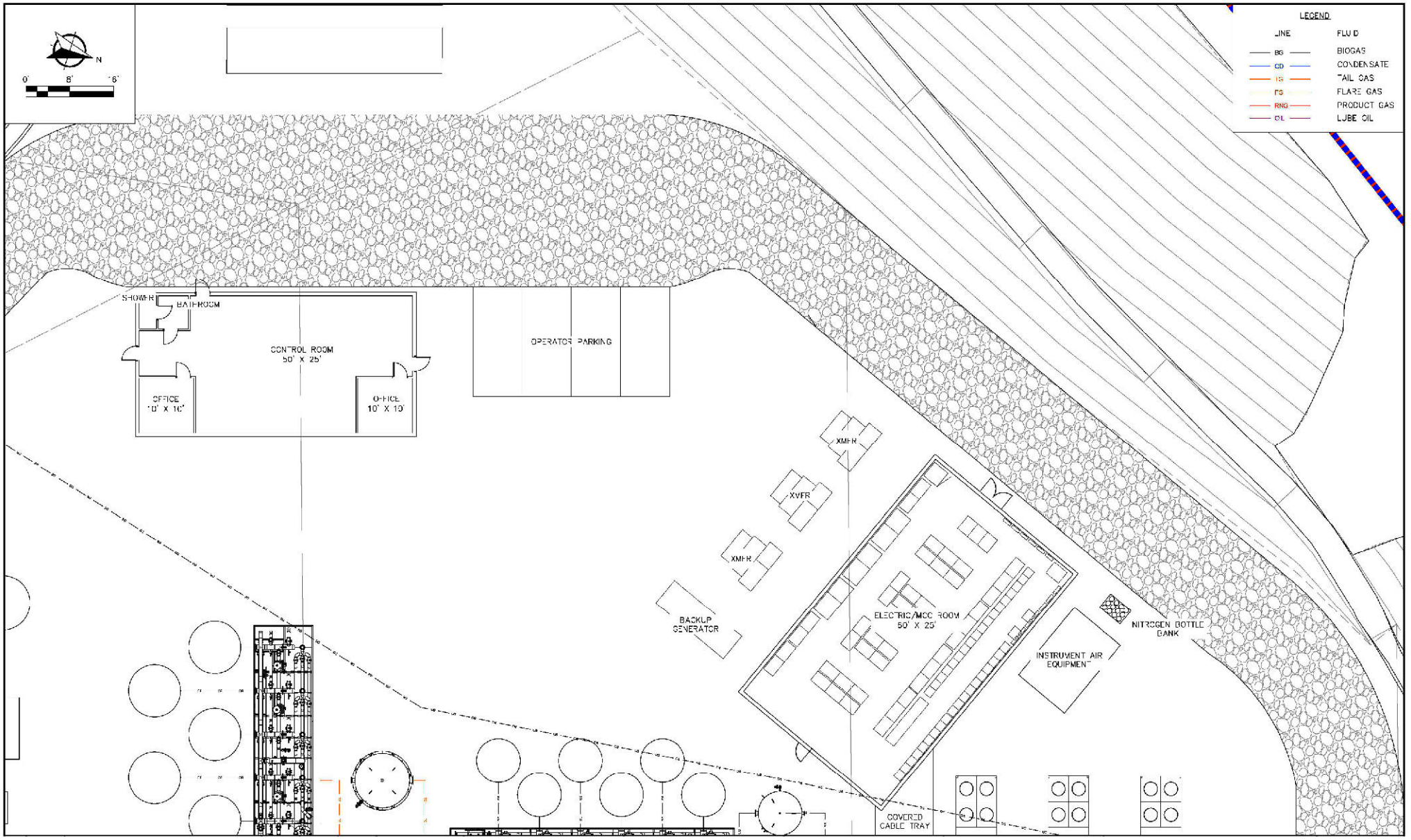
Bowerman Power RNG Plant Project
Orange County, CA



NOT FOR CONSTRUCTION

Figure 2-7
Process Equipment Layout

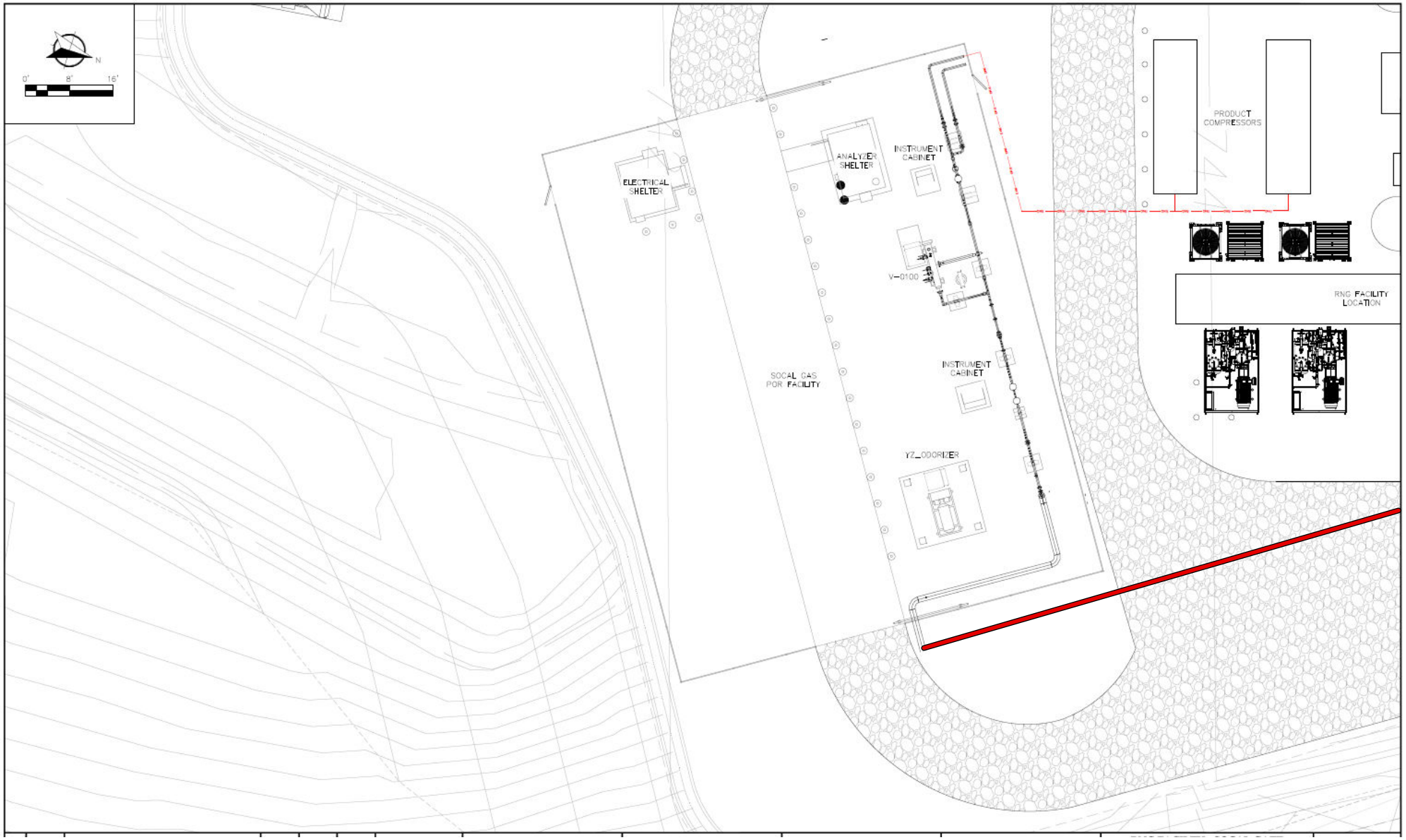
Bowerman Power RNG Plant Project
Orange County, CA



NOT FOR CONSTRUCTION

Figure 2-8
RNG Control / Electric Buildings Layout

Bowerman Power RNG Plant Project
Orange County, CA



Pipeline Route (underground)

NOT FOR CONSTRUCTION

Figure 2-9
Point of Receipt Facility

Bowerman Power RNG Plant Project
Orange County, CA

RNG Plant Construction

Equipment Type	Quantity
Dump Truck	10-15
Trackhoe	2
Bulldozer	2
Street Sweeper	1
Water Truck	1
Mixer	1
40 Ton Crane	1
100 Ton Crane	1
Extended Boom Forklift	1
Man Lift	1
Skid Steer Loader	1
Grader	1

Pipeline Construction

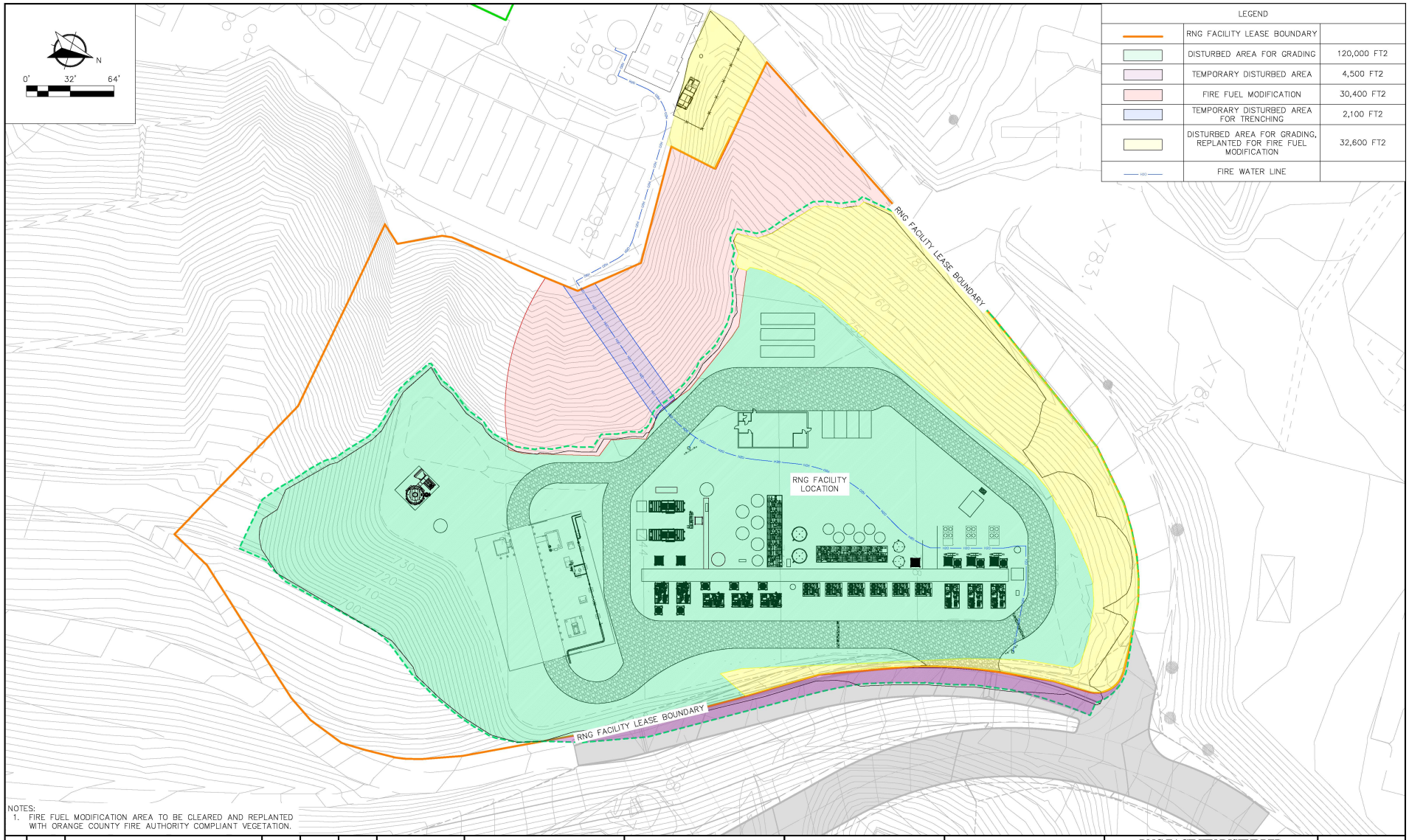
Equipment Type	Quantity
Boring Machine	1
Trackhoe	1
Bulldozer	1
Backhoe	1
Crane	1
Motor Grader	1
Pneumatic Hammer	1
Air Compressor	1
Side Boom Tractor	1
Tractor Tailer	1
Paver	1
Paving Equipment	1
Roller	1
Cement Mixer	1

RNG Plant Operation

Equipment Type	Quantity	Inside Enclosure (Yes/No)
Feed Compressors	3	No
Feed Compressors Aftercoolers	3	No
Feed Compressors Oil Coolers	3	No
Glycol Circulation Pumps	3	No
CO_2 Removal Vacuum Compressors	6	No
RNG Product Gas Cooler	1	No
N_2 Removal Vacuum Compressors	3	No
N_2 Removal Vacuum Compressors Oil Coolers	3	No
N_2 Removal Recycle Compressors	2	No
N_2 Removal Recycle Compressors Aftercoolers	2	No
N_2 Removal Recycle Compressors Oil Coolers	2	No
Product Gas Cooler from EQ PSA	1	No
Product Compressors	2	No
Product Compressors Aftercoolers	2	No
Thermal Oxidizer	1	No
Thermal Oxidizer Blower	1	No
Thermal Oxidizer Combustion Air Blower	1	No
Off-spec gas Flare	1	No
Off-spec gas Flare Combustion Blower	1	No
Instrument Air Compressors	2	No
Ventilation Fans	6	No
Back Up Generator	1	No
PSA Vessels	1	No
CO_2 Removal Vacuum Oil Coolers	3	No
H2S Removal Vessel	1	No

Figure 2-10
Equipment List

Bowerman Power RNG Plant Project
Orange County, CA



NOTES:
1. FIRE FUEL MODIFICATION AREA TO BE CLEARED AND REPLANTED WITH ORANGE COUNTY FIRE AUTHORITY COMPLIANT VEGETATION.

REV	DATE	DESCRIPTION	DRN BY	DSN BY	CHK BY
0	05/03/24	ISSUED FOR CEQA	MV	-	JF

MONTAUK RENEWABLES
5313 Campbells Run Road,
Pittsburgh, PA 15205

TENT ENGINEERING
452 NE Greenwood Ave.
Bend, OR 97701
www.tentengr.com

RNG FACILITY DISTURBED AREA

Bowerman RNG Facility
Bowerman Power LFG, LLC
11006 Bee Canyon Access Road,
Irvine, CA 92602

DRAWING NO.
G1.12
PROJECT NO.
164.02

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Figure 2-11
Disturbed Area

Bowerman Power RNG Plant Project
Orange County, CA

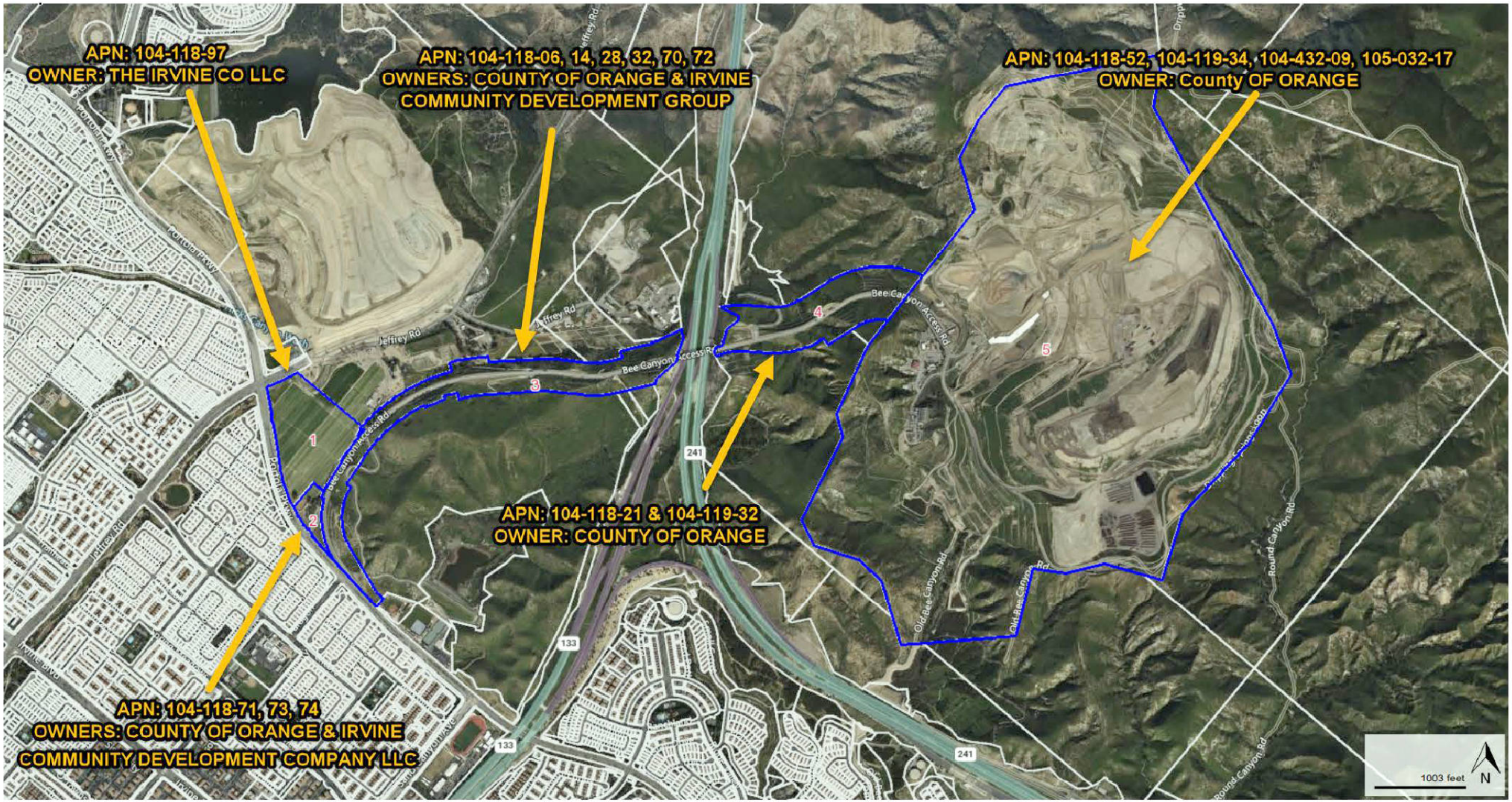

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Figure 2-12
Project Site Parcels

Bowerman Power RNG Plant Project
Orange County, CA

APPENDIX A: MITIGATION MONITORING AND REPORTING PLAN

APPENDIX B: AIR QUALITY, GHG, HRA, AND LST STUDY

APPENDIX C: BIOLOGICAL RESOURCES STUDIES

APPENDIX C1: BIOLOGICAL SURVEY REPORT

APPENDIX C2: WETLANDS DELINEATION REPORT

APPENDIX C3: CROTCH'S BUMBLE BEE SURVEYS

APPENDIX C4: CROTCH'S BUMBLE BEE AVOIDANCE PLAN

APPENDIX D: BOWERMAN RNG WATER INFRASTRUCTURE AND AVAILABILITY STUDY