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San Jose Data Center

Small Power Plant Exemption Application

For the

San Jose Data Center
San Jose, California

November 2019

Submitted to the:
California Energy Commission

Submitted by:

Microsoft Corporation

With Technical Assistance by:

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Acronyms and Abbreviations

µg/L	microgram(s) per liter
µg/m^3	microgram(s) per cubic meter
2015 Rule	Clean Water Rule
A	Agricultural
AADT	average annual daily traffic
AB	Assembly Bill
ABAG	Association of Bay Area Governments
ADMRT	Air Dispersion Modeling and Risk Assessment Tool
AND	atmospherically derived nitrogen
ADT	average daily traffic
AMMP	Avoidance, Minimization, and Monitoring Plan
amsl	above mean sea level
APCO	Air Pollution Control Officer
AQS	Air Quality System
AST	above-ground storage tank
ASTM	ASTM International
AUL	activity use limitation
BAAQMD	Bay Area Air Quality Management District
BACTBest	Available Control Technology
Bgs	below ground surface
BMP	best management practice
BSA	biological survey area
BTEX	benzene, toluene, ethylbenzene, and xylenes
BUOW	burrowing owl
CAA	Clean Air Act
CAAQS	California Ambient Air Quality Standards
CalEEMod	California Emissions Estimator Model
Caltrans	California Department of Transportation
CARB	California Air Resources Board
CDE	California Department of Education
CDFW	California Department of Fish and Wildlife
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CFR	Code of Federal Regulations
CH_4	methane

City	City of San José
CLUP	Comprehensive Land Use Plan
Cm	centimeter(s)
CMP	Congestion Management Program
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CO	carbon monoxide
CO_2	carbon dioxide
CO_2e	carbon dioxide equivalent
Construction General Permit	General Permit for Stormwater Discharge Associated with Construction and Land Disturbance Activities
Cornerstone	Cornerstone Earth Group
CPT	cone penetration test
CPUC	California Public Utilities Commission
CRHR	California Register of Historical Resources
CRPR	California Rare Plant Rank
CWA	Clean Water Act
DDD	Dichlorodiphenyldichloroethane
DDE	Dichlorodiphenyldichloroethylene
DDT	Dichlorodiphenyltrichloroethane
DEIR	Draft Environmental Impact Report
DOC	California Department of Conservation
DPF	diesel particulate filter
DPM	diesel particulate matter and diesel exhaust organic gases
DPS	distinct population segment
DTSC	California Department of Toxic Substances Control
EDR	Environmental Data Resources, Inc.
EIR	Environmental Impact Report
EPA	U.S. Environmental Protection Agency
ESA	Environmental Site Assessment
ESA	Endangered Species Act (federal)
FAA	Federal Aviation Administration
FRA	Federal Railroad Administration
FTA	Federal Transportation Administration
gal/d	gallon(s) per day
General Plan	Envision San José 2040 General Plan
GHG	greenhouse gas
GIS	geographic information system

Gpm	gallon(s) per minute
HAP	hazardous air pollutant
HCP	Habitat Conservation Plan
HI	hazard index
HNO_3	nitric acid
HRA	health risk assessment
HROFDY	Hour of Day
ISR	in-stack ratio
IT	information technology
km	kilometer(s)
kW	kilowatt(s)
LECEF	Los Esteros Critical Energy Facility
LI	Light Industrial
LORS	laws, ordinances, regulations, and standards
LOS	Level of Service
LRT	Light Rail Transit
m	meter(s)
m/s	meter(s) per second
MEIR	Maximally Exposed Individual Resident
MEIW	Maximally Exposed Individual Worker
MESR	Maximally Exposed Sensitive Receptor
mg/kg	milligram(s) per kilogram
mg/L	milligram(s) per liter
MSA	Metropolitan Statistical Area
MSAT	mobile source air toxic
MTBE	tert-methyl butyl ether
MTC	Metropolitan Transportation Commission
MUSD	Milpitas Unified School District
MW	megawatt(s)
MWh	megawatt-hour(s)
N_2O	nitrous oxide
NAAQS	National Ambient Air Quality Standards
NAHC	Native American Heritage Commission
NEHRP	National Earthquake Hazards Reduction Program
NESHAPs	National Emission Standards for Hazardous Air Pollutants
NH_3	ammonia
NOAA Fisheries	National Oceanic and Atmospheric Administration's National Marine Fisheries Service

NO_2	nitrogen dioxide
NOx	nitrogen oxides
NPDES	National Pollutant Discharge Elimination System
NSPS	New Source Performance Standards
NSR	new source review
OEHHA	California Office of Environmental Health Hazard Assessment
PAH	polycyclic aromatic hydrocarbon
PCE	passenger car equivalent
PG&E	Pacific Gas and Electric Company
PGA	peak ground acceleration
PM_{10}	particulate matter with aerodynamic diameter less than or equal to 10 microns
PM_{25}	particulate matter with aerodynamic diameter less than or equal to 10 microns
Ppb	parts per billion
Ppm	parts per million
ppt	parts per thousand
PRC	Public Resources Code
PRG	Preliminary Remedial Goal
PRIME	Plume Rise Model Enhancement
PRMP	paleontological resources monitoring plan
PSD	prevention of significant deterioration
PUE	Power Usage Effectiveness
R-1-8	Single Family Residential
R-M	Multiple Residence District
REC	Recognized Environmental Condition
REL	reference exposure level
RPS	Renewables Portfolio Standard
RSL	Regional Screening Level
RWQCB	Regional Water Quality Control Board
SB	Senate Bill
SCS	Sustainable Communities Strategy
SCUSD	Santa Clara Unified School District
SCVHCP	Santa Clara Valley Habitat Conservation Plan
SCVURPPP	Santa Clara Valley Urban Runoff Pollution Prevention Program
SCVWD	Santa Clara Valley Water District
SEASHR	seasonal hour
SF_6	sulfur hexafluoride

SFBAAB	San Francisco Bay Area Air Basin
SFB RWQCB	San Francisco Bay Regional Water Quality Control Board
SFPUC	San Francisco Public Utilities Commission
SIL	Significant Impact Level
SIP	State Implementation Plan
SJC02	San José Data Center
SJMWS	San Jose Municipal Water System
SJPD	San José Police Department
SLCP	Short-Lived Climate Pollutant
SMARA	Surface Mining and Reclamation Act
SMP	Site Management Plan
SO_2	sulfur dioxide
SPPE	Small Power Plant Exemption
SSC	Species of Special Concern
STLC	Soluble Threshold Limit Concentration
SWPPP	Stormwater Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TAC	toxic air contaminant
TBACT	Best Available Control Technology for Toxics
TOG	total organic gases
TPH-d	total petroleum hydrocarbons as diesel
TPH-g	total petroleum hydrocarbons as gasoline
TPP	Tree Protection Plan
tpy	ton(s) per year
TPZ	Tree Protection Zone
TTLC	Total Threshold Limit Concentration
UPS	uninterruptible power supply
USACE	U.S. Army Corps of Engineers
USC	United States Code
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
UST	underground storage tank
UWMP	Urban Water Management Plan (SJMWS's)
VMT	vehicle-mile(s) traveled
VOC	volatile organic compound
VRP	visibility-reducing particles
VTA	Santa Clara Valley Transportation Authority
WEAP	Worker Environmental Awareness Training Program

WEAT	worker environmental awareness training
WSA	Water Supply Assessment

1. Introduction

Microsoft Corporation (Applicant) proposes to construct and operate the San José City Data Center SJC (SJC02) located at 1657 Alviso-Milpitas Road in San José, California. The SJC02 will consist of two single-story data center buildings. The expected electrical load of the project is 92 megawatts (MW), inclusive of information technology (IT) equipment, ancillary electrical/telecommunications equipment, and other electrical loads (administrative, heat rejection, and safety/security). The Applicant will stipulate in an agreement with the utility to a contractual limit in amount of electricity available from Pacific Gas and Electric's (PG&E's) system to a maximum of 99 MW.

The SPPE process allows applicants with projects between 50 and 100 MW to obtain an exemption from the California Energy Commission's (CEC's) jurisdiction and proceed with local approvals for construction and operation, rather than requiring a CEC license. The CEC can exempt a project from its site certification process provided that no substantial adverse impact on the environment or energy resources will result from the construction or operation of the project.

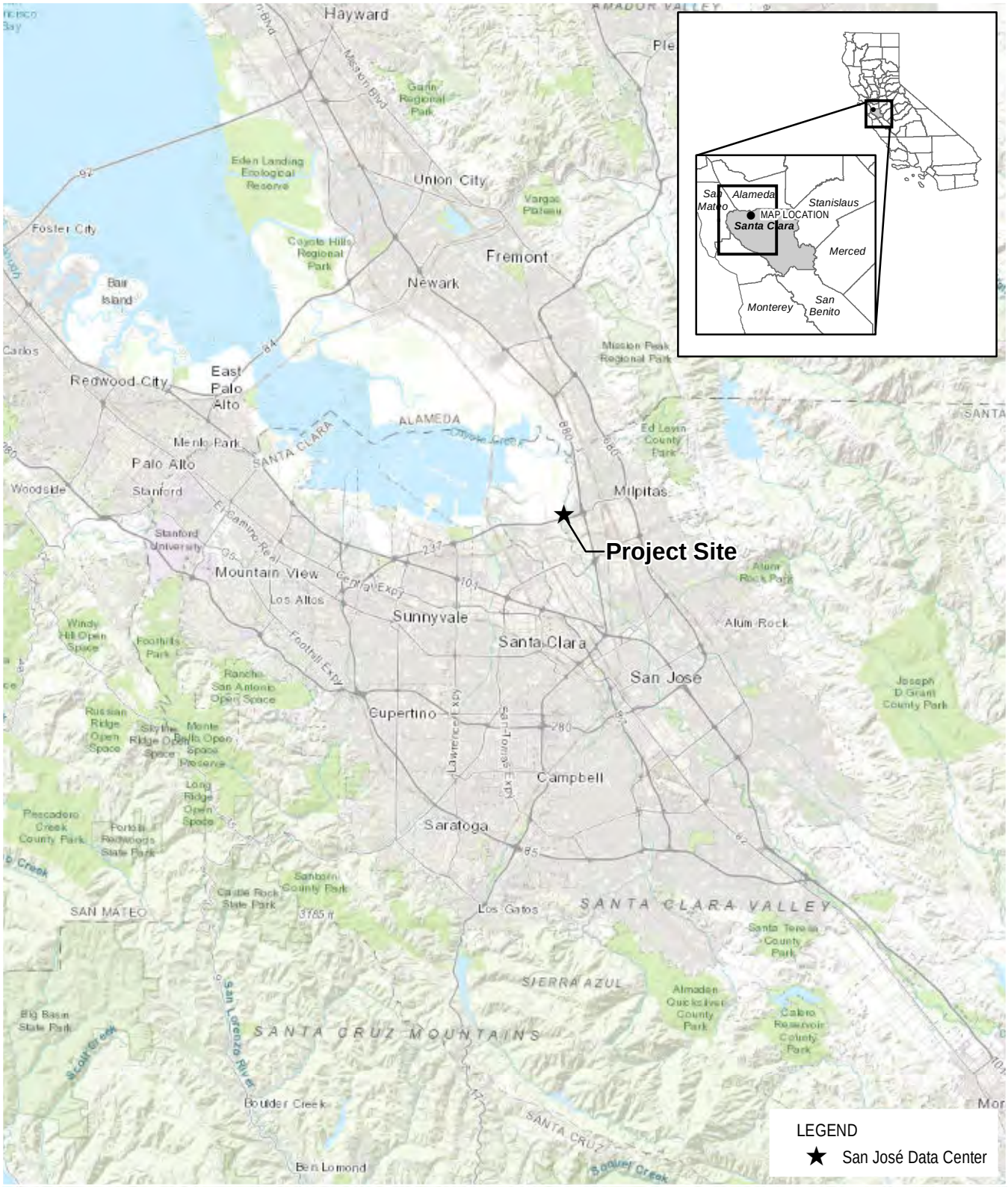
The Applicant prepared this SPPE application for the project, relying in part, to the extent appropriate and permitted under the most recent California Environmental Quality Act (CEQA), on relevant prior environmental documents as well as various technical studies. The SPPE application is intended to demonstrate, based on substantial evidence in the record, that the construction and operation of the project will not result in a substantial adverse impact on the environment or energy resources. This SPPE application uses the CEQA environmental checklist outlined in Appendix G of the CEQA Guidelines.

1.2 Project Description

The SJC02 consists of two buildings with approximately 479,000 gross square feet of administrative and data center space. The northern building (designated SJC02) will be a single-story structure of approximately 241,705 square feet with supporting amenities. The southern building (designated SJC03) will be a single-story structure of approximately 237,268 square feet with supporting amenities. Both buildings will include administrative areas, restrooms and shower facilities, storage areas, loading docks, backup generator yards, stormwater bio-swales, paved surface parking lots, and landscaping features. The project also will include an onsite 230-kilovolt (kV) substation with two 230-kV electrical supply lines that will connect to PG&E's Los Esteros Substation, located adjacent to the site. The approximately 64.5-acre project site is designated Light Industrial under the adopted Envision San José 2040 General Plan (City of San José 2011); is identified as Light Industrial in the applicable Alviso Master Plan; and is zoned LI-Light Industrial with an Assessor's Parcel Number of 015-31-054. Figure 1-1 shows the regional location of the project site, and Figure 1-2 identifies the project location as well as an aerial view of the existing site. A site plan is provided as Figure 1-3, and the proposed construction laydown location map is provided as Figure 1-4.

To provide reliable operation of the project in the event of loss of electrical service from the local electric utility provider, PG&E, the project will include 40 3.0-MW standby diesel generators to provide electrical power to support the IT load during utility outages or certain onsite electrical equipment interruptions or failures. These generators will be deployed in redundant configurations (that is, all 40 generators will never be operating at the same time at 100 percent) to ensure uninterrupted power, up to the maximum of 99 MW (with an expected load of 92 MW). In addition to the 40 backup generators, the project will include two administrative generators, rated at 1.25 MW and 0.5 MW, to support administrative functions during an interruption in the normal delivery of electrical power from the utility. The onsite substation will be located in the northwestern corner of the project site and will interconnect to the PG&E substation.

As shown on Figure 1-2, the project will require offsite linears for potable water, reclaimed water, stormwater, sanitary sewer, and electrical. No natural gas will be used onsite.



Source:
ESRI Service Layer

Figure 1-1
Regional Location
San José Data Center (SJC02)
San José, California

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LEGEND

- Project Site
- Los Esteros Critical Energy Facility
- PG&E Substation
- Proposed Storm Drain
- Proposed Sanitary Sewer
- Proposed Reclaimed Water
- Proposed Water Line Route #1
- Proposed Water Line Route #2
- Proposed Water Line Route #3
- Proposed Shared Water Line
- Proposed Electrical Supply Line

N

0 750 1,500

Approximate scale in feet

Figure 1-2
Project Location
San José Data Center (SJC02)
San José, California

JACOBS

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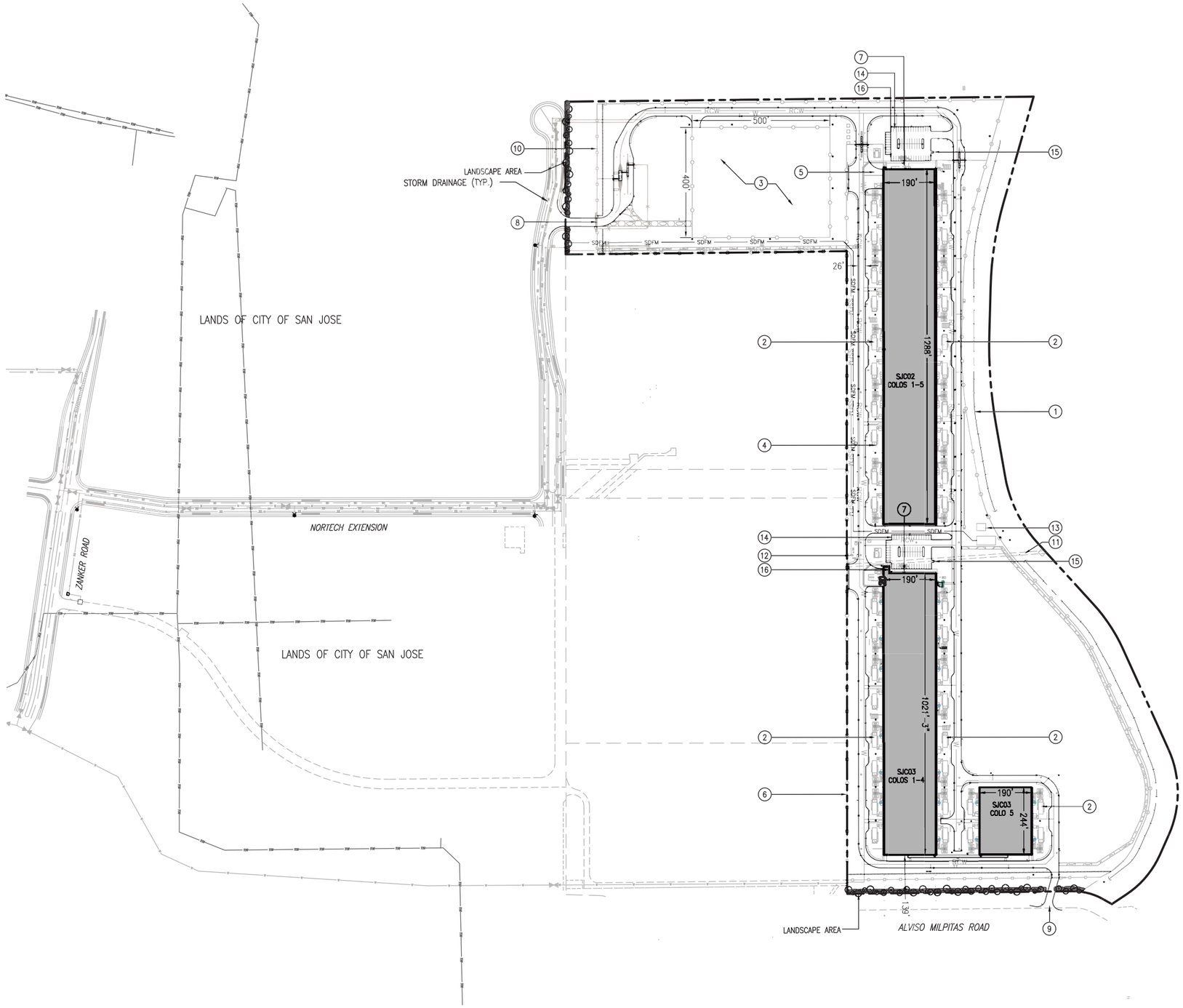

LEGEND

Property Line and Limit of Disturbance

1. Bioswale
2. Generators/Utility Yards
3. Substation
4. Generator Pad (Typ.)
5. Refuse/Recycling Canopy
6. Property Line
7. ADA Entry
8. Site Entrance/Exit
9. Secondary Site Entrance/Exit
10. Fenced Perimeter (8')
11. Existing Stormwater Easement
12. Sanitary Pump Station
13. Storm Pump Station
14. Car Parking
15. Motorcycle Parking
16. Bicycle Parking

Figure 1-3
Site Plan
San José Data Center (SJC02)
San José, California

EC0821191740SAC FILENAME: Fig 1-3 Site Plan.pdf

North

0 200 400

Approximate scale in feet

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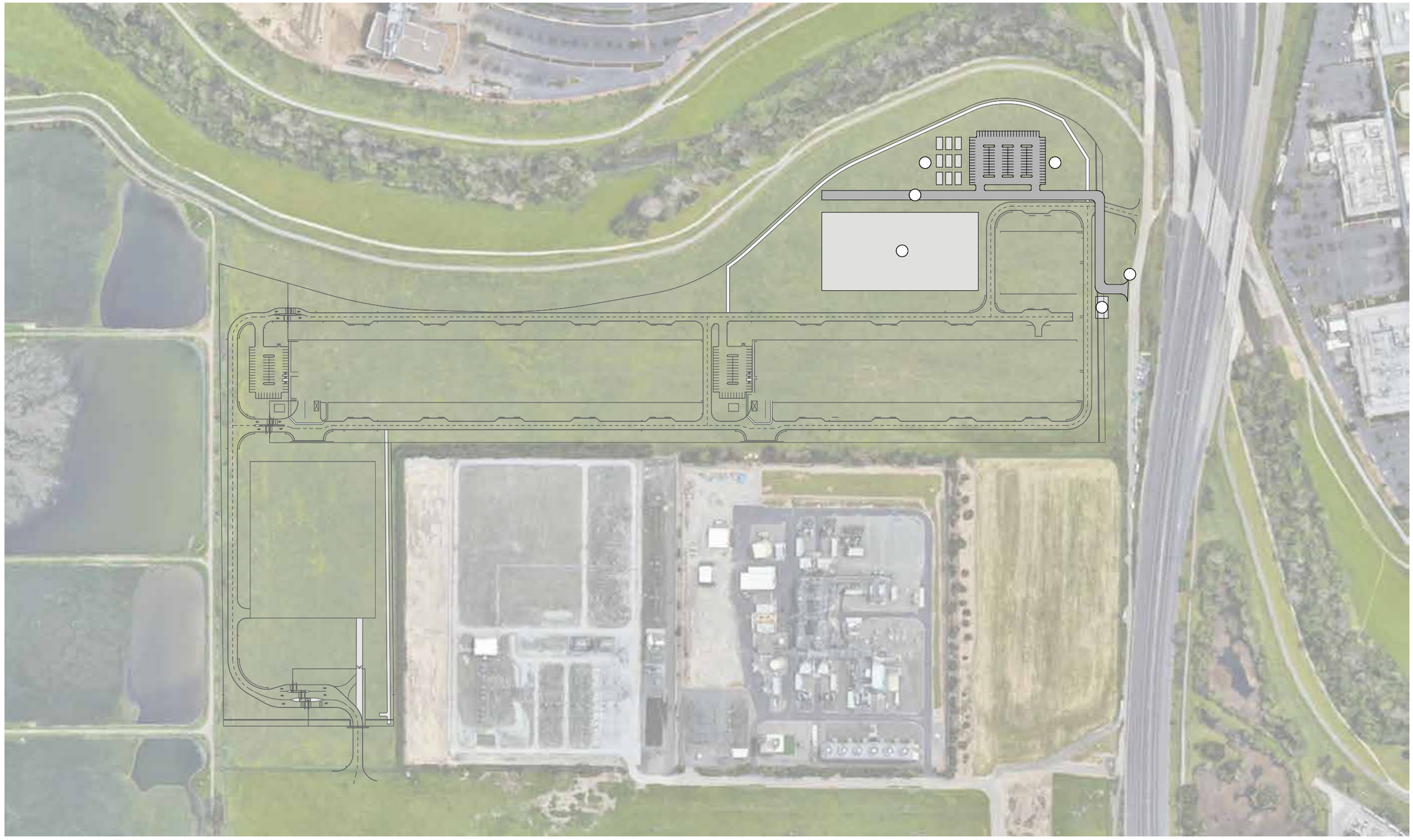

1 - LAYDOWN STAGING DIAGRAM

1. CONSTRUCTION LAYDOWN
2. GRAVEL ROAD
3. JOB SITE TRAILERS
4. CRAFT PARKING
5. VEHICLE WASH-DOWN
6. EXISTING SITE ENTRY

North

0 160 320

Approximate scale in feet

Figure 1-4
Proposed Construction Laydown
San José Data Center (SJC02)
San José, California

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For redundancy purposes, three potable water lines are proposed. Water Line Route #1 and Water Line Route #2 begin in the northwestern corner of the project. Both routes travel south to the proposed entrance road, Nortech Extension. From there, they both turn west to Zanker Road. At Zanker Road, Water Line Route #1 heads north briefly and then west, ultimately connecting to the Nortech valve. Water Line Route #1 is approximately 1.5 miles (7,900 feet) long. At Zanker Road, Water Line Route #2 turns south before turning west alongside Highway 237, and eventually turning south to go under Highway 237 to connect to the new Holger valve. Water Line Route #2 is approximately 1.3 miles (7,100 feet) long. Water Line Route #3 begins at the southwestern corner of the project, and heads generally east to Zanker Road, where it will parallel Water Line Route #2 connecting to the new Holger valve. Water Line Route #3 is approximately 1.4 miles (7,500 feet) long. The water will come from the San José Municipal Water System to the project.

Reclaimed water will be used at the site for landscaping purposes. The reclaimed water line will start at the northwestern corner of the project site and proceed south to the proposed entrance road, Nortech Extension. From there the line turns west and ends at an existing reclaimed water line that is oriented generally north to south. The reclaimed water line will be approximately 0.5 mile (2,900 feet) long.

A sanitary sewer line will begin at the northwestern corner of the property and head south to the proposed entrance road, where the line turns to the west. At Zanker Road, the line turns south and will connect to the existing sanitary sewer force main/pump station at the corner of Zanker Road and Thomas Foon Chew Way. The sewer line is approximately 0.6 mile (3,300 feet) long.

The stormwater line for the project will begin in the northwestern corner of the project site, paralleling the water line route and terminating at Nortech Parkway extension off Zanker Road, where it will tie into the City of San José's stormwater system in the vicinity of Nortech Parkway. The stormwater line to Zanker Road is approximately 0.55 mile (3,000 feet) long.

The onsite substation will be located in the northwestern corner of the project site and will interconnect to the PG&E substation to the immediate south via two, 0.2-mile-long (1,000 foot-long) distribution lines.

1.3 Environmental Determination

This SPPE application identifies the potential impacts from the construction and operation of the SJC02 and evaluates those impacts to applicable significance standards for each SPPE/CEQA topic area. Development activities on the project site started in the early 2000s, as explained more fully in the USDataport project Environmental Impact Report (Dataport EIR), consisting of the original 174-acre Los Esteros Critical Energy Facility (which included the project site) with up to approximately 2.3 million square feet of data center communication facility uses in warehouse style buildings. As that project did not ultimately proceed, a revised development application was pursued for only the approximately 65-acre project site. In connection therewith, a project EIR was initiated in May 2016, with the City of San José (City) certifying the EIR in September 2017[1] (City of San José 2017a, 2017b, 2017c). A copy of this EIR is provided as Appendix 1A, the Amendment to this EIR is provided as Appendix 1B, and the associated approved Special Use Permit is provided as Appendix 1C.. The 2017 EIR reviewed two options: Option 1 proposed approximately 1.2 million square feet of light industrial development; and Option 2 proposed 436,880 square feet of data center development on the northern 26.5 acres of the site, with up to 49.5 MW of standby generation and approximately 728,000 square feet of light industrial development. Both development options required the City to rezone the 64.5-acre project site from agricultural planned development to light industrial.

The SPPE application, tiering off the previously certified EIRs to the extent appropriate and permitted under CEQA, demonstrates (based on substantial evidence in the record) that the construction and

[1] http://www.sanjoseca.gov/index.aspx?nid=6072

operational impacts of the proposed SJC02 project are less than significant with the incorporation of design measures proposed to reduce or eliminate the potentially significant environmental impacts

1.4 References

City of San José. 2011. *Envision San José 2040 General Plan*. November.

City of San José. 2017a. *Draft Environmental Impact Report, 237 Industrial Center Project*. File Nos. C15-054 and SP16-053. Accessed October 25, 2019. http://www.sanjoseca.gov/index.aspx?nid=6072.

City of San José. 2017b. *First Amendment to Draft EIR – Response to EIR Comments and Text Edits (Final EIR), 237 Industrial Center Project*. September. Accessed October 22, 2019. http://www.sanJose.ca.gov/index.aspx?nid=6072.

City of San José. 2017c. *Special Use Permit, File No. SP16-053.*

2. Project Description

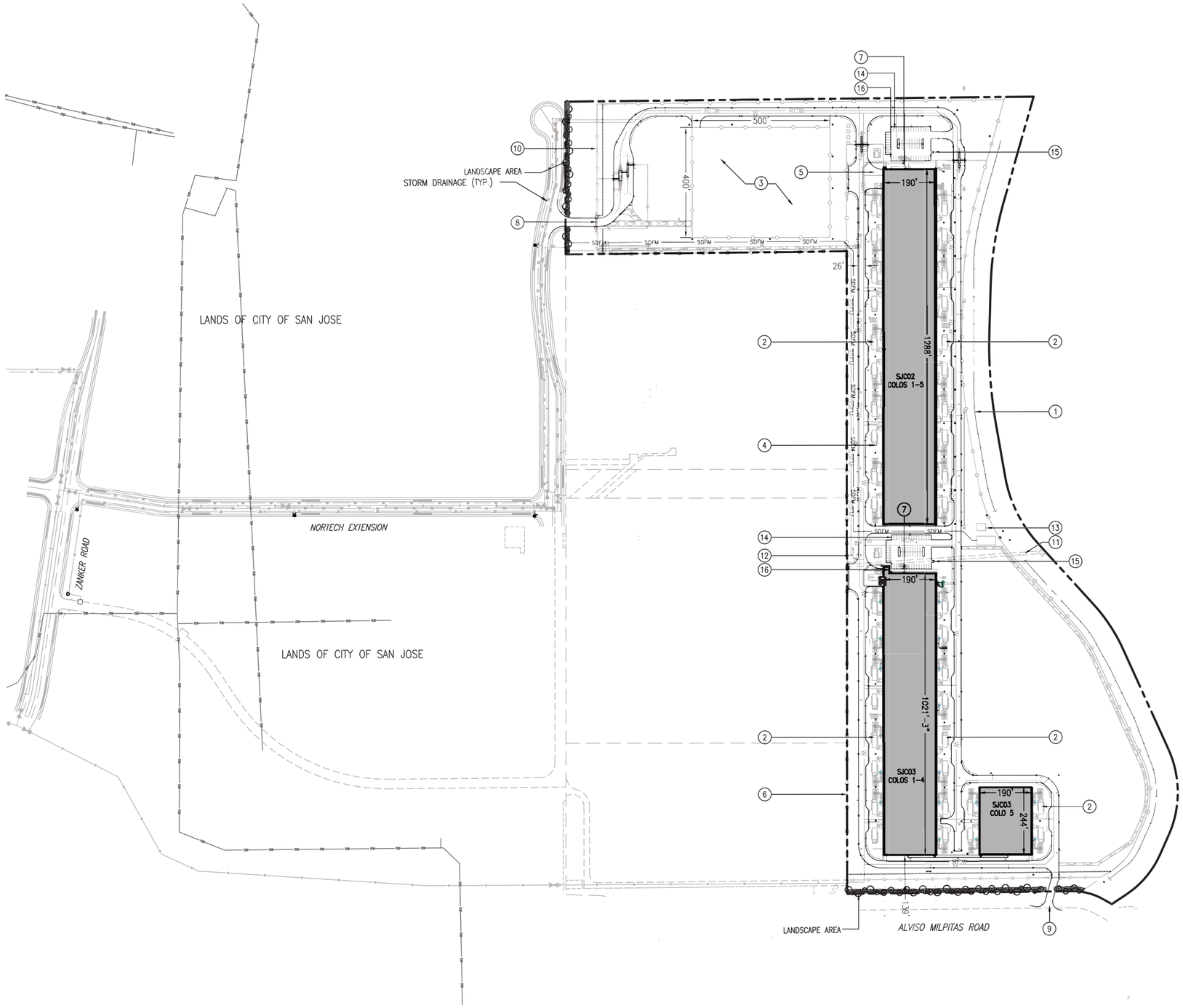
Microsoft Corporation (Applicant) proposes to construct and operate the San José City Data Center (SJC02) located at 1657 Alviso-Milpitas Road in San José, California. The SJC02 will consist of two single-story data center buildings. The maximum electrical load of the project will be 99 megawatts (MW), although the estimated load is 92 MW, inclusive of information technology (IT) equipment, ancillary electrical/telecommunications equipment, and other electrical loads (administrative, heat rejection, and safety/security). For the purposes of the CEC and City of San José's environmental review process, this SPPE application also describes the removal of existing onsite buildings and contaminated soils from the site. To provide reliable operation of the Project in the event of loss of electrical service from the local electric utility provider, Pacific Gas & Electric Company (PG&E), the Project includes 40 3.0-MW standby diesel generators to provide electrical power to support the IT load during utility outages or certain onsite electrical equipment interruption or failure. These generators will be deployed in redundant configurations (that is, all 40 generators will never be operating at the same time at 100 percent) to provide uninterrupted power, up to the maximum of 99 MW (with an expected load of 92 MW). Electrical power from the SJC02 backup generators cannot and will not create electricity for offsite distribution and consumption, as the electrical interconnection to the PG&E system only supports supplying electricity to SJC02 and does not allow exporting electricity from the project back to PG&E (i.e., the distribution line only allows power to flow in one direction – from PG&E to SJC02). In addition to the 40 backup generators, SJC02 will include two administrative generators, rated at 1.25 MW and 0.5 MW, to support administrative functions during an interruption in the normal delivery of electrical power from the utility. The Applicant will stipulate in an agreement with the utility to a contractual limit in the amount of electricity available from PG&E's system to a maximum of 99 MW.

2.1 Project Overview

The SJC02 consists of two buildings with approximately 479,000 gross square feet of administrative and data center space. The northern building (designated SJC02) is a single-story structure of approximately 241,705 square feet with supporting amenities. The southern building (designated SJC03) is a single-story structure of approximately 237,268 square feet with supporting amenities. Both buildings include administrative areas, restrooms and shower facilities, storage areas, loading docks, backup generator yards, stormwater bio-swales, paved surface parking lots, and landscaping features. SJC02 also includes an onsite 230-kilovolt (kV) substation with two 230-kV electrical supply lines that will connect to PG&E's Los Esteros Substation, located adjacent to the site. The approximately 64.5-acre Project site is designated Light Industrial under the adopted Envision San José 2040 General Plan; is identified as Light Industrial in the applicable Alviso Master Plan; and is zoned LI- Light Industrial with an Assessor's Parcel Number of 015-31-054. Figure 1-1 shows the regional location of the SJC02 site, and Figure 1-2 identifies the project site location. A site plan is provided as Figure 2-1.

The standby generation system for the project consists of 40 3.0-MW diesel-fired generators, each with a standby output capacity of 3.0 MW to support the need for the data center to provide an uninterruptible power supply. Each building's administrative functions will be supported during electrical outages by a standby generator (designated as Admin generators), with a 1.25-MW standby generator for the northern building and a 0.5-MW standby generator for the southern building. Additional project features include electrical switchgear and distribution lines between the substation and buildings, as well as from the backup generator yards and from each respective building. The backup generation system will be located in equipment yards along the sides of each building. Each building will include 21 standby generators (20 3-MW standby generators and an Admin standby generator). The Admin generator for each building will provide continuous power to the essential systems (fire monitoring and other emergency operations) for both buildings during electrical outages. At no time will the standby generators generate more than 99 MW[1] of electricity.

[1] Total power use assumes 40, 3-MW standby generators operating at 75 percent load, plus the admin generators ((40 * 3 MW * 0.75) + 1.25 MW + 0.5 MWs = 91.75 MWs).



LEGEND

Property Line and Limit of Disturbance

1. Bioswale
2. Generators/Utility Yards
3. Substation
4. Generator Pad (Typ.)
5. Refuse/Recycling Canopy
6. Property Line
7. ADA Entry
8. Site Entrance/Exit
9. Secondary Site Entrance/Exit
10. Fenced Perimeter (8')
11. Existing Stormwater Easement
12. Sanitary Pump Station
13. Storm Pump Station
14. Car Parking
15. Motorcycle Parking
16. Bicycle Parking

Figure 2-1
Site Plan
San José Data Center (SJC02)
San José, California

EC0821191740SAC FILENAME: Fig 2-1 Site Plan.pdf

North

0 200 400

Approximate scale in feet

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Each backup generator is a fully independent package system with dedicated fuel tanks located on a skid below the generator, located at ground level adjacent to the buildings. Each backup generation yard will be electrically interconnected to the building it serves through a combination of underground and aboveground conduit and cabling to a location within the building that houses electrical distribution equipment.

The project will include several offsite connections to potable and recycled water pipelines and to sanitary sewer and stormwater pipelines, and an access road from the northern project boundary to Zanker Road, referred to herein collectively as the "offsite infrastructure alignment areas," as shown on Figure 2-1. No natural gas will be used at the site.

2.1.1 Potable Water

For redundancy purposes, three potable water lines are proposed. Water Line Route #1 and Water Line Route #2 begin in the northwestern corner of the project. Both routes travel south to the proposed entrance road, Nortech Extension. From there, they both turn west to Zanker Road. At Zanker Road, Water Line Route #1 heads north briefly and then west, ultimately connecting to the Nortech valve. Water Line Route #1 is approximately 1.5 miles (7,900 feet) long. At Zanker Road, Water Line Route #2 turns south before turning west alongside Highway 237, and eventually turning south to go under Highway 237 to connect to the new Holger Valve. Water Line Route #2 is approximately 1.3 miles (7,100 feet) long. Water Line Route #3 begins at the southwestern corner of the project, and heads generally east to Zanker Road, where it will parallel Water Line Route #2 connecting to the new Holger valve. Water Line Route #3 is approximately 1.4 miles (7,500 feet long). The water will come from the San José Municipal Water System to the project.

2.1.2 Reclaimed Water

Reclaimed water will be used at the site for landscaping and cooling purposes. The reclaimed water line will start at the northwestern corner of the project site and proceed south to the proposed entrance road, Nortech Extension. From there, the line turns west and ends at an existing reclaimed water line that is oriented generally north to south. The reclaimed water line will be approximately 0.5 mile (2,900 feet) long).

2.1.3 Sanitary Sewer

A sanitary sewer line will begin at the northwestern corner of the project site, and head south to the proposed entrance road, where the line turns to the west. At Zanker Road, the line turns south and will connect to the existing sanitary sewer force main/pump station at the corner of Zanker Road and Thomas Foon Chew Way. The sewer line is approximately 0.6 mile (3,300 feet) long.

2.1.4 Stormwater

The stormwater line for the project will begin in the northwestern corner of the project site, paralleling the water line route, terminating at the Nortech Parkway extension off Zanker Road, where it will tie into the City of San José's stormwater system in the vicinity of Nortech Parkway. The stormwater line is approximately 0.55 miles (3,000 feet) long.

2.1.5 Electrical Supply Line

The proposed onsite substation will be located in the northwestern corner of the project site and will interconnect to the existing PG&E substation via two, 0.2-mile-long distribution lines. The approximately 1,000-foot-long electrical supply lines will be located on the western fenceline of the project site, adjacent to the Los Esteros Critical Energy Facility (LECEF).

2.1.6 Bike Trail Extension

The proposed project includes the extension of a Class I improved trail from Ranch Drive along the southern boundary of the site to the end of the existing bike trail (shown on Figure 3.16-2 of the Recreation section) in order to provide a trail connection to the Coyote Creek Trail.

2.1.7 Data Center Design

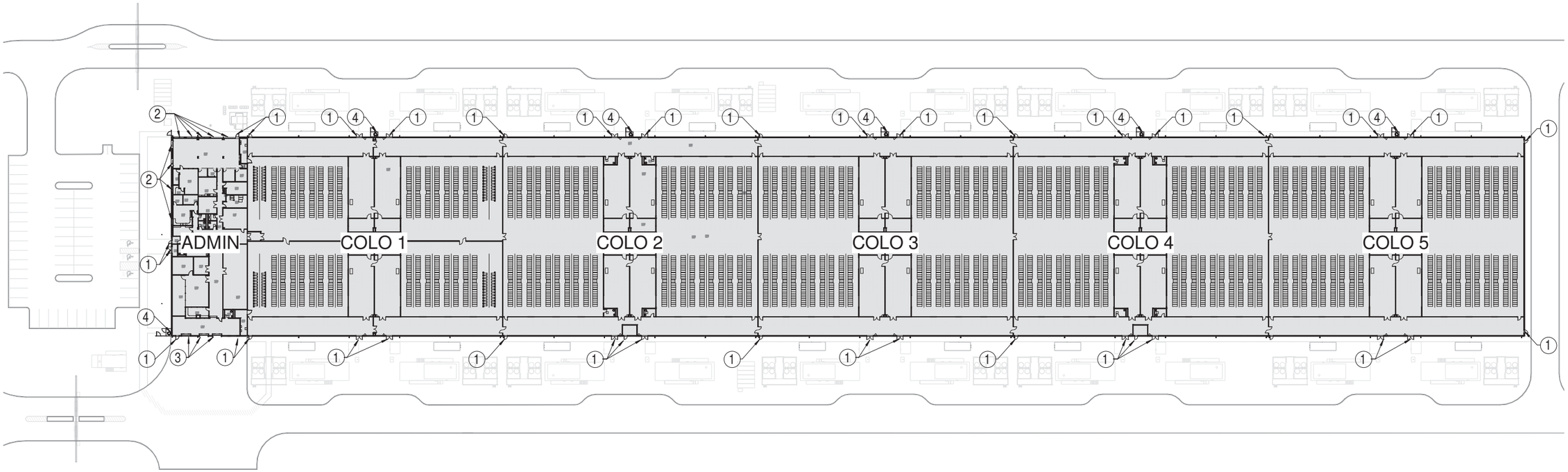
Buildings SJC02 and SJC03 will be constructed of steel structural components with metal-framed and insulated exterior walls with metal panel façade containing accent fields. The entries will include storefront glazing. Heating, ventilation, and air-conditioning equipment, including adiabatic chiller units, will be located adjacent to each building. Figures 2-2a to 2-2b provide the conceptual floor layout for the two buildings. Elevation drawings are presented on Figures 2-3a through 2-3f for Building SJC02 and 2-4a through 2-4g for Building SJC03. The exterior of the building will conform to applicable City of San José design standards. Figure 2-5 provides an oblique rendering of the project.

2.2 Electrical System Engineering

The standby generator system includes a 4-to-make-3 design topology, meaning that for every three standby generators that would support load in the event of a utility failure, there is one redundant generator. In the event of a utility service disruption, this means that all 40 standby generators (total for both buildings) begin operation at approximately 75 percent load, with both Admin generators operating at approximately 100 percent load. The total estimated electrical demand under this scenario is approximately 92 MW. Each building's standby generators will be supported by an uninterruptible power supply (UPS) system consisting of batteries, an inverter, and switches to facilitate the uninterrupted transfer of electrical power supply from the PG&E substation to the onsite standby generators in the event of an undefined number of potential events that could impact PG&E's service (resulting in a loss of power or degradation in power quality), which triggers the starting of the standby generators. The UPS system includes valve-regulated battery banks, with each bank capable of providing up to 10 minutes of backup at 100 percent load. The UPS system has a rectifier and inverter to condition electricity and is sized to deliver power to support 100 percent of the server bay demand for up to 60 seconds. However, when the electrical service is outside of pre-determined tolerances (+10 or -15 percent of alternating current nominal voltages or a frequency range of 60 Hertz plus or minus 5 percent), the UPS will transfer over to bypass to deliver generator produced power. The UPS transfer load from PG&E to UPS battery power, which triggers the start of the generators, occurs within 5 milliseconds. Load then transfers from the UPS battery system to the standby generators within 20 seconds of generator start. The UPS system provides 'clean' utility power for critical loads (IT equipment, fire/security and building management systems, and some small 120-volt circuits). The major mechanical systems, lighting, and general receptacles are not powered from the UPS sources.

The two separate 230-kV PG&E distribution lines are connected to PG&E's Los Esteros substation at two new, separate circuit breakers. The interconnection to the PG&E System and One Line Diagram is provided as Figure 2-6. The SJC02 distribution lines will include a 715 double-bundle Aluminum Conductor Composite Reinforced with a current carrying capacity of 310 Mega Volt-Amps . The receiving stations step voltage down to 60 kV for distribution along the Northwest Loop, which can then provide electricity to facilities interconnected to the loop from either end, making electrical service reliable. PG&E has indicated they have an outage frequency for the period of 2014 to 2018 of 99.8 and 99.9 percent on the two, 230-kV supply lines into the substation. Over this period, there have been 11 outages, with the longest outage in 2018 lasting for 72 hours.

A single electrical system consists of a 34.5-kV to 480-volt substation transformer feeding the 480-volt critical bus that feeds two parallel UPS modules. The critical bus is supported by its own standby generator, and each standby generator operates independent of one another. A utility main breaker and a generator main breaker are included in the critical bus 480-volt switchgear, which are controlled by an automatic transfer controller that transfers the electricity generated by the dedicated standby generator in the event of a power outage.



1 OVERALL GROUND FLOOR PLAN

① EXTERIOR DOOR LOCATION
② WINDOW LOCATION
③ OVERHEAD COILING DOORS
④ ROOF ACCESS LADDER
Note: No signage provided on building.

EC0821191740SAC FILENAME: Fig 2-2aFloorPlanNorthBuilding.pdf

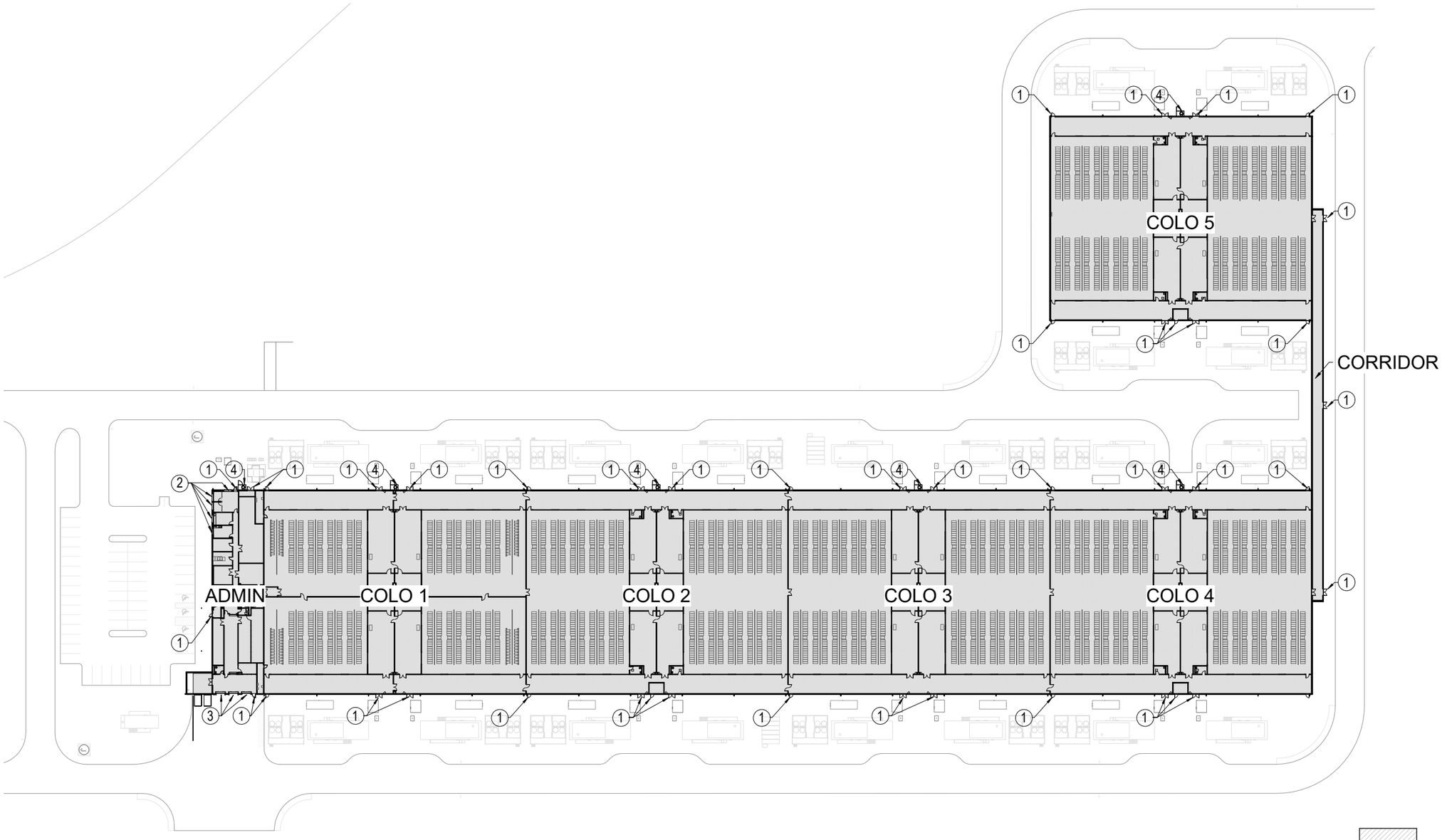
North

0 50 100
Approximate scale in feet

A	1	2	3	4	5

Figure 2-2a
Floor Plan North Building
San José Data Center (SJC02)
San José, California

JACOBS



1 - OVERALL GROUND FLOOR PLAN

① EXTERIOR DOOR LOCATION
② WINDOW LOCATION
③ OVERHEAD COILING DOORS
④ ROOF ACCESS LADDER

Note: No signage provided on building.

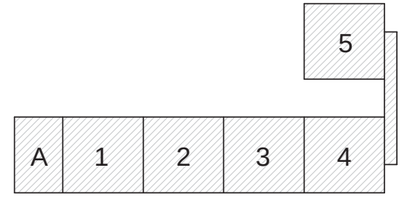
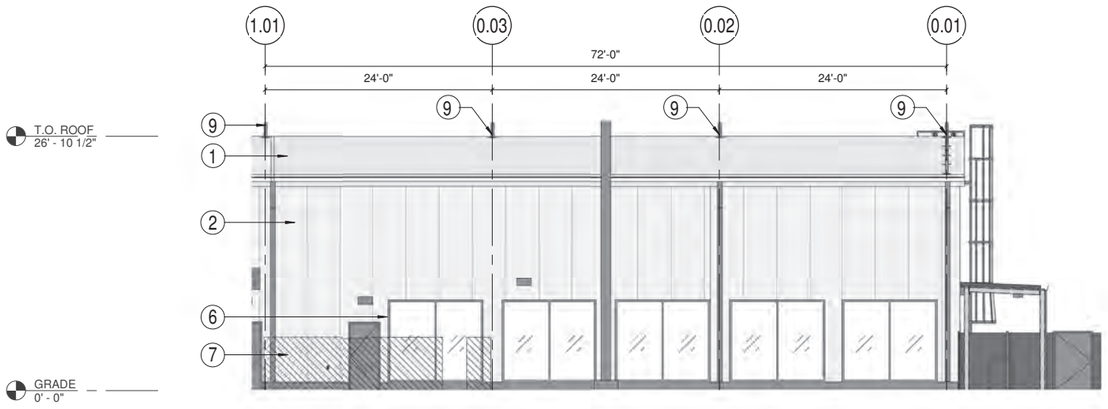


Figure 2-2b
Floor Plan South Building
San José Data Center (SJC02)
San José, California

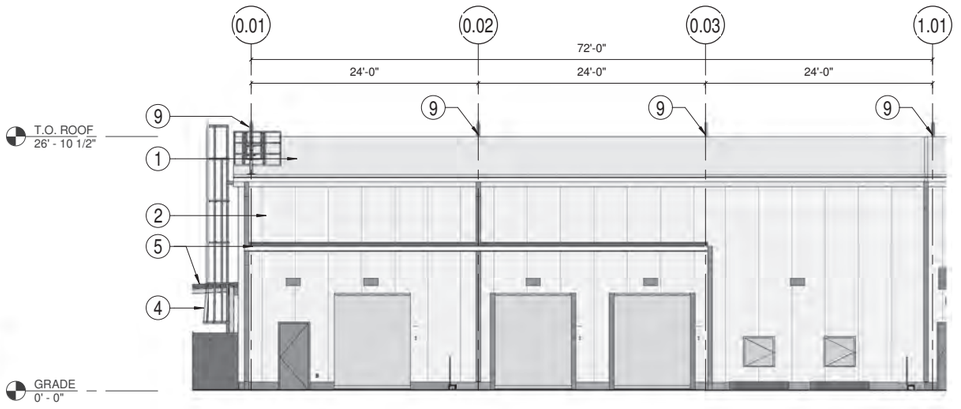
North

0 50 100
Approximate scale in feet

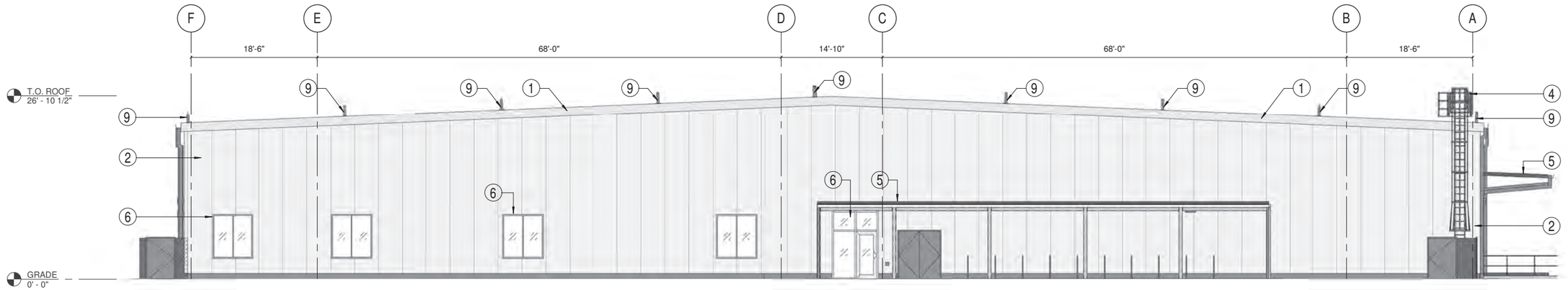
JACOBS



1 - **ELEVATION - ADMIN WEST**



2 - **ELEVATION - ADMIN EAST**



3 - **ELEVATION - ADMIN NORTH**

① ROOF PANEL 1 (WHITE)
② METAL PANEL 1 (WHITE)
③ MECHANICAL LOUVERS (WHITE)
④ ROOF ACCESS LADDER
⑤ CANOPY
⑥ STOREFRONT 1 & GLASS 1 (CLEAR ANODIZED & GRAY)
⑦ HVAC EQUIPMENT
⑧ EMERGENCY GENERATOR
⑨ ROOF SAFETY ANCHOR

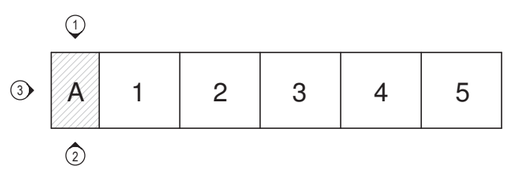
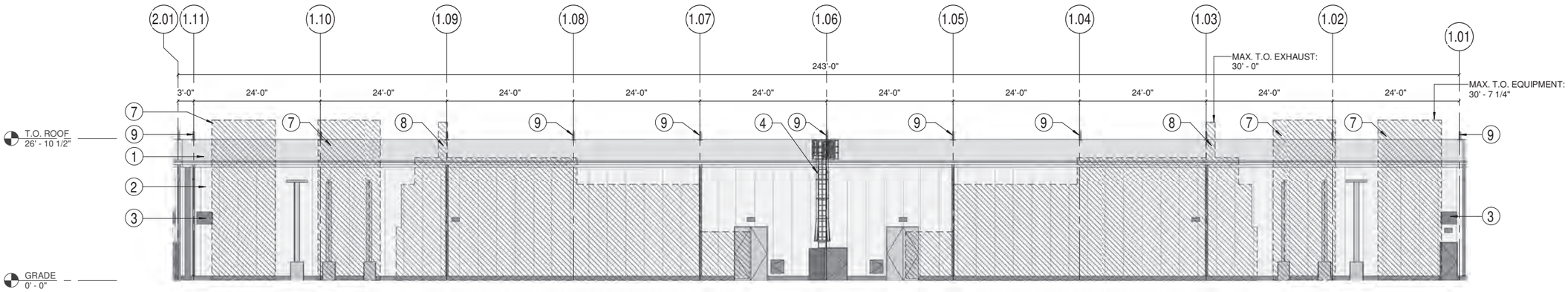


Figure 2-3a
Elevation Drawings for
Administrative North Building
North, East, West
San José Data Center (SJC02)
San José, California

0 10 20
Approximate scale in feet

JACOBS



4 ELEVATION - COLO 1 WEST

5 ELEVATION - COLO 1 EAST

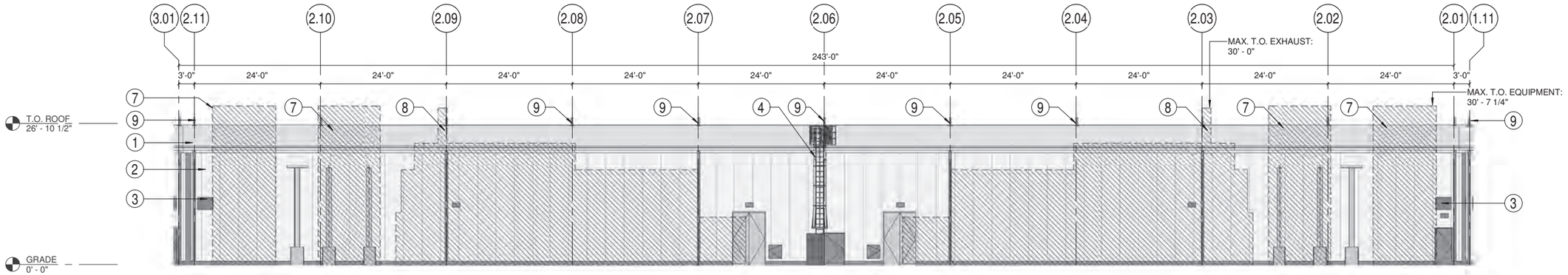
① ROOF PANEL 1 (WHITE)
② METAL PANEL 1 (WHITE)
③ MECHANICAL LOUVERS (WHITE)
④ ROOF ACCESS LADDER
⑤ CANOPY
⑥ STOREFRONT 1 & GLASS 1 (CLEAR ANODIZED & GRAY)
⑦ HVAC EQUIPMENT
⑧ EMERGENCY GENERATOR
⑨ ROOF SAFETY ANCHOR

Figure 2-3b
Elevation Drawings for
Colocation Unit 1 North Building
East and West
San José Data Center (SJC02)
San José, California

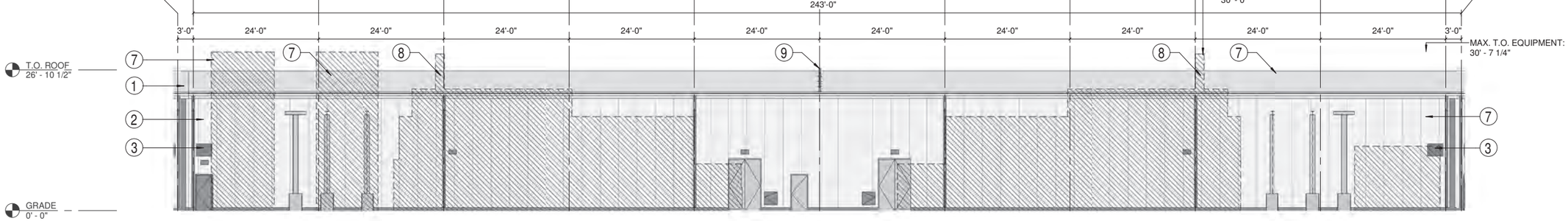
EC0821191740SAC FILENAME: Fig 2.3 a-f Elevation North Building.pdf

0 10 20
Approximate scale in feet

JACOBS



6 ELEVATION - COLO 2 WEST



7 ELEVATION - COLO 2 EAST

① ROOF PANEL 1 (WHITE)
② METAL PANEL 1 (WHITE)
③ MECHANICAL LOUVERS (WHITE)
④ ROOF ACCESS LADDER
⑤ CANOPY
⑥ STOREFRONT 1 & GLASS 1 (CLEAR ANODIZED & GRAY)
⑦ HVAC EQUIPMENT
⑧ EMERGENCY GENERATOR
⑨ ROOF SAFETY ANCHOR

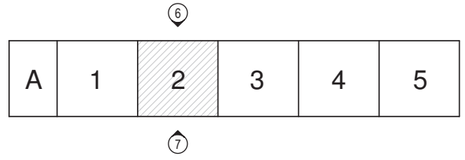
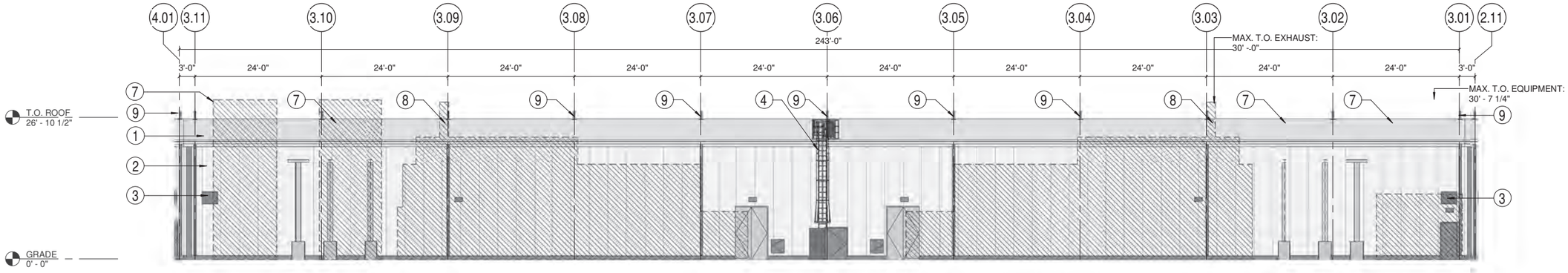


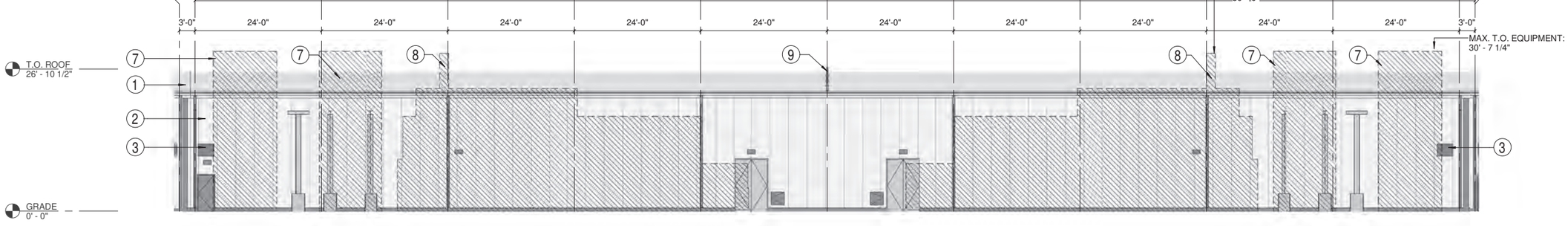
Figure 2-3c
Elevation Drawings for
Colocation Unit 2 North Building
East and West
San José Data Center (SJC02)
San José, California

0 10 20
Approximate scale in feet

JACOBS



8 ELEVATION - COLO 3 WEST



9 ELEVATION - COLO 3 EAST

① ROOF PANEL 1 (WHITE)
② METAL PANEL 1 (WHITE)
③ MECHANICAL LOUVERS (WHITE)
④ ROOF ACCESS LADDER
⑤ CANOPY
⑥ STOREFRONT 1 & GLASS 1 (CLEAR ANODIZED & GRAY)
⑦ HVAC EQUIPMENT
⑧ EMERGENCY GENERATOR
⑨ ROOF SAFETY ANCHOR

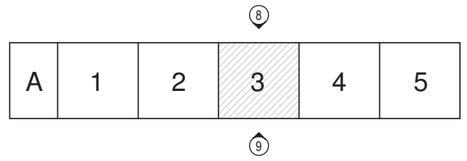
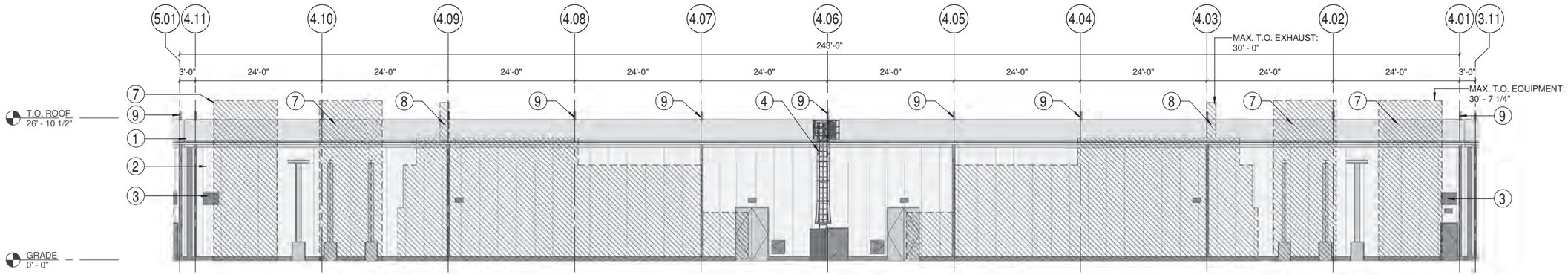


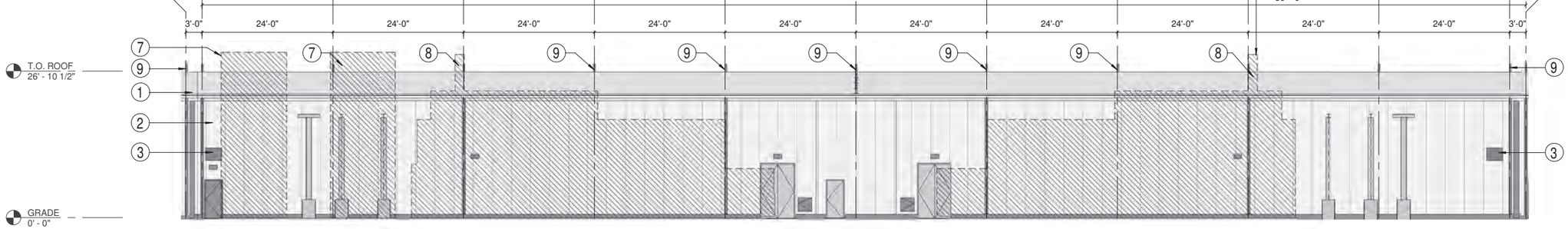
Figure 2-3d
Elevation Drawings for
Colocation Unit 3 North Building
East and West
San José Data Center (SJC02)
San José, California

0 10 20
Approximate scale in feet

JACOBS



10 ELEVATION - COLO 4 WEST



11 ELEVATION - COLO 4 EAST

① ROOF PANEL 1 (WHITE)
② METAL PANEL 1 (WHITE)
③ MECHANICAL LOUVERS (WHITE)
④ ROOF ACCESS LADDER
⑤ CANOPY
⑥ STOREFRONT 1 & GLASS 1 (CLEAR ANODIZED & GRAY)
⑦ HVAC EQUIPMENT
⑧ EMERGENCY GENERATOR
⑨ ROOF SAFETY ANCHOR

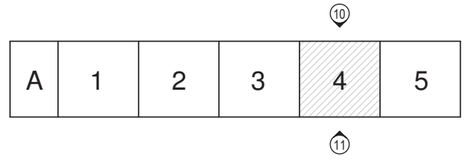
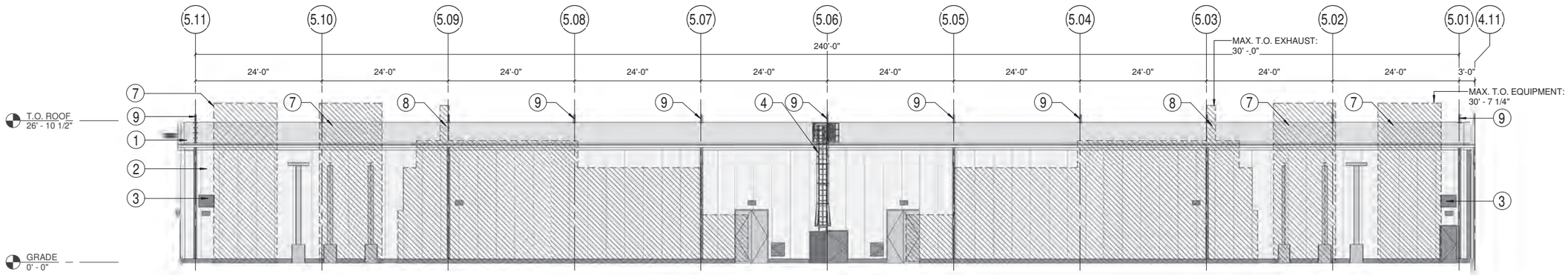


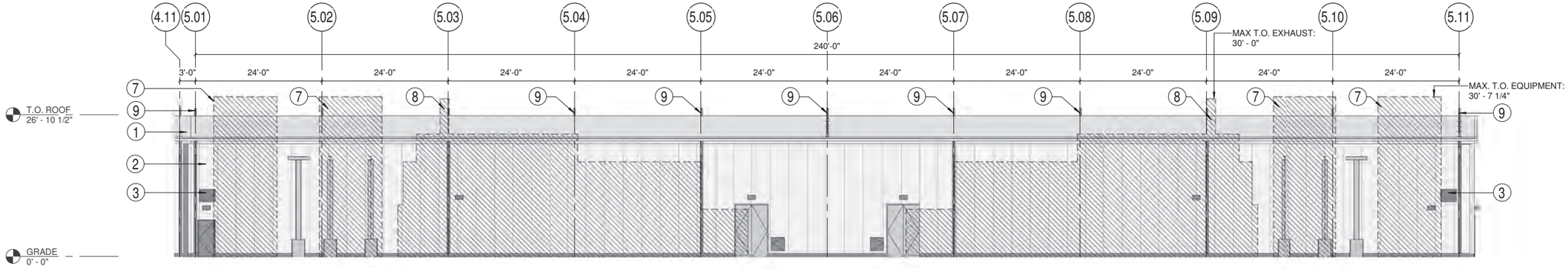
Figure 2-3e
Elevation Drawings for
Colocation Unit 4 North Building
East and West
San José Data Center (SJC02)
San José, California

0 10 20
Approximate scale in feet

JACOBS



12 **ELEVATION - COLO 5 WEST**



13 **ELEVATION - COLO 5 EAST**

① ROOF PANEL 1 (WHITE)
② METAL PANEL 1 (WHITE)
③ MECHANICAL LOUVERS (WHITE)
④ ROOF ACCESS LADDER
⑤ CANOPY
⑥ STOREFRONT 1 & GLASS 1 (CLEAR ANODIZED & GRAY)
⑦ HVAC EQUIPMENT
⑧ EMERGENCY GENERATOR
⑨ ROOF SAFETY ANCHOR

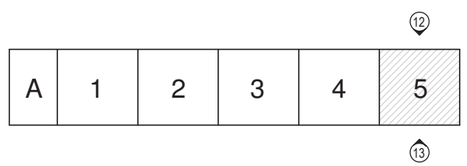
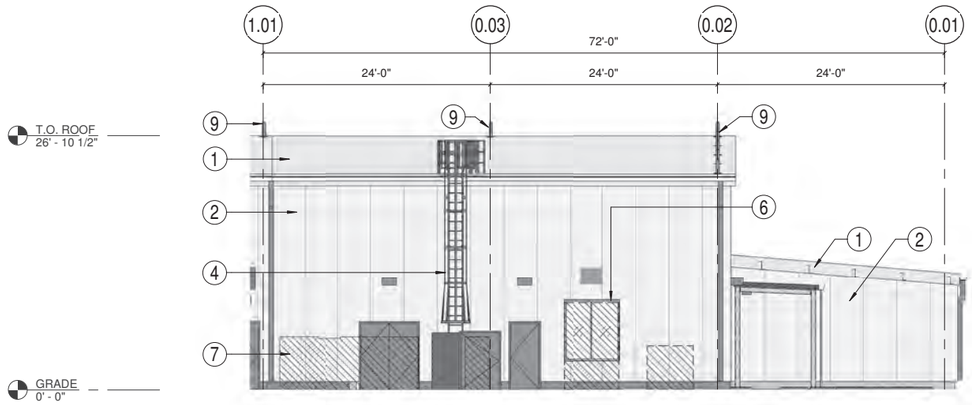


Figure 2-3f
Elevation Drawings for
Colocation Unit 5 North Building
East and West
San José Data Center (SJC02)
San José, California

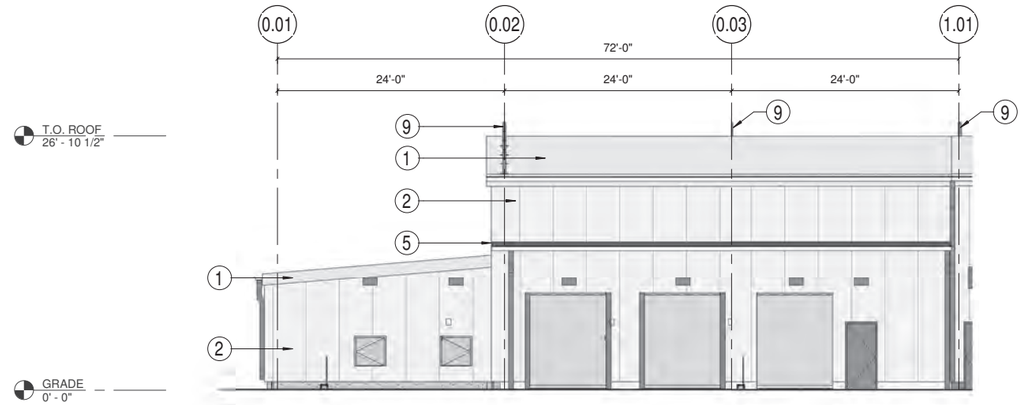
EC0821191740SAC FILENAME: Fig 2.3 a-f Elevation North Building.pdf

0 10 20
Approximate scale in feet

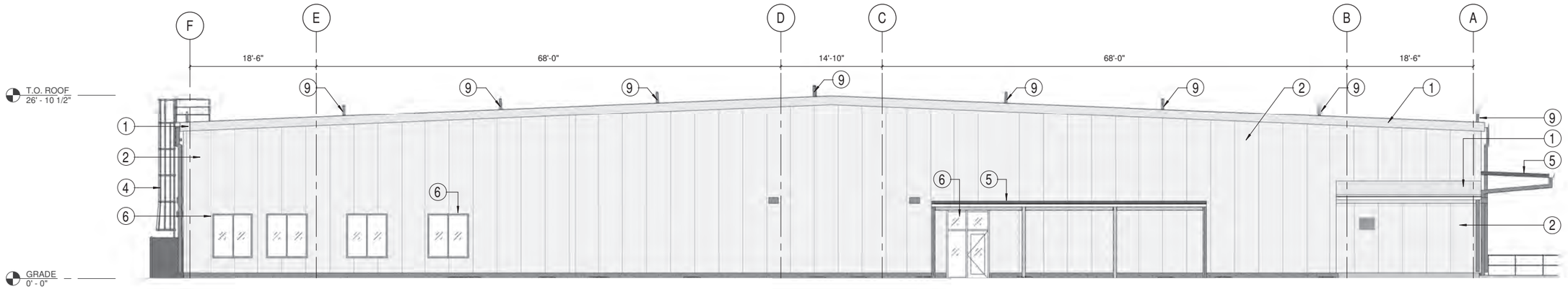
JACOBS



1 ELEVATION - ADMIN WEST



2 ELEVATION - ADMIN EAST



3 ELEVATION - ADMIN NORTH

① ROOF PANEL 1 (WHITE)
② METAL PANEL 1 (WHITE)
③ MECHANICAL LOUVERS (WHITE)
④ ROOF ACCESS LADDER
⑤ CANOPY
⑥ STOREFRONT 1 & GLASS 1 (CLEAR ANODIZED & GRAY)
⑦ HVAC EQUIPMENT
⑧ EMERGENCY GENERATOR
⑨ ROOF SAFETY ANCHOR

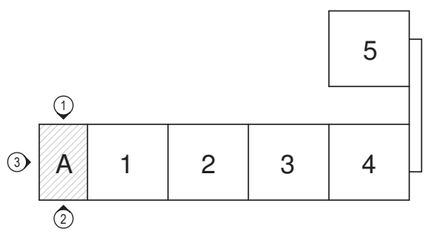
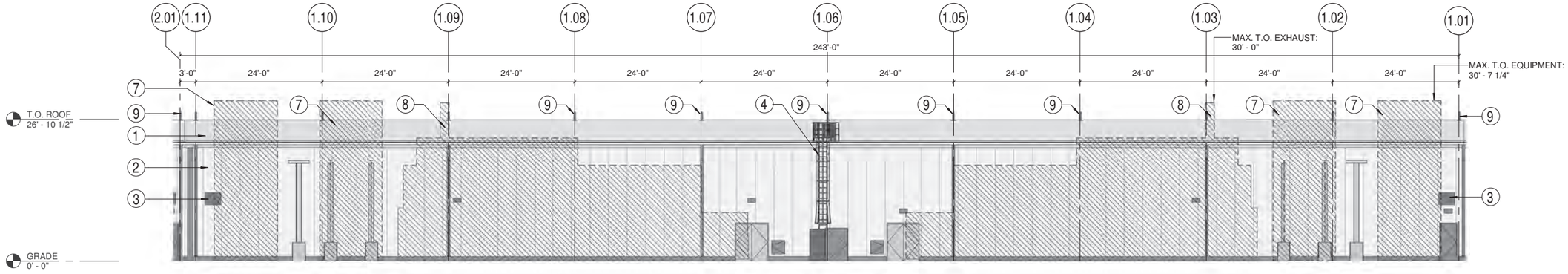


Figure 2-4a
Elevation Drawings for
Administrative South Building
North, East, West
San José Data Center (SJC02)
San José, California

0 10 20
Approximate scale in feet

JACOBS



4 ELEVATION - COLO 1 WEST

5 ELEVATION - COLO 1 EAST

① ROOF PANEL 1 (WHITE)
② METAL PANEL 1 (WHITE)
③ MECHANICAL LOUVERS (WHITE)
④ ROOF ACCESS LADDER
⑤ CANOPY
⑥ STOREFRONT 1 & GLASS 1 (CLEAR ANODIZED & GRAY)
⑦ HVAC EQUIPMENT
⑧ EMERGENCY GENERATOR
⑨ ROOF SAFETY ANCHOR

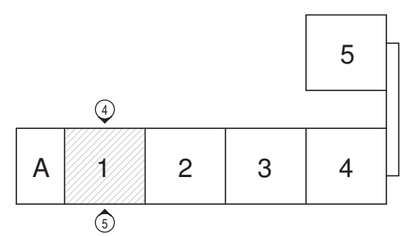
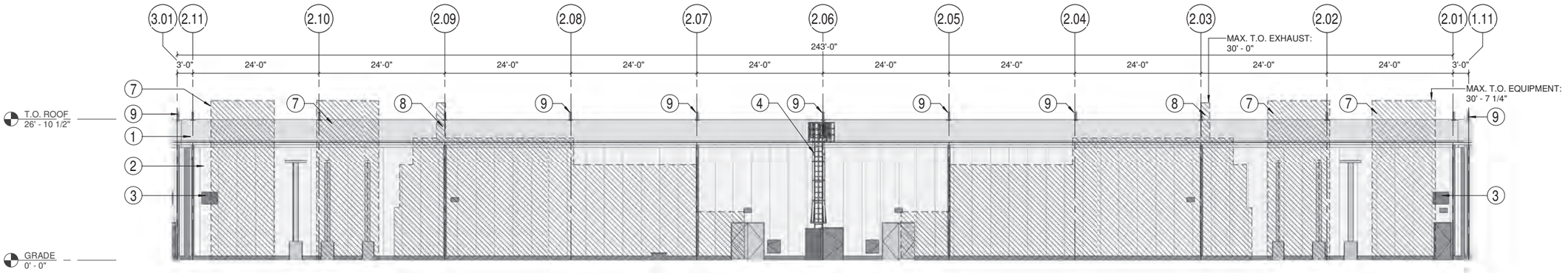


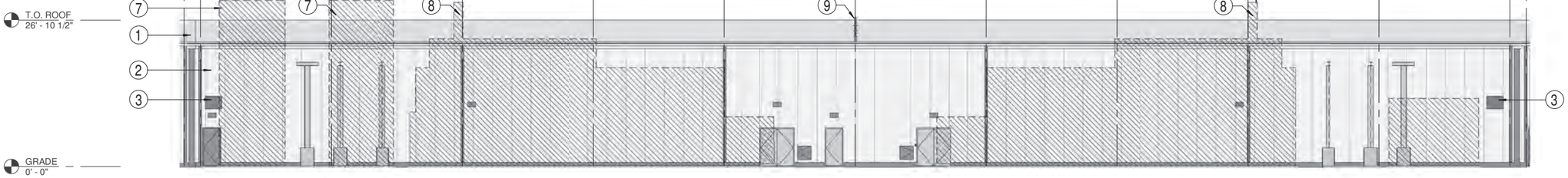
Figure 2-4b
Elevation Drawings for
Colocation Unit 1 South Building
East and West
San José Data Center (SJC02)
San José, California

0 10 20
Approximate scale in feet

JACOBS



6 ELEVATION - COLO 2 WEST



7 ELEVATION - COLO 2 EAST

① ROOF PANEL 1 (WHITE)
② METAL PANEL 1 (WHITE)
③ MECHANICAL LOUVERS (WHITE)
④ ROOF ACCESS LADDER
⑤ CANOPY
⑥ STOREFRONT 1 & GLASS 1 (CLEAR ANODIZED & GRAY)
⑦ HVAC EQUIPMENT
⑧ EMERGENCY GENERATOR
⑨ ROOF SAFETY ANCHOR

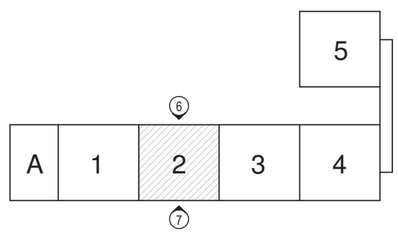
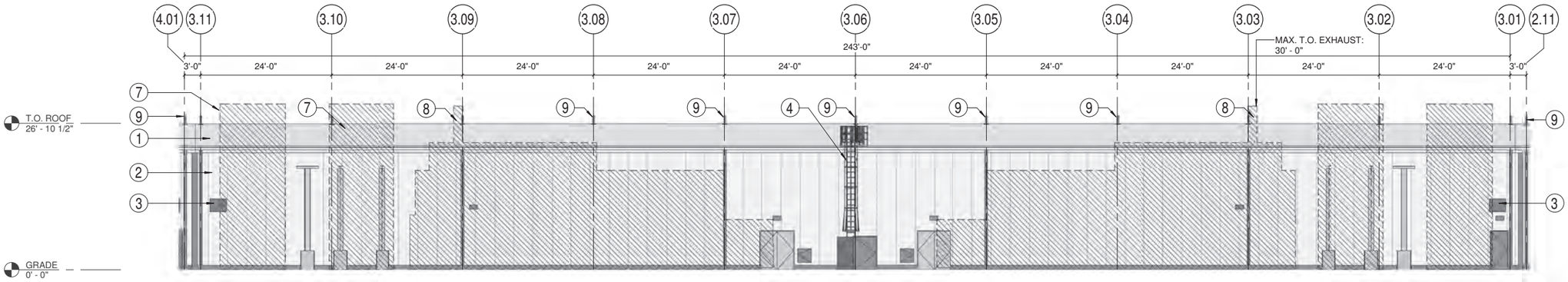


Figure 2-4c
Elevation Drawings for
Colocation Unit 2 South Building
East and West
San José Data Center (SJC02)
San José, California

EC0821191740SAC FILENAME: Fig 2.4 a-f Elevation South Building.pdf

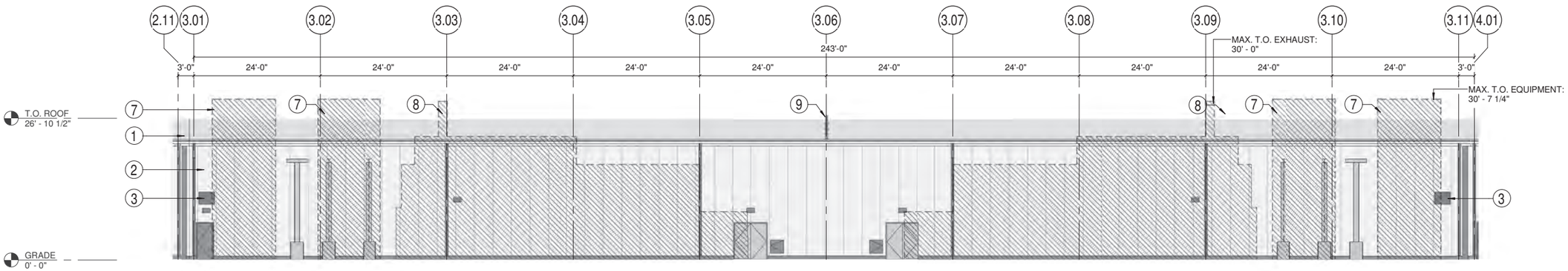
0 10 20
Approximate scale in feet

JACOBS



8 ELEVATION - COLO 3 WEST

3/32" = 1'-0"



9 ELEVATION - COLO 3 EAST

3/32" = 1'-0"

① ROOF PANEL 1 (WHITE)
② METAL PANEL 1 (WHITE)
③ MECHANICAL LOUVERS (WHITE)
④ ROOF ACCESS LADDER
⑤ CANOPY
⑥ STOREFRONT 1 & GLASS 1 (CLEAR ANODIZED & GRAY)
⑦ HVAC EQUIPMENT
⑧ EMERGENCY GENERATOR
⑨ ROOF SAFETY ANCHOR

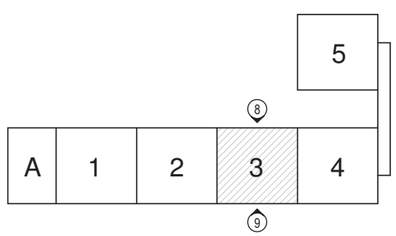
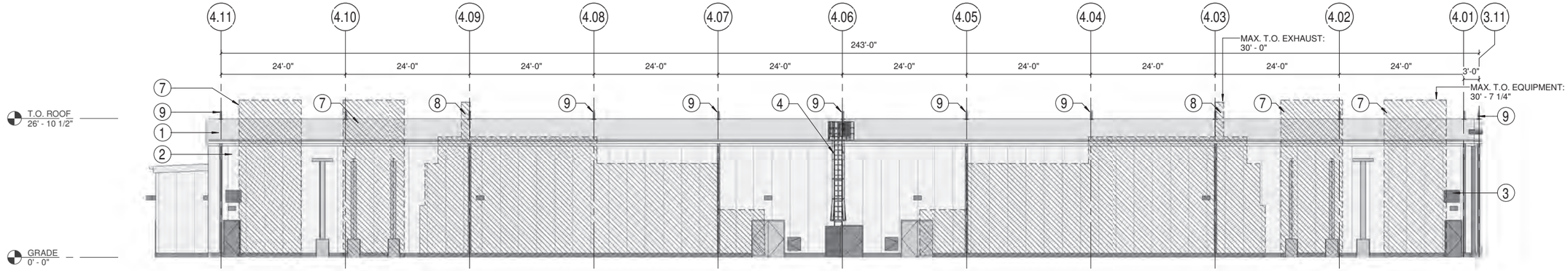


Figure 2-4d
Elevation Drawings for
Colocation Unit 3 South Building
East and West
San José Data Center (SJC02)
San José, California

0 10 20
Approximate scale in feet

JACOBS



10 ELEVATION - COLO 4 WEST

11 ELEVATION - COLO 4 EAST

① ROOF PANEL 1 (WHITE)
② METAL PANEL 1 (WHITE)
③ MECHANICAL LOUVERS (WHITE)
④ ROOF ACCESS LADDER
⑤ CANOPY
⑥ STOREFRONT 1 & GLASS 1 (CLEAR ANODIZED & GRAY)
⑦ HVAC EQUIPMENT
⑧ EMERGENCY GENERATOR
⑨ ROOF SAFETY ANCHOR

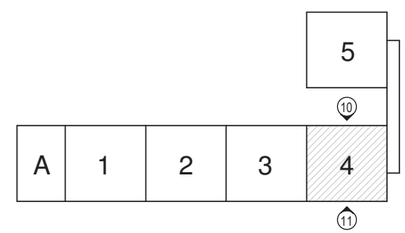
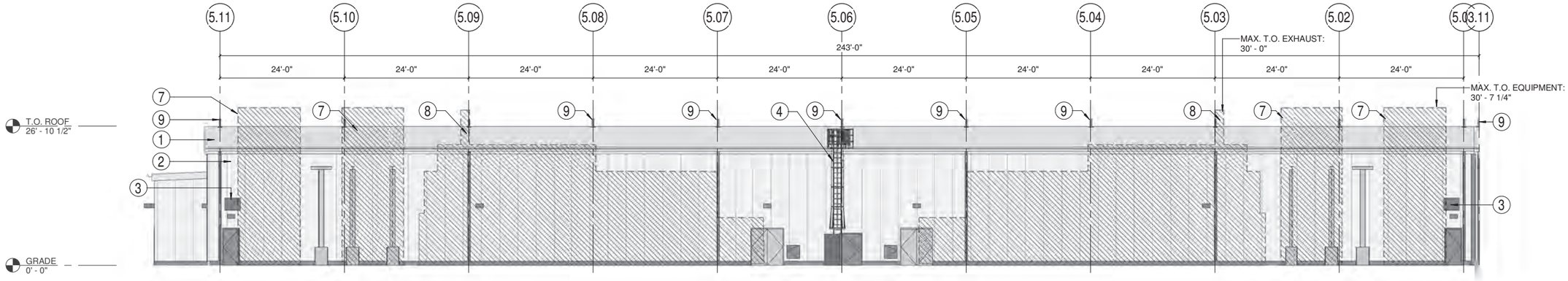


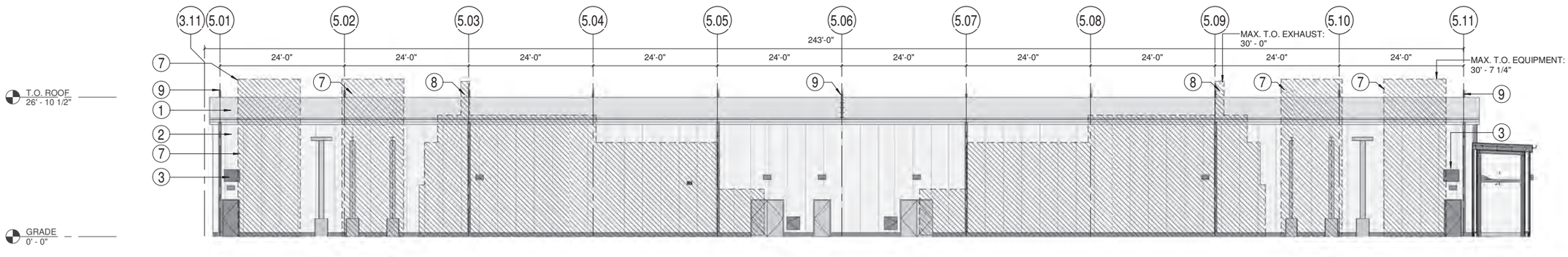
Figure 2-4e
Elevation Drawings for
Colocation Unit 4 South Building
East and West
San José Data Center (SJC02)
San José, California

0 10 20
Approximate scale in feet

JACOBS



12 **ELEVATION - COLO 5 WEST**



13 **ELEVATION - COLO 5 EAST**

① ROOF PANEL 1 (WHITE)
② METAL PANEL 1 (WHITE)
③ MECHANICAL LOUVERS (WHITE)
④ ROOF ACCESS LADDER
⑤ CANOPY
⑥ STOREFRONT 1 & GLASS 1 (CLEAR ANODIZED & GRAY)
⑦ HVAC EQUIPMENT
⑧ EMERGENCY GENERATOR
⑨ ROOF SAFETY ANCHOR

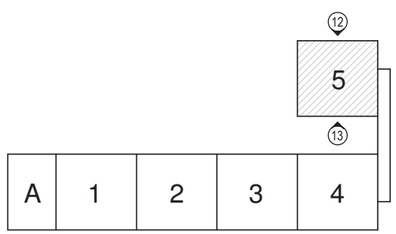


Figure 2-4f
Elevation Drawings for
Colocation Unit 5 South Building
East and West
San José Data Center (SJC02)
San José, California

0 10 20
Approximate scale in feet

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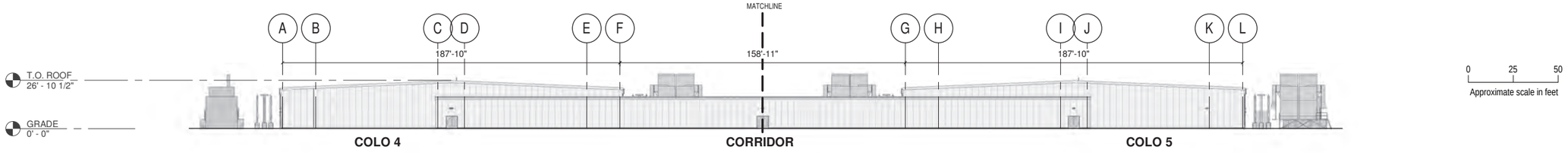
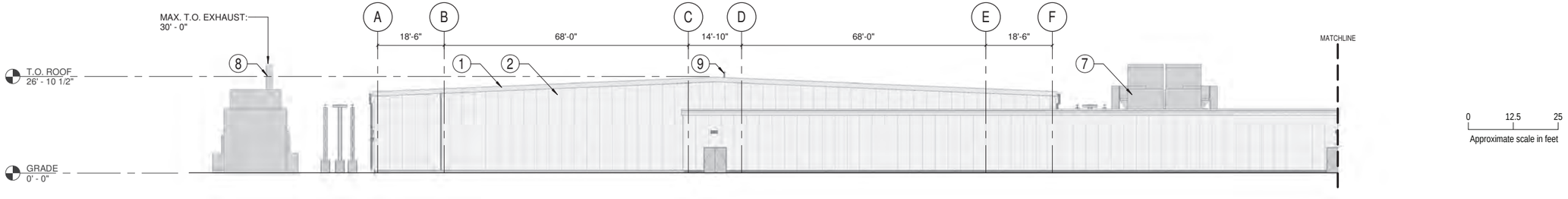
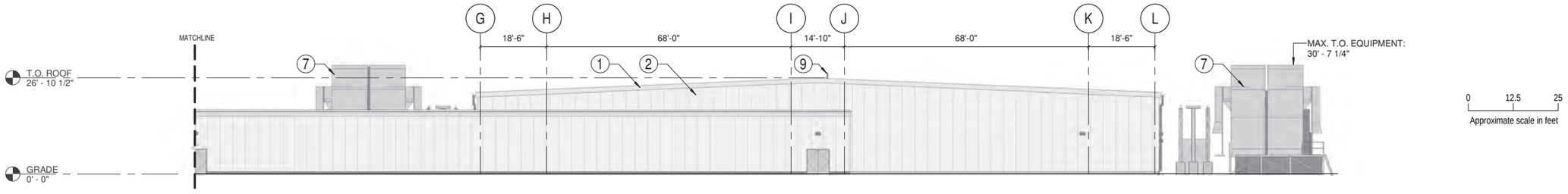


1 ELEVATION - SOUTH SIDE OVERALL



2 ELEVATION - SOUTH SIDE COLO 4



3 ELEVATION - SOUTH SIDE COLO 5

① ROOF PANEL 1 (WHITE)
② METAL PANEL 1 (WHITE)
③ MECHANICAL LOUVERS (WHITE)
④ ROOF ACCESS LADDER
⑤ CANOPY
⑥ STOREFRONT 1 & GLASS 1 (CLEAR ANODIZED & GRAY)
⑦ HVAC EQUIPMENT
⑧ EMERGENCY GENERATOR
⑨ ROOF SAFETY ANCHOR

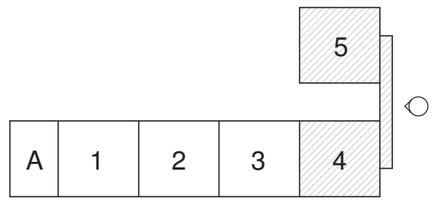


Figure 2-4g
Elevation Drawings for
Colocation Units 4 and 5 South Building
South
San José Data Center (SJC02)
San José, California

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Figure 2-5
Site Rendering
San José Data Center (SJC02)
San José, California

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New Microsoft Data Center Substation

IC Substation Adder

TRANSMISSION SCOPE:
New 2-Bay, 6 CB 230kV BAAH Substation with terminals for two (2) 230kV Lines and (2) 230/21kV 45MVA XFMR's

DISTRIBUTION SCOPE:
(2) 230/21kV 45MVA XFMR's,
(2) 21kV XFMR bays and
(4) 21kV Feeder (2 per XFMR)

Newrak - Los Esteros 230 kV

Los Esteros - Metcalf 230KV

Transmission Line #2

Transmission Line #1

230/13.8 KV XFMR

230/13.8 KV XFMR

T-Line: 1100' of 230KV

~ 1200'-2000'

Capacitor Bank #1 #2 #3

Los Esteros Substation

Future Voltage Regulation Equipment (Reactors)

Install (2) New Bays w/ (4) Deadend Structures, (4) CB's, (10) Disconnect Switches, CCVT's & Protective Relays

Bay 2
Bay 3
Bay 4
Bay 5
Bay 6
Bay 7
Bay 8

Bus 1
Bus 2

115KV BAAH

Los Esteros – Nortech 115kv

Los Esteros – Trimble 115KV

Los Esteros – Montague 115kv

Los Esteros – Agnews/River Oaks 115KV

Lecef #1

Lecef #2

XFMR #3

XFMR #4

Bay 2
Bay 3
Bay 4
Bay 5
Bay 6

Bus 1
Bus 2

230KV BAAH

To SVP

To SVP

Rev. 8
9/28/2016

Figure 2-6
Interconnection to PG&E System and One Line Diagram
San José Data Center (SJC02)
San José, California

JACOBS

The PG&E distribution lines supplying electricity to the onsite substation will be located within the SJC02 site..

2.2.1 Electrical Generation Equipment

The standby generators will be a U.S. Environmental Protection Agency (EPA) Tier-4 diesel-fired generator equipped with diesel particulate filters (DPFs) and selective catalytic reduction systems (SCRs). The IT load generators will be Cummins Model QSK95-G5 NR2 with a standby generating capacity of 3.0 MW. The Admin generators will be Cummins Model QSK50-G5 NR2 and QSX15-G9, with a standby generating capacity of 1.25 and 0.5 MW, respectively.

Each standby generator includes an engine, alternator, and sound-attenuated enclosure. Each generator can be independently operated based on signals from the UPS system programmable logic controllers. The standby generators are optimized for rapid start, with redundant starters, redundant batteries, redundant battery chargers, and a best battery selector switch. Each 3-MW generator is approximately 13 feet wide, 56.5 feet long, and 25 feet tall to the top of the DPF/SCR. The 1.25-MW Admin generator will be approximately 13 feet wide, 41 feet long, and 16 feet tall to the top of the enclosure. The 0.5 MW Admin generator will be approximately 13 feet wide, 41 feet long, and 13 feet tall to the top of the enclosure. Each standby generator will include a separate exhaust stack approximately 30 feet above grade.

2.2.2 Fuel System

Each 3-MW standby generator includes a diesel fuel tank with polishing filtration system. The tank will be located underneath each standby generator and provides sufficient fuel storage to operate the generator for approximately 48 hours. The 3-MW standby generators will include a 9,100 gallon tank. The 1.25- and 0.5-MW generators include 4,800- and 2,000-gallon tanks, respectively.

The Applicant will contract with multiple fuel suppliers to provide delivery within 48 hours of a request to confirm fuel availability.

2.2.3 Cooling System

Each generator will be self-contained within an enclosure, with its own radiator for cooling.

2.2.4 Water Supply and Use

Potable water will be provided by the City of San José (City). Recycled water is available and will be used onsite for process cooling and landscaping purposes. The standby generators will require water during the initial filling of the closed-loop radiator system and periodically during maintenance events. After the initial fill, no further consumption of water by the standby generators will be required.

Building cooling will be accomplished using adiabatic cooling technology. The adiabatic cooling technology uses a radiator-style cooling system with wetted pre-cooling pads installed upstream of the cooling tube bundle. During lower ambient conditions, the tower operates without using water on the wetted pads. However, during higher ambient temperatures (greater than 75 degrees Fahrenheit), the pre-cooling pads are wetted to reduce the incoming air temperature, resulting in greater heat rejection. The expected total water demand is approximately 29.1 acre-feet per year, which is primarily recycled water, with negligible quantities of potable water for sanitary purposes and other minor maintenance uses.

2.2.5 Waste Management

Construction- and demolition-related wastes, similar to construction and demolition for comparable projects, will be generated, managed, and disposed of consistent with applicable law, as described in Section 3.9. No significant waste materials will be generated during operation of SJC02.

2.2.6 Hazardous Materials Management

Each standby generator will include a double-walled fuel tank to minimize the potential of an accidental fuel release. As diesel fuel is not highly volatile, vapor controls are not required. The space between the walls of the fuel tank will be monitored for the presence of liquids. This monitoring system will be monitored by the onsite operations staff, who will receive automated alerts in the event of fuel leak or release. The diesel fuel and potentially the battery electrolyte (sulfuric acid) represent the only hazardous materials stored onsite in reportable quantities.

Fuel deliveries will occur as needed by fuel suppliers delivering diesel fuel via tanker trucks. These tanker trucks will park near each standby generator for refueling. Fueling will occur within a spill catch basin located under each generator fill connection. The drain to the spill catch basin will be closed prior to the start of fueling. Spill control equipment will be stored within the backup generation yard to allow immediate responses in the event of an accident.

As a safety measure, to the extent feasible, fueling operations will be scheduled at times when storm events are improbable to avoid potential impacts to water resources.

Warning signs will be installed at the fuel unloading areas to minimize the potential of refueling accidents occurring due to tanker trucks departing prior to disconnecting the transfer hose. Also, an emergency pump shut-off will be utilized if a pump hose breaks while fueling the tanks. Tanker truck loading and unloading procedures will be posted at the fuel unloading areas.

2.3 Existing Site Condition

The SJC02 will be located on an approximately 64.5-acre site. The site has been used historically for farming since the early 1920s, but it is not currently in agricultural use. There are 2 vacant residences and a storage shed/warehouse currently onsite, which will be demolished as part of the SJC02 project. To the north of the project site are the San José/Santa Clara Regional Wastewater Treatment Plant sludge drying beds, to the south is Highway 237, to the west is the LECEF, a PG&E substation (Los Esteros Substation), and to the east is the Coyote Creek riparian corridor. The project is anticipated to begin construction in the 3rd quarter of 2020, with operations beginning in the 1st quarter of 2022.

The nearest airport, the Norman Y. Mineta San José International Airport, is located approximately 3 miles to the south.

2.4 Project Construction

The Applicant will commence construction of the project after the existing structures have been demolished and any agriculture-related soil contamination is remediated consistent with requirements to be provided by the local lead agency. Possible remediation may include excavation for offsite disposal or capping in place. No offsite staging or laydown areas are proposed, as construction staging will occur on the project site or within the 75-foot construction corridor for linear features (each side of the linear).

Demolition of the existing structures and soil excavation and removal work is expected to take approximately 1 month. Once demolition and excavation work is complete, construction of the project is expected to take approximately 16 months. Construction and demolition are scheduled to commence in the 3rd quarter of 2020 and completed in the 1st quarter of 2022 Construction of the offsite linear features within the offsite infrastructure alignment areas is expected to be completed within the 17-month construction window. Onsite construction is expected to require a maximum of 215 workers (craft and supervisory) per month and an average of 108 workers per month. Maximum and average offsite construction workers are expected to be 72 and 48, respectively. Tables 2-1a and 2-1b presents the construction/demolition workforce by month and classification for onsite and offsite construction.

Tables 2-2a and 2-2b present the expected construction equipment on a monthly basis for onsite and offsite construction. Table 2-3 presents the number of morning and evening vehicle trips to the site for onsite and offsite work.

Table 2-1a. Onsite Construction Workforce by Month and Classification

Month	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Labor Classification																	
Carpenters	0	0	0	1	5	5	5	5	5	8	20	24	24	24	18	12	4
Laborers	12	12	12	12	25	25	25	25	25	25	25	25	25	25	16	12	4
Teamsters	5	5	5	5	5	5	5	5	5	5	5	5	5	5	3	3	0
Electricians	0	0	0	1	3	3	6	9	12	24	24	30	30	30	24	18	4
Iron Workers	0	0	0	0	12	12	12	12	12	12	9	9	9	9	9	0	0
Millwrights	0	0	0	0	0	0	0	0	0	0	0	0	4	4	6	6	0
Boilermakers	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Plumbers	0	0	0	0	6	6	6	6	6	12	12	12	18	18	18	12	4
Pipefitters	0	0	0	0	0	0	0	0	0	4	14	14	14	16	16	10	4
Insulation Workers	0	0	0	0	0	0	0	0	0	0	6	8	12	12	12	12	4
Operating Engineers	6	6	6	6	9	9	9	9	9	5	15	15	7	7	5	4	0
Oilers and Mechanics	1	1	1	1	2	2	2	2	2	4	6	6	8	8	6	6	0
Cement Finishers	0	0	0	0	6	6	6	6	6	6	6	3	3	1	1	0	0
Roofers	0	0	0	0	0	0	0	0	0	0	14	14	14	14	6	3	0
Sheetmetal Workers	0	0	0	0	0	0	0	0	0	2	8	8	12	12	8	8	0
Sprinkler Fitters	0	0	0	0	0	0	0	0	0	6	6	6	6	3	3	0	0
Painters	0	0	0	0	0	0	0	0	0	0	0	4	4	6	6	4	4
Total Craft Labor	24	24	24	26	73	73	76	79	82	113	170	183	195	194	157	110	28
Total Supervision	1	1	1	2	8	12	12	12	20	20	20	20	20	20	12	12	12
Total Staffing	25	25	25	28	81	85	88	91	102	133	190	203	215	214	169	122	40

Table 2-1b. Offsite Construction Workforce by Month and Classification

Month	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Labor Classification																	
Carpenters	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Laborers	20	20	20	20	20	20	20	20	20	20	20	20	20	20	10	10	4
Teamsters	5	5	5	5	5	5	5	5	5	5	5	5	5	5	3	3	0
Electricians	0	0	0	1	3	3	3	3	3	3	3	3	3	3	3	3	0
Operating Engineers	2	2	4	4	4	4	4	4	4	4	4	4	4	4	2	2	1
Millwrights	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Boilermakers	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Plumbers	0	0	0	0	0	0	3	3	6	6	6	3	0	0	0	0	0
Pipefitters	0	0	0	0	0	0	0	0	0	4	14	14	14	16	16	10	4
Insulation Workers	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Oilers and Mechanics	1	1	1	1	2	2	2	2	2	2	2	2	2	2	2	2	1
Cement Finishers	0	0	0	0	0	0	0	0	2	2	2	2	3	3	2	0	0
Roofers	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sheetmetal Workers	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sprinkler Fitters	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Painters	0	0	0	0	0	0	0	0	0	0	0	4	4	6	6	4	4
Total Craft Labor	28	28	30	31	34	34	37	37	42	46	56	57	55	59	44	34	14
Total Supervision	3	3	3	3	5	10	10	10	10	15	15	15	10	10	10	10	3
Total Staffing	31	31	33	34	39	44	47	47	52	61	71	72	65	69	54	44	17

Table 2-2a. Onsite Construction Equipment by Month

Month	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Description																	
Excavators	4	4	4	4	2	2	2	2	2	0	0	0	0	0	0	0	0
Backhoe	0	0	0	1	2	2	1	1	1	1	1	0	0	0	0	0	0
10-wheel Dump Truck	25	25	25	25	3	2	2	2	2	2	0	0	0	0	0	0	0
Hydraulic Hammer	2	2	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0
Front End Loader	2	2	2	2	3	3	1	1	0	0	0	0	0	0	0	0	0
75-ton Hydraulic Crane	0	0	0	0	0	0	2	2	0	1	1	0	0	0	0	0	0
35-ton Hydraulic Crane	0	0	0	0	0	0	2	2	0	0	0	2	2	0	0	0	0
Fork Lift	0	0	0	1	2	2	2	2	3	3	3	3	3	2	2	1	1
Horizontal Directional Drill Equipment	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0
Grader	0	0	0	4	4	4	4	2	1	0	0	0	0	0	0	0	0
Compactor	0	0	0	4	4	2	2	2	2	2	2	0	0	0	0	0	0
Water Truck	2	2	2	2	2	2	2	2	2	2	2	2	2	2	1	1	1
Pick-up Truck	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	1
Light Towers	0	0	0	1	1	1	2	2	2	1	1	1	1	0	0	0	0

Table 2-2b. Offsite Construction Equipment by Month

Month	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Description																	
Excavators	4	4	4	4	2	2	2	2	2	0	0	0	0	0	0	0	0
Backhoe	2	2	2	2	2	2	2	2	2	2	1	0	0	0	0	0	0
10-wheel Dump Truck	3	3	3	3	3	3	3	3	10	10	2	2	2	1	1	1	0
Concrete Trucks	0	0	0	0	0	0	0	0	0	0	0	5	5	5	5	5	0
Hydraulic Hammer	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Front End Loader	2	2	2	2	3	3	1	1	1	1	1	1	1	1	1	0	0
75-ton Hydraulic Crane	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
35-ton Hydraulic Crane	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Fork Lift	2	2	2	2	2	2	2	2	3	3	3	3	0	0	0	0	1
Horizontal Directional Drill Equipment	0	0	0	0	0	0	1	1	1	1	0	0	0	0	0	0	0
Grader	0	0	0	4	4	4	4	2	1	0	0	0	0	0	0	0	0
Compactor	0	0	0	4	4	2	2	2	2	2	2	0	0	0	0	0	0
Water Truck	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0
Pick-up Truck	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	2
Light Towers	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Table 2-3. Onsite/Offsite Construction Trip Generation

Trip Type	AM Peak Hour			PM Peak Hour		
	In	Out	Total	In	Out	Total
Delivery and Haul Trucks	30	30	60	30	30	60
Workers	215	0	215	0	215	215
Total Construction Traffic	245	30	275	30	245	275

Based on the geotechnical investigation, soils in the upper 3 to 5 feet under the project site consist of granular soils of clayey sands, sands, and gravels with variable clay content, and some clays. Under this layer of soils is lean to fat clays to about 25 feet, with loose to medium dense gravels/sand and loose to medium dense sands with gravel, and low to medium plastic sandy lean clays to about 80 feet below grade. The geotechnical investigation determined that the potential exists for liquefaction-induced settlement, lateral spreading, shallow groundwater (7 to 12 feet below grade), and expansive soils that are common in this region.

The geotechnical investigation suggests the placement of 3 to 4 feet of imported fill on the site, with the use of spread footings for building foundations, and densification techniques to address the liquefaction/lateral spreading and expansive soils. The densification technique involves the vertical and horizontal compaction of soils beneath the foundations to reduce the total settlement to acceptable levels. The geotechnical investigation indicates that densification techniques will disturb soils to approximately 40 feet below grade. Figure 2-7 identifies the expected excavation depths at the project site.

2.5 Project Design Features

The Applicant has incorporated numerous features and best management practices in the project design that are intended to avoid and reduce potential impacts from the project.

These project design features are consistent with best practices and existing regulatory requirements. They include the following by environmental topic area:

2.5.1 Air and Water Quality

- Minimize fugitive dust generation by watering exposed soils two time per day or as needed.
- Cover truck loads when transporting soil, sand, or other loose materials to or from the site.
- Perform street sweeping to remove all visible mud or dirt track-out onto adjacent public roads at least once per day. The use of dry power sweeping is prohibited.
- Limit onsite vehicle speeds on unpaved surfaces to 15 miles per hour.
- Pave onsite roads and driveways, and sidewalks as soon as possible in the construction schedule. Pour foundations for building pads as soon as possible after grading.
- Limit construction equipment idling times to a maximum 5 minutes, or shut equipment down when not in use.
- Maintain and tune construction equipment in accordance with manufacturer‘s specifications.
- Employ a certified visible emission evaluator to verify that construction equipment is functioning properly.
- Post a publicly visible sign with the telephone number and name of the person to contact regarding dust complaints and the Bay Area Air Quality Management District (BAAQMD) telephone number. The contact person will implement corrective measures, as needed, within 48 hours, and the BAAQMD will be informed of any legitimate complaints received to verify compliance with applicable regulations.

LEGEND

- Project Site
- Proposed SJC02 Development Area (Estimated Excavation Depth 35-65 ft bgs)
- Estimated Excavation Depth of 15 ft bgs
- Los Esteros Critical Energy Facility
- PG&E Substation
- Proposed Storm Drain
- Proposed Sanitary Sewer
- Proposed Reclaimed Water
- Proposed Water Line Route #1
- Proposed Water Line Route #2
- Proposed Water Line Route #3
- Proposed Shared Water Line
- Proposed Electrical Supply Line

N

0 750 1,500

Approximate scale in feet

Figure 2-7
Estimated Excavation Depths
of Proposed Project
San José Data Center (SJC02)
San José, California

JACOBS

\\BROOKSIDEFILES\GIS_SHARE\ENBG\00_PROJ\L\LIGHTSPEED\MAPS\REPORT\FIG2-7_EXCAVATIONDEPTHS.MXD 11/6/2019 2:37:14 PM

2.5.2 Biological Resources

- Pre-construction surveys will be performed for biological resources by a qualified biologist (bachelor's degree or higher in biological science field) with demonstrated field experience. The surveys will identify any active nests in both trees and burrows within 300 feet of areas that could be disturbed during construction. Surveys will be completed at least 14 days prior, and again 24 hours prior, to the initiation of ground disturbance, or as directed by the City. Additional surveys will be performed if construction lapses for more than 15 days between March and July. During this survey, the biologist will inspect vegetation along the perimeter of the project site and linear routes.
- A no-work buffer will be established around any active nests with an appropriate buffer (25 to 250 feet, depending on species) for the nesting species. The buffer widths will be developed by a qualified biologist, based on species' sensitivity to disturbance, planned construction activities, and baseline level of human activity. The buffers will remain in effect until the young have fledged or the nest is no longer active (as confirmed by the qualified biologist). Inactive nests will be removed by the qualified biologist, and unoccupied burrows will be destroyed.
- The biologist will draft a technical memorandum documenting the result of the survey and any designated buffer zones, which may be submitted to the City prior to the start of ground disturbance activities.
- Prior to the commencement of construction, the Applicant will secure the services of a qualified biologist. The biologist will prepare a Worker Environmental Awareness Training program (WEAT) to instruct construction workers of the obligation to protect and preserve valuable biological resources for review by the City. This WEAT will be provided to all construction workers via a recorded presentation and will include a discussion of applicable laws and penalties under the laws; samples or visual aids of resources that could be encountered in the project vicinity; instructions regarding the need to halt work in the vicinity of any potential biological encountered; and measures to notify their supervisor, the Applicant, and the specialists.

2.5.3 Cultural Resources

- Prior to the commencement of construction, the Applicant will secure the services of qualified archaeological and Native American specialists. These specialists will prepare a WEAT program to instruct construction workers of the obligation to protect and preserve valuable archaeological and Native American resources for review by the City. This program will be provided to all construction workers via a recorded presentation and will include a discussion of applicable laws and penalties under the laws; samples or visual aids of resources that could be encountered in the project vicinity; instructions regarding the need to halt work in the vicinity of any potential archaeological and Native American resources encountered; and measures to notify their supervisor, the Applicant, and the specialists.

2.5.4 Paleontological Resources

- The Applicant will secure the services of a qualified professional paleontologist, as defined by the Society of Vertebrate Paleontology, to be on-call prior to the commencement of construction. The paleontologist will be experienced in teaching non-specialists to recognize fossil materials and how to notify in the event of encountering a suspected fossil. If suspected fossils are encountered during construction, the construction workers will halt construction within 50 feet of any potential fossil find and notify the paleontologist, who will evaluate its significance.
- If a fossil is encountered and determined to be significant and avoidance is not feasible, the paleontologist will develop and implement an excavation and salvage plan in accordance with Society of Vertebrate Paleontology standards. Construction work in the immediate area will be halted or diverted to allow recovery of fossil remains in a timely manner. Fossil remains collected will be cleaned, repaired, sorted, and cataloged, along with copies of all pertinent field notes, photos, and maps.
- The paleontologist will prepare a paleontological resource monitoring report that outlines the results of the monitoring program and any encountered fossils. The report may be submitted to the Director

of Community Development for review and approval. The report and any fossil remains collected will be submitted to a scientific institution with paleontological collections.

- Prior to the commencement of construction, the Applicant will secure the services of a qualified paleontological specialist. The specialist will prepare a WEAT program to instruct construction workers of the obligation to protect and preserve valuable paleontological resources for review by the City's Director of Community Development. This program will be provided to all construction workers via a recorded presentation and will include a discussion of applicable laws and penalties under the laws; samples or visual aids of resources that could be encountered in the project vicinity; instructions regarding the need to halt work in the vicinity of any potential paleontological resources encountered; and measures to notify their supervisor, the Applicant, and the specialists.

2.6 Facility Operation

The standby generators will be run primarily for testing and maintenance purposes, and otherwise will not operate unless there is an interruption of the electrical supply. The California Air Resources Board's Airborne Toxic Control Measures limits each engine to no more than 50 hours of operation annually for reliability purposes (i.e., testing and maintenance). Table 2-4 presents the expected testing and maintenance operations for each engine on a monthly, quarterly, and annual basis.

Table 2-4. Standby Generator Expected Testing and Maintenance Events (per Standby Generator)

Maintenance Event	Duration		Load Factor	Annual Operations
	Frequency	Hours		Hours/Year
Monthly Generation[a]	8	0.42	100%	3.4
Quarterly Generation[b]	3	0.42	100%	1.3
Annual Generation	1	2	100%	2
3-Year Medium Voltage Breaker/Transformer Testing	1	4	100%	4
Contingency Testing[c]	-	1.6	100%	1.6

[a] Quarterly and annual testing is counted as monthly testing.

[b] Annual testing counts as quarterly testing.

[c] The contingency testing was included to provide standby generator operations to support unscheduled maintenance/testing requirements.

Note:
- = not applicable

2.7 Alternate Standby Generation Technologies Considered But Rejected

The purpose of the standby generators is to provide a high degree of electrical reliability, which requires installation of redundant systems (i.e., twice as much generating capability as necessary to operate the facility). Diesel-fired electrical generators have a long and successful history of satisfying the needs of emergency electrical needs of critical infrastructure. Even though there will be no significant, unmitigated impacts from the project due to the features incorporated into the project design and the incorporation of identified feasible mitigation measures (as described throughout this Initial Study, where appropriate), the Applicant considered alternate standby generation technologies as potential options. The technologies considered included alternative-fueled generators (propane, gasoline, and natural gas), fuel cells, renewable generation, and storage. However, none of the alternatives can meet the basic project objectives in a feasible, cost-effective manner, nor are they necessary to lessen any of the impacts from the project.

2.7.1 Alternative Fuel Sources

The use of alternative-fueled generators included consideration of the use of propane-, gasoline-, and natural gas- fired standby generators. Each proposed diesel-fired standby generator includes a diesel storage tank. Storage of diesel fuel does not require vapor control systems to protect public health and safety and can be stored for indefinite periods of time. Diesel fuel is widely used in automobiles, emergency generators supporting other critical infrastructure (such as hospitals, police stations, or communication systems), and construction equipment. Diesel fuel accounted for 21 percent of the fuels consumed in the United States transportation sector.[2] Diesel fuel has a lower vapor pressure as compared to other fuels (gasoline, propane, and natural gas), making it inherently safer to use and store as compared to alternative fuel sources. In contrast, natural gas- and propane gas-fired generators are available in 3.0-MW units; however, designing and installing an onsite natural gas storage system would not be cost effective and would require a significantly larger project site to accommodate the equipment required to pressurize and store the fuel. Natural gas-fueled units would also be susceptible to outages from the natural gas supplier in the event of extraordinary natural gas system events (such as line ruptures or supply shortage due to extreme weather events). Propane-fired generators require fuel storage tanks. The amount of propane required to support the expected load of 92 MW of standby generation for 48-hours (consistent with the reliability provided by proposed diesel standby generators) would require multiple storage tanks, increasing the risk to public health from accidental releases from transportation and onsite storage.

2.7.2 Alternative Technologies

The Applicant considered whether alternative technologies could provide the same level of reliability and consistency as the standby generators. Fuel cells convert chemical energy, in the form of hydrogen or natural gas, to electricity with water, heat, and carbon dioxide as the possible by-products. Standby fuel cells are configured in 'stacks' of units, allowing the fuel cell output to be scalable up to utility scales.[3] The use of fuel cells will either require the installation of a natural gas pipeline, increasing the project's impacts, or the storage of hydrogen sufficient to generate the expected load of 92 MW. The SJC02 standby generators do not require the installation of a new, significant natural gas pipeline to support the project. Assuming the use of natural gas fuel cell, and a pipeline of sufficient size and capacity where available, the expected load of 92 MW of fuel cells will require a substantially greater area than is required for the standby diesel generators. Given that the standby diesel generators are expected to operate for relatively few hours per year for testing and maintenance purposes, the environmental impacts associated with installing a natural gas pipeline of sufficient size for fuel cells in an urban area like San José would have a greater impact than the use of the proposed standby generators. Hydrogen is a highly flammable material stored under significant pressure, and storage is a challenge for stationary and portable applications.[4] Hydrogen is not considered feasible in similar project applications.

Due to the intermittent nature, the use of renewable generation sources (wind, hydroelectric, or solar) on their own would not satisfy the project's need for reliable standby generation. The space and resource requirements for the expected load of 92 MW of renewable power and their intermittent nature make such applications infeasible for this project and site. Renewable generation resources, such as solar or wind coupled with a battery installation, would require significantly more space than that currently operated by the standby generators; would not fit on the current project site; and would not avoid or minimize any potentially significant impacts.

[2] https://www.eia.gov/energyexplained/index.php?page=diesel_use
[3] https://www.energy.gov/sites/prod/files/2014/10/f19/ftco_early_mkts_fc_backup_power_fact_sheet.pdf
[4] https://www.energy.gov/eere/fuelcells/hydrogen-storage

3. Environmental Information

This section contains 21 individual sections representing the environmental, public health, and local impact assessment disciplines for the California Energy Commission (CEC) Energy Facilities Siting Regulations (Title 20, California Code of Regulations, Section 1936 et seq.) Application for a Small Power Plant Exemption.

3.1 Aesthetics

Except as provided in Public Resources Code Section 21099 would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Have a substantial adverse effect on a scenic vista?	☐	☐	☒	☐
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☒	☐
c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	☐	☐	☒	☐
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	☒	☐

Environmental checklist established by CEQA Guidelines, Appendix G.

3.1.1 Setting

The San José Data Center (SJC02) will be located within the City of San José (City) on an approximately 64.5-acre site and will consist of two data center buildings totaling over approximately 479,000 square feet of space. The project will include 40 3.0-megawatt (MW) standby diesel generators (20 per building) to provide electrical power to support the IT load during utility outages or certain onsite electrical equipment interruptions or failures, as well as the installation of 20 3-MW emergency diesel generators at each building. In addition to the 40 backup generators, the project will include two administrative generators, rated at 1.25 MW and 0.5 MW, to support administrative functions during an interruption in the normal delivery of electrical power from the utility. The facility design will not require more than approximately 99 MW of electrical power, which will be used only for backup power for onsite data center operations in the event of an electrical outage by Pacific Gas & Electric (PG&E), although the estimated load is 92 MW.

The land has been used historically for farming since the early 1920s but is not currently in agricultural use. There are two vacant residences, a mobile home, and a storage shed/warehouse currently onsite, which will be demolished as part of the SJC02 project. To the north of the project site are the San José/Santa Clara Regional Wastewater Treatment Plant (WWTP) sludge drying beds, to the south is Highway 237, to the west is the Los Esteros Critical Energy Facility (LECEF), a PG&E substation, and to the east is Coyote Creek. The project is anticipated to begin construction in the 3rd quarter of 2020, with operations beginning in the 1st quarter of 2022. The site will be graded level, and the existing perimeter landscape trees and fencing will remain. There are no unique or high-quality visual resources on the project site itself or within the offsite infrastructure alignment areas, although the project site is adjacent to the Coyote Creek riparian corridor.

3.1.2 Existing Landscape Setting and Viewer Characteristics

The SJC02 project site is located at 1595 and 1657 Alviso-Milpitas Road, San José, California. The closest buildings on adjacent lands range in size from 2 to 6 stories high. The adjacent power plant (LECEF) is constructed of concrete and metal. Overall, the visual character of the project site and surrounding area can be characterized as industrial and agricultural in nature (with the WWTP, LECEF, sludge drying beds, and PG&E substation nearby), although the Coyote Creek riparian corridor is also adjacent to the site.

Sources of existing light and glare are abundant in the industrial environment of the power plant to the east and the WWTP to the north of the site. These sources include street lights, parking lot lights, security lights, vehicular headlights, internal building lights, and reflective building surface and windows.

As identified in the Tree Inventory Report (City of San José 2017), there are approximately 195 trees on the perimeter of the project property (95 on the project site). [The trees on the project site are primarily located along the perimeter of the site, with a number of trees located adjacent to the existing buildings.

Regional Context. The project site, the offsite infrastructure alignment areas, and the surrounding area are relatively flat; as a result, the site is viewable primarily from the adjacent parcels, as well as from Ranch Drive and Highway 237 to the south. The project site is not readily visible from Zanker Road or from the eastern side of Coyote Creek (City of San José 2017).

No designated scenic vistas or view corridors are located within the City based on a review of the City's General Plan Scenic Corridors Diagram.[1] Views to the east of the project site are of the foothills; views west of the project site include the San Francisco Bay, Moffett Field, and the City of San José, which are partially obscured by existing buildings and landscaping trees located on adjacent properties.

The project site is mostly screened from views from Coyote Creek by two features: existing trees adjacent to the creek, and raised levees on each side of its banks. The project site is lower in elevation than the levee: thus, the views are limited.

The project site is not within a scenic viewshed or along a scenic highway designated by the California Department of Transportation Scenic Highway Program (Caltrans 2018).

The offsite infrastructure alignment areas are also not located within any designated scenic vistas or view corridors.

3.1.3 Environmental Impacts and Mitigation Measures

Aesthetics Impacts

a) Would the project have a substantial adverse effect on a scenic vista?

Less than Significant Impact. No designated scenic vistas or view corridors are located within the City. Views of the foothills are present to the east of the project site, and views west of the project site include the San Francisco Bay, Moffett Field, and the City of San José, which partially are obscured by existing buildings and landscaping trees. The proposed project's tallest feature will be approximately 31 feet tall, which will only obscure views close to onsite structures. Therefore, views of scenic areas will not be significantly impacted. Offsite infrastructure will be underground and will not result in impacts to scenic vistas. The project will have a less than significant impact scenic vistas.

b) Would the project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

Less than Significant Impact. The project site, the offsite infrastructure alignment areas, and the surrounding area are relatively flat. As a result, views of the project site are limited to the immediate surrounding area, which is primarily industrial in character. The project will not be readily visible from the viewsheds[2] of any of the visual resources in the City identified by the San José General Plan Environmental Impact Report because of existing development, vegetation, and distance, and there are no scenic vistas within the City (City of San José 2011). The project site is not within a scenic

[1] https://www.sanjoseca.gov/DocumentCenter/View/7466

[2] The Santa Clara Valley hills and mountains that frame the Valley floor, the baylands, and the urban skyline

viewshed or along a scenic highway designated by Caltrans. No trees, rock outcroppings, or historical buildings[3] will be substantially damaged by the project, given that the project will be compatible with existing industrial land uses nearby; will include thoughtful site planning and design elements; and will retain a significant number of onsite trees (including all of those along the perimeter). Therefore, the project will have a less than significant impact on scenic resources. Furthermore, compliance with the City's riparian offset requirements for the Coyote Creek Riparian Corridor verifies that impacts do not impair this valuable resource.

Visible Water Vapor Plumes

When internal combustion engines (e.g., diesel standby generators) operate during conditions of low ambient temperature and high relative humidity, the water vapor in the exhaust plume condenses as it mixes with the cooler ambient air, resulting in formation of a visible water vapor plume. This is similar to when the moisture-laden air in a person's breath on a cold day is chilled to the point where the water vapor condenses into tiny droplets of liquid water, forming a visible cloudy fog. Formation of visible plumes typically occurs on cool, humid days when the outdoor air is at or near saturation.

Internal combustion engines, such as the proposed 42 standby generators, produce high temperature exhausts that will disperse quickly, thereby minimizing the probability that visible plumes will form. Typically, the ambient conditions that produce visible plumes (low ambient temperatures and high relative humidity) are unlikely to coincide with the testing, maintenance, or operation of the standby generators. Emergency operation of the standby generators is more likely to occur during warm ambient conditions when electrical demand is at its highest, not during cooler ambient conditions that tend to increase the potential for visible plume formation. As such, the formation of visible plumes from the project's standby generators is unlikely. The heating, ventilation, and air conditioning system uses a fluid cooler that consumes water. However, these coolers are only operated when ambient air temperature exceed 75 degrees Fahrenheit (projected to occur less than 600 hours per year), precluding the formation of significant visual plumes. In addition, there are no unique, quality visual resources on the project site itself or the vicinity. Less than significant impact on visual resources will occur pertaining to visible plumes.

c) Would the project in non-urbanized areas substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?

Less than Significant Impact. The project site is in an already urbanized area, which is characterized as primarily industrial in nature. As discussed in Section 3.11, Land Use and Planning, the project is consistent with applicable zoning and other regulations governing scenic quality; therefore, no significant aesthetic impacts will occur. Moreover, the buildings and site improvements will be subject to the City's design review process to verify that the project will not adversely and significantly affect the visual quality of the project site and vicinity and will be required to conform to current industrial design guidelines and standards. The project will be subject to review by the City's Planning Division, which will confirm that the project conforms to San José's applicable adopted Design Guidelines. The guidelines were developed to support community aesthetic values, preserve neighborhood character, and promote a sense of community and place throughout the City. Therefore, implementation of the project will not have the potential to substantially degrade the existing visual quality or character of the site or its surroundings.

San José's design review process will be used to verify that the project will construct buildings with similar height and density to those in the surrounding industrial development to confirm land use

[3] Per the cultural resources report, the buildings are historical in nature due to their respective age but are not of cultural significance and are not considered cultural resources for purposes of CEQA.

compatibility. The height of the tallest proposed structure will be approximately 31 feet above ground surface (the fluid coolers). The façades of the proposed data center structures will consist primarily of metal paneling in white. Each of the data center structures will have a storefront that will be constructed of clear anodized aluminum and grey glass. The enclosures for the generators will consist of powder-coated metal panels in grey. The design of the proposed buildings incorporates the use of white and silver tones and varied textures, along with accent elements such as an exposed electrical equipment. The design of the project will assist in creating visual simplicity with a white structure and exposed electrical equipment, which will break up the building's facade.

The proposed buildings will be similar in scale to the surrounding industrial structures. The façades of the proposed buildings will be different than, but visually similar to, the surrounding land uses, which primarily include industrial structures. The proposed buildings and surface parking lot design will be compatible with the visual character of the surrounding area. Overall, the project will be consistent with adjacent industrial and commercial development in terms of visual character and quality. Additionally, landscaping along the southern property line will help to blend the project into the nearby riparian corridor.

Demolition, Excavation, and Construction Activities

The project will involve construction activities of two new, approximately 27-foot-high data center buildings with supporting parking, an electrical substation, and 42 standby generators located in generation yards adjacent to the data center buildings. During construction, the project site will be enclosed by the security fencing. Visual impacts during construction will be temporary and will cease upon completion of construction activities. Therefore, the temporary construction-related activities of the project will not substantially degrade the existing visual quality or character of the project site or its surroundings.

There are no significant impacts to aesthetics due to the incorporation of the project design features described; therefore, no mitigation measures are required. As noted herein, the buildings and site improvements will be subject to the City's design review process to confirm that the project will not adversely and significantly affect the visual quality of the area and will conform to current architectural and landscaping standards.

d) Would the project create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

Less than Significant Impact. The project will include outdoor security and wayfinding lighting on the project site located along walkways, driveways, and entrance areas, and in surface parking areas, comparable to the existing ambient lighting in the surrounding area. The project will increase the amount of lighting on the project site but will not increase the overall level of illumination in the area, given the adjacent industrial developments and the fact that the project will be required to adhere to all applicable lighting standards. The design of exterior facades of the proposed buildings will be required to adhere to applicable standards to confirm that impacts remain less than significant, which will be verified during the City's design review process . Typical design requirements include directional or shielded lights, or both, to minimize brightness and glare of the lights, which will be required as part of the project. In addition, the exterior surfaces of the proposed buildings will use low-glare glazing and will not be a significant source of glare during daytime hours. Lastly, signage will be subject to the City's approval process and consistent with applicable regulations. Design features will be included to minimize light impacts on the adjacent riparian corridor, Therefore, there are no significant impacts to the area as a result of the additional lighting needed for the SJC02 project.

Proposed Mitigation Measures: None.

3.1.4 References

California Department of Transportation (Caltrans). 2018. *Scenic Highways*. Accessed January 30, 2019. http://www.dot.ca.gov/design/lap/livability/scenic-highways/index.html.

City of San José(City). 2011. *Draft Program Environmental Impact Report for the Envision San José 2040 General Plan*. June. Accessed June 10, 2019. http://www.sanjoseca.gov/index.aspx?NID=4974.

City of San José (City). 2017. *City of San Jose Draft Environmental Impact Report, 237 Industrial Center Project*. June. Accessed November 13, 2019. http://www.sanjoseca.gov/index.aspx?nid=6072.

3.2 Agriculture and Forestry Resources

In determining whether impacts to forest resources, including timber land, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Program, the Forest Legacy Program, and forest carbon measurement methodology provided in the compliance offset protocol for U.S. forest projects adopted by the California Air Resources Board (2014).

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☒	☐
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☒	☐
c) Conflict with existing zoning for, or cause rezoning of, forest land as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production as defined by Government Code section 51104(g))?	☐	☐	☐	☒
d) Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	☐	☐	☒	☐

Environmental checklist established by CEQA Guidelines, Appendix G.

3.2.1 Setting

The San José Data Center (SJC02) will be located within the City of San José on an approximately 64.5-acre site and will consist of two data center buildings totaling over approximately 479,000 square feet of space. The project will include 40 3.0-megawatt (MW) standby diesel generators (20 per building) to provide electrical power to support the information technology (IT) load during utility outages or certain onsite electrical equipment interruptions or failures., as well as the installation of 20 3-MW emergency diesel generators at each building. In addition to the 40 backup generators, the project will include two administrative generators, rated at 1.25 MW and 0.5 MW, to support administrative functions during an interruption in the normal delivery of electrical power from the utility. The facility design will not require more than approximately 99 MW of electrical power, which will be used only for backup power for onsite data center operations in the event of an electrical outage by Pacific Gas & Electric (PG&E), although the estimated load is 92 MW.

The land has been used historically for farming since the early 1920s but is not currently in agricultural use. There are two residences, a mobile home, and a storage shed/warehouse currently onsite, which will be demolished as part of the SJC02 project. To the north of the project site are the San José/Santa Clara Regional Wastewater Treatment Plant sludge drying beds, to the south is Highway 237, to the west is the Los Esteros Critical Energy Facility, a PG&E substation, and to the east is Coyote Creek. The project is anticipated to begin construction in the 3rd quarter of 2020, with operations beginning in the 1st quarter of 2022.

The SJC02 is within an area designated as Grazing Land on the Santa Clara County Important Farmland 2016 map (DOC 2016).[1] This designation is described as "land on which the existing vegetation is suited to the grazing of livestock" (DOC 2016). The surrounding area is a mixture of Urban and Built, Grazing, and Other Land designations.

The site and surrounding area are not designated as forest land, and there are no forest resources or timberland present in the region. According to the City of San José Planning Division (2019), the site is zoned as LI (Light Industrial) and is primarily surrounded by industrial uses. The SJC02 will include several offsite utility linears for potable water, reclaimed water, sewer, and electricity. The linears extend from the project site onto property primarily west of the project site, on land owned by the City of San José. The linears are located on property currently zoned as LI (Light Industrial), R-M (Multiple Residence District), R-1-8 (Single Family Residential), and A (Agricultural).

3.2.2 Environmental Impacts and Mitigation Measures

a) Would the project convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?

Less than Significant Impact. The SJC02 site is designated as Grazing Land on the Santa Clara County Important Farmland 2016 map (DOC 2016) as shown on Figure 3.2-1, and has been historically used for farming since the early 1920s with orchards and later row crops. The project site consists of fallow farmland; it is not designated as "Farmland" for purposes of CEQA; the site has been long planned for light industrial uses, as reflected in its designation of Light Industrial in both the General Plan and the Alviso Master Plan as well as being zoned Light Industrial; and it is surrounded by other lands that have converted to urban, primarily light industrial and public/quasi-public uses. Accordingly, the project would not convert Important Farmland.

b) Would the project conflict with existing zoning for agricultural use, or a Williamson Act contract?

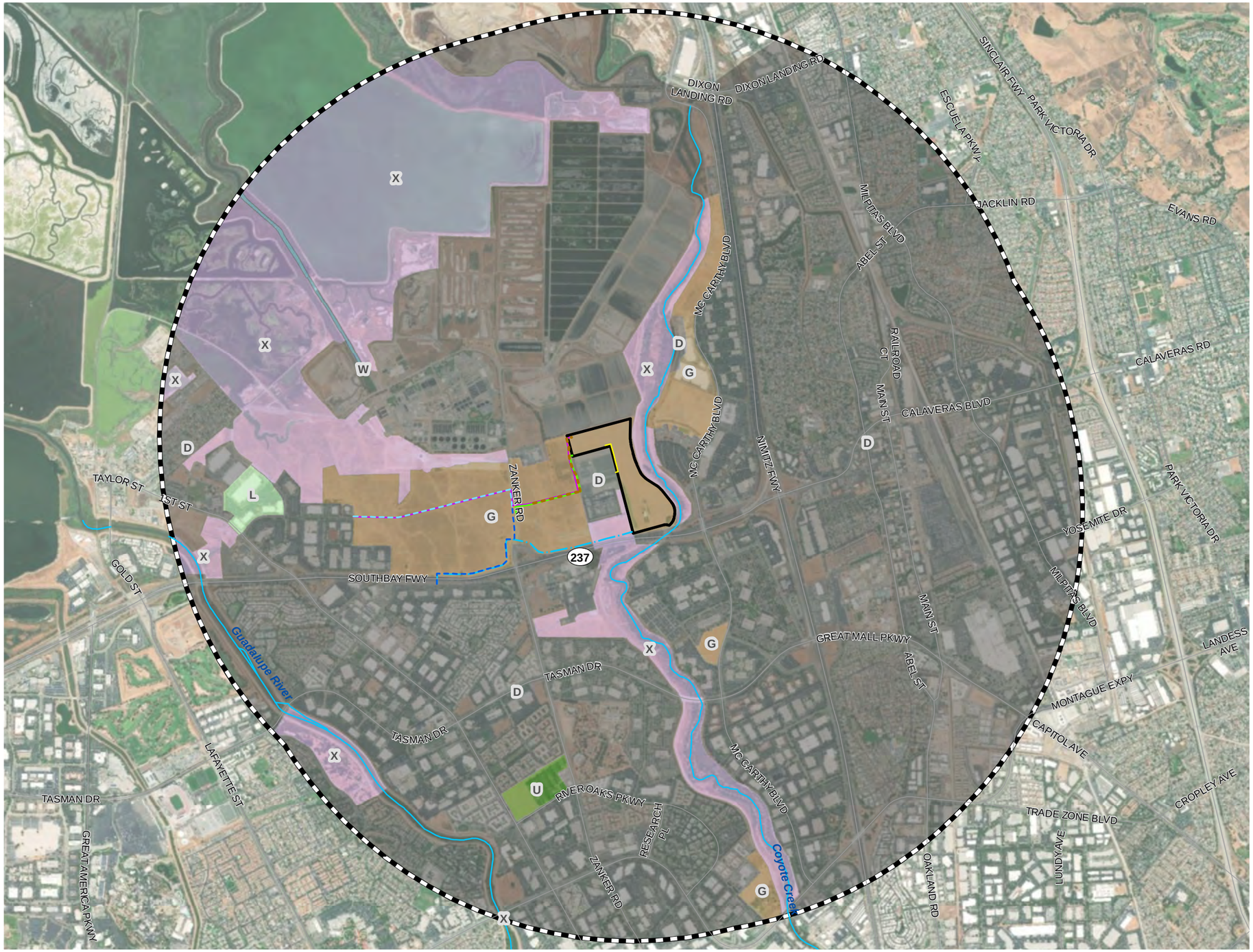
Less than Significant Impact. The project site consists of fallow farmland; is designated as Grazing Land[2]; and is located within an area long planned for industrial and other urban uses. While the project does convert fallow farmland to non-agricultural use, the existing site and proposed offsite linears are not covered under a Williamson Act Contract, and the current zoning allows for urban development (which is also consistent with the Light Industrial [LI] designation for the project site under both the General Plan and Alviso Master Plan), and the project site and vicinity have been long-planned for and otherwise developed with similar urbanized uses. [] The offsite linears are located within land zoned as LI, R-M (Multiple Residence District), R-1-8 (Single Family Residential), and A (Agricultural). While certain of these areas remain zoned as A, these lands are designated as Grazing Lands and are not mapped as farmland of state, local, unique, or statewide importance. Furthermore, the site, as well as the offsite linears, are not subject to a Williamson Act contract. Therefore, less than significant impacts in this regard would occur.

c) Would the project conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?

No Impact. The project site and surrounding areas are not zoned for forest land, timberland, or timberland production. Therefore, no forest resources impact will occur.

[1] In 2014, the California Department of Conservation updated the Santa Clara County Important Farmland Map which changed the land use designation of the project site from Farmland of statewide importance to Grazing Land.

[2] In 2014, the California Department of Conservation updated the Santa Clara County Important Farmland Map which changed the land use designation of the project site from Farmland of statewide importance to Grazing Land.



LEGEND

- Proposed Storm Drain
- Proposed Sanitary Sewer
- Proposed Reclaimed Water
- Proposed Water Line Route #1
- Proposed Water Line Route #2
- Proposed Water Line Route #3
- Proposed Shared Water Line
- Proposed Electrical Supply Line
- Project Site
- 2-mile Buffer of Project Features

FMMP Classification

- Urban and Built-Up Land (D)
- Grazing Land (G)
- Farmland of Local Importance (L)
- Unique Farmland (U)
- Water (W)
- Other Land (X)

Source:
California Department of Conservation, Farmland Mapping and Monitoring Program: Santa Clara County, Important Farmland GIS Data, 2016

Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

N

0 2,000 4,000

Approximate scale in feet

Figure 3.2-1
Important Farmlands in Vicinity of Project
San José Data Center (SJC02)
San José, California

JACOBS

\\BROOKSIDEFILES\GIS_SHARE\ENBG\00_PROJ\L\LIGHTSPEED\MAPS\REPORT\FIG3_02-1_FMMP_2MI.MXD 11/6/2019 2:43:57 PM

d) Would the project result in the loss of forest land or conversion of forest land to non-forest use?

No Impact. The project site has been historically used for farming since the 1920s, and currently consists of fallow farmland. The immediate surrounding area is used primarily for industrial and other urban uses. The site does not contain forest land and is not in an area where forest land is present. Therefore, no forest resource impacts will occur.

e) Would the project involve other changes in the existing environment, which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use?

Less than Significant Impact. The project site is zoned as LI and will convert fallow farmland land to an urban use. The project site has sat as fallow farmland for several years and is not mapped as farmland of state, local, unique, or statewide importance. The project site and offsite linears also are not covered under a Williamson Act Contract. The current zoning allows for urban development within the project site, which is consistent with the LI designations under both the General Plan and Alviso Master Plan. The existing onsite structures will be demolished as part of the project. These structures, which have not been in use for several years, were used to support historical agricultural activities within the project site and will not have an impact on agricultural activities within the region. Additionally, forest land is not located within the project site, and the nearest forest resources are located approximately 4 miles east of the project site and will not be impacted by the project (CDFW 2019). Therefore, the proposed project will not involve other changes in the existing environment that could result in conversion of farmland to non-agricultural use or conversion of forest land to non-forest use.

f) Proposed Mitigation Measures:

None.

3.2.3 References

California Air Resources Board. 2014. *Compliance Offset Protocol U.S. Forest Offset Projects*. Adopted November 14, 2014. Accessed February 2019. https://www.arb.ca.gov/cc/capandtrade/protocols/usforest/usforestprojects_2014.htm.

California Department of Conservation (DOC). 2016. *Santa Clara*. Accessed June 5, 2019. https://maps.conservation.ca.gov/DLRP/CIFF/.

California Department of Fish and Wildlife (CDFW), 2019. *CDFW BIOS Online Viewer*. Accessed July 18, 2019. https://apps.wildlife.ca.gov/bios/?bookmark=2668.

City of San José. 2019. *Planning Division MAP San José*. Accessed June 5, 2019. http://www.sanjoseca.gov/index.aspx?nid=1751.

3.3 Air Quality

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. In its discretion, the California Energy Commission (CEC) has determined that utilizing the relevant air quality management district significance criteria for purposes of this Initial Study is appropriate. Accordingly, this analysis of the project's potential air quality impacts, and the associated findings presented in this section, are based on comparisons to thresholds of significance established by the Bay Area Air Quality Management District (BAAQMD) for California Environmental Quality Act (CEQA) analysis (BAAQMD 2017c).

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☒	☐
b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable Federal or State ambient air quality standard?	☐	☐	☒	☐
c) Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☒	☐
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	☐	☐	☒	☐

Environmental checklist established in Appendix G of the *2019 CEQA Statute & Guidelines* (AEP 2019).

3.3.1 Setting

The San José Data Center (SJC02) will be located within the City of San José on an approximately 64.5-acre site and will consist of two data center buildings totaling over approximately 479,000 square feet of space. The project will include 40 3.0-megawatt (MW) standby diesel generators (20 per building) to provide electrical power to support the IT load during utility outages or certain onsite electrical equipment interruptions or failures., as well as the installation of 20 3-MW emergency diesel generators at each building. In addition to the 40 backup generators, the project will include two administrative generators, rated at 1.25 MW and 0.5 MW, to support administrative functions during an interruption in the normal delivery of electrical power from the utility. The facility design will not require more than approximately 99 MW of electrical power, which will be used only for backup power for onsite data center operations in the event of an electrical outage by Pacific Gas & Electric (PG&E), although the estimated load is 92 MW.

The land has been used historically for farming since the early 1920s but is not currently in agricultural use. There are two vacant residences, a mobile home, and a storage shed/warehouse currently onsite, which will be demolished as part of the SJC02 project. To the north of the project site are the San José/Santa Clara Regional Wastewater Treatment Plant sludge drying beds, to the south is Highway 237, to the west is the Los Esteros Critical Energy Facility, a PG&E substation, and to the east is Coyote Creek. The project is anticipated to begin construction in the 3rd quarter of 2020, with operations beginning in the 1st quarter of 2022.

Air quality in the San Francisco Bay Area Air Basin (SFBAAB) is better than air quality in most other populated areas in California, such as the South Coast, San Joaquin Valley, and Sacramento regions. This is attributed to a more favorable climate, cooler temperatures, and better atmospheric mixing as a result of coastal winds.

Proximity to the Pacific Ocean and the San Francisco Bay has a moderating influence on the climate in the project vicinity. The portion of the Santa Clara Valley where the project site is located is bounded by the San Francisco Bay to the north, the Santa Cruz Mountains to the southwest, and the Diablo Range to the east. The surrounding terrain greatly influences winds in the Santa Clara Valley, resulting in a prevailing wind that flows along the valley's northwest-southeast axis.

Over time, air quality improvements have occurred in the SFBAAB, but violations and exceedances of the state ozone and particulate matter standards continue to persist, posing challenges to state and local air pollution control agencies (CARB 2013). Pollutants in the air can cause health problems, especially for children, the elderly, and people with heart or lung problems. Healthy adults may experience symptoms during periods of intense exercise. Pollutants can also cause damage or harm vegetation, animals, and property.

This section details the project's anticipated air pollutant emissions and their potential to contribute to air quality and public health impacts. Details on the project's greenhouse gas (GHG) emissions and their potential to contribute to climate change impacts can be found in Section 3.8.

3.3.1.1 Overview of Existing Air Quality

Air quality in California is evaluated based on an area's compliance with ambient air quality standards established by the U.S. Environmental Protection Agency (EPA) and California Air Resources Board (CARB). EPA and CARB have established concentration-based ambient air quality standards to protect public health and welfare. Compliance is based on the results of ambient air quality monitoring, typically conducted by federal, state, and local regulatory agencies, with measurements taken using a variety of established techniques.

Air Quality Standards

The EPA has established National Ambient Air Quality Standards (NAAQS) for the following seven pollutants, termed criteria pollutants: ozone, nitrogen dioxide (NO_2), carbon monoxide (CO), sulfur dioxide (SO_2), particulate matter with aerodynamic diameter less than or equal to 10 microns (PM_{10}), particulate matter with aerodynamic diameter less than or equal to 2.5 microns ($PM_{2.5}$), and airborne lead. Similarly, CARB has established California Ambient Air Quality Standards (CAAQS) for the seven pollutants listed herein and for visibility-reducing particles (VRP), sulfates, hydrogen sulfide, and vinyl chloride. In general, the CAAQS are more stringent than the corresponding NAAQS, with varying averaging times and statistics used to compare measured or modeled concentrations to ambient standards. The standards currently in effect in California are shown in Table 3.3-1a.

Table 3.3-1a. National and California Ambient Air Quality Standards

Pollutant	Averaging Time	CAAQS[a]	NAAQS[b]	
			Primary[c]	Secondary[d]
Ozone	1 hour 8 hours	0.09 ppm 0.070 ppm	-- 0.070 ppm	-- 0.070 ppm
CO	1 hour 8 hours	20 ppm 9.0 ppm	35 ppm 9 ppm	-- --
NO_2	1 hour Annual Arithmetic Mean	0.18 ppm 0.030 ppm	0.100 ppm[e] 0.053 ppm	-- 0.053 ppm
SO_2	1 hour 3 hours 24 hours Annual Arithmetic Mean	0.25 ppm -- 0.04 ppm --	0.075 ppm[f] -- 0.14 ppm[g] 0.030 ppm[g]	-- 0.5 ppm -- --
PM_{10}	24 hours Annual Arithmetic Mean	50 µg/m^3 20 µg/m^3	150 µg/m3 --	150 µg/m^3 --

Table 3.3-1a. National and California Ambient Air Quality Standards

Pollutant	Averaging Time	CAAQS[a]	NAAQS[b]	
			Primary[c]	Secondary[d]
$PM_{2.5}$	24 hours Annual Arithmetic Mean	-- 12 µg/ m^3	35 µg/m3 12 µg/m3	35 µg/m^3 15 µg/m^3
Lead	30-Day Average Calendar Quarter Rolling 3-Month Average	1.5 µg/ m^3 -- --	-- 1.5 µg/m3 0.15 µg/m3	-- 1.5 µg/m^3 0.15 µg/m^3
VRP	8 hours	[h]	--	--
Sulfates	24 hours	25 µg/ m^3	--	--
Hydrogen Sulfide	1 hour	0.03 ppm	--	--
Vinyl Chloride	24 hours	0.01 ppm	--	--

Source: CARB 2016.

[a] CAAQS for ozone, CO, SO_2 (1- and 24-hour), NO_2, and particulate matter (PM_{10}, $PM_{2.5}$, and VRP) are values that are not to be exceeded. All others are not to be equaled or exceeded.

[b] NAAQS (other than ozone, particulate matter, and those based on annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration measured at each site in 1 year, averaged over 3 years, is equal to or less than the standard. For PM_{10}, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 µg/m3 is equal to or less than 1 on average over 3 years. For $PM_{2.5}$, the 24-hour standard is attained when 98 percent of the daily concentrations, averaged over 3 years, are equal to or less than the standard.

[c] Primary Standards: The levels of air quality necessary, with an adequate margin of safety, to protect the public health.

[d] Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.

[e] To attain the 1-hour national standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 0.100 ppm.

[f] To attain the 1-hour national standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 0.075 ppm. [g] The existing 24-hour and annual primary standards were revoked. The 1971 SO_2 national standards (24-hour and annual arithmetic mean) remain in effect until one year after an area is designated for the 2010 standard, except in areas designated nonattainment for the 1971 standards. In these areas, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved.

[h] Particles in sufficient amount to produce an extinction coefficient of 0.23 per kilometer when the relative humidity is less than 70 percent.

Notes:

-- = No standard has been adopted for this averaging time
µg/m^3 = microgram(s) per cubic meter
ppm = part(s) per million

Attainment Status. The EPA and CARB classify areas as being in attainment or nonattainment with the NAAQS or CAAQS for each criteria pollutant. A region that meets the NAAQS or CAAQS for a pollutant is designated as being in “attainment” for that pollutant. If the region does not meet the NAAQS or CAAQS for a pollutant, it is designated as being in “nonattainment” for that pollutant. An area that was previously designated as a nonattainment area but has recently met the standard and has been reclassified by EPA as “attainment with a maintenance plan” is a “maintenance” area. If monitoring data are insufficient, an area may be deemed “unclassified” for a pollutant standard, but this designation is typically considered the same as attainment for regulatory purposes.

The San José Data Center (SJC02 or project) would be located in the City of San José, under the jurisdiction of the BAAQMD. Table 3.3-1b summarizes attainment status for the criteria pollutants in the SFBAAB with regard to both the federal and state standards.

Table 3.3-1b. Attainment Status for the San Francisco Bay Area Air Basin

Pollutant	Averaging Time	Federal Designation	State Designation
Ozone	1 hour 8 hours	-- Marginal Nonattainment	Nonattainment Nonattainment
CO	1 hour 8 hours	Maintenance[a] Maintenance	Attainment Attainment
NO_2	1 hour Annual Arithmetic Mean	Attainment Attainment	Attainment Attainment
SO_2	1 hour 3 hours 24 hours Annual Arithmetic Mean	Attainment Attainment Attainment Attainment	Attainment -- Attainment --
PM_{10}	24 hours Annual Arithmetic Mean	Attainment --	Nonattainment Nonattainment
$PM_{2.5}$	24 hours Annual Arithmetic Mean	Nonattainment[b] Attainment	-- Nonattainment
Lead	30-day Average Calendar Quarter Rolling 3-month Average	-- Attainment Attainment	Attainment -- --
VRP	8 hours	--	Unclassified
Sulfates	24 hours	--	Attainment
Hydrogen Sulfide	1 hour	--	Unclassified
Vinyl Chloride	24 hours	--	No information available

Sources: EPA 2019b; CARB 2019a; BAAQMD 2017a.

[a] The CO maintenance period expired on June 1, 2018. The area is still listed as maintenance in the EPA Greenbook.

[b] On January 9, 2013, EPA issued a final rule to determine that the Bay Area attains the 24-hour $PM_{2.5}$ national standard. This EPA rule suspends key State Implementation Plan requirements as long as monitoring data continue to show that the Bay Area attains the standard. Despite this EPA action, the Bay Area will continue to be designated as “nonattainment” for the national 24-hour $PM_{2.5}$ standard until such time as the BAAQMD submits a “redesignation request” and a “maintenance plan” to EPA, and EPA approves the proposed redesignation.

Note:

-- = No standard has been adopted for this averaging time

Given its nature as a data center, the project would not emit measurable quantities of lead, VRP, sulfates, hydrogen sulfide, or vinyl chloride. Therefore, these pollutants are not addressed in further detail in this section.

Existing Conditions

Table 3.3-1c provides background concentrations of criteria pollutants for the previous 3 years as measured in ambient air at certified monitoring stations near the project site. To evaluate potential air quality impacts as a result of the project, modeled air concentrations attributable to the project are combined with appropriate background concentrations and compared to the applicable NAAQS and CAAQS. If the background concentrations alone exceed the applicable NAAQS and CAAQS, modeled air concentrations attributable to the project are instead compared directly to Significant Impact Levels (SILs).

Table 3.3-1c. Summary of Background Concentrations Measured in Ambient Air[a]

Pollutant	Averaging Time	Units	2016	2017	2018
Ozone	1 hour	ppm	0.087	0.121	0.078
	8 hours	ppm	0.066	0.098	0.061
CO	1 hour	ppm	1.9	2.1	2.5
	8 hours	ppm	1.4	1.8	2.1
NO_2	1 hour (maximum)	ppb	51	68	86
	1 hour (98th percentile)	ppb	42	50	59
	Annual Arithmetic Mean	ppb	11.26	12.24	12.04
SO_2	1 hour (maximum)	ppb	1.8	3.6	6.9
	1 hour (99th percentile)	ppb	2.0	3.0	3.0
	3 hours[b]	ppb	1.8	3.6	6.9
	24 hours	ppb	0.8	1.1	1.1
	Annual Arithmetic Mean	ppb	0.19	0.20	0.21
PM_{10}	24 hours	µg/m^3	40	69	115
	Annual Arithmetic Mean[c]	µg/m^3	18.3	21.3	23.1
$PM_{2.5}$	24 hours (98th percentile)	µg/m^3	20	41	73
	Annual Arithmetic Mean	µg/m^3	8.4	10.1	12.9

Source: EPA 2019a; CARB 2019b

[a] Unless otherwise noted, background values were collected from Monitor Site ID 060850005 located at 158B Jackson Street in San Jose, California, as reported by EPA on the Monitor Values Report Website (https://www.epa.gov/outdoor-air-quality-data/monitor-values-report).

[b] In the absence of monitored values, the 1-hour maximum background was conservatively used as background for the 3-hour averaging period.

[c] Background values were collected from the monitoring site located at 158B Jackson Street in San Jose, California, as reported by CARB in the iADAM Database (https://www.arb.ca.gov/adam/).

Note:

ppb = part(s) per billion

In addition to the criteria pollutants, EPA and CARB also regulate emissions of hazardous air pollutants (HAPs) and toxic air contaminants (TACs). The term TAC is more commonly used in California. TAC emissions are pollutants that are known or suspected to cause cancer or other serious health effects, such as reproductive effects or birth defects, or adverse environmental effects. Relevant criteria pollutants and TACs are described in the following subsections, including their potential health effects.

Ozone

Ozone is a photochemical oxidant that is formed when volatile organic compounds (VOCs) and nitrogen oxides (NO_X) react in the presence of ultraviolet sunlight. The principal sources of VOCs and NO_X, often termed ozone precursors, are combustion processes (including motor vehicle engines) and evaporation of solvents, paints, and fuels. Exposure to levels of ozone above the current ambient air quality standards can lead to human health effects such as lung inflammation, lung tissue damage, and impaired lung functioning. Ozone exposure is also associated with symptoms such as coughing, chest tightness, shortness of breath, and the worsening of asthma symptoms. The greatest risk for harmful health effects belongs to outdoor workers, athletes, children, and others who spend greater amounts of time outdoors during smoggy periods. Elevated ozone levels can reduce crop and timber yields, as well as damage native plants. Ozone can also damage materials such as rubber, fabrics, and plastics.

Carbon Monoxide

CO is a colorless, odorless gas formed by incomplete combustion of fossil fuels. Exposure to CO near the levels of the NAAQS and CAAQS can lead to fatigue, headaches, confusion, and dizziness.

Nitrogen Dioxide

NO_2 is a byproduct of combustion sources such as on-road and off-road motor vehicles or stationary fuel combustion sources. The principle form of nitrogen oxide produced by combustion is nitric oxide (NO); however, NO reacts quickly with oxygen to form NO_2, creating a mixture of NO and NO_2 commonly called NO_X. Exposures to NO_2, along with pollutants from vehicle exhaust, are associated with respiratory symptoms, episodes of respiratory illness, and impaired lung function.

Sulfur Dioxide

SO_2 is a colorless, pungent gas formed primarily by the combustion of sulfur-containing fossil fuels. Effects from SO_2 exposures at levels near the 1-hour standard include bronchoconstriction accompanied by symptoms that may include wheezing, shortness of breath, and chest tightness, especially during exercise or physical activity.

Particulate Matter

Particulate matter (PM_{10} and $PM_{2.5}$) includes a wide range of solid or liquid particles, including smoke, dust, aerosols, and metallic oxides. Extensive research indicates that exposures to ambient PM_{10} and $PM_{2.5}$ concentrations that exceed current air quality standards are associated with increased risk of hospitalization for lung- and heart-related respiratory illness, including emergency room visits for asthma. Particulate matter exposure is also associated with increased risk of premature death, especially in the elderly and people with pre-existing cardiopulmonary disease. In children, studies have shown association between particulate matter exposure and reduced lung function and increased respiratory symptoms and illnesses.

Toxic Air Contaminants

The health effects associated with TACs are quite diverse, and generally are assessed locally, rather than regionally. TACs could cause long-term health effects such as cancer, birth defects, neurological damage, asthma, bronchitis, or genetic damage; or short-term effects such as eye watering, respiratory irritation (a cough), running nose, throat pain, and headaches (BAAQMD 2017c). Numerous other health effects also have been linked to exposure to TACs, including heart disease, Sudden Infant Death Syndrome, respiratory infections in children, lung cancer, and breast cancer (OEHHA 2015).

3.3.1.2 Regulatory Background

Federal, state, and regional agencies regulate air quality in the SFBAAB, where the project site is located.

Federal

Federal air quality policies are regulated through the Federal Clean Air Act (CAA). The U.S. Congress adopted the CAA in 1970, and passed amendments to the CAA in 1977 and 1990. In 1990, the CAA was amended to strengthen regulation of both stationary and mobile emission sources. As required by the federal CAA, NAAQS have been established for the criteria pollutants, as described previously.

The 1977 CAA amendments require each state to develop and maintain a State Implementation Plan (SIP) for each nonattainment criteria pollutant. The SIP serves as a tool to help avoid and minimize emissions of nonattainment criteria pollutants and their precursor pollutants, and to achieve compliance

with the NAAQS. More details on the applicable local air quality plans and SIP are provided in the following state regulatory discussion.

EPA has promulgated federal regulations for permitting the construction and operation of emission sources that qualify as “major” sources of emissions, as defined in the applicable rules. In most states, EPA has delegated authority to states and local permitting authorities to write regulations and operate federally enforceable permitting programs. Federal regulations for pre-construction review and permitting of new and modified major sources include nonattainment new source review (NSR) requirements, applicable to major sources of nonattainment pollutants and/or their precursors in nonattainment areas, and prevention of significant deterioration (PSD) requirements, applicable to any major sources of attainment pollutants or their precursors. Title V of the federal CAA requires the EPA to establish a national operating permit program for major sources of emissions. In states with delegated authority (like California), these permits are referred to as Part 70 or Title V permits.

In addition to the criteria pollutants, EPA also regulates emissions of HAPs. HAPs or air toxic emissions are pollutants that are known or suspected to cause cancer or other serious health effects, such as reproductive effects or birth defects, or adverse environmental effects. Controlling air toxic emissions became a national priority with the passage of the CAA amendments in 1990, when the U.S. Congress mandated that the EPA regulate 188 air toxics. National Emission Standards for Hazardous Air Pollutants (NESHAPs) regulate HAPs at major emission sources, aiming to protect the public health with an ample margin of safety and to prevent any significant and adverse environmental effects.

For mobile sources, the EPA has assessed the list of the 188 HAPs in its rule titled Control of Hazardous Air Pollutants from Mobile Sources (*Federal Register*, Vol. 72, No. 37, page 8430, February 26, 2007), and identified the high-priority mobile source air toxics (MSATs). MSATs are pollutants with significant emission contributions from mobile sources, which are among the national and regional-scale cancer risk drivers in the 1999 National Air Toxics Assessment. In this rule, the high-priority MSATs identified by EPA are acrolein, benzene, 1,3-butadiene, diesel particulate matter and diesel exhaust organic gases (collectively referred to as DPM), formaldehyde, naphthalene, and polycyclic organic matter. The control of HAPs from mobile sources requires controls to dramatically decrease MSAT emissions (for example, by using cleaner fuels and cleaner engines).

EPA regulations applicable to the project’s proposed diesel-fueled emergency engines include the NESHAP for reciprocating internal combustion engines (RICE), presented in 40 Code of Federal Regulations (CFR) 63, Subpart ZZZZ, and the New Source Performance Standards (NSPS) for combustion ignition engines fueled by diesel, presented in 40 CFR 60, Subpart IIII. Per 40 CFR 63.6590(c)(1), the RICE NESHAP requirements are met by meeting the NSPS requirements of 40 CFR 60, Subpart IIII. These NSPS requirements include, but are not limited to, the following:

- Engines must be certified to meet appropriate emissions standards.
- Engines must be installed and operated according to manufacturer’s specifications.
- For a combined total of 100 hours per year, emergency engines can be used for the following purposes:
  - Maintenance and testing
  - Emergency demand response for Emergency Alert Level 2 situations[1]
  - Responding to situations when there is at least a 5 percent or more change in voltage
  - Operating for up to 50 hours to head off potential voltage collapse, or line overloads, that could result in local or regional power disruption

[1] In 2015, the Delaware Department of Natural Resources and Environmental Control challenged the emergency demand response regulations in the U.S. Court of Appeals for the District of Columbia Circuit. As a result of these legal proceedings, the court remanded this portion of the NESHAP, while leaving other provisions intact. Additional details can be found at https://www.leagle.com/decision/infco20150501329.

In an emergency, such as hurricane or ice storm, any engine of any size can operate without meeting control requirements or emission limits (EPA 2013).

State

CARB is the state agency that regulates mobile sources throughout the state and oversees implementation of the state air quality laws and regulations, including the California CAA. The California CAA, which was approved in 1988, requires each local air district, where ambient concentrations violate the CAAQS, to prepare an air quality management plan to achieve compliance with the CAAQS as a part of the SIP. CARB has ultimate responsibility for the SIP for nonattainment pollutants, but relies on each local air district to adopt mandatory statewide programs and provide tailored additional strategies for sources under their jurisdiction. The SIPs are a compilation of new and previously submitted plans, programs (e.g., monitoring, modeling, and permitting), district rules, state regulations, and federal controls. Local air districts and other agencies prepare SIP elements and submit them to CARB for approval. CARB forwards SIP revisions to EPA for approval and publication in the *Federal Register*. CARB also established the CAAQS, which are typically considered more stringent than the NAAQS.

California regulates TACs through its Air Toxics Program, which is mandated in Chapter 3.5 of the Health and Safety Code – Toxic Air Contaminants, and Part 6 – Air Toxics Hot Spots Information and Assessment (California Health and Safety Code Sections 39660 et seq. and 44300 et seq., respectively). TACs consist of a variety of compounds, including metals, minerals, soot, and hydrocarbon-based chemicals. There are hundreds of different air toxics, with varying degrees of toxicity. Sources of TACs include industrial processes, such as petroleum refining and chrome-plating operations; commercial operations, such as gasoline stations and dry cleaners; and motor vehicle exhaust.

TACs are primarily regulated through state and local risk management programs, which are designed to eliminate, avoid, or minimize the risk of adverse health effects from exposures to TACs. A chemical becomes a regulated TAC in California based on designation by the California Office of Environmental Health Hazard Assessment (OEHHA) (BAAQMD 2017c). For example, OEHHA completed a comprehensive health assessment of diesel exhaust in 1998. The assessment formed the basis for a CARB decision to formally identify particulate matter in diesel exhaust (DPM) as a TAC that may pose a threat to human health. In response, CARB has adopted the *Diesel Risk Reduction Plan* (CARB 2016) and a series of airborne toxic control measures for mobile and stationary sources, which are intended to reduce overall DPM emissions in California. The recommended measures can be grouped as measures that address on-road vehicles, off-road equipment and vehicles, and stationary and portable engines. Many rules provide for older, more emissive equipment to be replaced with cleaner equipment and fleets over time. As another example, CARB's Regulation for In-Use Off-Road Diesel-Fueled Fleets, presented in 13 California Code of Regulations (CCR) 2449, requires construction equipment operators to restrict all nonessential idling of construction equipment to 5 minutes or less.

Assembly Bill (AB) 2588, also known as the Air Toxics "Hot Spots" Information and Assessment Act of 1987[2], requires facilities to prepare detailed TAC emissions inventories. Results of these emissions inventories are used to prioritize facilities for health risk assessment (HRA), which must be conducted using CARB/OEHHA guidelines. As part of its jurisdiction under AB 2588[3], OEHHA derives cancer potencies and reference exposure levels (RELs) for individual air contaminants, based on the current scientific knowledge that includes consideration of possible differential effects on the health of infants, children, and other sensitive subpopulations, and in accordance with the mandate of the Children's Environmental Health Protection Act[4]. These cancer potencies and RELs are used in health risk assessments to evaluate potential health risks associated with human exposures to estimated TAC emissions. Estimated risks are compared to levels of carcinogenic, chronic, and acute health risks deemed acceptable by the regulatory agencies. Sections of the California Public Resources Code require

[2] California Health and Safety Code Sections 44360 – 44366.

[3] California Health and Safety Code Section 44360(b)(2).

[4] Senate Bill 25, Escutia, Chapter 731, Statutes of 1999; California Health and Safety Code Sections 39669.5 et seq.

an assessment of impacts to public health for new or modified sources, including power plants that emit one or more TACs[5].

Under California regulatory guidelines, DPM is used as a surrogate measure of exposure for the mixture of chemicals that make up diesel exhaust as a whole. Diesel exhaust is a complex mixture of thousands of gases and fine particles and contains over 40 substances listed by EPA as HAPs and by CARB as TACs. DPM is primarily composed of aggregates of spherical carbon particles coated with organic and inorganic substances. Diesel exhaust deserves particular attention mainly because of its ability to induce serious non-cancer effects and its status as a likely human carcinogen. Diesel exhaust is also characterized by CARB as "particulate matter from diesel-fueled engines." The impacts from human exposure would include both short- and long-term health effects. Short-term effects can include increased coughing, labored breathing, chest tightness, wheezing, and eye and nasal irritation. Effects from long-term exposure can include increased coughing, chronic bronchitis, reductions in lung function, and inflammation of the lung. Epidemiological studies strongly suggest a causal relationship between occupational diesel exhaust exposure and lung cancer. Diesel exhaust is listed by EPA as "likely to be carcinogenic to humans" (EPA 2003).

Regional. BAAQMD is the primary regional agency responsible for attaining and maintaining air quality conditions in the SFBAAB through a comprehensive program of planning, regulation, and enforcement (BAAQMD 2017c). Some of the BAAQMD's key air plans and regulations are described in the following subsections.

2017 Bay Area Clean Air Plan. The *2017 Bay Area Clean Air Plan* was adopted by the BAAQMD on April 19, 2017, and provides a regional strategy to protect public health and the climate. The 2017 Clean Air Plan updates the most recent Bay Area ozone plan, the 2010 Clean Air Plan, and is a multi-pollutant air quality plan addressing four categories of air pollutants (BAAQMD 2017b):

1) Ground-level ozone and the key ozone precursor pollutants (VOCs and NO_X)
2) Particulate matter (PM_{10} and $PM_{2.5}$), as well as the precursors to secondary $PM_{2.5}$
3) TACs
4) GHGs

The 2017 Clean Air Plan includes 85 distinct control measures to decrease fossil fuel combustion, improve energy efficiency, and decrease emissions of GHGs and other pollutants. The measures most likely to affect the project are expected to be implemented through future, more stringent regulation of air pollutants, including TACs, by BAAQMD. For example, BAAQMD is expected to adopt more stringent limits and methods for evaluating toxic risks and new regulations to reduce fuel consumption on a source-type by source-type basis.

BAAQMD Calculating Potential to Emit for Emergency Backup Power

The BAAQMD recently released a new policy, *Calculating Potential to Emit for Emergency Backup Power Generators*, which was developed to include a new requirement and methodology for determination of potential to emit (PTE) for emergency backup power generators (BAAQMD 2019). Although the policy has been signed, it has not been subject to formal rulemaking and is not an adopted BAAQMD regulation. All facilities with one or more generators proposed for emergency backup power purposes would be subject to this policy, if it is formally adopted.

Under the policy, impact analyses for subject facilities must assume 100 hours per year of emergency operations, in addition to the requested number of annual hours for maintenance and testing, when calculating the source's PTE and determining the applicability of requirements under BAAQMD's NSR (Regulation 2, Rule 2) and Title V Major Facility Review (Regulation 2, Rule 6) regulations. The policy

[5] California Public Resources Code Section 25523(a); Title 20, Sections 1752.5, 2300 – 2309 and Division 2, Chapter 5, Article 1, Appendix B, Part (1), CCR; California CAA; California Health and Safety Code Section 39650, et seq.

states that emission reduction credits required for a project are based solely on the permitted hours/emissions associated with maintenance and testing activities, not the assumed 100 hours of emergency operations used in the PTE calculations. Similarly, the policy notes that emissions from emergency operations are exempt from BAAQMD's regulation for NSR of TACs (Regulation 2, Rule 5).

When implementing this policy, the BAAQMD will not approve permit conditions for backup generators that limit emergency operations to less than the assumed 100 hours per year in order to lower a source's PTE. The BAAQMD set the assumed 100 hours per year for emergency operations in the policy as a reasonable worst-case assumption for the amount of time a facility may operate for emergency purposes within a given year. The policy does not in any way limit emergency operation of backup power generators, because BAAQMD recognizes that facilities need to maintain flexibility to respond to emergency situations.

BAAQMD Regulation 2, Rule 1: Permits – General Requirements

This rule requires the Applicant to secure written authorization from the BAAQMD Air Pollution Control Officer (APCO), in the form of an Authority to Construct permit, prior to the time a project "puts in place, builds, erects, installs, modifies, modernizes, alters or replaces any article, machine, equipment or other contrivance, the use of which may cause, reduce or control the emission of air contaminants". Furthermore, Rule 1 provides that "The APCO shall deny an authority to construct or a permit to operate if the APCO finds that the subject of the application would not or does not comply with any emission limitations or other regulations of the District (including but not limited to the BACT and offsets requirements in Regulations 2-2-301 through 2-2-303), or with applicable permit conditions or federal or California laws or regulations, or if any required fees have not been paid". The Applicant will submit an air permit application to the BAAQMD, which will provide the necessary evidence to document that the SJC02 project, including, without limitation, the standby and administrative generators, would fully comply with applicable BAAQMD regulations.

BAAQMD Regulation 2, Rule 2: Permits – New Source Review

This rule applies to all new or modified sources requiring a Permit to Operate and requires Best Available Control Technology (BACT) for any new source with a PTE of 10.0 or more pounds per day of any single pollutant. Offsets are required at a 1.15:1 ratio if the project would have a PTE of more than 35 tons per year (tpy) of NO_X or precursor organic compounds, and at a 1:1 ratio if the project would have a PTE of more than 100 tpy of $PM_{2.5}$, PM_{10}, or SO_2.

BAAQMD Regulation 2, Rule 5: New Source Review of Toxic Air Contaminants

This rule provides for the review of new and modified sources of TAC emissions to evaluate potential public exposures and health risks. Under this rule, a project would be denied an Authority to Construct if it exceeds any of the specified risk limits, which are consistent with BAAQMD's CEQA significance thresholds. Best Available Control Technology for Toxics (TBACT) would also be required for any new or modified source of TACs where the source has an estimated excess lifetime cancer risk greater than 1.0 in 1 million or a chronic hazard index (HI) greater than 0.20. The specific toxicity values for each particular TAC, as identified by BAAQMD and OEHHA, are listed in Table 2-5-1 of Regulation 2, Rule 5 for use in HRAs (BAAQMD 2017c). Table 2-5-1 also provides the emission threshold level for each TAC, "below which the resulting health risks are not expected to cause, or contribute significantly to, adverse health effects".

BAAQMD Regulation 2, Rule 6: Permits – Major Facility Review

This rule is intended to implement the Title V operating permit requirements and applies to major facilities. A major facility is defined as either (1) a facility that has a PTE of 100 tpy or more of any criteria air pollutant or (2) has a PTE of 10 tpy or more of a single HAP or 25 tpy or more of a combination of HAPs.

3.3.2 Significance Criteria

BAAQMD has developed air emission, dispersion modeling, and health risk thresholds of significance for CEQA analysis, as shown in Table 3.3-2. Air quality impacts resulting from demolition, excavation, construction, and operation of the project would be deemed significant if daily or annual emission estimates, modeled concentrations, or HRA results would exceed the BAAQMD's applicable significance thresholds. This analysis of the project is based on the general methodologies in the most recent BAAQMD CEQA Guidelines (last updated in May 2017[6] [BAAQMD 2017c]) and the numerical significance thresholds listed in Table 3.3-2.

HRAs evaluate potential human health risks associated with exposure of sensitive receptors to pollutant concentrations: in this case, project-related emissions of TACs. The risk categories evaluated in HRAs include individual excess lifetime cancer risk, non-cancer health effects from chronic (long-term) exposure, and non-cancer health effects from acute (short-term) exposure. There are two kinds of significance thresholds for the results of HRAs. Cancer risk is expressed as a numerical excess lifetime cancer risk per 1 million exposed individuals. The results of evaluation of non-cancer health effects associated with acute and chronic exposures are expressed as HI, which is the ratio of expected exposure levels to acceptable RELs (BAAQMD 2017c).

The significance thresholds for TACs and $PM_{2.5}$ applied to the siting of a new source are listed in Table 3.3-2 and summarized as follows (BAAQMD 2017c):

- An excess lifetime cancer risk level of more than 10 in 1 million
- A non-cancer chronic HI greater than 1.0
- A non-cancer acute HI greater than 1.0
- An incremental increase in the modeled annual average $PM_{2.5}$ concentration of greater than 0.3 micrograms per cubic meter ($\mu g/m^3$)

The significance thresholds for cumulative impacts are listed in Table 3.3-2 and also summarized in the following bullet points. A project would have a cumulative considerable impact if the aggregate total of all past, present, and foreseeable future sources within a 1,000-foot distance from the fence line of a source plus the contribution from the project exceeds the following (BAAQMD 2017c):

- An excess lifetime cancer risk level of more than 100 in 1 million
- A non-cancer chronic HI greater than 10.0
- An incremental increase in the modeled annual average $PM_{2.5}$ concentration of greater than 0.8 $\mu g/m^3$

For assessing community risks and hazards, a 1,000-foot distance is recommended around the project property boundary. BAAQMD recommends that any proposed project that includes the siting of a new source or receptor assess associated impacts within 1,000 feet, taking into account both individual and nearby cumulative sources (that is, proposed project plus existing and foreseeable future projects). Cumulative sources represent the combined total risk values of each individual source within the 1,000-foot evaluation zone (BAAQMD 2017c).

[6] BAAQMD has initiated an update to its current CEQA Guidelines and thresholds of significance to reflect new or revised requirements in the State CEQA Guidelines, recent court decisions, improved analytical methodologies, and new mitigation strategies. However, until new guidance is approved, the thresholds of significance from the 2017 CEQA Guidelines are still considered appropriate for determining a project's significance, and thus those thresholds are utilized in this analysis..

Table 3.3-2. Bay Area Air Quality Management District Thresholds of Significance

Pollutant	Construction	Operation	
	Average Daily Emissions (pounds per day)	Average Daily Emissions (pounds per day)	Maximum Annual Emissions (tpy)
VOCs, NO_X	54	54	10
PM_{10}	82 (exhaust only)	82	15
$PM_{2.5}$	54 (exhaust only)	54	10
Fugitive Dust	BMPs	None	None
Risk and Hazards for New Sources and Receptors (Project)	Same as Operational Threshold	Increased cancer risk of > 10.0 in 1 million Increased non-cancer risk of > 1.0 HI (chronic or acute) Ambient $PM_{2.5}$ increase of > 0.3 µg/m^3 (Zone of influence: 1,000-foot radius from property line of source or receptor)	
Risk and Hazards for New Sources and Receptors (Cumulative)	Same as Operational Threshold	Increased cancer risk of > 100 in 1 million (from all local sources) Increased non-cancer risk of > 10.0 HI (chronic, from all local sources) Ambient $PM_{2.5}$ increase of > 0.8 µg/m^3 (from all local sources; Zone of influence: 1,000-foot radius from property line of source or receptor)	

Source: BAAQMD 2017c

Notes:

> = greater than
BMP = best management practice

3.3.3 Emissions Estimation Methodology

3.3.3.1 Demolition, Excavation and Construction

Short-term demolition, excavation and construction emissions of CO, VOCs, NO_X, SO_2, PM_{10}, and $PM_{2.5}$ were estimated for the project. The only TAC evaluated for demolition, excavation and construction activities was DPM, which was assumed equal to estimated onsite and offsite exhaust PM_{10} emissions. Detailed demolition, excavation and construction emission calculations are presented in Appendix 3.3A. A qualified demolition contractor will inspect the existing structures prior to demolition to determine the presence of asbestos-containing materials (ACM) or lead-based paint (LBP). If ACM or LBP are present, the contractor will abate ACM or LBP, or both, consistent with the BAAQMD and state requirements. Any soil contamination will also be remediated consistent with the requirements of the Santa Clara County Department of Environmental Health. [

Demolition, excavation, and construction emissions would include exhaust from fuel combustion and fugitive dust. They would result from use of construction equipment, demolition activities, soil disturbance, material movement, paving activities, and on- and offsite vehicle trips, such as material haul trucks, worker commutes, and delivery vehicles. Emissions from the approximately 17-month construction period, of which the first month includes demolition and excavation activities, were estimated using construction equipment emission factors, horsepower, and load factors from the California Emissions Estimator Model (CalEEMod) *CalEEMod User's Guide* (BREEZE 2017), assuming a mix of equipment meeting Tier 3 and Tier 4 NO_X and PM_{10} emission standards; paving emission factors from the *CalEEMod User's Guide* (BREEZE 2017); and on-and offsite vehicle exhaust and idling emission factors from EMFAC2017. Fugitive dust emission factors for demolition; truck dumping and loading; and excavation and grading activities were derived using methodology from the *CalEEMod User's Guide* (BREEZE 2017); fugitive dust emission factors for vehicle travel on paved and unpaved roads were derived using methodology from *AP-42* (EPA 2011 and 2006, respectively). Construction of the project would not require soil piles to be placed onsite, and best management practices (BMPs) for fugitive dust control would be implemented,

as described in the Project Description section and later in this section. Estimated criteria pollutant demolition, excavation, and construction emissions for the project, and for which a BAAQMD significance threshold exists, are summarized in Table 3.3-3, and conservatively assume that all demolition, excavation, and construction activities would occur concurrently.

The CalEEMod program was selected from the list of analytical tools recommended by the BAAQMD[7] for evaluating air quality and GHG impacts pursuant to CEQA. On this list of tools, the CalEEMod program is specifically identified as appropriate for estimating criteria pollutant and GHG emissions. Furthermore, use of this BAAQMD-recommended analytical tool confirms consistency among projects before the CEC. In addition, the City of San José used the CalEEMod program in preparing the 237 Industrial Center Environmental Impact Report (2017 EIR) air quality evaluation for the previously approved data center project that was proposed on the project site.

Table 3.3-3. Criteria Pollutant Emissions from Project Demolition, Excavation, and Construction

	VOCs	NOx	PM_{10}[a]	$PM_{2.5}$[a]
Average Daily Emissions (pounds per day)[b]	9.71	53.5	50.0	9.60
Maximum Emissions (tons per project)	1.82	10.0	9.36	1.80

[a] These estimates conservatively include fugitive dust emissions, even though the BAAQMD's thresholds are specific to exhaust emissions only.

[b] The BAAQMD's thresholds are for average daily emissions, so the reported results are the total project emissions averaged over the entire demolition, excavation, and construction duration.

The BAAQMD's CEQA Guidelines (BAAQMD 2017c) consider fugitive dust impacts to be less than significant, provided that specified BMPs are implemented. As stated previously, to minimize fugitive dust impacts, the BAAQMD's recommended BMPs would be incorporated as project design features, as follows:

- All exposed surfaces (for example, parking areas, staging areas, soil piles, graded areas, and unpaved access roads) will be watered two times per day.
- All haul trucks transporting soil, sand, or other loose material offsite will be covered.
- All visible mud or dirt track-out onto adjacent public roads will be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.
- All vehicle speeds on unpaved surfaces will be limited to 15 miles per hour.
- All roadways, driveways, and sidewalks to be paved will be completed as soon as possible. Building pads will be laid as soon as possible after grading unless seeding or soil binders are used.
- Idling times will be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling [13 CCR 2485]). Clear signage will be provided for construction workers at all access points.
- All construction equipment will be maintained and properly tuned in accordance with manufacturer's specifications. All equipment will be checked by a certified visible emissions evaluator.
- A publicly visible sign will be posted with the telephone number and name of the person to contact at the lead agency regarding dust complaints. This person will respond and take corrective action within 48 hours. BAAQMD's phone number will also be visible to provide compliance with applicable regulations.

[7] See http://www.baaqmd.gov/plans-and-climate/california-environmental-quality-act-ceqa/ceqa-tools.

3.3.3.2 Operations

The operational emissions from all project components of CO, VOCs, NO_X, SO_2, PM_{10}, and $PM_{2.5}$ were evaluated, as were TAC emissions from diesel fuel combustion in the standby and administrative generators and urea usage in the generators' selective catalytic reduction (SCR) systems. Operational emissions result from diesel fuel and urea use in the generators and emission control systems; refueling of diesel storage tanks; operation of cooling units; offsite vehicle trips for worker commutes and material deliveries; and facility upkeep, such as architectural coatings, consumer product use, landscaping, water use, waste generation, and electricity use. Each of these emission sources are described in more detail in the following paragraphs. Detailed operation emission calculations are presented in Appendix 3.3B.

Stationary Sources

Diesel fuel combustion in the project's 40 standby generators and two administrative generators would result in stationary source emissions. Of the generators proposed for installation, 40 would be Cummins-certified Tier 4 engines, with an engine output of 4,307 horsepower (3 MW) at full load. There will also be two additional Cummins-certified Tier 4 engine generators, with ratings of 1,818 and 731 horsepower (1.25 and 0.5 MW, respectively), to serve the administrative buildings. Each generator would be equipped with a two-stage Miratech SCR System. The first stage would control particulate matter by at least 85 percent via a diesel oxidation catalyst and diesel particulate filter; the second stage would control NO_X, CO, VOCs, particulate matter, and HAPs to Tier 4 emissions standards via SCR. All generators would be tested routinely to verify that they would function during an emergency.

During routine maintenance and readiness testing, criteria pollutants and TACs would be emitted directly from the generators. When considering emissions from these routine events, the emission calculations conservatively apply Tier 2 emission factors to CO and NO_X, and Tier 4 emission factors for PM_{10} and $PM_{2.5}$. This approach reflects the likelihood of each generator's SCR not achieving full functionality during the short-duration maintenance and testing events. SO_2 emissions were based on the maximum sulfur content allowed in California diesel (15 ppm by weight per 13 CCR 2281), and conservatively assumed 100 percent conversion of fuel sulfur to SO_2. DPM emissions resulting from diesel stationary combustion were assumed equal to PM_{10} emissions, with speciated TAC emissions estimated using emission factors from *AP-42* (EPA 1996).

Ammonia would also be emitted during generator operation, but only as a result of urea usage in the SCR. Although the SCR would not likely be fully functional during routine maintenance and testing events, ammonia emissions were conservatively included in the TAC emission estimates for routine operation. These emissions were estimated based on an assumed ammonia slip concentration of 5 ppm.[8]

Annual emissions were estimated assuming that maintenance and testing would occur for no more than 42 hours per year per generator[9], which is less than the 50 hour per year limit for maintenance and testing allowed in the Airborne Toxic Control Measure for Stationary Compression Ignition Engines (17 CCR 93115). Consistent with BAAQMD permitting methods, no load factor was applied. Daily emissions were estimated assuming that each generator would be operated for maintenance and testing for 42 hours per year, and then averaged over 12 months per year and 30 days per month to get a daily average emissions estimate.[10] Daily and annual criteria pollutant emission estimates from routine maintenance and testing of the generators are included in Table 3.3-7, along with other routine facility operation emissions

[8] See https://www.empire-cat.com/uploadedFiles/Empire_Cat/Power_Systems/Emissions_Solutions/Stationary_Portable_Power/SCR%20Frequently%20Asked%20Questions.pdf.

[9] SPPE Section 2.0, Table 2-4 shows the expected standby generator engine operation of less than 13 hours per year for maintenance and testing.

[10] Daily emission rates were averaged over the period of a year since the standby and administrative generators could potentially be tested at any time of day or day of the year.

described later within this section. Total TAC emissions from maintenance and testing are included in Table 3.3-6, with TAC-specific emission details included in Appendix 3.3B.

Potential criteria pollutant and TAC emissions from emergency operation of the generators were also estimated, as specified in BAAQMD's recently released policy, *Calculating Potential to Emit for Emergency Backup Power Generators* (BAAQMD 2019). These emissions were estimated based on the project's maximum emergency operations demand of 91.75 MW, which is less than the CEC's threshold for qualifying for an SPPE of 99 MW. To stay within the 91.75 MW of generation capacity, the emission calculations assume 30 of the 40 standby generators (3-MW) and the two administrative generators (1.25- and 0.5-MW) operate at 100 percent load.[11] In accordance with the BAAQMD's policy, the total PTE estimates also assume that all 42 generators would operate for 42 hours per year at 100 percent load for maintenance and testing. Table 3.3-4 describes the assumptions used to estimate the total PTE from emergency operation and maintenance and testing of the proposed standby and administrative generators.

Table 3.3-4. Emergency Operation and Maintenance and Testing Assumptions for Standby and Administrative Generators

Parameter	Units	Value	Comments
Total Number of Standby Generators	Units	40	Total number of 3-MW standby generators to be permitted, including both primary and backup standby generators
Number of Primary Standby Generators	Units	30	Assumes these generators are operated for both emergency operations and maintenance and testing purposes; the number of primary standby generators was determined based on the limitation of a maximum 91.75-MW energy output by the facility
Number of Backup Standby Generators	Units	10	Assumes these backup standby generators are operated for maintenance and testing purposes, but would only be operated for emergency purposes if one of the primary standby generators was taken offline
Total Number of Administrative Generators	Units	2	One 1.25-MW generator and one 0.5-MW generator to be permitted for emergency operations and maintenance and testing purposes
Annual Hours of Operation per Unit Assumed for Emergency Purposes	Hours per year	100	Required by the BAAQMD's policy, *Calculating Potential to Emit for Emergency Backup Power Generators* (BAAQMD 2019)
Annual Hours of Operation per Unit Assumed for Maintenance and Testing Purposes	Hours per year	42	Maximum maintenance and testing hours proposed for each generator [

Table 3.3-5 presents the maximum annual PTE from the standby and administrative generators, including both emergency and routine maintenance and testing operations.

[11] The operation of all 40 standby generators at approximately 75 percent load results in the same PTE as assuming 30 generators operate at 100 percent load for 100 hours per year.

Table 3.3-5. Criteria Pollutant Emissions from Emergency Generator Operation and Routine Maintenance and Testing

Annual Operation	Annual Emissions (tpy)					
	VOC	CO	NO_X	SO_2	PM_{10}	$PM_{2.5}$
Standby Generators - Maximum PTE[a]	4.97	11.6	97.3	0.10	0.49	0.49
Administrative Generators - Maximum PTE[b]	0.05	0.43	1.67	0.002	0.01	0.01
Total Generators – Maximum PTE	5.02	12.0	99.0	0.10	0.50	0.50

[a] Maximum PTE emissions assume operation of all 40 standby diesel generators at 100 percent load. To comply with BAAQMD's policy, Calculating Potential to Emit for Emergency Backup Power Generators (BAAQMD 2019), it is assumed that only 30 of the 40 standby generators would operate 142 hours per year, while the remaining 10 backup standby generators would operate only 42 hours per year.

[b] Maximum PTE emissions assume operation of both administrative diesel generators at 100 percent load. To comply with BAAQMD's policy, Calculating Potential to Emit for Emergency Backup Power Generators (BAAQMD 2019), it is assumed that both of the administrative generators would operate 142 hours per year.

Table 3.3-6 provides total annual TAC emission estimates, considering the sum of all TACs and HAPs, from both emergency and routine maintenance and testing generator operation.

Table 3.3-6. TAC Emissions from Emergency Generator Operation and Routine Maintenance and Testing

Pollutant	Annual Emissions (tpy)[a]		
	3-MW Generators (40)	1.25-MW Generator	0.5-MW Generator
Total TACs and HAPs from Maintenance and Testing Operation[b]	0.45	0.005	0.002
Total TACs and HAPs from Emergency Operation[c]	1.07	0.012	0.005
Total TACs and HAPs from All Possible Operation Scenarios	1.52	0.017	0.007

[a] All TACs and HAPs, including DPM and speciated diesel exhaust pollutants, were conservatively summed to report annual emissions. Actual total TAC or HAP emissions, as defined by the CARB and EPA, respectively, are expected to be less than what is reported here.

[b] Assumes 42 hours of operation per generator per year at 100 percent load.

[c] Assumes 100 hours of operation per generator per year at 100 percent load.

Storage Tank Refueling

In addition to the stationary source emissions described above, each generator would emit VOCs during refueling of the diesel storage tanks feeding each generator. Each project standby generator (40 in total) and administrative generator (2 in total) is expected to operate less than 15 hours per year. However, assuming each generator is operated for 42 hours per year with a conservative fuel usage rate of 202.0 gallons per hour[12], each generator would consume 8,484 gallons of diesel annually. This assumes that each generator is operated at full load, which is not expected, absent prolonged outage of the electric grid. Under the unlikely case that each generator is operated 42 hours per year at full load, each

[12] Both administrative generators would have an hourly fuel usage rate less than 202.0 gallons per hour, so actual annual gallons of diesel consumed would be less than what is estimated herein.

generator storage tank could be refueled up to four times per year. The project generators' diesel storage tanks are not required to include vapor control devices according to CARB's Vapor Recovery Program - Frequently Asked Questions (FAQs) For Aboveground Storage Tanks, which specifically states, "Note that ASTs storing diesel or jet fuel are not required to have vapor recovery systems".[13] The South Coast Air Quality Management District's *Supplemental Instructions for Liquid Organic Storage Tanks Annual Emissions Reporting Program* (February 2017)[14] provides a diesel fuel storage tank emission factor of 0.028 pounds of VOC per 1,000 gallons for loading, storing, dispensing, and spills or leaks. This emission factor, together with the estimated annual fuel use of 8,484 gallons per year, were used to estimate storage tank refueling emissions from each generator storage tank. These emissions are included in Table 3.3-7, with calculation details included in Appendix 3.3B.

Cooling Units

The project's cooling-related emissions would result from use of refrigerants in operation of five 18-ton Daikin variable refrigerant flow cooling units, two 4.5-ton variable refrigerant flow cooling units, and one 14-ton cooling unit. Based upon manufacturer data, these units would contain R-410A coolant, which has been identified by the International Panel on Climate Change to have a global warming potential. Therefore, emissions associated with industry standard leak rates of R-410A were used to estimate potential GHG emissions and impacts in Section 3.8.

In total, 68 closed circuit cooling units will be installed to support the remainder of the facility operations. The closed circuit cooling units are supplemented with wet cooling when the outdoor ambient air temperature is above 75 degrees Fahrenheit (approximately 590 hours per year according to the manufacturer). For equipment longevity, each of the cooling units is equipped with a re-condensing system to remove moisture from the cooling air prior to discharge. As a result of the re-condensing operation, negligible particulate matter emissions would result from the air discharge.

Mobile Sources

Once operational, approximately 100 employees would be employed at the project site on a daily basis, split between three shifts, with approximately 30 daily vendor trips. Total vehicle trips, including vendor and employee trips, would be approximately 130 per day, which would result in mobile source criteria pollutant emissions. Emissions for mobile sources were estimated using vehicle exhaust and idling emission factors from EMFAC2017 and are included in Table 3.3-7.

Area and Energy Sources

The project would result in area and energy source criteria pollutant emissions associated with facility upkeep (that is, building operation and maintenance). Area sources include landscaping activities, consumer product use, and periodic painting emissions. Energy sources include only electrical use, as natural gas will not be used for comfort heating.[15] Facility upkeep emissions were estimated using CalEEMod, based on the square footage of the buildings to be constructed and paved areas, and are included in Table 3.3-7. The CalEEMod output is included in Appendix 3.3B.

[13] See https://www.arb.ca.gov/vapor/faq.htm.

[14] See http://www.aqmd.gov/docs/default-source/planning/annual-emission-reporting/supplemental-instructions-for-liquid-organic-storage-tanks.pdf.

[15] CalEEMod does not calculate criteria pollutant emissions associated with electricity consumption, because that is considered an indirect source of emissions. Accordingly, the energy source criteria pollutant emissions are not included in this analysis. Similarly, criteria pollutant emissions associated with waste generation and water use would be tied to electricity consumption and are not included in this analysis.

Total Emissions from Facility Operations

Total daily and annual criteria pollutant emissions resulting from routine facility operations, including maintenance and testing of standby and administrative generators, storage tank refueling, operation of cooling units, vehicle trips, and facility upkeep, are presented in Table 3.3-7.

Table 3.3-7. Criteria Pollutant Emissions from Routine Facility Operation

Daily Operation	Average Daily Emissions (pounds per day)					
	VOC	CO	NO_X	SO_2	PM_{10}	$PM_{2.5}$
Generators[a]	10.0	23.8	197	0.20	0.99	0.99
Tank Refueling	0.03	--	--	--	--	--
Cooling Units[b]	--	--	--	--	--	--
Mobile Sources	0.17	4.66	3.31	0.02	0.38	0.18
Facility Upkeep	15.2	0.02	0.00	0.00	0.00	0.00
Unmitigated Project Emissions	25.3	28.5	200	0.23	1.37	1.17
Annual Operation	**Maximum Annual Emissions (tpy)**					
	VOC	CO	NO_X	SO_2	PM_{10}	$PM_{2.5}$
Generators[a]	1.80	4.29	35.4	0.04	0.18	0.18
Tank Refueling	0.00	--	--	--	--	--
Cooling Units[b]	--	--	--	--	--	--
Mobile Sources	0.03	0.85	0.60	0.00	0.07	0.03
Facility Upkeep	2.77	0.00	0.00	0.00	0.00	0.00
Unmitigated Project Emissions	4.60	5.15	36.0	0.04	0.25	0.21

[a] Emissions assume concurrent operation of all 40 standby and 2 administrative generators at 100 percent load for 42 hours per year, even though only 30 standby and 2 administrative generators are expected to operate at any single time.

[b] Per above discussion, cooling units would result in negligible particulate matter emissions.

Note:

-- = No or negligible emissions expected from this source

3.3.4 Air Quality Impact Analysis

An ambient air quality impact analysis, including dispersion modeling, was conducted as follows:

- To estimate reasonable worst-case ground-level concentrations that would result from the project under 50, 75, and 100 percent generator load scenarios
- To combine modeled, project-related estimates with monitored background concentrations
- To compare predicted results with applicable state and federal ambient air quality standards and BAAQMD significance criteria

The analysis was conducted in accordance with the air quality impact analysis guidelines presented in 40 CFR 51, Appendix W, *Guideline on Air Quality Models* (EPA 2017).

The analysis includes an evaluation of the potential effects of simple, intermediate, and complex terrain, and aerodynamic effects due to nearby buildings and structures (downwash) on plume dispersion and

ground-level concentrations. A numerical Gaussian plume model was used in the analysis. The model assumes that the concentrations of emissions within a plume can be characterized by a Gaussian distribution of gaseous concentrations about the plume centerline. Gaussian dispersion models are approved by EPA and BAAQMD for regulatory use and are based on conservative assumptions (that is, the models tend to over-predict actual impacts by assuming steady-state conditions, no pollutant loss through conservation of mass, and no chemical reactions).

Subsections 3.3.4.1 and 3.3.4.2 present the following information:

- Dispersion modeling methodology for evaluating impacts on ambient air quality
- Source parameters and data used in dispersion modeling

Dispersion modeling results compared to the CAAQS, NAAQS, and applicable SILs are presented in Section 3.3.6.

3.3.4.1 Dispersion Modeling Methodology

Model Selection and Model Options

The American Meteorological Society/Environmental Protection Agency Regulatory Model (AERMOD) (Version 19191) was used with regulatory default options, as recommended in EPA's *Guideline on Air Quality Models* (EPA 2017). Supporting pre-processing programs for AERMOD were also used, including the following:

- BPIP-PRIME (Version 04274)
- AERMAP (Version 11103)

AERMOD is a steady-state plume model that simulates air dispersion based on planetary boundary layer turbulence structure and scaling concepts, including treatment of both surface and elevated sources, and both simple and complex terrain. This model is recommended for short-range (less than 50 kilometers [km]) dispersion from the source. The model incorporates the Plume Rise Model Enhancement (PRIME) algorithm for modeling building downwash. AERMOD is designed to accept input data prepared by two specific pre-processor programs, AERMET and AERMAP. AERMOD was run with the following options:

- Regulatory default options
- Direction-specific building downwash
- Hour of day factor
- Urban population
- Actual receptor elevations and hill height scales obtained from AERMAP

The modeled facility layout is presented in Appendix 3.3C, Figure 1.

Meteorological Data

The analysis was performed with 5 years of data provided by the BAAQMD. The data were collected at the Moffett Field surface station (WBAN 23244) for calendar years 2013 through 2017. The Moffett Field surface station is located approximately 6.5 miles west of the project site and best represents the topography at the project site. The concurrent daily upper air sounding data from the Oakland International Airport station (WBAN 23230) were also included. The data were pre-processed with AERMET (Version 18081) by the BAAQMD for direct use in AERMOD.

Table 3.3-8 presents a summary of the percent completeness of wind speed and wind direction data. A cumulative wind rose for 2013 to 2017 data from the AERMET-processed surface files for the Moffett Field surface station is shown in Appendix 3.3C, Figure 3. The 5-year mean wind speed is 2.74 meters per second (m/s).

Table 3.3-8. Meteorological Data Completeness

Parameter	2013	2014	2015	2016	2017
Valid Wind Direction and Speed Observations	8,751	8,752	8,720	8,727	8,725
Possible Observations	8,760	8,760	8,760	8,784	8,760
Percent Complete (%)	99.90	99.91	99.54	99.35	99.60

Building Downwash

Building influences on stacks are calculated by incorporating the updated EPA Building Profile Input Program for use with the PRIME algorithm. Appendix 3.3C, Figure 1 shows the facility layout. The stack heights used in the dispersion modeling were the actual stack heights, because the proposed stack heights would be less than good engineering practice stack height.

Receptor Grid

The ambient air boundary was defined by the fence line surrounding the project site. The selection of receptors in AERMOD were as follows:

- 25-meter (m) spacing along the fence line
- 50-m spacing from the fence line to 500 m from the grid origin
- 100-m spacing from beyond 500 m to 1 km from the fence line
- 500-m spacing from beyond 1 km to 5 km from the fence line
- 1,000-m spacing from beyond 5 km to 10 km from the fence line

AERMAP (Version 11103) was used to process terrain elevation data to obtain the elevation for all receptors using National Elevation Dataset (1 arc-second, or approximately 30 m, resolution) files prepared by the U.S. Geological Survey. AERMAP first determined the base elevation at each receptor. Then AERMAP created hill height scale by searching for the terrain height and location that has the greatest influence on dispersion for each individual source and receptor. Both the base elevation and hill height scale data were produced for each receptor by AERMAP as a file or files that were directly accessed by AERMOD. All receptor locations were expressed in the Universal Transverse Mercator North American Datum 1983, Zone 10 coordinate system. The modeled receptor grid is shown in Appendix 3.3C, Figure 2.

Sensitive Receptors. Sensitive receptors (such as infants, the aged, and people with specific illnesses or diseases) are the subpopulations who are more sensitive to the effects of toxic substance exposure. Examples of receptor locations include residences, schools and school yards, parks and playgrounds, daycare centers, nursing homes, and medical facilities. Residences could include houses, apartments, and senior living complexes. Medical facilities could include hospitals, convalescent homes, and health clinics. Playgrounds could be play areas associated with parks or community centers (BAAQMD 2017c). The potential sensitive receptor locations evaluated in the HRA for the project include the following, consistent with BAAQMD's *Recommended Methods for Screening and Modeling Local Risks and Hazards* (BAAQMD 2012):

- Residential dwellings, including apartments, houses, and condominiums
- Schools, colleges, and universities
- Daycares
- Hospitals
- Senior-care facilities

A sensitive receptor search was conservatively conducted within the 2-km zone of influence, which is a much greater distance than the 1,000-foot zone of influence recommended by the BAAQMD. It was determined that the sensitive receptor locations near the project site include primarily schools, preschool through elementary-level; daycares; health centers; and a senior care center. The area directly east and south of the project site consists of various businesses. The nearest residential neighborhood is located approximately 0.3 mile south of the project site.

The sensitive receptors were used as discrete receptor locations in the model for purposes of conducting the HRA, as described in Section 3.3.5.

Hour of Day Factor

An Hour of Day (HROFDY) factor modeling refinement was used in AERMOD to characterize daily operating hours for maintenance and testing from 7 a.m. until 7 p.m. Each generator was assumed to operate a maximum of 4 hours per day only during the 7 a.m. to 7 p.m. time frame. The HROFDY factor was utilized for the 24-hour averaging period and was not included for the annual averaging period.

Urban Factor

The project site is located in the Milpitas region of California and is considered an urban area, because the land use surrounding the project site is predominately classified as urban. Therefore, the model used a single urban area in AERMOD. The population estimate of Santa Clara County in 2018 was 1,937,570 people (U.S. Census Bureau 2018). This population was included in the model to help define the differential heating effect that develops at night due to the urban population.

Refined Analysis for 1-hour NO

For comparison to the NAAQS and CAAQS, NO_2 modeling followed a Tier 2 approach described in Section 4.2.3.4 of EPA's *Guideline on Air Quality Models* (EPA 2017). The Tier 2 analysis assumes an ambient equilibrium between NO and NO_2 using the Ambient Ratio Method 2 (ARM2) approach, in which the conversion of NO to NO_2 is predicted using hourly ambient NO_X monitoring data. For this modeling, the ARM2 option was used with an in-stack ratio (ISR) of NO_2/NO_X of 0.1 and a maximum out-of-stack NO_2/NO_X ratio of 0.9. The NO_2 ISR Database (EPA 2016), developed using EPA-verified testing, indicates that diesel internal combustion engines typically have an ISR of 0.03. The model conservatively used 0.1 as an ISR for use in ARM2.

The model also included seasonal hour (SEASHR) background data for NO_2. The 1-hour NO_2 background profiles used in this analysis were calculated as a SEASHR profile that provides a single background value for each hour of the day for each of the four seasons. Data for these background profiles were obtained from EPA's Air Quality System (AQS) Website[16], as measured at AQS Monitor Site ID 060850005 located at 158B Jackson Street in San Jose, California for years 2016, 2017, and 2018. For each hour of the day for each season, the average concentration of the three most recent and complete years is calculated. For purposes of CAAQS modeling, the background profile uses the high-1st-high hourly values averaged across the three most recent and complete years of data. For purposes of NAAQS modeling, the background profile conservatively uses the high-2nd-high hourly values, averaged across the three most recent and complete years of data, to represent the 98th percentile. The high-2nd-high values are determined to be the 98th percentile based upon any single season having no more than 92 possible data points for any given hour.

[16] Accessible at https://aqs.epa.gov/api.

3.3.4.2 Source Parameters and Data Used in Dispersion Modeling

All 40 standby generators and both administrative generators were modeled as point sources, based on the operating assumptions listed in Table 3.3-9.

Table 3.3-9. Generator Operating Assumptions

Averaging Period	Operating Assumption
1-hour	Assumes a single generator could operate at 100 percent load at a time for maintenance and testing purposes
3-hour	Assumes all generators would operate at the maximum 1-hour rate during a 3-hour period for maintenance and testing purposes
8-hour and 24-hour	Assumes all generators could each operate at 100 percent load for a maximum of 4 hours per day for maintenance and testing purposes
Annual	Assumes all generators could each operate at 100 percent load for a maximum of 42 hours per year for maintenance and testing purposes

Source parameters used for modeling the standby and administrative generators were determined from manufacturer and performance data, and are included in Table 3.3-10. The base elevation for each source was estimated based on a central elevation within the facility fence line. Consistent with the project design, the modeling assumed that the entire surface within the property boundary would be graded to this elevation; therefore, all buildings and sources would have this same elevation. A table showing individual source parameters for all 42 generators is included in Appendix 3.3C.

Table 3.3-10. Generator Source Parameters for Dispersion Modeling

Load Scenario	Source	Base Elevation (m)	Stack Height (m)	Exhaust Temperature (K)	Exit Velocity (m/s)	Stack Diameter (m)
50% Load	3-MW Generator (40)	5	9.14	627.59	16.58	0.76
	1.25-MW Generator (1)	5	6.10	691.48	16.86	0.51
	0.5-MW Generator (1)	5	6.10	715.37	10.67	0.36
75% Load	3-MW Generator (40)	5	9.14	652.04	20.38	0.76
	1.25-MW Generator (1)	5	6.10	705.37	21.54	0.51
	0.5-MW Generator (1)	5	6.10	728.71	13.17	0.36
100% Load	3-MW Generator (40)	5	9.14	716.48	24.18	0.76
	1.25-MW Generator (1)	5	6.10	727.59	24.26	0.51
	0.5-MW Generator (1)	5	6.10	752.04	16.36	0.36

Note:

K = degrees Kelvin

Criteria pollutant emission rates used for modeling were developed as described in Section 3.3.3.2. The estimated 1-hour emission rates represent the maximum amount of each pollutant that would be released in any given hour. The estimated 3-hour emission rates were conservatively assumed equal to the 1-hour emission rate, based on the understanding that each generator could operate at the maximum 1-hour emission rate for 3 consecutive hours. Emission rates used for modeling 8-hour and 24-hour averaging periods were calculated assuming each generator would only operate for 4 hours in a given 24-hour period, consistent with the possibility of uninterrupted power supply testing occurring on any day of the year. Annual emission rates used for modeling assume each generator could operate a maximum of

42 hours per year. Table 3.3-11 includes the emission rates used for modeling for each criteria pollutant from a single generator. Emission rates for all 42 generators are presented in Appendix 3.3C.

Table 3.3-11. Criteria Pollutant Emission Rates for Dispersion Modeling[a]

Pollutant	Averaging Period	3-MW Generator Emission Rate (lb/hr)			1.25-MW Generator Emission Rate (lb/hr)			0.5-MW Generator Emission Rate (lb/hr)		
		100% Load	75% Load	50% Load	100% Load	75% Load	50% Load	100% Load	75% Load	50% Load
NO_X	1-hour[b]	41.6	31.4	21.3	16.2	12.3	8.40	7.40	5.61	3.83
	Annual[c]	0.20	0.15	0.10	0.08	0.06	0.04	0.04	0.03	0.02
CO	1-hour[b]	4.96	3.75	2.54	5.38	4.09	2.80	0.72	0.55	0.37
	8-hour[d]	2.48	1.87	1.27	2.69	2.04	1.40	0.36	0.27	0.19
$PM_{2.5}$	24-hour[d]	0.035	0.026	0.018	0.015	0.011	0.008	0.006	0.004	0.003
	Annual[c]	0.001	0.0008	0.0005	0.0004	0.0003	0.0002	0.0002	0.0001	0.0001
PM_{10}	24-hour[d]	0.035	0.026	0.018	0.015	0.011	0.008	0.006	0.004	0.003
	Annual[c]	0.001	0.0008	0.0005	0.0004	0.0003	0.0002	0.0002	0.0001	0.0001
SO_2	1-hour[b]	0.043	0.033	0.024	0.019	0.015	0.011	0.007	0.005	0.004
	3-hour[e]	0.043	0.033	0.024	0.019	0.015	0.011	0.007	0.005	0.004
	24-hour[d]	0.007	0.006	0.004	0.003	0.003	0.002	0.001	0.0009	0.0007
	Annual[c]	0.0002	0.0002	0.0001	0.00009	0.00007	0.00005	0.00003	0.00003	0.00002

[a] Emission rates used for dispersion modeling were based on Tier 2 emission factors for NOX and CO, assuming the SCR is not yet operational, and Tier 4 emission factors for PM_{10} and $PM_{2.5}$, assuming control via a diesel particulate filter.

[b] Maximum emission rate in any given hour.

[c] Calculated as the total annual emissions, based on 42 hours of operation per year, averaged over 8,760 hours.

[d] Calculated assuming that each generator will only operate a maximum of 4 hours within a 24-hour period.

[e] Equal to the 1-hour emission rate, based on the understanding that each generator could operate at the maximum 1-hour emission rate for 3 consecutive hours.

Note:

lb/hr = pound(s) per hour

3.3.5 Health Risk Assessment

An HRA requires dispersion modeling of TAC emissions estimated for the project, as described in Section 3.3.4, and characterization of the resultant risk from estimated TAC concentrations using an approved risk assessment methodology. This study follows 2015 guidance from the OEHHA for preparation of HRAs (OEHHA 2015). The Hotspot and Reporting Program Version 2 (HARP2; CARB 2015) and OEHHA methodology were used to calculate risk. This section describes the use of HARP2 and the OEHHA methodology to characterize risks that would potentially result from demolition/excavation/construction and operation of the project. The risk assessment results are reported and compared to the relevant BAAQMD thresholds in Section 3.3.6.

TACs considered in evaluating the health impacts of the project are those included in BAAQMD Regulation 2, Rule 5. The only TAC evaluated in the demolition/construction HRA was DPM. The TACs evaluated in the operational HRA were DPM, ammonia, and the speciated total organic gases (TOG) in diesel exhaust. The TACs from speciated TOG include the following:

- Acetaldehyde
- Acrolein

- Benzene
- Formaldehyde
- Naphthalene
- Propylene
- Toluene
- Total polycyclic aromatic hydrocarbons (PAHs)[17]
- Xylene

The cancer risk, chronic HI, and acute HI predicted by the HRA for demolition/construction and operation of the project were based on TAC emissions from the project. These emission estimates were developed as described in Section 3.3.3, compared to BAAQMD thresholds, and used as inputs to the HRA.

The HRA process requires four general steps to estimate health impacts:

1) Identify and quantify project-generated emissions.
2) Model pollutant dispersion to estimate ground-level TAC concentrations at each receptor location
3) Assess potential for human exposure.
4) Use a risk characterization model to estimate the potential health risk at each receptor location.

The methods used in the demolition/excavation/construction and operational HRAs are described in more detail in the following subsections, as related to these four general steps.

3.3.5.1 HRA Approach and Risk Characterization

As recommended by the 2015 OEHHA Guidance, a Tier 1 assessment was performed. The Tier 1 assessment is the most conservative of the four tier assessment methodologies identified in the OEHHA Guidance and uses a standard point-estimate approach with standard OEHHA assumptions (OEHHA 2015).

The HRA included potential health impacts from TAC exposure on receptors through the following pathways:

- Inhalation
- Dermal absorption
- Soil ingestion
- Mother's milk
- Homegrown produce

The inhalation cancer potency, oral slope factor values, and RELs used to characterize health risks associated with the modeled impacts were obtained from the *Consolidated Table of OEHHA/ARB Approved Risk Assessment Health Values* (OEHHA & CARB 2018). Although not required by the 2015 OEHHA Guidance for a Tier 1 assessment, residential exposure through the consumption of homegrown produce (including pork, chicken, and eggs) was conservatively included in the assessment.

The following pathways were deemed not applicable to the project, per regulatory guidance, and thus were not included in the assessment:

- Surface drinking water
- Still-water fishing
- Subsistence farming

[17] Total PAHs include benz(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene, dibenz(a,h)anthracene, and indeno(1,2,3-cd)pyrene.

Cancer

Cancer risk was evaluated based on estimated long-term ground-level concentrations of TACs, as calculated from AERMOD, and the 2015 OEHHA assumptions for inhalation cancer potency, oral slope factor, frequency, and breathing rate of exposed persons. Cancer risk results are expressed on a number-per-million basis. The cancer risks estimated for the Maximally Exposed Individual Resident (MEIR), Maximally Exposed Individual Worker (MEIW), and Maximally Exposed Sensitive Receptor (MESR) were compared to the BAAQMD threshold for acceptable carcinogenic risks. These results are presented in Section 3.3.6.

Two HRAs were conducted: one based on the project's demolition, excavation, and construction emissions, and the other based on the project's routine operational emissions. Both HRAs calculated residential, worker, and sensitive receptor cancer risk due to exposure to project emissions. As required by the 2015 OEHHA Guidance, sensitive receptor (including residential) cancer risks were estimated assuming exposure beginning in the third trimester of pregnancy; worker cancer risk was estimated assuming an 8-hour-per-day, 250 day-per-year exposure, beginning at the age of 16 (OEHHA 2015). The demolition/excavation/construction HRA assumed a 2-year rolling exposure duration, intended to conservatively mirror the 17-month construction duration, of which the first month includes demolition/excavation activities. The operational HRA assumed a conservative 30-year continuous exposure duration for residential and sensitive receptors and a 25-year exposure duration for workers (OEHHA 2015).

Non-cancer Chronic Exposure

Chronic toxicity is defined as adverse health effects from prolonged (long-term) chemical exposure to toxicants or other stressors. To assess chronic non-cancer exposures to emissions from project demolition, excavation, construction, and operation, long-term TAC ground-level concentrations were evaluated based on the RELs developed by OEHHA for each TAC. The REL is a concentration in ambient air at, or below which, no adverse health effects are anticipated. Non-cancer chronic health risks were calculated as a hazard quotient (or HI), which is the calculated exposure concentration of each contaminant divided by its REL. Hazard quotients for pollutants affecting the same target organ are summed with the resulting totals expressed as HIs for each organ system. The non-cancer chronic risks estimated for the MEIR, MEIW, and MESR were compared to the BAAQMD non-cancer chronic threshold. These results are presented in Section 3.3.6.

Non-cancer Acute Exposure

Acute toxicity is defined as adverse health effects caused by a single chemical exposure of no more than 24 hours. To assess acute non-cancer risks from project operation, the 1-hour TAC ground-level concentrations estimated for each contaminant were divided by the contaminant's acute REL to obtain an acute HI. Hazard quotients for pollutants affecting the same target organ were summed with the resulting totals expressed as HIs for each organ system. The non-cancer acute risks estimated for the MEIR, MEIW, and MESR were compared to the BAAQMD non-cancer acute threshold. These results are presented in Section 3.3.6.

3.3.5.2 Demolition, Excavation, and Construction HRA

A screening HRA was conducted to evaluate the potential health risks associated with pollutant exposure during demolition, excavation, and construction of the project. DPM was the only TAC evaluated consistent with the BAAQMD's CEQA guidance, and emissions of DPM were assumed to be equal to the exhaust PM_{10} emissions estimated for onsite and offsite construction equipment and off-road vehicles. The emissions and screening HRA methodology are described in the following paragraphs.

Emissions. DPM emissions result from diesel fuel combustion in onsite and offsite construction equipment and off-road vehicles. DPM emissions resulting from the demolition and construction activities were derived from the emission estimates presented in Appendix 3.3A, as follows:

- DPM was assumed to be best represented by PM_{10} emitted as a result of fuel combustion. Therefore, fugitive dust emissions were excluded, as they are not expected to include DPM.
- Offsite, on-road contributions of PM_{10} resulting from material haul truck trips, worker commute trips, and vendor delivery trips were excluded, as they are not expected to significantly contribute to localized impacts of DPM.
- Onsite and offsite contributions of PM_{10} resulting from off-road, gasoline-fueled light-duty trucks were conservatively included, although they are not expected to emit DPM.
- PM_{10} emissions resulting from diesel-fueled construction equipment exhaust were estimated assuming a mix of equipment meeting Tier 3 and Tier 4 PM_{10} emission standards.

For modeling, these emissions were averaged over the construction period (approximately 17 months) and spatially distributed within the demolition, excavation, and construction area. Although some of the demolition, excavation, and construction activities would occur offsite in proximity to the project, all emissions were modeled as being released from the project site due to the temporary nature of the offsite emissions. The emission rates used for modeling are presented in Table 3.3-12, with detailed calculations presented in Appendix 3.3D.

Table 3.3-12. Diesel Particulate Matter Emission Rates for Project Demolition and Construction Used in HRA Modeling

Emissions Category	DPM Exhaust Emissions		
	Total (lb/project)	Annualized (lb/year)[a]	Modeled Rate (g/s)
Total Demolition and Construction Emissions	604	426	0.006
Demolition and Construction Emissions per Modeled Source[b]	1.38	0.98	0.00001

[a] Annualized emissions were calculated by averaging the total project emissions over a 17-month construction period.

[b] A total of 437 sources were modeled.

Notes:

g/s = gram(s) per second
lb/project = pound(s) per project
lb/year = pound(s) per year

Methodology

The atmospheric dispersion of emitted DPM was modeled using AERMOD (Version 19191). The modeled output (maximum ground-level concentrations), along with equations from the *Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments* (OEHHA 2015), were used to estimate the cancer and chronic (non-cancer) health risks for residential and worker exposure to DPM emissions. Acute (non-cancer) health risks were not estimated, because there is no acute inhalation REL for DPM, thus indicating that DPM is not known to result in acute health hazards (OEHHA 2015; OEHHA & CARB 2018). Details regarding the model selection, model options, meteorological data, and receptor grid spacing used to conduct this screening HRA are consistent with those described in Section 3.3.4. The construction source parameters used for modeling and health risk estimation, specific to the screening HRA, are described in more detail in the following paragraphs.

Source Parameters

The exhaust emissions resulting from construction equipment and vehicles were modeled as a set of point sources spaced approximately 25 m apart over the onsite demolition, excavation, and construction

area with a horizontal stack release. The horizontal release type is an AERMOD beta option (that is, nonregulatory default option), which negates mechanical plume rise. This conservative approach was used because it is unknown whether all construction equipment will have vertically oriented exhaust stacks. Stack release parameters consisted of a stack release temperature of 533 degrees Kelvin (K; 500 degrees Fahrenheit), a stack diameter of 0.127 m (5 inches), and a release height of 4.6 m (15 feet) based on data for typical construction equipment. Modeling was also restricted to the hours of 7 a.m. to 7 p.m., which was assumed to coincide with the expected daily construction schedule allowed by local noise ordinances. A detailed summary of the modeling inputs is presented in Appendix 3.3D.

Health Risk Estimates. The screening HRA estimated the 2-year rolling cancer risks, aligned with the expected construction duration, at the MEIR, MEIW, and MESR. Exposure was assumed to start during the third trimester for residents and sensitive receptors and at age 16 for workers. The excess lifetime cancer risks were estimated using the following:

- Equations 3.4.1.1 and 8.2.4A from the *Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments* (OEHHA 2015) for residential exposure
- Equations 5.4.1.2A, 5.4.1.2B, and 8.2.4B from the *Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments* (OEHHA 2015) for worker exposure
- Maximum annual ground-level concentrations used to estimate risk were determined through dispersion modeling with AERMOD
- Demolition and construction emission estimates used for AERMOD modeling are presented in Table 3.3-12

Chronic risks were also estimated for the MEIR, MEIW, and MESR, based on the emission rates and ground-level concentrations described above. To calculate chronic risk, as characterized by an HI, the maximum annual ground-level concentration determined through dispersion modeling with AERMOD was divided by the DPM REL of 5 µg/m^3 (OEHHA & CARB 2018).

3.3.5.3 Operational HRA

A complete HRA was conducted to evaluate the potential health risks associated with exposure to airborne emissions from routine operation of the facility. The emissions, HRA methodology, and risk characterization are described in the following paragraphs.

Emissions

TAC emissions associated with routine facility operation consist of combustion byproducts produced by 42 generators, all of which are fired exclusively on diesel fuel. Chemicals to be evaluated were DPM, ammonia, and speciated TOG in diesel exhaust. When considering diesel exhaust, DPM was the only TAC modeled in HARP2 with annual emission rates, based on DPM being a surrogate for the whole diesel exhaust per Appendix D of the *Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments* (OEHHA 2015). Additionally, ammonia would be emitted only during SCR operation. Although the emission estimates for NO_X assume the SCR would not yet be fully operational during maintenance and testing events, ammonia was conservatively included in the annual and short-term analyses. Since DPM does not have an associated acute REL, the diesel exhaust is speciated for the short-term period. Emissions were calculated using the methodology described in Section 3.3.3.2. These estimates conservatively assume that all 42 generators would operate at 100 percent load for 42 hours per year. Consistent with Appendix D of the *Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments* (OEHHA 2015), cancer and non-cancer chronic risks were estimated based on modeling of annual ammonia and DPM emissions; non-cancer acute risks were estimated based on modeling of hourly emissions of ammonia, acetaldehyde, acrolein, benzene, DPM, formaldehyde, naphthalene, propylene, toluene, total PAHs, and xylenes. Detailed emission calculations are provided in Appendix 3.3B.

Table 3.3-13 provides the hourly and annual TAC emission rates used for modeling each individual generator. These pollutants were identified as TACs per BAAQMD Regulation 2, Rule 5, Table 2-5-1. The speciated PAHs were modeled as total PAH in HARP2, with naphthalene separately included for the short-term acute health risk calculations. DPM was the only diesel exhaust TAC modeled in HARP2 with annual emission rates per Appendix D of the *Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments* (OEHHA 2015).

Table 3.3-13. Toxic Air Contaminant Emission Rates (at 100% Load) Used in HRA Modeling

Pollutant	3-MW Generator		1.25-MW Generator		0.5-MW Generator	
	Hourly Emissions (lb/hr)	Annual Emissions (lb/yr)	Hourly Emissions (lb/hr)	Annual Emissions (lb/yr)	Hourly Emissions (lb/hr)	Annual Emissions (lb/yr)
Acetaldehyde	0.0007	N/A	0.003	N/A	0.0001	N/A
Acrolein	0.0002	N/A	0.0001	N/A	0.00004	N/A
Ammonia[a]	0.20	8.42	0.090	3.77	0.034	1.43
Benzene	0.22	N/A	0.0097	N/A	0.0037	N/A
DPM[b]	0.21	8.77	0.088	3.70	0.036	1.49
Formaldehyde	0.0022	N/A	0.0010	N/A	0.0004	N/A
Naphthalene	0.0036	N/A	0.0016	N/A	0.0006	N/A
Propylene	0.078	N/A	0.035	N/A	0.013	N/A
Toluene	0.0078	N/A	0.0035	N/A	0.0013	N/A
Total PAH	0.0059	N/A	0.0026	N/A	0.0010	N/A
Xylenes	0.0054	N/A	0.0024	N/A	0.0009	N/A

[a] Ammonia emissions have been conservatively included in the health risk modeling, even though this TAC is only expected to be emitted during emergency operations when the SCR system is functional.

[b] DPM emission rates were assumed equal to exhaust PM_{10} emission rates.

Note:

N/A = Not applicable because only DPM and ammonia were modeled for the annual scenario.

Methodology

The operational HRA was conducted in accordance with the following guidance:

- *Air Toxic Hot Spots Guidance Manual for Preparation of Health Risk Assessments* (OEHHA 2015)
- *BAAQMD Air Toxics NSR Program Health Risk Assessment (HRA) Guidelines* (BAAQMD 2016)
- *Guideline on Air Quality Models* (EPA 2017)

The operational HRA modeling was conducted using CARB's HARP2 Air Dispersion Modeling and Risk Assessment Tool (ADMRT). To facilitate calculation of long-term TAC ground-level concentrations at each modeled receptor, the AERMOD air dispersion modeling output plot files were imported into HARP2.

Risk Characterization

The results of the dispersion modeling analysis represent an intermediate product in the HRA process as the AERMOD output plot files were imported into HARP2, and HARP2 was subsequently used to determine cancer, chronic, and acute health risks. AERMOD (Version 19191) was used to predict ground-level concentrations of TAC emissions associated with project operation. The model selection, model options, source parameters, meteorological data, and receptor grid spacing are consistent with

those described in Section 3.3.4 and are not repeated here. A unit emission rate (1 g/s) was used to model each source, as outlined in the HARP2 ADMRT manual.[18] Cancer risks and chronic and acute non-cancer exposures were assessed as previously described.

3.3.6 Environmental Impacts

a) Would the project conflict with or obstruct implementation of the applicable air quality plan?

Less Than Significant Impact. The project site is located within the BAAQMD's jurisdiction, which is the agency primarily responsible for assuring that federal and state ambient air quality standards are met and maintained in the SFBAAB. The BAAQMD has permit authority over stationary sources, acts as the primary reviewing/responsible agency for environmental documents with respect to air quality and GHG emissions, and develops and implementations rules and regulations that must be consistent with or more stringent than federal and state air quality laws and regulations. The project's consistency with the *2017 Bay Area Clean Air Plan* and other applicable BAAQMD regulations is discussed in the following paragraphs.

According to the 2017 BAAQMD CEQA Guidelines, a project would be considered consistent with the *2017 Bay Area Clean Air Plan* if the project would not result in significant and unavoidable air quality impacts after the application of all feasible mitigation (BAAQMD 2017c). For construction, the CEQA Guidelines state that "if daily average emissions of construction-related criteria air pollutants or precursors would exceed any applicable threshold of significance…, the project would result in a significant cumulative impact," and additional analysis would be required (BAAQMD 2017c). As shown in Table 3.3-14, the project's daily average demolition, excavation, and construction emissions do not exceed the BAAQMD's significance thresholds for VOCs, NO_X, PM_{10}, or $PM_{2.5}$. Therefore, the project's demolition, excavation, and construction activities will not result in a significant cumulative impact. It is anticipated that implementation of the project design features described in Section 3.3.3.1 would control potential fugitive dust emissions, thus resulting in less-than-significant fugitive dust impacts. For these reasons, further analysis (such as dispersion modeling to determine ground-level concentrations) is not warranted for demolition, excavation, and construction activities.

Table 3.3-14. Criteria Pollutant Emissions from Project Demolition and Construction Compared to the BAAQMD Significance Thresholds

	VOCs	NO_X	PM_{10}[a]	$PM_{2.5}$[a]
Average Daily Emissions (lb/day)[b]	9.71	53.5	50.0	9.60
BAAQMD Average Daily Thresholds (lb/day)	54	54	82	54
Exceeds Threshold (Y/N)?	No	No	No	No

[a] These estimates conservatively include fugitive dust emissions, even though the BAAQMD's thresholds are specific to exhaust emissions only.

[b] The BAAQMD's thresholds are for average daily emissions, so the reported results are the total project emissions averaged over the entire construction duration.

As shown in Table 3.3-15, the project would not result in routine facility operational emissions in excess of the BAAQMD significance thresholds, although the analysis does conclude that with respect to NO_X. NO_X emitted by generators during maintenance and testing events is approximately 97 percent of the estimated routine operational emissions. For the reasons set forth herein, this analysis is conservative; thus, the expected emissions may be less. Moreover, in any event, these NO_X emissions will be fully offset through the permitting process in accordance with BAAQMD's Regulation 2, Rule 2, as discussed herein, for which compliance is appropriately assumed for

[18] Note that the HARP2 ADMRT manual is made available within the "Help" module of the HARP2 program itself or the *User Manual For the Hotspots Analysis And Reporting Program Air Dispersion Modeling and Risk Assessment Tool Version 2* (CARB 2015)

purposes of this analysis. Therefore, the project would not conflict with or obstruct implementation of the *2017 Bay Area Clean Air Plan*.

Table 3.3-15. Criteria Pollutant Emissions from Routine Facility Operation Compared to the BAAQMD Significance Thresholds

Annual Operation	Average Daily Emissions (lb/day)					
	VOC	CO	NO_X	SO_2	PM_{10}	$PM_{2.5}$
Unmitigated Project Total[a]	25.3	28.5	200	0.23	1.37	1.17
Mitigation[b]	--	--	226	--	--	--
Mitigated Project Total	25.3	28.5	-26.2	0.23	1.37	1.17
BAAQMD Average Daily Thresholds[c]	54	--	54	--	82	54
Exceeds Threshold (Y/N)?	N	N	N	N	N	N
Annual Operation	**Annual Emissions (tpy)**					
	VOC	CO	NO_X	SO_2	PM_{10}	$PM_{2.5}$
Unmitigated Project Total[a]	4.60	5.15	36.0	0.04	0.25	0.21
Mitigation[b]	--	--	40.7	--	--	--
Mitigated Project Total	4.60	5.15	-4.71	0.04	0.25	0.21
BAAQMD Annual Thresholds[c]	10	--	10	--	15	10
Exceeds Threshold (Y/N)?	N	N	N	N	N	N

[a] For CEQA comparison purposes, the project total includes emissions from all components of the project, including, without limitation, all known and expected activities, such as generator maintenance and testing, storage tank refueling, operation of cooling units, vehicle trips, and ongoing facility upkeep.

[b] Emissions presented as mitigation are subtracted from the unmitigated project emissions to determine total, mitigated project emissions. These emissions reductions will be achieved through the complete offset of NO_X emissions from routine operation of the standby and administrative generators, as presented in Table 3.3-7, and were calculated based on the offset ratio of 1.15:1.

[c] BAAQMD thresholds of significance taken from Table 2-1 of the *2017 CEQA Air Quality Guidelines* (BAAQMD 2017c).

Note:

-- = No mitigated emissions or BAAQMD threshold

Per BAAQMD's Regulation 2, Rule 2, new sources with a PTE of 10.0 lb/day or more of any single pollutant must be equipped with BACT. As shown in Table 3.3-7, daily CO and NO_X emissions from routine operation of the generators exceed the BAAQMD's 10.0 lb/day limit. Accordingly, these sources will be equipped with an SCR System, which is considered BACT. BAAQMD's Regulation 2, Rule 2 also requires new sources that emit more than 35 tpy of NO_X to fully offset routine emissions at a 1.15:1 ratio. As shown in Table 3.3-15, annual NO_X emissions from routine operation of the generators would total 35.4 tpy. Accordingly, the NO_X emissions associated with generator maintenance and testing will be fully offset through the air permitting process to a less-than-significant impact. The project's annual PM_{10} emissions are far less than the BAAQMD's Regulation 2, Rule 2 limit of 100 tpy. As a result, a cumulative impacts analysis is not required for the project.

Per BAAQMD's policy, *Calculating Potential to Emit for Emergency Backup Power Generators* (BAAQMD 2019), maximum PTE from emergency and routine operation of the project's 42 generators was calculated as described in Section 3.3.3.2. Under Regulation 2, Rule 6, BAAQMD issues Title V operating permits for new facilities when the estimated PTE of any pollutant is greater than the Title V threshold, typically 100 tpy. The PSD pre-construction permit threshold is a PTE of 250 tpy of any attainment criteria pollutant (except lead) for specific source types not listed in 40 CFR 52.21(b)(1)(i); for listed source types, the threshold is a PTE of 100 tpy. As shown in

Table 3.3-16, the maximum PTE from emergency and routine generator operation for all criteria pollutants are less than the major source thresholds. Therefore, the project would not trigger PSD or Title V operating permit requirements.

Table 3.3-16. Criteria Pollutant Emissions from Emergency and Routine Generator Operation

Annual Operation	Annual Emissions (tpy)					
	VOC	CO	NO_X	SO_2	PM_{10}	$PM_{2.5}$
Generators - Maximum PTE[a]	5.02	12.0	99.0	0.10	0.50	0.50
Title V Thresholds[b]	100	100	100	100	100	100
PSD Thresholds[c]	250	250	250	250	250	250
Exceeds Title V Thresholds (Y/N)?	N	N	N	N	N	N
Exceeds PSD Thresholds (Y/N)?	N	N	N	N	N	N

[a] For permitting comparison purposes, consistent with BAAQMD's new policy (BAAQMD 2019), only the maximum PTE emissions for generators were used to determine PSD applicability.

[b] Title V applicability criteria taken from BAAQMD's Title V Applicability Criteria - Major Facility Website (http://www.baaqmd.gov/permits/major-facility-review-title-v/title-v-applicability-criteria). This criteria is consistent with BAAQMD Regulation 2-2-217, Major Facility.

[c] EPA's PSD Thresholds taken from BAAQMD Regulation 2-2-224, PSD Project.

BAAQMD's Regulation 2, Rule 6 considers sources with a PTE of more than 10 tpy of any single HAP or more than 25 tpy of a combination of HAPs to be major sources, triggering Title V operating permit requirements. As shown in Table 3.3-17, the annual emissions of any single HAP or combination of HAPs, based on both emergency and routine generator operation, will be less than the major source thresholds, such that a Title V operating permit will not be required on the basis of TAC emissions.

Table 3.3-17. TAC Emissions from Emergency and Routine Generator Operation

Pollutant	Annual Emissions (tpy)		
	3-MW Generator	1.25-MW Generator	0.5-MW Generator
Maximum Single TAC or HAP (All Generators)	0.59	0.006	0.003
Total TACs and HAPs (All Generators)	1.52	0.017	0.007
Single HAP Title V Threshold	10	10	10
Combined HAP Title V Threshold	25	25	25
Exceeds Title V Thresholds (Y/N)?	N	N	n

The characterization of TAC emissions used to conduct the operational HRA are described in Section 3.3.5.3. The results are presented in the following section for purposes of demonstrating compliance with BAAQMD's Regulation 2, Rule 5.

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

Less Than Significant Impact. A cumulative impacts analysis assesses the impacts that result from the project's incremental effect viewed over time, together with other closely related past, present, and reasonably foreseeable future projects whose impacts may compound or increase the

incremental effect of the project.[19] Additionally, cumulative impacts are assessed in terms of conformance with the BAAQMD's air quality attainment or maintenance plans.

Two significance criteria were used to evaluate this project. First, all project emissions of nonattainment criteria pollutants and their precursors (NO_X, VOCs, PM_{10}, $PM_{2.5}$, and SO_2) are considered significant cumulative impacts that must be mitigated. Second, any ambient air quality standard exceedance or any contribution to an existing ambient air quality standard exceedance caused by project emissions is considered to be significant and must be mitigated. For demolition, excavation, and construction emissions, available mitigation is limited to controlling both construction equipment tailpipe emissions and fugitive dust emissions to the maximum extent feasible. For operational emissions, available mitigation includes both feasible emission controls (such as BACT) or use of emission offsets.

Additionally, pollutants for which the region is designated as attainment, maintenance, or unclassified were evaluated by comparing the modeled concentration for each pollutant and averaging period, with the incorporation of background, to the applicable NAAQS or CAAQS. If the result is less than the applicable NAAQS or CAAQS, the project would be considered to have a less-than-significant impact for pollutants for which the region is in attainment.

For a project that does not individually have significant operational air quality impacts, the determination of a significant cumulative air quality impact is based upon an evaluation of the consistency of the project with the local general plan and of the general plan with the most current Clean Air Plan (BAAQMD 2017c). As stated previously, the project would not result in demolition, excavation, and construction or operational emissions in excess of the BAAQMD significance thresholds identified in Table 3.3-2, with incorporation of all feasible mitigation measures. Thus, the project would not be expected to conflict with the *2017 Bay Area Clean Air Plan*, and a cumulative impact analysis is not warranted.

Furthermore, an air quality impact analysis was conducted as described in Section 3.3.4. The results of this analysis are presented herein and demonstrate that routine operation of the project will not cause or contribute to an existing exceedance of the ambient air quality standards. Thus, the project would not be expected to result in a cumulatively considerable net increase of nonattainment criteria pollutants, and the impact would be less than significant.

Results from the dispersion modeling analysis are compared to the NAAQS, CAAQS, and SILs[20] in Tables 3.3-18, 3.3-19, and 3.3-20, respectively. As summarized in Table 3.3-18, the total predicted concentrations for PM_{10} (24-hour), $PM_{2.5}$ (annual), CO (1-hour and 8-hour), SO_2 (1-hour, 3-hour, 24-hour, and annual), and NO_2 (1-hour[21] and annual) are less than the respective NAAQS under all three generator load scenarios. Because the $PM_{2.5}$ (24-hour) background concentrations are already greater than the NAAQS, the project's modeled $PM_{2.5}$ (24-hour) concentrations were compared to the SILs to show that the project would not exceed any SILs, or cause or contribute to an exceedance of ambient standards. The predicted modeling results with comparison to the SILs are presented in Table 3.3-20.

[19] California Public Resources Code Section 21083 and 14 CCR 15064(h), 15065(c), 15130, and 15355.

[20] The SIL determines whether potential ambient impacts of the emitted pollutant would cause or significantly contribute to an exceedance of a standard (that is, impacts below the SIL indicate the project would not cause or significantly contribute to an exceedance).

[21] The EPA does not require low-use emergency generators to demonstrate compliance with the 1-hour NO_2 NAAQS; therefore, comparison to this standard is provided for informational purposes only.

Table 3.3-18. Comparison of Modeled Results with Background to the National Ambient Air Quality Standards

Pollutant	Averaging Time	Maximum Modeled Concentration (µg/m^3)	Background Concentration (µg/m^3)[a]	Total Predicted Concentration (µg/m^3)	NAAQS (µg/m^3)
100% Load Scenario					
PM_{10}	24-hour[b]	1.16	115	116	150
$PM_{2.5}$	Annual[c]	0.01	10.5	10.5	12
CO	1-hour[d]	208	2,863	3,071	40,000
	8-hour[d]	80.5	2,405	2,485	10,000
SO_2	1-hour[e]	1.72	6.98	8.70	196
	3-hour[f]	1.75	18.1	19.8	1,300
	24-hour[f]	0.25	2.88	3.13	365
	Annual[f]	0.00	0.55	0.55	80
NO_2	Annual[f]	1.93	23.0	25.0	100
	1-hour[g]	162	N/A	162	188
75% Load Scenario					
PM_{10}	24-hour[b]	0.99	115	116	150
$PM_{2.5}$	Annual[c]	0.01	10.5	10.5	12
CO	1-hour[d]	177	2,863	3,040	40,000
	8-hour[d]	68.6	2,405	2,474	10,000
SO_2	1-hour[e]	1.51	6.98	8.49	196
	3-hour[f]	1.52	18.1	19.6	1,300
	24-hour[f]	0.23	2.88	3.10	365
	Annual[f]	0.00	0.55	0.55	80
NO_2	Annual[f]	1.68	23.0	24.7	100
	1-hour[g]	153	N/A	153	188
50% Load Scenario					
PM_{10}	24-hour[b]	0.75	115	116	150
$PM_{2.5}$	Annual[c]	0.01	10.5	10.5	12
CO	1-hour[d]	138	2,863	3,001	40,000
	8-hour[d]	52.4	2,405	2,457	10,000
SO_2	1-hour[e]	1.22	6.98	8.20	196
	3-hour[f]	1.21	18.1	19.3	1,300
	24-hour[f]	0.18	2.88	3.06	365
	Annual[f]	0.00	0.55	0.55	80

Table 3.3-18. Comparison of Modeled Results with Background to the National Ambient Air Quality Standards

Pollutant	Averaging Time	Maximum Modeled Concentration (µg/m^3)	Background Concentration (µg/m^3)[a]	Total Predicted Concentration (µg/m^3)	NAAQS (µg/m^3)
NO_2	Annual[f]	1.31	23.0	24.3	100
	1-hour[g]	153	N/A	153	188

[a] Background concentrations from Table 3.3-1c were used to estimate the total predicted concentrations.

[b] The total predicted concentration for the 24-hour PM_{10} standard is the 6th-highest value over the five modeled years (2013-2017) combined with the maximum background concentration.

[c] The total predicted concentration for the annual $PM_{2.5}$ standard is the maximum 5-year average modeled concentration combined with the maximum background concentration.

[d] The total predicted concentrations for the 1-hour and 8-hour CO standards are the high-2nd-high modeled concentrations of the 5 individual years modeled (2013-2017) combined with the maximum background concentrations.

[e] The total predicted concentration for the 1-hour SO_2 standard is the high-4th-high modeled concentration averaged over 5 years combined with the 3-year average background concentration.

[f] The total predicted concentrations for the annual SO_2, 3-hour SO_2, 24-hour SO_2, and annual NO_2 standards are the highest modeled concentrations of the 5 individual years modeled (2013-2017) combined with the maximum background concentrations.

[g] The 1-hour NO_2 maximum modeled concentration accounts for an SEASHR background and ARM2 chemistry of an ISR of 0.1 and an out-of-stack ratio of 0.9, which were included within the model. This concentration is also the worst-case single generator concentration because only a single generator will operate at a given time.

Note:

N/A = Not applicable because the background is included in the model

As summarized in Table 3.3-19, total predicted concentrations for CO (1-hour and 8-hour), SO_2 (1-hour and 24-hour), and NO_2 (1-hour and annual) were also less than the CAAQS under all three load scenarios. Because the PM_{10} and $PM_{2.5}$ background concentrations are already greater than the CAAQS, the project's modeled PM_{10} (annual and 24-hour) and $PM_{2.5}$ (annual) concentrations were compared to the SILs to show that the project would not exceed any SILs, or cause or contribute to an exceedance of ambient standards. The predicted modeling results with comparison to the SILs are presented in Table 3.3-20.

Table 3.3-19. Comparison of Modeled Results with Background to the California Ambient Air Quality Standards

Pollutant	Averaging Time	Maximum Modeled Concentration (µg/m^3)[a]	Background Concentration (µg/m^3)[b]	Total Predicted Concentration (µg/m^3)	CAAQS (µg/m^3)
100% Load Scenario					
CO	1-hour	209	2,863	3,072	23,000
	8-hour	81.2	2,405	2,486	10,000
SO_2	1-hour	1.79	18.1	19.9	655
	24-hour	0.25	2.88	3.13	105
NO_2[c]	Annual	1.93	23.0	25.0	57
	1-hour	263	N/A	263	339

Table 3.3-19. Comparison of Modeled Results with Background to the California Ambient Air Quality Standards

Pollutant	Averaging Time	Maximum Modeled Concentration (µg/m^3)[a]	Background Concentration (µg/m^3)[b]	Total Predicted Concentration (µg/m^3)	CAAQS (µg/m^3)
75% Load Scenario					
CO	1-hour	189	2,863	3,052	23,000
	8-hour	69.6	2,405	2,474	10,000
SO_2	1-hour	1.66	18.1	19.7	655
	24-hour	0.23	2.88	3.10	105
NO_2[c]	Annual	1.68	23.0	24.7	57
	1-hour	262	N/A	262	339
50% Load Scenario					
CO	1-hour	151	2,863	3,014	23,000
	8-hour	53.5	2,405	2,458	10,000
SO_2	1-hour	1.40	18.1	19.5	655
	24-hour	0.18	2.88	3.06	105
NO_2[c]	Annual	1.31	23.0	24.3	57
	1-hour	323	N/A	323	339

[a] The maximum modeled concentration for each pollutant and averaging period are the high-1st-high concentrations for comparison to the CAAQS.

[b] Background concentrations from Table 3.3-1c were used to estimate the total predicted concentrations.

[c] The 1-hour NO_2 maximum modeled concentration accounts for an SEASHR background and ARM2 chemistry of an ISR of 0.1 and an out-of-stack ratio of 0.9, which were included within the model. This concentration is also the worst-case single generator concentration because only a single generator will operate at a given time for maintenance and testing purposes.

Note:

N/A = Not applicable because the background is included in the model

Table 3.3-20. Comparison of Modeled PM_{10} and $PM_{2.5}$ Results to the Significant Impact Levels

Pollutant	Averaging Time	Maximum Modeled Concentration (µg/m^3)	SIL (µg/m^3)
100% Load Scenario			
$PM_{2.5}$[a]	24-hour	1.15	1.2
	Annual	0.01	0.3
PM_{10}[b]	24-hour	1.24	5
	Annual	0.01	1

Table 3.3-20. Comparison of Modeled PM_{10} and $PM_{2.5}$ Results to the Significant Impact Levels

Pollutant	Averaging Time	Maximum Modeled Concentration (µg/m³)	SIL (µg/m³)
75% Load Scenario			
$PM_{2.5}$[a]	24-hour	0.99	1.2
	Annual	0.01	0.3
PM_{10}[b]	24-hour	1.07	5
	Annual	0.01	1
50% Load Scenario			
$PM_{2.5}$[a]	24-hour	0.76	1.2
	Annual	0.01	0.3
PM_{10}[b]	24-hour	0.82	5
	Annual	0.01	1

[a] Modeled concentration is the maximum high-1st-high value averaged over the 5 modeled years (2013-2017).

[b] Modeled concentration is the maximum high-1st-high value of the 5 individual modeled years (2013-2017).

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

Less Than Significant Impact. The location of the project is a major factor in determining whether it would result in localized air quality impacts to sensitive receptors. The potential for adverse air quality impacts increases as the distance between the source of emissions and sensitive receptor locations decreases. Impacts on sensitive receptors are of particular concern, because sensitive receptors include children, the elderly, and people with illnesses or others who are especially sensitive to the effects of air pollutants. Hospitals, schools, convalescent facilities, and residential areas are examples of sensitive receptor locations.

As previously noted, the BAAQMD's CEQA Guidelines establish numerical criteria for determining when a health risk increase is deemed cumulatively considerable, thus triggering the need for a quantitative cumulative impacts' assessment. If a project does not exceed the identified significance thresholds, its health risks would not be cumulatively considerable, resulting in less than significant health risk impacts to existing regional conditions.

Sensitive receptor exposure to TACs was evaluated by conducting a screening HRA for demolition, excavation, and construction activities and a complete HRA for routine facility operation, as described in Section 3.3.5. The HRAs for the project were conducted consistent with the following guidance: *Guidance Manual for Preparation of Health Risk Assessments* (OEHHA 2015); *BAAQMD Air Toxics NSR Program Health Risk Assessment (HRA) Guidelines* (BAAQMD 2016); 2017 CEQA Guidelines (BAAQMD 2017c); and *Recommended Methods for Screening and Modeling Local Risks and Hazards* (BAAQMD 2012).

The results of the screening HRA for demolition, excavation, and construction activities are presented in Table 3.3-21 and show that the excess lifetime cancer risks and chronic HIs at the MEIR, MEIW, and MESR are less than the BAAQMD's significance thresholds of 10 in 1 million and 1, respectively. Therefore, predicted impacts associated with the project demolition and construction activities are not cumulatively considerable, and result in less-than-significant health risk impacts. It should be noted that these less-than-significant impacts are conservative, given the conservative assumptions used in developing the DPM emission estimates and the DPM cancer potency safety factor inherent in OEHHA's calculations. Detailed health risk calculations are provided in Appendix 3.3D.

Table 3.3-21. Health Risks for Exposure to Demolition and Construction Emissions at the Maximally Exposed Individual Receptors

Receptor Type	MEIR	MEIW	MESR	BAAQMD Threshold
Cancer Risk Impact (in 1 million)	4.13	0.37	0.48	10
Chronic Non-cancer HI	0.003	0.015	0.0003	1

The results of the HRA for routine facility operation are presented in Table 3.3-22 and show that the excess lifetime cancer risk and chronic and acute non-cancer HIs at each of the MEIR, MEIW, and MESR are less than the BAAQMD's significance thresholds of 10 in 1 million and 1, respectively. Additionally, as shown in Table 3.3-18, the project's incremental increase in annual average $PM_{2.5}$ concentration is 0.01 µg/m^3, which is less than the BAAQMD's significance threshold of 0.3 µg/m^3. Therefore, predicted impacts associated with routine facility operation are not cumulatively considerable, and result in less-than-significant health risk impacts. Additional details are provided in Appendix 3.3E.

Table 3.3-22. Health Risks Estimated for Exposure to Project-Related Operational Emissions at the Maximally Exposed Individual Receptors

Receptor Type	MEIR	MEIW	MESR	BAAQMD Threshold
Cancer Risk Impact (in 1 million)	2.38	0.53	0.34	10
Chronic Non-cancer HI	6.54E-04	1.75E-03	9.29E-05	1
Acute Non-cancer HI	0.14	0.14	0.02	1

In accordance with BAAQMD Regulation 2, Rule 5, maximum HRA results for operation of a single emission unit are presented in Table 3.3-23. As shown, routine generator operation does not trigger the regulatory requirement for TBACT as the incremental cancer risk does not exceed the threshold of 1 in 1 million. Nevertheless, as stated previously, each of the generators will be equipped with an SCR System, which is considered TBACT. Therefore, the project will be required to comply with BAAQMD Regulation 2, Rule 5 and result in less-than-significant health risk impacts. Additional details are provided in Appendix 3.3E.

Table 3.3-23. Health Risks Estimated for Exposure to Project-Related Emissions from Operation of a Single Emission Unit at the Maximally Exposed Individual Receptors

Receptor Type	MEIR	MEIW	MESR	BAAQMD Threshold
Cancer Risk Impact (in 1 million)	0.11	0.09	0.01	1
Chronic Non-cancer HI	2.94E-05	3.10E-04	2.60E-06	0.20
Acute Non-cancer HI	0.02	0.02	4.85E-04	--

d) Would the project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

Less Than Significant Impact. The BAAQMD states that, while offensive odors rarely cause any physical harm, they still can be very unpleasant, leading to considerable distress among the public and often generating citizen complaints to local governments and the BAAQMD. Any project with the potential to frequently expose members of the public to objectionable odors would be deemed to have a significant impact. Odor impacts on residential areas and other sensitive receptors warrant the

closest scrutiny, but consideration should also be given to other land uses where people may congregate, such as recreational facilities, worksites, and commercial areas.

Determining the significance of potential odor impacts involves a two-step process. First, it should be determined whether the project would result in an odor source and receptors being located within the distances indicated in Table 3.3-24. Table 3.3-24 also lists types of facilities known to emit objectionable odors. Second, if the project would result in an odor source and receptors being located closer than the screening level distances indicated in Table 3.3-24, a more detailed analysis should be conducted, as described in the BAAQMD's CEQA Guidelines (BAAQMD 2017c).

Given its nature as a data center, the project will not be an operational odor source listed in Table 3.3-24, and this type of project is not known to cause any significant odor impacts. Odor impacts from project operations would be similar to those from existing odor sources in the vicinity of the project site, which include heavy and light industrial uses. A further evaluation of this facility is not warranted by any local conditions or special circumstances. Therefore, the project would not create objectionable odors affecting a substantial number of people.

Potential odor sources during demolition, excavation, and construction activities include diesel exhaust from heavy-duty equipment. Demolition, excavation, and construction-related odors near existing receptor locations would be temporary in nature and dissipate as a function of distance. Potential odor sources from routine project operations would include diesel exhaust from engine testing, trash pick-up, or heavy-duty delivery vehicles and the occasional use of architectural coatings during routine maintenance. . Accordingly, demolition, excavation, construction, and operation of the project is not expected to result in odor impacts that would exceed BAAQMD's odor thresholds.

Table 3.3-24. Project Screening Trigger Levels for Potential Odor Sources

Type of Operation	Project Screening Distance
Wastewater Treatment Plant	2 miles
Wastewater Pumping Facilities	1 mile
Sanitary Landfill	2 miles
Transfer Station	1 mile
Composting Facility	1 mile
Petroleum Refinery	2 miles
Asphalt Batch Plant	2 miles
Chemical Manufacturing	2 miles
Fiberglass Manufacturing	1 mile
Painting and Coating Operations (for example, auto body shops)	1 mile
Rendering Plant	2 miles
Food Processing Facility	1 mile
Confined Animal Facility, Feed Lot, or Dairy	1 mile
Green Waste and Recycling Operations	1 mile
Metal Smelting Plants	2 miles
Coffee Roaster	1 mile

Source: BAAQMD 2017c

Previously Identified Mitigation Measures:

None.

New Proposed Mitigation Measures:

None.

3.3.7 References

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3.4 Biological Resources

This section describes biological resources (vegetation, fish, wildlife, and wetlands) in the study area; identifies potential impacts on sensitive habitats and species that could result from the implementation of the project; and concludes that impacts on biological resources will be less than significant with mitigation proposed as identified in the Mitigation Measures described in Section 3.4.2. The project's potential effects on biological resources were evaluated using the significance criteria set forth in Appendix G of the California Environmental Quality Act (CEQA) Guidelines. The conclusions are summarized in Table 3.4-1 and are discussed in more detail in Section 3.4.3.

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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?	☐	☒	☐	☐
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	☐	☐	☒	☐
c) Have a substantial adverse effect on state or Federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☒	☐	☐
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☐	☒	☐
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☒	☐
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or State habitat conservation plan?	☐	☐	☒	☐

Environmental checklist established by CEQA Guidelines, Appendix G.

3.4.1 Setting

The San José Data Center (SJC02) will be located within the City of San José on an approximately 64.5-acre site and will consist of two data center buildings totaling over approximately 479,000 square feet of space. The project will include 40 3.0-megawatt (MW) standby diesel generators (20 per building) to provide electrical power to support the information technology (IT) load during utility outages or certain onsite electrical equipment interruptions or failures, as well as the installation of 20 3-MW emergency diesel generators at each building. In addition to the 40 backup generators, the project will include two administrative generators, rated at 1.25 MW and 0.5 MW, to support administrative functions during an interruption in the normal delivery of electrical power from the utility. The facility design will not require more than approximately 99 MW of electrical power, which will be used only for backup power for onsite data center operations in the event of an electrical outage by Pacific Gas & Electric (PG&E), although the estimated load is 92 MW.

The land has been used historically for farming since the early 1920s but is not currently in agricultural use. There are two vacant residences, a mobile home, and a storage shed/warehouse currently onsite, which will be demolished as part of the SJC02 project. To the north of the project site are the San José/Santa Clara Regional Wastewater Treatment Plant sludge drying beds, to the south is Highway 237, to the west is the Los Esteros Critical Energy Facility (LECEF), a PG&E substation, and to the east is Coyote Creek. The project is anticipated to begin construction in the 3rd quarter of 2020, with operations beginning in the 1st quarter of 2022.

3.4.2 Regulatory Background and Methodology

3.4.2.1 Regulatory Background

This section summarizes existing federal, state, and local laws, policies, and regulations that pertain to biological resources.

Federal

Endangered Species Act

The federal Endangered Species Act (ESA) of 1973 (16 USC 1531–1544), as amended, protects plants, fish, and wildlife that are listed as endangered or threatened by the U.S. Fish and Wildlife Service (USFWS) or the National Oceanic and Atmospheric Administration's National Marine Fisheries Service (NOAA Fisheries). Section 9 of the ESA prohibits the "take" of listed fish and wildlife, where "take" is defined as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, collect, or attempt to engage in such conduct" (50 *Code of Federal Regulations* [CFR] 17.3). For plants, this statute prohibits removing, possessing, maliciously damaging, or destroying any listed plant *under federal jurisdiction* and removing, cutting, digging-up, damaging, or destroying any listed plant in knowing violation of state law (16 United States Code [USC] 1538).

The ESA allows for issuance of incidental take permits to private parties either in conjunction with a Habitat Conservation Plan (HCP) or as part of a Section 7 consultation (which is discussed in the following paragraph). Under Section 10 of the ESA, a private party may obtain incidental take coverage by preparing an HCP to cover target species within the project area; identifying impacts to the covered species; and presenting the measures that will be undertaken to avoid, minimize, and mitigate such impacts.

Under Section 7 of the ESA, federal agencies are required to consult with USFWS or NOAA Fisheries, or both, as applicable, if their actions—including permit approvals or funding—may affect a federally listed species (including plants) or designated critical habitat. If the project is likely to adversely affect a species, the federal agency will initiate formal consultation with the USFWS or NOAA Fisheries, or both, and issue a biological opinion as to whether a proposed agency action(s) is likely to jeopardize the continued

existence of a listed species (jeopardy) or adversely modify critical habitat (adverse modification). As part of the biological opinion, the USFWS may issue an incidental take statement allowing take of the species that is incidental to an otherwise authorized activity, provided that the action will not jeopardize the continued existence of the species or adversely modify designated critical habitat.

Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) of 1918 (16 USC Sections 703–711) protects all migratory birds, including active nests and eggs. Birds protected under the MBTA include all native waterfowl, shorebirds, hawks, eagles, owls, doves, and other common birds such as ravens, crows, sparrows, finches, swallows, and others, including their body parts (for example feathers and plumes), active nests, and eggs. A complete list of protected species can be found in 50 CFR 10.13. Enforcement of the provisions of the federal MBTA is the responsibility of USFWS.

Waters and Wetlands: Clean Water Act Sections 401 and 404

The purpose of the Clean Water Act (CWA) (33 USC Section 1251 et seq.) is to “restore and maintain the chemical, physical, and biological integrity of the nation’s waters.” Waters of the United States include rivers, streams, estuaries, the territorial seas, ponds, lakes, and wetlands. Wetlands are defined as those areas “that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions” (33 CFR 328.3).

The U.S. Army Corps of Engineers (USACE) issues permits for work in wetlands and other waters of the United States based on guidelines established under Section 404 of the CWA. Section 404 of the CWA prohibits the discharge of dredged or fill material into waters of the United States, including wetlands, without a permit from USACE. U.S. Environmental Protection Agency (EPA) also has authority over wetlands and may, under Section 404(c), veto a USACE permit.

Section 401 of the CWA requires all Section 404 permit actions to obtain a state Water Quality Certification or waiver, as described in more detail in Section 3.9, Hydrology and Water Quality.

In 2015, USACE and EPA issued the Clean Water Rule (2015 Rule), intended to clarify areas under the jurisdiction of the CWA. The 2015 Rule was stayed in court rulings soon afterwards. On February, 2017, an Executive Order was issued regarding the 2015 Rule. The Executive Order and the subsequent EPA and USACE Proposed Rule called for the 2015 Rule to be reviewed and rescinded or revised in accordance with the Executive Order. On August 16, 2018, the U.S. Court of Appeals for the Sixth Circuit stay was enjoined by the U.S. District Court for South Carolina. USACE and EPA are reviewing the August 16, 2018, District Court order enjoining the suspension to determine next steps; however, the 2015 Rule is currently in effect in 26 states, including the State of California.

State

California Endangered Species Act

Sections 2050–2098 of the California Fish and Game Code (the California Endangered Species Act [CESA]) prohibit the take of state-listed endangered and threatened species unless specifically authorized by the California Department of Fish and Wildlife ([CDFW]). The state definition of “take” is to hunt, pursue, catch, capture, or kill a member of a listed species or attempt to do so. CDFW administers CESA and authorizes take through permits or memorandums of understanding issued under Section 2081 of CESA, or through a consistency determination issued under Section 2080.1. Section 2090 of CESA requires state agencies to comply with threatened and endangered species protection and recovery and to promote conservation of these species.

Fully Protected Species Under the Fish and Game Code

The Fish and Game Code designates certain fish and wildlife species as “fully protected” under Sections 3511 (birds), 4700 (mammals), 5050 (reptiles and amphibians), and 5515 (fish). Fully protected species may not be taken or possessed at any time, and no permits may be issued for incidental take of these species.

Protection for Birds: Fish and Game Code

The Fish and Game Code Section 3503 et seq. states that it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by this code or any regulation made pursuant thereto. Section 3503.5 makes it unlawful to take, possess, or destroy any birds in the orders of Falconiformes or Strigiformes (birds of prey) or to take, possess, or destroy the nest or eggs of any such bird.

Native Plant Protection Act of 1973

The Native Plant Protection Act of 1973 (Fish and Game Code Sections 1900–1913) includes provisions that prohibit the taking of endangered or rare native plants. CDFW administers the Native Plant Protection Act of 1973 and generally regards as rare many plant species included on the California Rare Plant Rank (CRPR) 1A, 1B, 2A, and 2B of the California Native Plant Society [CNPS]) Inventory of Rare and Endangered Vascular Plants of California. In addition, sometimes CRPR 3 and 4 plants are considered if the population has local significance in the area and is impacted by the project.

Section 1913(b) includes a specific provision to allow for the incidental removal of endangered or rare plant species, if not otherwise salvaged by CDFW, within a right-of-way to allow a public utility to fulfill its obligation to provide service to the public.

California Species of Special Concern

Species of Special Concern (SSC) is a category conferred by CDFW to fish and wildlife species that meet the state definition of threatened or endangered, but have not been formally listed (e.g., federally or state-listed species), or are considered at risk of qualifying for threatened or endangered status in the future based on known threats. SSC is an administrative classification only, but these species should be considered “special-status” for the purposes of the CEQA analysis (see the Significance Criteria section of this document).

Porter-Cologne Water Quality Control Act

The State Water Resources Control Board (SWRCB) and the nine Regional Water Quality Control Boards (RWQCBs) have jurisdiction over all surface water and groundwater in California, including wetlands, headwaters, and riparian areas. The SWRCB or applicable RWQCB must issue waste discharge requirements for any activity that discharges waste that could affect the quality of waters of the state.

Local

Santa Clara Valley Habitat Plan

The Santa Clara Valley Habitat Conservation Plan (SCVHCP), which primarily covers southern Santa Clara County, as well as the City of San José with the exception of the bayland areas. The SCVHCP addresses listed species and species that are likely to become listed during the plan's 50- year permit term. The covered species include nine plants and nine animals. The SCVHCP requires that the agencies comment on reportable interim projects and recommend mitigation measures or project alternatives that would help achieve the preliminary conservation objectives and not preclude important conservation planning options or connectivity between areas of high habitat value.

The project is considered a covered project under the SCVHCP. As a result, the project would be subject to conditions and fees of the SCVHCP, which will be calculated at the time the project submits an application, which corresponds to application timing of grading and/or building permits. The onsite portion of the development area and offsite utility alignments are within Fee Zone A: Ranchlands and Natural Lands. In addition, a Nitrogen Deposition Fee and temporary impact fees are expected to be assessed for the proposed project pursuant to applicable provisions of the SCVHCP.

The SCVHCP also includes conditions that would apply to the project, which have been incorporated as enforceable project design measures described in this document.

Envision San José 2040 General Plan

The Envision San José 2040 General Plan (General Plan) aims to protect biological resources when properties are developed in San José. Generally, similar types of requirements occur in the General Plan as in the SCVHCP. The General Plan includes several policies with respect biological protections that are relevant to this analysis including, but not limited to, the following (City of San José 2011):

- Policy MS-21.4: Encourage the maintenance of mature trees, especially natives, on public and private property as an integral part of the community forest. Prior to allowing the removal of any mature tree, pursue all reasonable measures to preserve it.
- Policy MS-21.5: As part of the development review process, preserve protected trees (as defined by the Municipal Code), and other significant trees. Avoid any adverse effect on the health and longevity of protected or other significant trees through appropriate design measures and construction practices. Special priority should be given to the preservation of native oaks and native sycamores. When tree preservation is not feasible, include appropriate tree replacement, both in number and spread of canopy.
- Policy MS-21.6: As a condition of new development, require, where appropriate, the planting and maintenance of both street trees and trees on private property to achieve a level of tree coverage in compliance with and that implements City laws, policies or guidelines.
- Policy MS-21.9: Where urban development occurs adjacent to natural plant communities (e.g., oak woodland, riparian forest), landscape plantings shall incorporate tree species native to the area and propagated from local sources (generally from within 5-10 miles and preferably from within the same watershed).
- Policy ER-1.4: Minimize the removal of ecologically valuable vegetation such as serpentine and non-serpentine grassland, oak woodland, chaparral, and coastal scrub during development and grading for projects within the City.
- Policy ER-1.5: Preserve and protect oak woodlands, and individual oak trees. Any loss of oak woodland and/or native oak trees must be fully mitigated.
- Policy ER-1.7: Prohibit planting of invasive non-native plant species in oak woodlands, grasslands, chaparral and coastal scrub habitats, and in hillside areas.
- Policy ER-4.1: Preserve and restore, to the greatest extent feasible, habitat areas that support special status species. Avoid development in such habitats unless no feasible alternatives exist, and mitigation is provided of equivalent value.
- Policy ER-4.2: Limit recreational uses in wildlife refuges, nature preserves and wilderness areas in parks to those activities which have minimal impact on sensitive habitats.
- Policy ER-4.3: Prohibit planting of invasive non-native plant species in natural habitats that support special-status species.
- Policy ER-4.4: Require that development projects incorporate mitigation measures to avoid and minimize impacts to individuals of special-status species.

- Policy ER-5.2: Require that development projects incorporate measures to avoid impacts to nesting migratory birds.
- Policy ER-6.3: Employ low-glare lighting in areas developed adjacent to natural areas, including riparian woodlands. Any high-intensity lighting used near natural areas will be placed as close to the ground as possible and directed downward or away from natural areas.
- Policy ER-6.6: Encourage the use of native plants in the landscaping of developed areas adjacent to natural lands.
- Policy ER-6.8: Design and construct development to avoid changes in drainage patterns across adjacent natural areas and for adjacent native trees, such as oaks.
- Policy ER-6.10: Update the Riparian Corridor Policy Study and all City design guidelines based on guidance from Responsible Agencies on best practices for lighting to protect sensitive habitats and species, including birds and bats.

The General Plan also includes the following policies related to bird-safe design (City of San José 2011):

- Policy ER-7.1: In the area north of Highway 237, design and construct buildings and structures using bird-friendly design and practices to reduce the potential for bird strikes for species associated with the baylands or riparian habitats of lower Coyote Creek.
- Policy ER-7.6: Update the Riparian Corridor Policy Study and City of San José design guidelines based on guidance from Responsible Agencies and other interested organizations on best practices for avoiding and minimizing bird strikes at new tall buildings.

Alviso Master Plan

The Vegetation and Wildlife section of the Alviso Master Plan (City of San José 1998) identifies existing habitats in the Plan area, of which the project site is a part. These habitats include seasonal wetlands, agricultural fields, and riparian areas along and aquatic conditions within Coyote Creek. Special status animal species, including burrowing owls, are acknowledged to be within the Plan area and could be affected by future development.

Policies within the Plan, pertinent to the proposed project and linear features include those that respect and complement the natural setting, marshlands, waterways, trails, and other amenities of Alviso, as described in the following:

- Environmental Protection Policy 1: All new parking, circulation, loading, outdoor storage, utility, and other similar activity areas must be located on paved surfaces with proper drainage to avoid potential pollutants from entering the groundwater, Guadalupe River, Coyote Creek, or San Francisco Bay.
- Environmental Protection Policy 3: The riparian corridors adjacent to Coyote Creek and Guadalupe River should be preserved intact. Any development adjacent to the waterways should follow the City's Riparian Corridor policies.
- Environmental Protection Policy 4: To mitigate the loss of specific wildlife habitat due to development, certain lands should be set aside to provide needed habitat.

City of San José Riparian Corridor Policy and Bird-Safe Design

The City of San José has a riparian buffer policy that is administered through the Riparian Corridor Policy Study (City of San José 1994). In addition, Council Policy 6-34 became effective on August 23, 2016. The purpose of Council Policy 6-34 is to provide guidance consistent with the goals, policies, and actions of the City's General Plan for 1) protecting, preserving, or restoring riparian habitat; 2) limiting the creation of new impervious surface within riparian corridor setbacks to minimize flooding from urban run-off, and control erosion; and 3) encouraging bird-safe design in baylands and riparian habitats of lower Coyote Creek, north of State Route 237. This policy supplements the regulations for riparian corridor protection

already contained within the Habitat Plan, Municipal Code, and other existing City policies that may provide for riparian protection and bird-safe design.

Specific guidance pertaining to setbacks, allowed activities, and materials and lighting in riparian areas are included within Council Policy 6-34. Furthermore, bird-safe design guidelines for structures north of SR 237 advise that buildings adhere to the following:

- Avoid use of mirrors and large areas of reflective glass.
- Avoid use of transparent glass skyways, walkways, or entryways, free-standing glass walls, and transparent building corners.
- Avoid funneling open space to a building façade.
- Strategically place landscaping to reduce reflection and views of foliage inside or through glass.
- Avoid or minimize up-lighting and spotlights.
- Turn non-emergency lighting off, or shield it, at night to minimize light from buildings that is visible to birds, especially during bird migration season (February through May and August through November).

Ordinance-Size Trees

The City of San José has a Tree Ordinance (Chapter 13.32 of the Municipal Code), which regulates the removal of trees. An “ordinance-size tree” is defined as any native or non-native tree species with a circumference of 56 inches (diameter of 18 inches) at 24 inches above the natural grade of slope. A tree removal permit is required from the City prior to the removal of any trees covered under the ordinance. Prior to the issuance of a tree removal permit, the City requires that a formal tree survey be conducted, which indicates the number, species, trunk circumference, and location of all trees that will be removed or impacted by the project.

3.4.2.2 Methodology

This section summarizes the methods used to identify and analyze potential impacts on special-status species that may occur in the study area. The study area is defined here as the project site, associated offsite linear features, and roadway improvement that would be disturbed in order to construct and operate the Project, plus a 150-foot buffer of these areas.

As described in the following paragraphs, qualified biologists began their research with a database searches and literature reviews to determine which special-status plants, natural communities, and wildlife might have potential to occur in the study area.

Species Considered to be of Special Status

Special-status species include the following:

- Listed or candidates for listing as threatened or endangered under the federal ESA or CESA
- Plants included in the online version of the CNPS Inventory of Rare and Endangered Plants of California as CRPR 1A, 1B, 2A, or 2B
- Fish or wildlife designated as a Species of Special Concern or a Fully Protected species by the CDFW
- Migratory birds with active nests, defined as containing eggs or dependent young

Database Searches

The following biological databases were queried for records of special-status plants, natural communities, and wildlife that might have potential to occur in the study area:

- USFWS list of federally listed and proposed endangered, threatened, and candidate species and their designated critical habitat (USFWS 2019; CDFW 2019a)
- CNPS online Inventory of Rare and Endangered Vascular Plants of California (CNPS 2019; CDFW 2019a)
- California Natural Diversity Database (CDFW 2019a)
- Species List of NOAA Fisheries Resources in California (NOAA 2019)

A California Natural Diversity Database (CNDDB) search for special-status species was conducted for a 5-mile buffer around the study area (CDFW 2019a). The USFWS database was queried for federally-listed species and critical habitat using the USFWS Information Planning and Consultation (IPaC) tool for the study area (USFWS 2019; CDFW 2019a). The CNPS database was queried for Milpitas U.S. Geological Survey (USGS) 7.5 minute quadrangle in which the project site occurs, and for the eight surrounding quadrangles (Newark, Niles, La Costa Valley, Mountain View, Calaveras Reservoir, Cupertino, San José West, and San José East) (CNPS 2019; CDFW 2019a).

Other information sources consulted as part of conducting this analysis included the following:

- City of San José Draft Environmental Impact Report, 237 Industrial Center Project (City of San José 2017) (2017 EIR). This report includes the following:
  - Technical Biological Report (Live Oak Consultants 2017)
  - Tree Survey (HMH Engineers 2015)
- Santa Clara Valley HCP (County of Santa Clara et al. 2012)
- Aerial photographs (Google 2019)

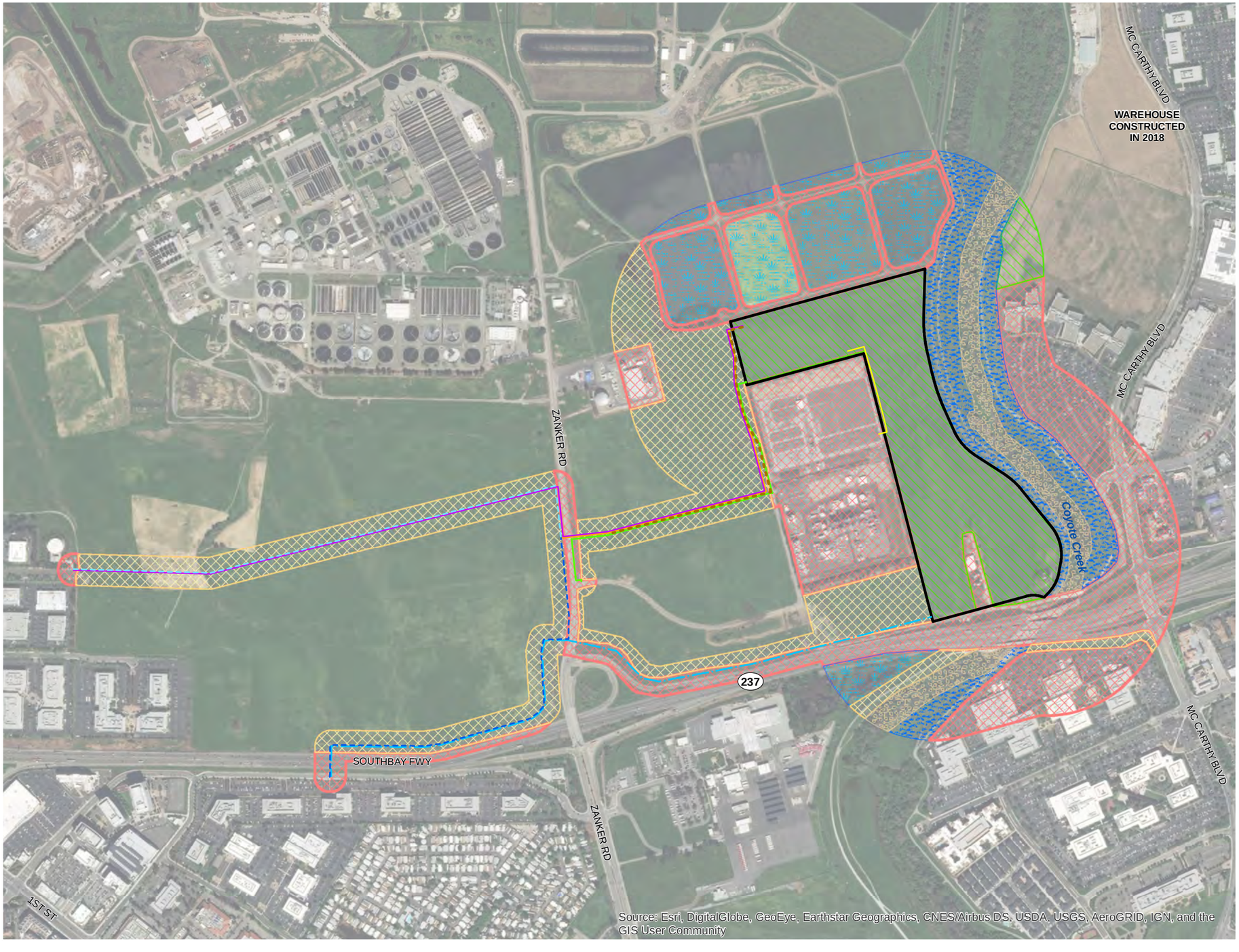
Using this information, the biologists conducted detailed field surveys of the biological resources survey area (as that term is defined below), as detailed in the following subsections.

Field Surveys

Biologists conducted reconnaissance surveys of all relevant non-developed areas in the biological survey area (BSA) that were publicly accessible, as explained in the following section. No protocol-level surveys, focused surveys, or aquatic resources delineation surveys were conducted. Per the project design measures BIO-1.1, BIO-1.2, BIO-2.2, and BIO-5.2 (discussed in Section 3.4.5, Proposed Mitigation Measures to be Incorporated for the Project), pre-construction surveys for nesting migratory birds (including raptors, tricolored blackbirds, and burrowing owl), and an aquatic resources delineation will be completed prior to construction.

Reconnaissance Surveys

The study area is shown on Figure 3.4-1, and is defined as the onsite areas and associated offsite extensions of utilities and roadways that would be disturbed in order to implement the project, plus a 150-foot buffer of these areas. A 150-foot buffer of the onsite areas and associated offsite extensions of utilities and roadways was included to confirm that biological surveys accounted for biological resources immediately adjacent to the project site. General biological reconnaissance surveys entailed walking and meandering transects in publicly accessible non-developed portions of the biological resources survey area (as defined previously), and surveying areas that appeared to support special-status fauna and flora as identified in desktop-level reviews. The portion of the utility extension between Zanker Road and Nortech Parkway was enclosed behind a locked fence and not accessible. This area was visually surveyed from the fence boundary.



LEGEND

- Agricultural field (short-term fallowed)
- Annual Grassland
- Coyote Creek Riparian Floodplain
- Coyote Creek Riparian Woodland
- Developed
- Wetland
- Project Site
- Proposed Storm Drain
- Proposed Sanitary Sewer
- Proposed Reclaimed Water
- Proposed Water Line Route #1
- Proposed Water Line Route #2
- Proposed Water Line Route #3
- Proposed Shared Water Line
- Proposed Electrical Supply Line

Image Date:
8/19/2017

N

0 750 1,500

Approximate scale in feet

Figure 3.4-1
Habitat Types
San José Data Center
San José, California

JACOBS

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The following tasks were conducted during the reconnaissance-level surveys:

- Plant communities and habitat types were identified in the BSA and evaluated for special-status plant suitability.
- Baseline data were collected for wildlife special-status species. Habitat for various special-status species was observed and recorded. Uplands and aquatic features in the BSA were evaluated to determine habitat suitability and potential jurisdictional status.

Likelihood of Presence for Special-Status Species

Using the information generated from literature reviews and field surveys, the list of special-status species with the potential to occur onsite was further refined to reflect the species that may occur within the study area more generally. The likelihood of special-status species occurrence was determined based on natural history parameters, including, but not limited to, the species' range, habitat, foraging needs, migration routes, and reproductive requirements, using the following general categories:

- *Present* – Reconnaissance-level, focused, or protocol-level surveys documented the occurrence or observation of a species in the study area.
- *Likely to occur (onsite)* – The species has a strong likelihood to be found in the study area prior to or during construction but has not been directly observed to date during project surveys. The likelihood that a species may occur is based on the following considerations: suitable habitat that meets the life history requirements of the species is present on or near the study area; migration routes or corridors are near or within the study area; records of sighting are documented on or near the study area; and there is an absence of invasive predators (e.g., bullfrogs). The main assumption is that records of occurrence have been documented within or near the study area, the study area falls within the range of the species, and suitable habitat is present; however, it is undetermined whether the habitat is currently occupied.
- *Potential to occur* – There is a possibility that the species can be found in the study area prior to or during construction but has not been directly observed to date. The likelihood that a species may occur is based on the following conditions: suitable habitat that meets the life history requirements of the species is present on or near the study area; migration routes or corridors are near or within the study area; and there is an absence of invasive predators (e.g., bullfrogs). The main assumption is that the study area falls within the range of the species and suitable habitat is present, but that no records of sighting are located within or near the study area and it is undetermined whether the habitat is currently occupied.
- *Unlikely to occur* – The species is not likely to occur in the study area based on the following considerations: lack of suitable habitat and features that are required to satisfy the life history requirements of the species (e.g., absence of foraging habitat; lack of reproductive areas, and lack of sheltering areas); presence of barriers to migration and dispersal; presence of predators or invasive species that inhibit survival or occupation (e.g., the presence of bullfrogs or invasive fishes); and lack of hibernacula, hibernation areas, or estivation areas onsite.
- *Absent* – Suitable habitat does not exist in the study area, the species is restricted to or known to be present only within a specific area outside of the study area, or focused or protocol-level surveys did not detect the species.

Unless otherwise noted, the likelihood of presence and environmental information presented in this section are summarized in Appendix 3.4A.

3.4.3 Environmental Setting

3.4.3.1 Regional Setting

The project site is in Land Resources Region C: the California Subtropical Fruit, Truck, and Specialty Crop Region (USDA-NRCS 2006) and in the Bay Flats subsection of the Central California Coast ecological subregion of California (Miles and Goudey 1997). This region is a nearly flat (less than approximately 10 feet above sea-level) delta and estuarine area in the south San Francisco Bay and was historically flooded during high tide before artificial barriers were built. The region is hot and subhumid: mean annual temperature is about 58° to 60° F and the mean freeze-free period is about 250 to 275 days. Mean annual precipitation is about 12 to 15 inches of rainfall. The predominant natural plant community on the inner edges of the subsection, away from the bay, is sedge meadow communities and emergent aquatic communities. The project vicinity has been altered by human activity, including levee building and agricultural activities.

3.4.3.2 Local Setting

The approximately 64.5-acre project site is comprised of one parcel (APN 015-31-054) located north of Highway 237 between Zanker Road and Coyote Creek in the City of San José, as shown on Figure 3.4-1. The project site is located west of Coyote Creek and to the east and north of the LECEF power plant and the Pacific Gas and Electric (PG&E) Los Esteros substation. The project also includes the offsite extension of utilities and roadways onto the project site, primarily on property owned by the City of San José west of the site (APNs 15-31-028, -044, -050, - 061, -062, and -063).

The study area is shown on Figure 3.4-1, and is defined as the project site, associated offsite linear facilities, and roadways that would be disturbed in order to implement the project, plus a 150-foot buffer of these areas. Four general biotic habitat distinctions describe the habitat areas identified within the study area: agricultural fields (short-term fallowed), annual grassland, developed, and Coyote Creek riparian corridor (City of San José 2017). These general biotic habitats are described in further detail in the following sections.

The main portion of the project site is comprised of agricultural fields with two vacant, existing residential home and farming support structures and a small wetland. The utility alignments are comprised of annual grassland with some developed roads.

While the project site does not include riparian habitat, it was present in the 150-foot buffer of the project study area. Riparian habitat in the study area is broken up into two habitat types: riparian woodland and riparian floodplain.

There are two aquatic resources onsite. A small wetland (approximately 0.066 acre) exists in the shape of a narrow triangular area near Ranch Drive in the southwestern corner of the main site. In addition, a depression exists along the proposed utility line corridors immediately west of the PG&E substation, and historical photography from available aerial imagery shows that this area has held ponded water at some points in the past (Figure 3.4-2). This feature is potentially a wetland. Immediately adjacent to the eastern boundary of the project is the Coyote Creek riparian corridor; however, no work will be conducted within 100 feet of the toe of the Coyote Creek levee or near the small wetland.

Landcover, Vegetation, and Wildlife Habitats

Agricultural Fields

The project site is predominantly comprised of managed agricultural fields that are regularly disked and are currently fallow. The project site appears to have been disked annually or farmed, or both, for more than 20 years according to available aerial imagery (Google 2019). At the time of the 2016 and 2019 surveys, these fields were mostly comprised of barren exposed soils with scattered ruderal annual

grassland species. Vegetation of the agricultural fields was dominated by typical grassland species such as wild oat (*Avena* spp.) and Italian rye grass (*Lolium multiflorum*), and forb species including cheeseweed mallow (*Malva parviflora*), black mustard (*Brassica nigra*), and summer mustard (*Hirschfeldia incana*).

Other species observed in this habitat of the study area included Harding grass (*Phalaris aquatica*), poison hemlock (*Conium maculatum*), field bindweed (*Convolvulus arvensis*), bristly ox tongue (*Helminthotheca echioides*), prickly lettuce (*Lactuca serriola*), wild radish (*Raphanus raphanistrum*), and milk thistle (*Silybum marianum*). Along the northern margin of the site, which was less managed, a few woody plants occurred including coyote brush (*Baccharis pilularis*), box elder (*Acer negundo*), Northern California black walnut (*Juglans hindsii*), and blue elderberry (*Sambucus cerulea*). A linear low depression exists along the western edge of the site; however, except for a couple individuals of wetland species like curly dock (*Rumex crispus*), this feature is dominated by upland species like cheeseweed and wild radish. Grasses dominating this feature appear to be undifferentiated from the adjacent field to the east, and this feature has no real defined bed and bank.

Annual Grassland

Annual grassland areas were observed along much of the offsite infrastructure alignment areas of the proposed project (i.e., roadways and utility corridors). Annual grasslands range from managed fields to a more mesic and intact grasslands and total approximately 55 offsite acres[1]. A former creek that has been filled and no longer supports a bed and bank runs north-south where the project's proposed offsite utility alignment is planned (City of San José 2017). A depression exists along the proposed utility line corridors immediately west of the PG&E substation, and historical photography from available aerial imagery shows that this area has held ponded water at some points in the past (Figure 3.4-2). However, this feature appears to have been farmed for more than 20 years according to available aerial imagery and was dominated by upland species during the June 2019 site visit. Per project design measure BIO-5.2 (discussed in Section 3.4.5, Proposed Mitigation Measures to be Incorporated for the Project), an aquatic resources delineation will be completed prior to construction to further investigate this area.

One long thin man-made raised earthen berms exists within the annual grassland in the field east of Zanker Road and north of the existing bike path along the western edge of the proposed offsite utility alignments (Figure 3.4-1). This berm had several black corrugated pipes installed within the berm. These may have been installed to promote habitat suitability of the property for burrowing owls (*Athene cunicularia*). This berm provides habitat for California ground squirrels (*Otospermophilus beecheyi*), which have colonized many of the berms. Burrowing owls were not observed during the site surveys, but signage along Nortech Parkway indicated that the annual grassland in the western portion of the proposed utility alignments was being managed for burrowing owl and that burrowing owls may be present.

Plants observed in this habitat and along the edges of this habitat include ruderal plants generally found in annual grasslands such as wild oats, black mustard, ripgut brome (*Bromus diandrus*), soft chess (*Bromus hordeaceus*), Italian thistle (*Carduus pycnocephalus*), barnyard barley (*Hordeum vulgare*), prickly lettuce (*Lactuca serriola*), common mallow (*Malva neglecta*), wild radish, Russian-thistle (*Salsola tragus*), prickly sow-thistle (*Sonchus asper*), and common chickweed (*Stellaria media*). Borders of this habitat included landscaped trees and other landscaping.

[1] Acreage assumes 150 feet (75 feet on either side of centerline)

Developed

There are developed lands both on the project site and offsite in the utility alignment areas. Approximately 4 acres of currently developed area exists onsite and includes the following:

- A landscaped margin along the western side of the agricultural fields which is shared with the PG&E and LECEF properties (the margin to the west of project site)
- A vacant residential unit in the southeastern corner of the site
- An additional vacant residential unit and a warehouse storage building likely associated with the agricultural uses of the agriculture fields near the center of the site
- A large gravel driveway that provides access from the two additional residential units to Ranch Drive

The areas of the project site where the vacant residences exist support a mix of horticultural plant species and weedy species. Plants observed in these onsite developed areas include landscape plantings of jacaranda (*Jacaranda mimosifolia*), oleander (*Nerium oleander*), pepper trees (*Schinus* sp.), privet (*Ligustrum* sp.), and a row of various managed fruit trees and olives (*Olea europaea*). Weedy species around these onsite developed areas include many of the same species observed in the agricultural fields of the site as well as spurge (*Euphorbia* sp.), stinkwort (*Dittrichia graveolens*), willow herb (*Epilobium brachycarpum*), serrated lettuce, mallow, and Russian thistle. The landscaped margin of the site, which lies along the western side of the agricultural fields, supports pepper and sycamore trees (*Platanus* sp.), privet, and crimson bottlebrush (*Callistemon citrinus*) to name a few of the plantings.

Within the infrastructure alignment areas offsite, approximately 15 acres of developed land use areas exist, including existing public and private roadways and a bike path on Alviso-Milpitas Road that parallels Highway 237. No plants were observed within the existing public and private roadways and bike path in the offsite developed areas. Some of these species overhang the project site and some are likely offsite within the proposed utility infrastructure alignment areas.

Wetlands

A small wetland (approximately 0.066 acre) exists in the shape of a narrow triangular area near Ranch Drive in the southwestern corner of the main site (City of San José 2017). It is dominated by a dense stand of California blackberry, and there is a pump station next to it.

As described previously in the annual grassland section, a depression exists along the proposed utility line corridors immediately west of the PG&E substation, and historical photography from available aerial imagery shows that this area has held ponded water at some points in the past (Figure 3.4-2). This feature is potentially a wetland. Per project design measure BIO-5.2 (discussed in Section 3.4.5, Proposed Mitigation Measures to be Incorporated for the Project), an aquatic resources delineation will be completed prior to construction to further investigate this area.

Offsite Riparian Corridor: Coyote Creek Riparian Woodland and Floodplain

Coyote Creek is separated from the project site by a levee topped with a gravel levee road. The riparian habitat of Coyote Creek is comprised of two habitat types: a riparian woodland and a mesic grassland floodplain that appears to be managed for fire fuel abatement. No work from the project will be conducted within 100 feet of the toe of the levee, which is the applicable setback pursuant to City's Riparian Corridor Policy.

The riparian woodland of Coyote Creek that runs along the project site's eastern boundary contains mature riparian tree species that provide a dominant habitat canopy. Tree species in the riparian woodland include box elder, California buckeye (*Aesculus californica*), cottonwood, valley oak (*Quercus lobata*), coast live oak (*Q. agrifolia*), willows (*Salix* spp.), and black elderberry (*S. canadensis*). Shrubs, forbs, and grasses in the understory of the riparian tree canopy included mugwort (*Artemisia vulgaris*),

giant reed grass (*Arundo donax*), mulefat (*Baccharis salicifolia*), coyote brush, poison hemlock, teasel (*Dipsacus* sp.), broad-leaved peppergrass (*Lepidium latifolium*), California blackberry (*Rubus ursinus*), curly dock, and cattail (*Typha* sp.), to name a few of the observed species.

A grassland floodplain occurs adjacent to the riparian woodland that was dominated by mesic species during the June 2016 site visit. During the October 2016 site visit, this portion of the riparian corridor had been mowed, likely for fire fuel abatement. In general, this area supports grassland species with several mesic and riparian species. Species observed in this habitat area include wild oats, mugwort, broad-leaved peppergrass, curly dock, poison hemlock, teasel, Bermuda grass (*Cynodon dactylon*), stinkwort, perennial wildrye (*Elymus virginicus*), serrated lettuce, burr clover (*Medicago polymorpha*), and wild radish.

Special-Status Species

This section describes special-status species observed (present) during project reconnaissance-level field surveys and any species considered to be likely to occur, have potential to occur, or that are seasonally present. Special-status species that are unlikely to be found in the study area are not discussed in this section.

The CNDDB, USFWS, and CNPS database searches identified 47 special-status species within the vicinity of the project, as described in Section 3.4.2.2, Methodology (Appendix 3.4A). CNDDB records of plants, wildlife, and critical habitat are illustrated on Figures 3.4-3a and 3.4-3b. These database searches identified 20 special-status plant species, and 27 special-status wildlife species. Table 3.4-1 (Special-Status Plant Species and Special-Status Wildlife Species, respectively) only include those species that were identified as having some potential to occur in the study area. A full list of the species identified in the database reviews and their likelihood of presence is provided in Appendix 3.4A.

Special-Status Plants

Of the 20 special-status plant species that occur regionally within habitats that are broadly similar to those of the project site, 19 are considered absent and one (Congdon's tarplant [*Centromadia parryi ssp. congdonii*]) is considered to be unlikely to occur onsite or within the offsite infrastructure alignment areas. This is because they are not known to occur near the site, or they occur within habitats that are different from those of the site.

Congdon's tarplant plant is listed on the CNPS Inventory of Rare and Endangered Plants of California List 1B. It is found in valley and foothill grasslands on alkaline soils from sea level to 750 feet in elevation. This species is highly tolerant of disturbed habitats. The closest known occurrence is approximately 1.5 miles southwest of the site (CDFW 2019a; Figures 3.4-3a and 3.4-3b). Although potential habitat is present within ruderal grasslands of the site, site surveys were conducted in 2016 and 2017 within the blooming season for this species and it was not observed (Live Oak Associates 2017). Because it was not detected in 2017 site surveys, this plant species is considered to be unlikely to occur onsite or within the offsite infrastructure alignment areas.

LEGEND

Wetland Type

- Freshwater Emergent Wetland
- Freshwater Pond
- Riverine
- Project Site
- Proposed Storm Drain
- Proposed Sanitary Sewer
- Proposed Reclaimed Water
- Proposed Water Line Route #1
- Proposed Water Line Route #2
- Proposed Water Line Route #3
- Proposed Shared Water Line
- Proposed Electrical Supply Line

Source:
U.S. Fish and Wildlife Service, 2019

N

0 750 1,500

Approximate scale in feet

Figure 3.4-2
National Wetlands
Inventory Mapping
San José Data Center
San José, California

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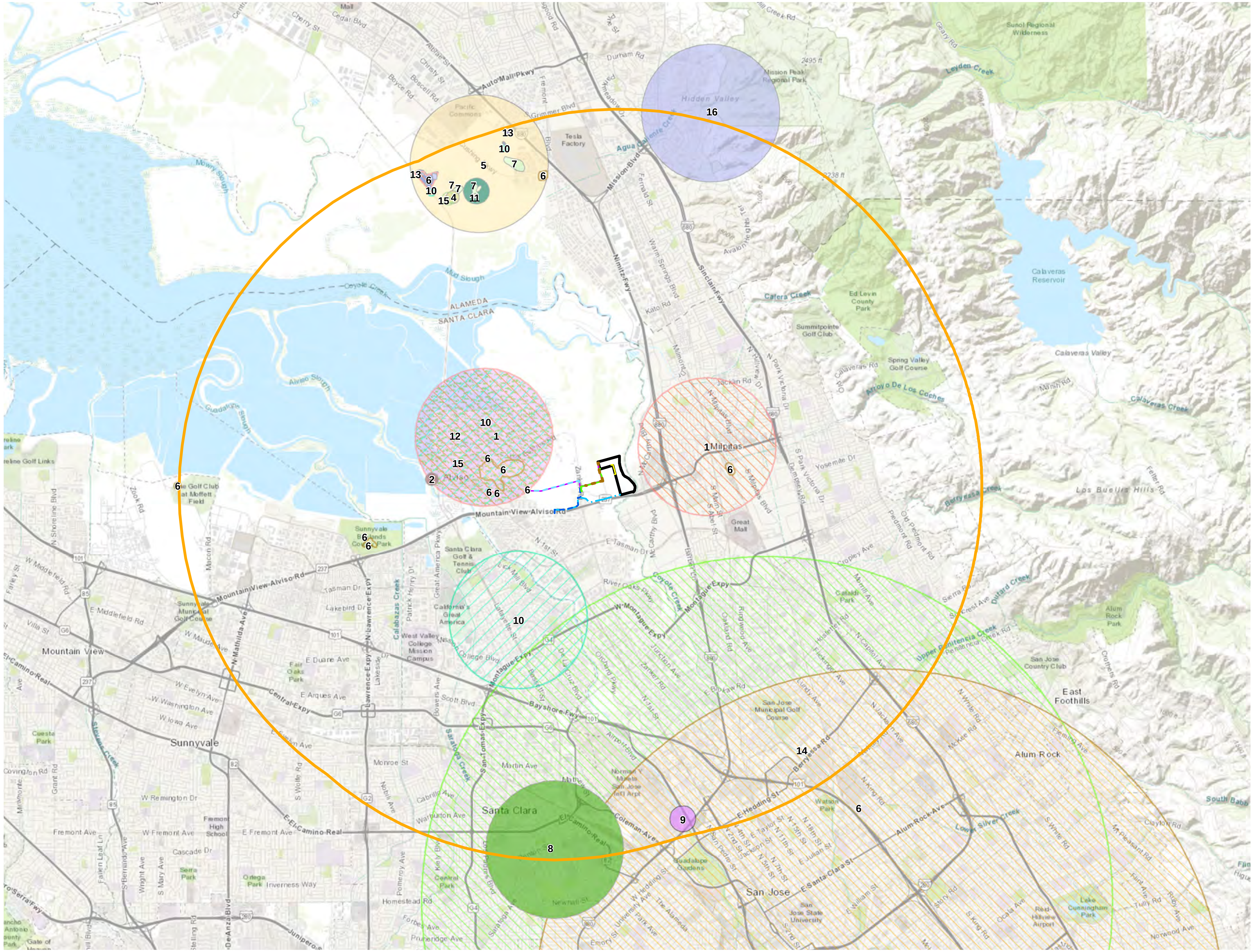

LEGEND

- Proposed Storm Drain
- Proposed Sanitary Sewer
- Proposed Reclaimed Water
- Proposed Water Line Route #1
- Proposed Water Line Route #2
- Proposed Water Line Route #3
- Proposed Shared Water Line
- Proposed Electrical Supply Line
- San José Data Center
- 5 Mile Radius from Project

Plants

- 1 - alkali milk-vetch
- 2 - arcuate bush-mallow
- 3 - brittlescale
- 4 - California alkali grass
- 5 - California seablite
- 6 - Congdon's tarplant
- 7 - Contra Costa goldfields
- 8 - hairless popcornflower
- 9 - Hall's bush-mallow
- 10 - Hoover's button-celery
- 11 - lesser saltscale
- 12 - Point Reyes salty bird's-beak
- 13 - prostrate vernal pool navarretia
- 14 - robust spineflower
- 15 - saline clover
- 16 - San Joaquin spearscale

Note:
CNDDB version June 2019
ESRI Service Layer
Source:
The occurrences shown on this map represent the known locations of the species listed here as of the date of this version. There may be additional occurrences or additional species within this area which have not yet been surveyed and/or mapped. Lack of information in the CNDDB about a species or an area can never be used as proof that no special status species occur in an area.

N

0 1.5 3
Approximate scale in miles

Figure 3.4-3a
California Natural Diversity Database
Special Status Species (Plants) within 5 Miles
of the Project Area
San José Data Center (SJC02)
San José, California

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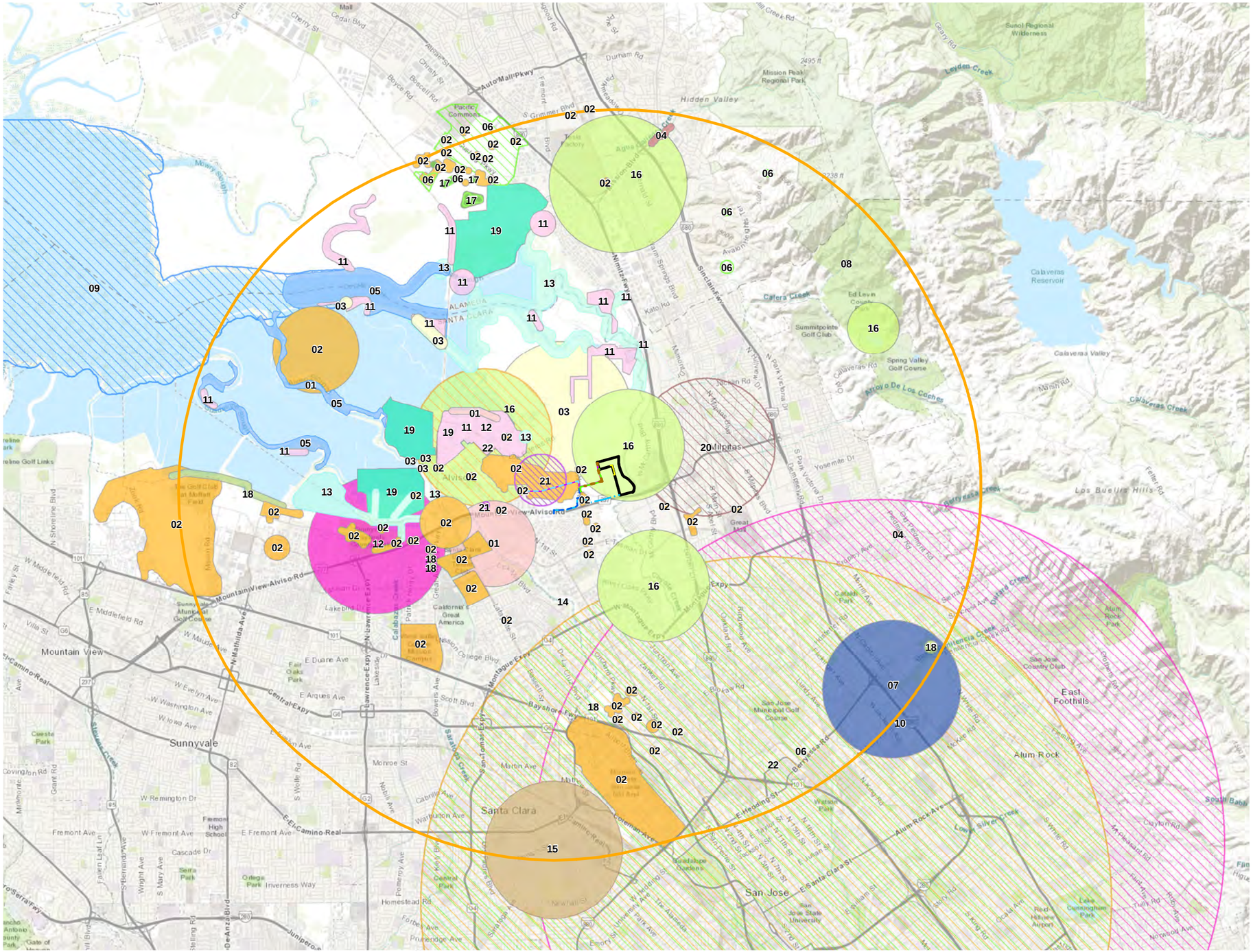

LEGEND

- Proposed Storm Drain
- Proposed Sanitary Sewer
- Proposed Reclaimed Water
- Proposed Water Line Route #1
- Proposed Water Line Route #2
- Proposed Water Line Route #3
- Proposed Shared Water Line
- Proposed Electrical Supply Line
- San José Data Center
- 5 Mile Radius from Project

Animals

- 01 - Alameda song sparrow
- 02 - burrowing owl
- 03 - California black rail
- 04 - California red-legged frog
- 05 - California Ridgway's rail
- 06 - California tiger salamander
- 07 - foothill yellow-legged frog
- 08 - golden eagle
- 09 - longfin smelt
- 10 - northern California legless lizard
- 11 - salt-marsh harvest mouse
- 12 - salt-marsh wandering shrew
- 13 - saltmarsh common yellowthroat
- 15 - Swainson's hawk
- 16 - tricolored blackbird
- 17 - vernal pool tadpole shrimp
- 18 - western pond turtle
- 19 - western snowy plover
- 20 - western yellow-billed cuckoo
- 21 - white-tailed kite
- 22 - yellow rail

Note:
CNDDB version June 2019
ESRI Service Layer
Source:
The occurrences shown on this map represent the known locations of the species listed here as of the date of this version. There may be additional occurrences or additional species within this area which have not yet been surveyed and/or mapped. Lack of information in the CNDDB about a species or an area can never be used as proof that no special status species occur in an area.

0 1.5 3
Approximate scale in miles

N

Figure 3.4-3b
California Natural Diversity Database
Special Status Species (Animals) within 5 Miles of the Project Area
San José Data Center (SJC02)
San José, California

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Special-Status Animals

In total, 27 special-status animal species occur, or once occurred, within the study area. Of these, 14 species are expected to be absent or unlikely to occur on the project site or within the offsite infrastructure alignment areas due to a lack of suitable habitat. Of these, 13 special-status animal species may occur as foragers, transients, may be resident to the project site, or they may occur within areas adjacent to the site. These include steelhead (*Oncorhynchus mykiss*), American peregrine falcon (*Falco peregrinus anatum*), Alameda song sparrow (*Melospiza melodia pusillula*), yellow warbler (*Setophaga petechia*), northern harrier (*Circus hudsonius*), saltmarsh common yellowthroat (*Geothlypis trichas sinuosa*), tricolored blackbird (*Agelaius tricolor*), burrowing owl (*Athene cunicularia*), western snowy plover (*Charadrius alexandrinus nivosus*), white-tailed kite (*Elanus leucurus*), ringtail cat (*Bassariscus astutus*), Townsend's big-eared bat (*Corynorhinus townsendii*), and San Francisco dusky-footed woodrat (*Neotoma fuscipes annectens*). Several of these species may also roost or nest in trees or shrubs occurring on or adjacent to the site.

Table 3.4-1. Special-Status Wildlife Species

Scientific Name/ Common Name	Status[a]			Habitat	Potential for Occurrence
	Federal	State	CDFW		
Fish					
Oncorhynchus mykiss irideus/ steelhead, central California coast distinct population segment	T	-	-	Spawn in freshwater rivers or streams in the spring and spend the remainder of their life in the ocean	**Seasonally Present.** Rivers and creeks are absent from the main part of the site.
Birds					
Agelaius tricolor/Tricolored blackbird	-	T	SSC	Breeds near fresh water, primarily emergent wetlands, with tall thickets Forages in grassland and cropland habitats	**Potential to Occur.** Suitable tricolored blackbird habitat is absent from the main portion of the site; however, the riparian habitat along the Coyote Creek corridor supports suitable nesting habitat for the tricolored blackbird. The SCVHCP identifies the eastern edge corner of this site to be within 250 feet of potentially suitable tricolored blackbird nesting habitat. Condition 17 of the SCVHCP requires surveys for tricolored blackbirds, as potentially suitable habitat exists adjacent to (and within 250 feet of) the site within Coyote Creek.
Athene cunicularia/ burrowing owl	-	-	SSC	Open, dry annual or perennial grasslands with low-growing vegetation and on the margins of disturbed/developed habitats Subterranean nester, dependent upon burrowing mammals, most notably, the California ground squirrel	**Potential to occur.** The site is within the burrowing owl fee area for the SCVHCP, and burrowing owls are known to occur adjacent to the site as well as artificial burrows specifically designed for burrowing owls near the offsite utility alignments to the west of the site. The site currently supports California ground squirrel burrows and provides potential habitat for BUOW. Surveys for burrowing owl per the HCP protocol were conducted on the main portion of the site on June 20 and October 18, 2016, and the utility alignment was surveyed on October 18, 2016; BUOW were not observed onsite during the surveys.

Table 3.4-1. Special-Status Wildlife Species

Scientific Name/ Common Name	Status[a]			Habitat	Potential for Occurrence
	Federal	State	CDFW		
Charadrius alexandrinus nivosus/ western snowy plover	T	-	SSC	Sandy beaches, salt pond levees, and shores of large alkali lakes. Needs sandy, gravelly, or friable soils for nesting	**Potential to occur.** Breeding and foraging habitat is available along Coyote Creek levee.
Circus cyaneus/ Northern harrier	-	-	SSC	Coastal saltwater and freshwater marshes, nesting and foraging habitats in grasslands and agricultural fields; nests on ground in shrubby vegetation, usually at marsh edge; nest built of a large mound of sticks in wet areas	**Potential to occur.** Harriers may forage over the site and may nest on or adjacent to the site.
Elanus leucurus/ white-tailed kite	-	-	CFP	Rolling foothills and valley margins with scattered oaks, and river bottomlands or marshes next to deciduous woodland; open grasslands, meadows for foraging close to isolated, dense-topped trees for nesting and perching	**Potential to Occur.** Suitable breeding habitat exists onsite for this species, and foraging habitat is available in the agricultural field and annual grassland habitats onsite.
Falco peregrinus anatum/ American peregrine falcon	-	-	CFP	Near wetlands, lakes, rivers, or other water; on cliffs, banks, dunes, mounds, and human-made structures Nest consists of a scrape or a depression or ledge in an open site	**Potential to Occur.** Although nesting habitat is not present on the site, foraging habitat is present onsite. The nearest recorded observance of the American peregrine falcon is more than 3 miles from the site; however, the American peregrine falcon is known from the San José area. Therefore, this species could forage over the site from time to time.
Geothlypis trichas sinuosa/ Salt marsh common yellowthroat	-	-	SSC	Resident of the San Francisco Bay region, in freshwater and saltwater marshes; requires thick, continuous cover down to water surface for foraging; tall grasses, tule patches, willows for nesting	**Potential to occur.** This species is known to be in the area of the site, and may breed adjacent to the site in the Coyote Creek riparian corridor.
Melospiza melodia pusillula/ Alameda song sparrow	-	-	SSC	Resident of salt marshes bordering south arm of San Francisco Bay; inhabits *Salicornia* marshes Nests low in *Grindelia* bushes (high enough to escape high tides) and in *Salicornia*	**Potential to Occur.** This species is known to be in the area of the site, and may breed adjacent to the site in the Coyote Creek riparian corridor.
Setophaga petechia/ yellow warbler	-	-	SSC	Migrants move through many habitats of Sierra and its foothills; breeds in riparian thickets of alder, willow, and cottonwoods	**Potential to Occur.** This species is known to be in the area of the site, and may breed adjacent to the site in the Coyote Creek riparian corridor.
Mammals					
Bassariscus astutus/ Ringtail cat	-	-	CFP	Occurs in heavily wooded habitats near water	**Potential to Occur.** Riparian habitat along Coyote Creek provides potentially suitable habitat for the ringtail adjacent to the site; however, it is likely that any ringtail would not stray far from these riparian areas and would be considered to be Unlikely to Occur to occur on the main portion of the site**.**

Table 3.4-1. Special-Status Wildlife Species

Scientific Name/ Common Name	Status[a]			Habitat	Potential for Occurrence
	Federal	State	CDFW		
Corynorhinus townsendii/ Townsend's big-eared bat	-	-	SSC	Primarily a cave-dwelling bat that may also roost in buildings Occurs in a variety of habitats of the state	**Potential to Occur.** Foraging habitat is present on the site; however, potential roosting habitat is absent from the site.
Neotoma fuscipes annectens/ San Francisco dusky-footed woodrat	-	-	SSC	Found in hardwood forests, oak riparian, and shrub habitats	**Potential to Occur.** Riparian habitat along Coyote Creek provides potentially suitable habitat for the dusky-footed woodrat.

Sources:
1) USFWS. 2018a. Species list query for the project location.

2) CNDDB. 2018. Queried for occurrences within 5 miles of the project location.

[a] Status designations are as follows:

Federal Designations:(E) Federally Endangered, (T) Federally Threatened, (D) Federally Delisted

State Designations:(E) State Endangered, (T) State Threatened, (D) State Delisted

CDFW Designations:(SSC) Species of Special Concern, (CFP) California Fully Protected

Fish

Steelhead, central California coast distinct population segment

Central California coast steelhead move through Coyote Creek during migration between estuarine and oceanic habitat downstream and spawning or rearing habitat upstream, although this species is not expected to spawn in the reach located adjacent to the study area.

Birds

American Peregrine Falcon

The American peregrine falcon was delisted from ESA and CESA but remains a CDFW Fully Protected species. The habitat of the American peregrine falcon includes many terrestrial biomes, which may include urban and developed areas. Most often, breeding peregrine falcons use habitats containing cliffs and almost always nest near water (Wheeler 2003; White et al. 2002). Peregrine falcons generally use open habitats for foraging but are also known to forage and occur in densely populated areas. Many artificial habitats (such as towers, bridges, and buildings) are also used by this species (White et al. 2002). Prey mainly consists of birds ranging from small passerines to mid-sized waterfowl, and juveniles primarily feed on large flying insects (Wheeler 2003).

There is one CNDDB occurrence of this species within the study area (CDFW 2019a; Figures 3.4-3a and 3.4-3b). This occurrence labelled as "sensitive" and is confined to the San José West USGS quad, 3.3 miles south of the project site. CNDDB occurrence details describe a nest box attached to a high-rise office building in San José that has provided habitat for successful nesting every year from 2006 to 2015. This species may forage for avian prey in and above the area. However, this species is not expected to nest in or near the study area due to the lack of suitable cliffs and structures for nesting.

Alameda Song Sparrow

The Alameda song sparrow is a CDFW Species of Special Concern. The Alameda song sparrow inhabits tidal salt marshes that have an appropriate configuration of vegetation, water, and exposed ground (Marshall 1948). Vegetation is required for nesting sites, perches, and concealment from predators. Height of vegetation may also be limiting for song sparrows, because tides may flood low-lying nests. Marshall (1948) noted that song sparrows were either absent or occurred at lower densities when cordgrass (*Spartina foliosa*) was less than 1.5 feet high, and that song sparrows were missing from areas of pickleweed (*Salicornia pacifica*) that were less than 1 foot high. Exposed ground for foraging is required for the species.

There are three CNDDB occurrences of this species within the study area (CDFW 2019a; Figures 3.4-3a and 3.4-3b). The closest occurrence of this species is located approximately 1.6 miles west/southwest of the project site, or approximately 0.2 mile southwest of the proposed offsite infrastructure alignment areas near Nortech Parkway, in restored salt marsh habitat dominated by pickleweed (*Salicornia* sp.) in Alviso Marsh. Because of the proximity of the project to salt marsh habitat, this species may nest in low shrubs in or near the study area.

Burrowing Owl

The burrowing owl (*Athene cunicularia*) is a CDFW Species of Special Concern that is primarily a grassland species, but it is known to persist and occasionally thrive in some landscapes that are highly altered by human activity (Rosenberg and Haley 2004). Suitable habitat characteristics are burrows for roosting and nesting, relatively short vegetation with only sparse shrubs, and taller vegetation (Haug et al. 1993). Nest and roost burrows are most commonly dug by ground squirrels (*Spermophilus beecheyi*) (Trulio 1997), but burrowing owls may use other mammal burrows or structures such as culverts, piles of concrete rubble, and pipes (Ronan 2002). Most California populations are nonmigratory, and these habitat types serve for breeding, foraging, and overwintering.

Burrowing owls are known to occur adjacent to the site and could occur within artificial burrows specifically designed for burrowing owls near the offsite utility alignments to the west of the site. The site and offsite alignment areas currently support California ground squirrel burrows and provides potential habitat for burrowing owls. Surveys for burrowing owl per the protocols included in the SCVHCP were conducted on the main portion of the site on June 20 and October 18, 2016, and the utility alignments were surveyed on October 18, 2016 (Live Oak Associates 2017). Burrowing owls were not observed during the surveys. However, as the site is within the burrowing owl fee zone for the SCVHCP, the project will be required to conduct pre-construction surveys in accordance with Condition 15. Measures to confirm compliance with this condition are included herein. Should site grading occur during the nesting season for this species (February 1 through August 31), nests and nestlings that may be present would likely be destroyed. Overwintering burrowing owls may also be buried in their roost burrows outside of the nesting season (September 1 through January 31). Project design measures will verify that burrowing owls will not be harmed by construction activities. Completion of the following measures, including the payment of SCVHCP fees, will reduce the potential impacts to burrowing owls to a less than significant level.

Yellow Warbler

The yellow warbler is a CDFW Species of Special Concern. Migrants of this species move through many habitats of Sierra and its foothills. This species breeds in riparian thickets of alder, willow, and cottonwoods.

While there are no CNDDB records within 5 miles of the project site, there are four eBird occurrences of this species within the Coyote Creek riparian corridor east of the project site from as recently as 2018, and several other eBird occurrences within 5 miles of the project site (CDFW 2019a; eBird 2019). This

species is known to be in the vicinity of the study area and may breed adjacent study area in the Coyote Creek riparian corridor.

Northern Harrier

The northern harrier is a CDFW Species of Special Concern. Harriers breed and forage in a variety of open habitats that provide adequate vegetative cover, an abundance of suitable prey, and scattered perches, such as shrubs or fence posts. These habitats may include freshwater marshes; brackish and saltwater marshes; wet meadows; weedy borders of lakes, rivers and streams; grasslands; weed fields; pastures; and some croplands. Harriers nest on the ground, mostly within patches of dense, often tall, vegetation in undisturbed areas (MacWhirter and Bildstein 1996).

While there are no CNDDB records within 5 miles of the project site, and the nearest CNDDB record is located in salt marsh habitat approximately 5.9 miles west/northwest of the project site, this species is known to occur near the study area, and there are several eBird occurrences within 1 mile of this area (CDFW 2019a; eBird 2019). Northern harriers may forage and may nest on the ground in or near the study area.

Salt Marsh Common Yellowthroat

The salt marsh common yellowthroat is a CDFW Species of Special Concern. Breeding habitat includes woody swamps, brackish marsh, and freshwater marsh (Foster 1977). This species typically occupies the ecotone between moist and upland habitats and can also use small and relatively isolated patches of habitat, including swales and seeps where groundwater is close to the surface; however, this species also occasionally nests in drier environments (Hobson et al. 1986). In brackish and saline tidal marsh habitat, abundance was positively associated with a high percent cover of rushes (*Scirpus* spp. and *Juncus* spp.) and peppergrass (*Lepidium latifolium*), and with a height of the highest herbaceous plant over 1 foot. They build open-cup nests that are well concealed and are typically located near the ground in grasses and herbaceous vegetation, such as poison hemlock *(Conium maculatum*), cattails (*Typha* spp.), tules (*Schoenoplectus* spp.), and some shrubs (e.g., coyote brush [*Baccharis pilularis*]).

There are four CNDDB records for this species within 5 miles of the project site, including one occurrence in the Coyote Creek riparian corridor immediately east of the project site from 1998 (CDFW 2019a; Figures 3.4-3a and 3.4-3b). This species may forage and breed in or near the study area.

Tricolored Blackbird

Tricolored blackbird was recently (March 2019) listed as a Threatened species under the California Endangered Species Act (CDFW 2019b). This colonial bird species breeds near fresh water, primarily emergent wetlands, with tall thickets. It especially prefers emergent vegetation and blackberry bushes for nesting habitat. It forages in grassland and cropland habitats.

There are five CNDDB records for this species within 5 miles of the project site, including one occurrence overlapping the project area from 1995 that describes tricolored blackbird nesting in poison hemlock and coyote brush (CDFW 2019a; Figures 3.4-3a and 3.4-3b). The SCVHCP identifies the eastern edge corner of this site to be within 250 feet of potentially suitable tricolored blackbird nesting habitat (County of Santa Clara et al. 2012). Suitable tricolored blackbird habitat is absent from the site; however, the riparian habitat along the Coyote Creek corridor supports suitable nesting habitat for tricolored blackbird. This species may forage and breed in or near the study area.

Western Snowy Plover

The western snowy plover is listed as Threatened under ESA and is also an SSC. Along the western coast of the United States, the nesting season of the western snowy plover extends from early March through late September. The earliest nests on the California coast occur during the first week of March in

some years, and by the third week of March in most years (Page et al. 1995). Peak initiation of nesting is from mid-April to mid-June (Powell et al. 1997). Breeding generally occurs above the high tide line on coastal beaches, sand spits, dune-backed beaches, sparsely vegetated dunes, beaches at creek and river mouths, and salt pans at lagoons and estuaries. Less common nesting habitat includes bluff-backed beaches, dredged material disposal sites, salt pond levees, dry salt ponds, and river bars. In winter, western snowy plovers are found on nesting beaches, man-made salt ponds, and on estuarine sand and mud flats.

There are two CNDDB records within 5 miles of the project site, including one occurrence located 1.1 miles west/northwest of the project area (0.5 mile north of the proposed offsite utility alignment areas near Nortech Parkway) (CDFW 2019a; Figures 3.4-3a and 3.4-3b). This occurrence describes a continuous record of western snowy plover breeding in New Chicago Marsh and the salt evaporator ponds on either side of Alviso Slough from 1971 to 2009. Breeding and foraging habitat is available along Coyote Creek levee. This species may breed and forage near the study area.

White-Tailed Kite

The white-tailed kite (*Elanus leucurus*) is a CDFW Fully Protected species. Kites inhabit open lowland valleys and low, rolling foothills, but are also known to occur in urban areas. This species forages in grasslands, marshes, riparian edges, and cultivated fields where prey species (mainly small mammals) are relatively abundant (Kaufman 1996). Kites typically nest on the tops of trees close to good foraging locations.

There are two CNDDB records within 5 miles of the project site (CDFW 2019a; Figures 3.4-3a and 3.4-3b). The closest occurrence is located approximately 0.5 mile west of the project site and overlaps the locations of the proposed offsite utility alignment areas west of the project site. This occurrence describes white-tailed kite nesting in a eucalyptus tree (*Eucalyptus* sp.) in 1971. There is suitable habitat for the species in the vicinity of the study area, particularly around the marshes north of the project site.

Other Migratory Birds and Nesting Raptors

Non-listed migratory bird species or raptors may establish nests in suitable habitat in or near the study area. The nesting season for migratory birds and raptors generally occurs between February 15 and August 31. One potentially active raptor nest was observed in the study area during the June 2019 survey. This large platform nest was located on the top of the shorter of two adjacent electrical transmission towers, in the northwestern corner of the project area (37.42966, -121.93542). There is potential for passerine and raptors to nest in or near the study area.

Mammals

Ringtail cat

Ringtail cat occurs in a wide variety of habitats near permanent fresh water (CDFW-CIWTG 2005). This species is not tracked in the CNDDB (CDFW 2019a). There is suitable habitat for the species near the study area, particularly around the Coyote Creek riparian corridor.

Townsend's big-eared bat

Townsend's big-eared bat is found in all habitats except for subalpine and alpine habitats and may be found at any season throughout its range. It is most abundant in mesic habitats and requires caves, mines, tunnels, buildings, or other human-made structures for roosting. This species may use separate sites for night, day, hibernation, or maternity roosts. This species is extremely sensitive to disturbance of roosting sites (Zeiner et al. 1990).

The closest CNDDB record of this species is located approximately 5.1 miles south of the project site (CDFW 2019a; Figures 3.4-3a and 3.4-3b). This occurrence describes several museum specimens collected in the early to mid-20th century; the collection location noted for these specimens is described as "San José" and, therefore, the location of this occurrence is noted in the CNDDB as being approximate. No evidence of bats was observed during reconnaissance surveys, and it is highly unlikely that the site supports roosting habitat for bats; however, individual Townsend's big-eared bats may forage in the study area from time to time.

San Francisco dusky-footed woodrat

The San Francisco dusky-footed woodrat is found in in hardwood forests, oak riparian, and shrub habitats. This species is known to occur in the Coyote Creek corridor; however, no woodrat nests were detected during a focused survey in July 2016. For the reasons described previously, these species are determined to be absent in the study area.

The closest CNDDB occurrence of this species is located approximately 7.3 miles northeast of the project site, near the Calaveras Reservoir Dam (CDFW 2019a; Figures 3.4-3a and 3.4-3b). This occurrence describes 28 individuals encountered between 2011 and 2017. There is suitable habitat for the species in study area, particularly around the Coyote Creek riparian corridor.

Nitrogen Deposition

Air emissions from the standby and administrative generators include, but are not limited to, nitrogen oxides (NOx) from combustion and ammonia (NH_3) from selective catalytic reduction control devices. Nitrogen oxide gases (NO and NO_2) convert to nitrate particulates in a form that is suitable for uptake by most plants and could promote plant growth and primary productivity. Coastal salt marshes are a common natural habitat in the vicinity of the project where nitrogen deposition may occur. The critical load for atmospheric nitrogen deposition into coastal wetlands is difficult to establish, because wetlands subject to tidal exchange have open nutrient cycles. In addition, nitrogen loading in wetlands is often affected by sources other than atmospheric deposition (Morris 1991). Various studies that have examined nitrogen loading in intertidal salt marsh wetlands have found critical loads to range from between 63 and 400 kilogram per hectare per year (Caffrey et al. 2007; Wigand et al. 2003). The wet and dry nitrogen deposition resulting directly from depositional nitrogen emissions that would be generated from the project were evaluated using the air dispersion model AERMOD (version 19191). AERMOD is considered a conservative model for this analysis, as it is a steady-state Gaussian plume dispersion model and does not calculate complex chemical transformations and equilibria associated with nitrogen deposition.

Several additional conservative assumptions were used in the modeling with regard to nitrogen formation and deposition:

- 100 percent conversion of NOx and NH_3 into atmospherically derived nitrogen within the generator stacks was assumed, rather than allowing for the conversion of NOx and NH_3 to occur over distance and time within the atmosphere, which would be more realistic.
- Depositional rates and parameters were based upon nitric acid (HNO_3) which, of all the depositing species, has the highest affinity for impacts to soils and vegetation and tendency to stick to what it is deposited on.
- Maximum settling velocities were selected to produce conservative deposition rates.
- Maximum potential emissions for the project were assumed to occur each year.

Emissions of depositional nitrogen were conservatively calculated as a complete conversion of in-stack NO_X and NH_3 from each of the combustion sources. This was done by multiplying the nitrogen mass fraction of each of the pollutants by the respective average annual emissions.

The dry deposition algorithms in AERMOD include land use characteristics and some dry gas deposition resistance terms based on five seasonal categories and nine land use categories. The seasonal categories for each month of modeling are as follows:

- Midsummer: April, May, June, and July
- Autumn: August, September, and October
- Late Autumn/Winter without snow: November, December, and January
- Transitional Spring: February and March

Land use categories are used within AERMOD to calculate dry deposition of the emitted nitrogen compounds. For example, in areas of lush vegetation, the gaseous nitrogen compounds would have a higher uptake and, therefore, dry deposition would be higher at these areas than in bodies of water or urban areas with fewer trees. A determination for land use categories used in the analysis was conducted using satellite aerial imagery for which each 10 degree increment within a 3-kilometer radius surrounding the project was defined as either grassy suburban area or unforested wetland.

AERMOD also requires the input of wet and dry depositional parameters based on the nitrogen-containing species being emitted. For this analysis, it was conservatively assumed that all nitrogen emitted was in the form of HNO_3, as nitric acid is the most depositionally aggressive species. Based on the above modeling approach, the maximum modeled annual deposition of five individually modeled years (2013 to 2017) was 10.97 kilograms per hectare per year, which occurs on the southern fence line of the project site. The nitrogen deposition impacts drop off to less than 1 kilogram per hectare per year within 2.15 kilometers of the project fence line. These nitrogen deposition impacts are based on each standby generator operating the maximum number of hours per year (42 hours per year), which is almost three times higher than expected operating profile needed for maintenance and testing. The project nitrogen deposition impacts are not expected to significantly contribute to nitrogen loading on coastal salt marshes because of several factors, including the high level of NOx emission controls applied to the standby generators; air quality mitigation regulations that require offsets are to be surrendered for actual NOx emissions; the fact that depositional nitrogen formation requires time for the chemical reaction to occur; and the predominate wind patterns (northwest to southeast). These factors, among other factors, will result in a majority of the potential air quality impacts occurring away from the project site where time and distance will reduce ground-level concentrations.

SJC02's already insignificant nitrogen deposition impacts will be further reduced through the payment of the SCVHCP nitrogen deposition impact fees. Therefore, given the emission controls incorporated into the project design and the requirement to offset emissions of nitrogen oxides through the purchase of air emission reduction credits and through payment of the applicable SCVHCP fee, no mitigation measures are required.

3.4.4 Potential Impacts

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 U.S. Fish and Wildlife Service?

Less than Significant with Mitigation Incorporated.

Special-status animal species may be present in the study area and are protected by existing federal, state, and local laws, policies, and regulations as described in Section 3.4.1.1.

Congdon's tarplant was the only special-status plant with potential to occur in the study area, and this species was not detected in 2016 and 2017 surveys. Therefore this species is unlikely to occur in the onsite or offsite project area, and is not expected to be impacted. In total, 13 special-status animal species may occur as foragers or transients, may be resident to the site, or may occur within areas adjacent to the site. These include steelhead, American peregrine falcon, Alameda song sparrow,

yellow warbler, northern harrier, saltmarsh common yellowthroat, tricolored blackbird, burrowing owl, western snowy plover, white-tailed kite, ringtail cat, Townsend's big-eared bat, and San Francisco dusky-footed woodrat.

With incorporation of BIO-1, BIO-2, BIO-2.1, BIO-2.2, BIO-2.3, BIO-2.4, and BIO-5.1, impacts on special-status birds, migratory birds, and raptors would be less than significant. As detailed more fully in the relevant design measures, surveys would be conducted for nesting birds, and those activities that could disturb the birds or cause nest abandonment would be avoided.

b) Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

Less than Significant Impact.

Riparian habitat occurs along Coyote Creek, which is located adjacent to the eastern boundary. A 100-foot buffer from the toe of the levee is incorporated within the design; therefore, the project would be required to comply with the riparian setback requirements of the City of San José and the SCVHCP. Because no work would take place within the riparian corridor associated with Coyote Creek, development of the site would not constitute a significant effect on sensitive and protected habitat communities. Project design measures BIO-3.1, BIO-3.2, BIO-3.3, BIO-3.4, BIO-3.5, and BIO-5.2, along with compliance with the applicable provisions of the SCVHCP, will further verify that impacts remain at a less than significant level.

c) Would the project have a substantial adverse effect on state or federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

Less than Significant with Mitigation Incorporated.

Wetland habitat occurs in the small triangular wetland near Ranch Road in the southwestern corner of the agricultural field (approximately 0.066 acre). As described in the annual grassland section, a potential wetland depression also exists along the proposed offsite utility alignment areas immediately west of the PG&E substation (Figure 3.4-2). BIO-5.2 requires an aquatic resources delineation covering the project site to be conducted.

Development of the site would constitute a significant effect on wetlands if those wetlands would be impacted by project activities. If wetlands or other areas jurisdictional under Section 404 of the Clean Water Act will be impacted, the project would be required to apply for and obtain all necessary permits from USACE and RWQCB. Work will not occur within jurisdictional features (if any) until all of the necessary permits have been obtained. Mitigation measures BIO-3.1, BIO-3.2, BIO-3.3, BIO-3.4, BIO-3.5, and BIO-5.2, and compensation consistent with the SCVHCP, would be imposed on the project to reduce impacts to a less than significant level with project design measures incorporated.

d) Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

Less Than Significant Impact.

Buildout of the site and the offsite installation of utilities and other improvements and infrastructure would not substantially interfere with or otherwise constrain native wildlife movement, as the only corridor is the Coyote Creek riparian corridor at the eastern edge of the project site, and there will be no impacts to this corridor (as explained above). Animals currently using Coyote Creek as a corridor are expected to continue to use it at buildout of the project, especially since the existing levee on the western side of the creek would not be affected. Implementation of project design measures

BIO-3.1 through BIO-3.5 will further reduce the already less than significant interference on the movement of native wildlife.

e) Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

Less Than Significant Impact

The City of San José has a Tree Ordinance (Chapter 13.32 of the Municipal Code), which regulates the removal of trees. An "ordinance-size tree" is defined as any native or non-native tree with a circumference of 56 inches (diameter of 18 inches) at 24 inches above the natural grade of slope. For multi-trunk trees, the circumference is measured as the sum of the circumferences of all trunks at 24 inches above the natural grade of slope. The ordinance covers both native and non-native species. A tree removal permit is required from the City prior to the removal of any trees covered under the ordinance. Prior to the issuance of a removal permit, the City requires that a formal tree survey be conducted which indicates the number, species, trunk circumference and location of all trees which will be removed or impacted by the project. The proposed project includes project design measure BIO-4.1, which is consistent with the plans and policies of the City of San José General Plan and Municipal Code.

f) Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Communities Conservation Plan, or other approved local, regional, or state habitat conservation plan?

Less Than Significant Impact.

The study area is within the area covered by the SCVHCP, and the project qualifies as a covered activity. The proposed project includes project design measures consistent with the plans and policies of CDFW, USACE, RWQCB, the SCVHCP, the General Plan, the Alviso Master Plan, the City of San José Riparian Corridor Policy and Bird-Safe Design, and the City of San José's General Plan and Municipal Code. For these reasons, the project would not conflict with any local policies or ordinances protecting biological resources, such as the provisions of an adopted HCP, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

3.4.5 Proposed Mitigation Measures to be Incorporated for the Project

The following sections describe significance criteria for impacts related to biological resources derived from Appendix G of the CEQA Guidelines, assess potential project-related construction and operational impacts on biological resources, and provide feasible measures that the project will be required to implement to reduce impacts to less than significant levels where necessary. The following measures will be implemented and are consistent with those included in the City of San José Draft Environmental Impact Report, 237 Industrial Center Project (City of San José 2017).

3.4.5.1 Migratory Birds and Other Protected Bird Species

To verify that any active nests will not be disturbed and that individual birds would not be harmed by construction activities, the following project design measures shall be implemented by the project to reduce impacts to a less than significant level. In addition, although unlikely to occur on the site itself, the SCVHCP identifies the project site and the offsite utility alignment areas to be within 250 feet of potentially suitable tricolored blackbird nesting habitat, thus requiring pre-construction surveys in accordance with the Condition 17 of the SCVHCP.

- BIO-1.1: If initial site disturbance activities, including tree, shrub, or vegetation removal, are to occur during the breeding season February 1st to August 31st inclusive, a qualified biologist shall conduct pre-construction surveys for nesting migratory birds onsite and within 250 feet (for raptors) of the site, where accessible. The survey shall occur within 7 days of the onset of ground disturbance if disturbances are to commence between February 1st and June 30th and within 30 days prior to the onset of ground disturbance between July 1st and August 31st. If a nesting migratory bird were to be

detected, an appropriate construction-free buffer shall be established in consultation with the California Department of Fish and Wildlife (CDFW). The actual size of the buffer, which shall be determined by the project biologist, would depend on species, topography, and type of activity that would occur in the vicinity of the nest. The project buffer would be monitored periodically by the project biologist to verify compliance. After the nest is completed, as determined by the biologist, the buffer would no longer be required.

- BIO-1.2: The SCVHCP identifies the project site to be within 250 feet of potentially suitable tricolored blackbird nesting habitat occurring along Coyote Creek. The project applicant shall conduct surveys for tricolored blackbirds within 250 feet of this habitat, where visual access is possible, prior to start of construction following protocols in Condition 17 in Chapter 6 of the SCVHCP. Such protocols include the following:
  - Prior to any ground disturbance, a qualified biologist shall complete a background assessment to determine if there has been nesting at the site or near the site in the past 5 years. This includes checking the CNDDB, contacting local experts, and looking for evidence of historical nesting (i.e., old nests).
  - If nesting in the past 5 years is not evident, the qualified biologist shall conduct a preconstruction survey in areas identified in the habitat survey as supporting potential tricolored blackbird nesting habitat. Surveys shall be made at the appropriate times of year when nesting use is expected to occur and shall document the presence or absence of nesting colonies of tricolored blackbird. Surveys shall conclude no more than 2 calendar days prior to construction, per Condition 17 of Chapter 6 in the SCVHCP.
  - Should a nesting colony of tricolored blackbirds be located, a 250-foot construction-free buffer shall be established from the edge of all hydric vegetation associated with the nest site and the buffer shall be avoided, and the CDFW and USFWS shall be notified immediately.
  - If construction occurs in the project site during the nesting season and when the 250-foot buffer is in place around active nesting habitat, a qualified biologist shall conduct periodic monitoring of the site to confirm that the 250-foot buffer is enforced. The biologist shall have the authority to increase the buffer size if needed based on tricolored blackbird behavior at the active nesting area.
  - If active tricolored blackbird nesting occurs within 250 feet of the project site and offsite utility alignment areas and construction occurs during the active nesting period resulting in the need for a buffer, the qualified biologist shall conduct training for construction personnel in avoidance procedures, buffer zones, and safety protocols to verify no impacts to the nest.

3.4.5.2 Western Burrowing Owls

The following project design measures will confirm that burrowing owls will not be harmed by construction activities. The SCVHCP provides applicable measures to work at locations where burrowing owl may occur, including survey methodologies, and includes protocols if burrowing owls need to be excluded or if unoccupied burrows need to be collapsed. Completion of the following measures, including the payment of SCVHCP fees, will reduce the potential impacts to burrowing owls to a less than significant level.

- BIO-2.1: To mitigate impacts to occupied burrowing owl habitat, the project applicant shall pay the applicable burrowing owl fee as specified in the SCVHCP for each acre of occupied burrowing owl nesting habitat impacted as a result of project buildout. Fees shall also be required from the loss of foraging habitat on the annual grassland offsite (approximately 64.5 acres; Zone A fees).
- BIO-2.2: The project applicant shall conduct preconstruction surveys to ascertain whether burrowing owls occupy burrows on the site and along the utility alignments offsite prior to construction. The preconstruction surveys shall be performed by a qualified biologist and shall consist of a minimum of two surveys, with the first survey no more than 14 days prior to initial construction activities (i.e. vegetation removal, grading, excavation, etc.) and the second survey conducted no more than 2 days prior to initial construction activities. If no burrowing owls or fresh sign of burrowing owls are

observed during preconstruction surveys, construction may continue. However, if a burrowing owl is observed during these surveys, occupied burrows shall be identified by the monitoring biologist and a buffer shall be established, as follows:

  - If an active nest is found, a qualified biologist shall establish a 250-foot non-disturbance buffer around all nest sites. If the biologist determines that the nest is vacant, the non-disturbance buffer zone may be removed, in accordance with measures described in the SCVHCP. The biologist shall supervise hand excavation of the burrow to prevent reoccupation only after receiving approval from the wildlife agencies (CDFW and USFWS) in accordance with Chapter 6, Condition 15 of the SCVHCP.
  - For permission to encroach within 250 feet of such burrows during the nesting season (February 1st through August 31st), an Avoidance, Minimization, and Monitoring Plan shall be prepared and approved by the City and the wildlife agencies prior to such encroachment in accordance with Chapter 6 of the SCVHCP.

- BIO-2.3: Should a burrowing owl be located during the non-breeding season (September through January), a 250-foot buffer shall be established, and construction activities shall not be allowed within the 250-foot buffer of the active burrow(s) used by any burrowing owl unless the following avoidance measures are adhered to:
  - A qualified biologist shall monitor the owls for at least 3 days prior to construction to determine baseline foraging behavior (i.e., behavior without construction).
  - The same qualified biologist shall monitor the owls during construction. If the biologist determines there is a change in owl nesting and foraging behavior as a result of construction activities, these activities shall cease within the 250-foot buffer.
  - If the owls are gone from the burrows for at least 1 week, the project applicant may request approval from the habitat agency to excavate all usable burrows within the construction area to prevent owls from reoccupying the site. After all usable burrows are excavated, the buffer zone shall be removed, and construction may continue.
- BIO-2.4: In the event the voluntary relocation of site burrowing owls does not occur (defined as owls having vacated the site for 10 or more consecutive days), the project applicant can request permission to engage in passive relocation during the non-breeding season through the standard SCVHCP application process (Section 6.8 of the SCVHCP). If passive relocation is granted, additional measures may be required by the Habitat Agency.
  If the owls voluntarily vacate the site for 10 or more consecutive days, as documented by a qualified biologist, the project applicant could seek permission from the Santa Clara Valley Habitat Agency to have the qualified biologist take measures to collapse vacated and other suitable burrows to confirm that owls do not recolonize the site, in accordance with the SCVHCP.

3.4.5.3 Riparian and Wetland Habitats

Impacts to riparian habitats or areas regulated by the USACE, RWQCB, or CDFW would be considered significant. The following avoidance and minimization measures and compensation, consistent with the SCVHCP (Conditions 3, 4, and 12 from Chapter 6) are included in the project to reduce impacts to a less than significant level.

- BIO-3.1: Prior to the start of any grading or other soil disturbing activities, the project applicant shall be required to prepare a Stormwater Pollution Prevention Plan consistent with the City's National Pollutant Discharge Elimination System C3 provisions.
- BIO-3.2: A qualified biological monitor shall visit the project site daily during utility line construction in the vicinity of the wetland to verify that BIO-3.1 through -3.5 are being fully implemented and are effective.
- BIO-3.3: Removal of wetland vegetation and/or trees for the installation of the utility line shall be limited to the minimum extent required.

- BIO-3.4: The project applicant shall verify that all seed mixtures used for revegetation of the impacted wetland area shall be locally native or sterile nonnative species only. No invasive non-native plant species shall be used for revegetation.
- BIO-3.5: The project applicant shall comply with all applicable laws and regulations regarding requirements of the CDFW, U.S. Army Corps of Engineers (USACE), and RWQCB for aspects of the project, if any, which fall within those agencies' respective purview, including obtaining any permits required for the construction of the utility lines in the offsite infrastructure alignment areas, as well as compliance with any additional conditions attached to any required permits and monitoring requirements (if any).

3.4.5.4 Trees

The following project design measure shall be implemented to reduce impacts to trees (that may be retained) from project construction to a less than significant level. All project design measures for impacts to trees that may be retained are subject to agreement with the Director of the Department of Planning, Building and Code Enforcement in accordance with the provisions of the City's Tree Preservation Ordinance.

- BIO-4.1: The project applicant, in consultation with a certified arborist or biologist, shall submit a Tree Protection Plan (TPP) to the Supervising Environmental Planner of the Department of Planning, Building, and Code Enforcement for trees to be preserved. The TPP shall include, but is not limited to, the following:
  - Number of trees and location of trees to be protected
  - Final landscaping proposal
  - Tree Protection Zone (TPZ)
  - Size and location of TPZ
  - Specific recommendation and suggestions or recommendation for each TPZ if applicable
  - Maintenance methodology for tree protection zones during the entire demolition and construction period
  - Irrigated schedule
  - Pruning schedule for preserved trees, if applicable
  - Herbicides and other products recommended to be used on preserved trees

3.4.5.5 General Measures

The following general measure shall be implemented:

- BIO-5.1: A worker environmental awareness program biological resources module will be conducted for onsite construction personnel prior to the start of construction activities. The module will explain the Applicant Proposed Measure (APM) and any other measures developed to prevent impacts on special-status species, including marsh species (salt marsh harvest mouse and rails) and nesting birds. The module will also include a description of special-status species and their habitat needs, as well as an explanation of the status of these species and their protection under ESA, CESA, and other statutes. A brochure will be provided with color photos of sensitive species, as well as a discussion of any permit measures. A copy of the program and brochure will be provided to California Public Utilities Commission at least 30 days prior to the start of construction for project files. This APM also includes the following measures:
  - Environmental Inspector: A qualified Environmental Inspector will verify implementation and compliance with all APMs. The Environmental Inspector will have the authority to stop work or determine alternative work practices where safe to do so, as appropriate, if construction activities are likely to affect sensitive biological resources.

  - Litter and Trash Management: Food scraps, wrappers, food containers, cans, bottles, and other trash from the project area will be deposited into closed trash containers. Trash containers will be removed from the project work areas at the end of each working day unless located in an existing substation, potential staging area, or the switching station site.
  - Parking: Vehicles and equipment will be parked on pavement, existing roads, and previously disturbed or developed areas, or work areas as identified in this document.
  - Work Areas, Pull Sites, Staging Areas, Helicopter Landing Zones: Work, staging, vehicle parking, and equipment parking areas must be contained within the final areas that are negotiated with the relevant property owners, or as noted above.
  - Wetland and Waters Avoidance: Wetlands and waters as identified in the Aquatic Resources Delineation Report must be avoided during all work activities.
  - Pets and Firearms: No pets or firearms will be permitted at the project site.
- BIO-5.2: An aquatic resources delineation covering the entire project area will be conducted. All features that are determined to be jurisdictional under the resource agencies will either be avoided, or the relevant permits will be obtained for project impacts. Work will not occur within these jurisdictional features until the relevant permits have been obtained.

3.4.6 References

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3.5 Cultural Resources

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5?	☐	☐	☒	☐
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to 15064.5?	☐	☐	☒	☐
c) Disturb any human remains, including those interred outside of dedicated cemeteries?	☐	☐	☒	☐

Environmental checklist established by CEQA Guidelines, Appendix G.

3.5.1 Setting

The San José Data Center (SJC02) will be located within the City of San José on an approximately 64.5-acre site and will consist of two data center buildings totaling over approximately 479,000 square feet of space. The project will include 40 3.0-megawatt (MW) standby diesel generators (20 per building) to provide electrical power to support the information technology (IT) load during utility outages or certain onsite electrical equipment interruptions or failures, as well as the installation of 20 3-MW emergency diesel generators at each building. In addition to the 40 backup generators, the project will include two administrative generators, rated at 1.25 MW and 0.5 MW, to support administrative functions during an interruption in the normal delivery of electrical power from the utility. The facility design will not require more than approximately 99 MW of electrical power, which will be used only for backup power for onsite data center operations in the event of an electrical outage by Pacific Gas & Electric (PG&E), although the estimated load is 92 MW.

The land has been used historically for farming since the early 1920s but is not currently in agricultural use. There are two residences, a mobile home, and a storage shed/warehouse currently onsite, which will be demolished as part of the SJC02 project. To the north of the project site are the San José/Santa Clara Regional Wastewater Treatment Plant sludge drying beds, to the south is Highway 237, to the west is the Los Esteros Critical Energy Facility, a PG&E substation, and to the east is Coyote Creek. The project is anticipated to begin construction in the 3rd quarter of 2020, with operations beginning in the 1st quarter of 2022.

The City of San José (City) is situated within the valley created by the Santa Cruz and Gavilan Mountains on the west and the Diablo Range on the east. The Santa Clara Valley is a structural valley: it was created by the uplifting mountains, as opposed to erosional forces (NPS 2007; SFEI 2010).

An analysis of historical maps and field notes indicates that the project site was used for agricultural purposes as early as the late 19th century. PaleoWest reviewed several historical USGS maps including the San José, CA (1889, 1947, 1953a) and the Milpitas, CA (1961, 1968, 1973, 1980) quadrangles. Based on a review of historical USGS maps, the project site was settled as early as 1889 with buildings, likely associated with farming, and roads in the surrounding area (USGS 1889). Between 1889 and 1953, depictions of the project site on USGS changed little; however, the 1953 USGS map depicts the project site as farmland being primarily used as an orchard (USGS 1947, 1953b). Two additional buildings are depicted on the USGS map for 1973 that were not depicted in the 1961 and 1968 maps (USGS 1961, 1968, 1973). The project site continued to be shown as orchard land in the 1980 USGS map (USGS 1980). The elevation of the project site ranges between 13 and 17 feet above mean sea level.

The geologic Map of Santa Clara County shows the area in the vicinity of the project site as late Holocene natural levee and floodplain deposits (Qhfp and Qhl) (Helley and Westling 1989). The age and depositional nature of these levee deposits are such that the project site retains the potential for unknown, buried cultural resources despite minor previous ground-disturbing activities at the site.

The project site is located north of downtown San José, about 0.5 mile west of the intersection of Interstate 880 and CA Route 237. Land use in the area was historically agricultural, with the project site occupied by an orchard but now existing as empty fields. To the west of the project site is a water treatment plant. A channelized portion of Coyote Creek riparian corridor is located immediately to the east of the project site.

The project site has been developed since the late 1960s, and the existing structures will be demolished as part of the project, which is anticipated to begin construction in the 3rd quarter of 2020, with operations beginning in the 1st quarter of 2022.

A complete discussion of the prehistoric, ethnographic, and historical setting may be found in Appendix 3.5-A, *Cultural Resource Investigation in Support of the San José Data Center (SJC02) Project*.

3.5.2 Regulatory Setting

3.5.2.1 California Environmental Quality Act

Various laws apply to the evaluation and treatment of cultural resources. The California Environmental Quality Act (CEQA) requires the Lead Agency to evaluate cultural resources by determining whether they meet several sets of specified criteria that make such resources eligible to the California Register of Historical Resources (CRHR). The evaluation then influences the analysis of potential impacts to such historical resources and the mitigation(s) that may be required to ameliorate any such impacts.

CEQA guidelines define significant cultural resources under two regulatory definitions: historical resources and unique archaeological resources. A historical resource is defined as meeting one or more of the following, per California Code of Regulations (CCR), Title 14, Section [§] 15064.5[a]:

- A resource listed in, or determined to be eligible by the State Historical Resources Commission for listing in, the CRHR
- A resource listed in a local register of historical resources or identified as significant in a historical resource survey meeting the requirements of §5024.1(g) of the Public Resources Code (PRC)
- Any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California, provided the agency's determination is supported by substantial evidence in light of the whole record

Historical resources that are automatically listed in the CRHR include California historical resources listed in or formally determined eligible for the National Register of Historic Places (NRHP) and California Registered Historical Landmarks from No. 770 onward (PRC §5024.1[d]).

Under CEQA, a resource is generally considered to be historically significant if it meets the criteria for listing in the CRHR. In addition to being at least 50 years old, a resource must meet one or more of the following four criteria (PRC, §5024.1):

1) Associated with events that have made a significant contribution to the broad patterns of our history
2) Associated with the lives of persons significant in our past
3) Embodies the distinctive characteristics of a type, period, or method of construction, or represents the work of an important creative individual, or possesses high artistic values
4) Has yielded, or may be likely to yield, information important to history or prehistory

In addition, historical resources must also possess integrity of location, design, setting, materials, workmanship, feeling, and association (CCR, Title 14, §4852[c]).

Even if a resource is not listed or determined to be eligible for listing in the CRHR, CEQA requires the Lead Agency to decide as to whether the resource is a historical resource as defined in PRC, §§5020.1(j) or 5024.1.

In addition to historical resources, archaeological artifacts, objects, or sites can meet CEQA's definition of a unique archaeological resource, even if the resource does not qualify as a historical resource (CCR, Title 14, §15064.5[c][3]). Archaeological artifacts, objects, or sites are considered unique archaeological resources if it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that the resource meets any of the following criteria (PRC, §21083.2[g]):

- Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information
- Has a special and particular quality such as being the oldest of its type or the best available example of its type
- Is directly associated with a scientifically recognized important prehistoric or historic event or person

To determine whether a proposed project may have a significant effect on the environment (CEQA defines historical resources to be a part of the environment), the project's construction and operational impacts are analyzed to determine if a substantial adverse change in the significance of historical or unique archaeological resources will occur. The magnitude of an impact depends on the following:

- Historical resource(s) affected
- Specific historical significance of any potentially impacted historical resource(s)
- How the historical resource(s) significance is manifested physically and perceptually
- Appraisals of those aspects of any historical resource's integrity that figure importantly in the manifestation of the resource's historical significance
- How much the impact will change historical resource integrity appraisals

CCR, Title 14, §15064.5(b), the CEQA Guidelines, define a substantial adverse change as "physical demolition, destruction, relocation or alteration of the resource or its immediate surroundings such that the significance of an historical resource would be materially impaired."

3.5.2.2 Resource Types

Three broad classes of cultural resources are considered in this section: prehistoric, ethnographic, and historic. Those cultural resources determined eligible to the CRHR are called historical resources and are further defined under state law as buildings, sites, structures, objects, areas, places, records, manuscripts, and tribal cultural resources (CCR, Title 14, §§4852a, 5064.5(a)(3); PRC, §§5020.1(h,j), 5024.1[e][2, 4], 21074).

Prehistoric archaeological resources are those materials relating to prehistoric human occupation and use of a particular environment. These resources may include sites and deposits, structures, artifacts, rock art, trails, and other traces of Native American human activity. In California, the prehistoric period began over 12,000 years ago and extended through the 18th century until 1769, when the first Europeans settled in California.

Ethnographic resources are those materials important to the heritage of a particular ethnic or cultural group, such as Native Americans or African, European, or Asian immigrants. They may include traditional

resource collecting areas, ceremonial sites, topographic features, value-imbued landscapes, cemeteries, shrines, or neighborhoods and structures. Ethnographic resources are variations of natural resources and standard cultural resource types. They are subsistence and ceremonial locales and sites; structures; objects; and rural and urban landscapes assigned cultural significance by traditional users. The decision to call resources ethnographic depends on whether associated peoples perceive them as traditionally meaningful to their identity as a group and the survival of their lifeways.

Historical period resources are those materials, archaeological and architectural, usually but not necessarily associated with Euro-American exploration and settlement of an area and the beginning of a written historical record. They may include archaeological deposits; sites; structures; trail and road corridors; artifacts; or other evidence of historical human activity. Under federal and state requirements, historical period cultural resources must be greater than 50 years old to be considered of potential historical importance. A resource less than 50 years of age may be historically significant if the resource is of exceptional importance. The Office of Historic Preservation endorses recording and evaluating resources over 45 years of age to accommodate a 5-year lag in the planning process.

3.5.2.3 County of Santa Clara

On October 17, 2006, the Board of Supervisors adopted the Historic Preservation Ordinance, enacting Division C17 of the Santa Clara County Ordinance Code. The Historical Preservation Ordinance was adopted for the preservation, protection, enhancement, and perpetuation of resources of architectural, historical, and cultural merit within Santa Clara County and to benefit the social and cultural enrichment, and general welfare of the people (County of Santa Clara 2006).

The County of Santa Clara maintains a historical resources inventory and has established criteria for designation of historical resources as landmarks which meet the following designation criteria:

a. *Fifty years or older.* If less than 50 years old, sufficient time must have passed to obtain a scholarly perspective on the events or individuals associated with the historic resource and/or the historic resource is a distinctive or important example of its type or style; and

b. *Retains historic integrity.* If a historic resource was moved to prevent demolition at its former location, it may still be considered eligible if the new location is compatible with the original character of the property; and

c. Meets one or more of the following criteria of significance:

    1) Associated with events that have made a significant contribution to the broad patterns of local or regional history, or the cultural heritage of California or the United States;

    2) Associated with the lives of persons important to local, California or national history;

    3) Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of a master or possesses high artistic values; or

    4) Yielded or has the potential to yield information important to the pre-history or history of the local area, California, or the nation.

3.5.2.4 City of San José General Plan

Historical and cultural resources are addressed in Lu-13 thru Lu-16 in Chapter 6 of the *Envision San José 2040 General Plan*. The primary General Plan goal is to preserve historically and archaeologically significant structures, sites, districts, and artifacts in order to promote a greater sense of historical awareness and community identity, and to enhance the quality of urban living (City of San José 2018).

The City of San José is considered to be a “Certified Local Government,” which gives authority from the California Office of Historic Preservation to develop and maintain its own historical preservation program. According to the City’s *Historic Preservation Ordinance* (Municipal Code Chapter 13.48) adopted in 1975 and amended since, the City of San José is authorized to maintain an inventory of historical

resources, establish a historical landmarks commission, preserve historical properties using landmark designation process, require historical preservation permits for additions or alternation to City Landmarks or buildings within City Historic Districts, and to provide financial incentives through the Historic Property Contracts program. (City of San José 2019).

The City of San José maintains a register of City Landmarks, Historic Districts, and Structures of Merit. The City of San José's Historic Preservation Ordinance (Chapter 13.48 of the Municipal Code) defines a resource as a City Landmark if it has "special historical, architectural, cultural, aesthetic or engineering interest or value of an historical nature" and falls into one of the following four categories of structure:

1) An individual structure or portion thereof
2) An integrated group of structures on a single lot
3) A site, or portion thereof
4) Any combination thereof (Sec. 13.48.020.C)

Under the ordinance, the following is promoted: preservation of old historically or architecturally worthy structures and neighborhoods which impart a distinct aspect to the City of San José and which serve as visible reminders of the historical and cultural heritage of the City of San José, the state, and the nation. This preservation is promoted for the following reasons:

- To stabilize neighborhoods and areas of the City
- To enhance, preserve, and increase property values
- To carry out the goals and policies of the City's general plan
- To increase cultural, economic, and aesthetic benefits to the City and its residents
- To preserve, continue, and encourage the development of the City to reflect its historical, architectural, cultural, and aesthetic value or traditions
- To protect and enhance the City's cultural and aesthetic heritage
- To promote and encourage continued private ownership and utilization of such structures

The landmark designation process itself requires that findings be made that proposed landmarks have special historical, architectural, cultural, aesthetic, or engineering interest or value of an historical nature, and that designation as a landmark conforms with the goals and polices of the General Plan. The following eight factors can be considered to make those findings among other relevant factors:

1) Its character, interest or value as a part of the local, regional, state or national history, heritage, or culture
2) Its location as a site of a significant historical event
3) Its identification with a person or persons who significantly contributed to the local, regional, state or national culture and history
4) Its exemplification of the cultural, economic, social, or historical heritage of the City of San José
5) Its portrayal of the environment of a group of people in an era of history characterized by a distinctive architectural style
6) Its embodiment of distinguishing characteristics of an architectural type or specimen
7) Its identification as the work of an architect or master builder whose individual work has influenced the development of the City of San José
8) Its embodiment of elements of architectural or engineering design, detail, materials, or craftsmanship which represents a significant architectural innovation or which is unique

Evaluation of potential City Landmarks is conducted based on both the subjective criteria listed herein and on a numerical tally system that rates structures based on visual quality or design; history and association; environment and context; integrity; reversibility; interior quality and conditions; and

NRHP/CRHR status. A points-based rating system is used; scores over 33 suggest that the building should be evaluated for City Landmark status or the CRHR.

3.5.3 Findings

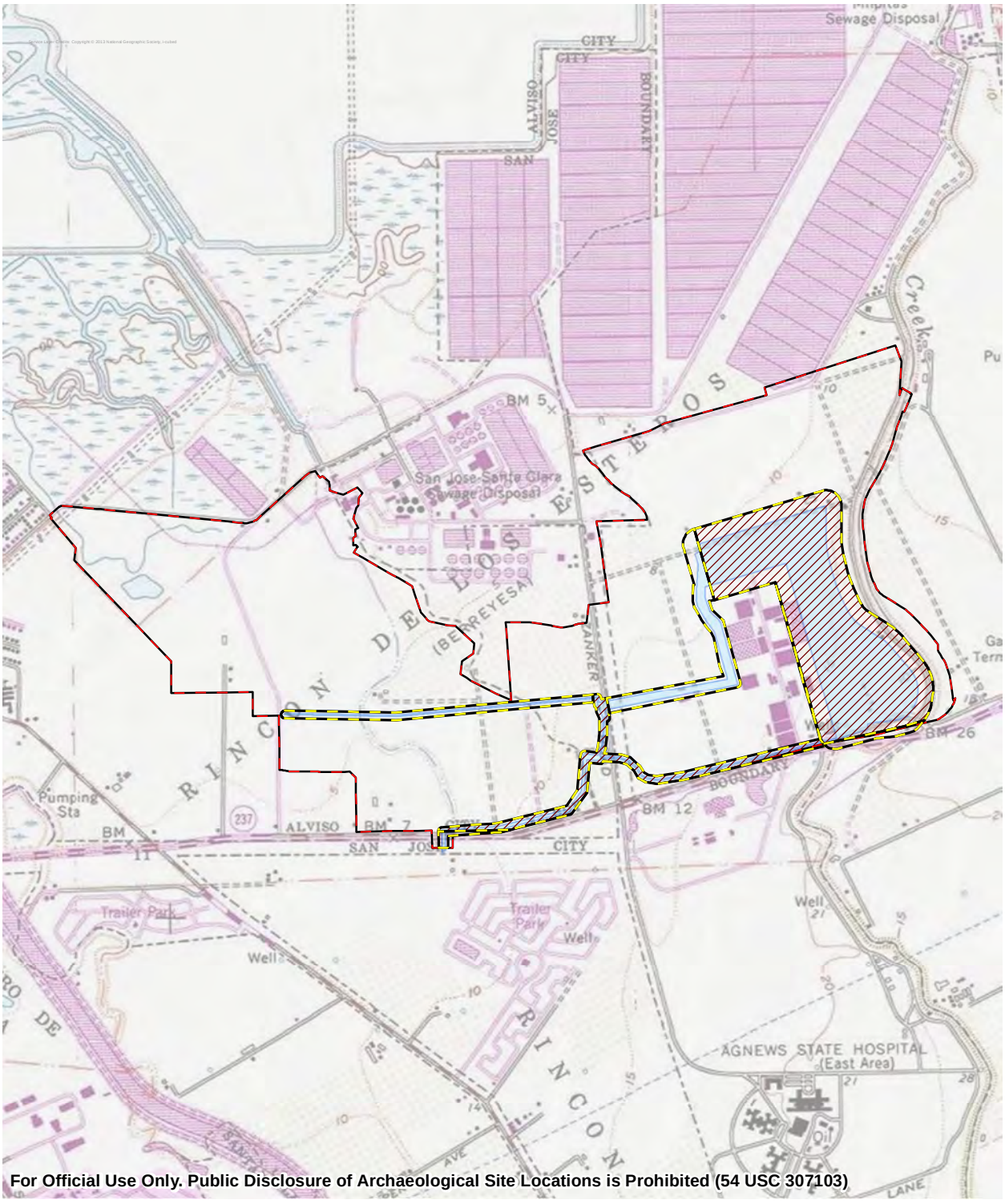
3.5.3.1 Prehistoric and Ethnographic Resources

A pedestrian archaeological survey was conducted inclusive of the project site, linear facility routes, and extending out no less than 200 feet around project components and 50 feet to either side of the right-of-way of the project linear facility routes per California Energy Commission required survey methods (Figure 3.5-1). However, due to lack of accessibility, only the portion of the proposed linear routes along Zanker Road and the southernmost linear route were able to be surveyed completely. No prehistoric or ethnographic resources were identified. A record search was conducted by PaleoWest Archaeology at the Northwest Information Center at Sonoma State University in May 2019. This inventory effort included the Project site and a one-mile radius around the Project site, collectively termed the Project study area. The record search indicated that 261 cultural resources studies were conducted within 1 mile of the Project site (Figure 3.5-1), and 45 of those studies include the Project site. At least two studies that included subsurface archaeological testing were conducted within 0.25 mile of the Project site. No previously identified cultural resources were found in the Project site; however, 10 prehistoric sites, and two multicomponent (prehistoric and historical sites) were recorded within the surrounding 1-mile buffer (Table 3.5-1).

Table 3.5-1. Prehistoric and Ethnographic Resources 45 Years or Older Within the Project Study Area[a] Project

Primary Number/ Trinomial	Resource Name	Age	Type	Recording
P-41-000409/ CA-SMA-000299	Colma Creek	Prehistoric	Site	1989 (Barb Bocek, Stanford University); 1994 (Carolyn Rice)
P-41-000495/ CA-SMA-000355	Colma Creek/Chestnut	Prehistoric	Site	2000 (Matthew R. Clark, Holman & Associates)
P-43-000025/ CA-SCL-000005	Nelson 339	Prehistoric	Site	1912 (Loud); 1984 (Basin Research); 2012 (Jack Meyer, Jennifer Thomas, FWARG)
P-43-000026/ CA-SCL-000006	Marcello's Enclosure	Prehistoric	Site	1912 (Loud, University of California); 1980 (Morris, Johnson, Cabrillo College)
P-43-000277/ CA-SCL-000268/H	4-SCL-268	Prehistoric, Historic	Site	1976 (ACRS); 1978 (Dietz); 1980 (Morris, Fenenga, Johnson, Cabrillo College)
P-43-000448/ CA-SCL-000447/H	formerly known as CA-SCL-6E	Prehistoric, Historic	Site	1980 (C. Desgrandchamp, D. Chavez)
P-43-000486/ CA-SCL-000485	[none]	Prehistoric	Site	1982 (Cartier, Archaeological Resource Management)
P-43-000529/ CA-SCL-000528	Nolte #1	Prehistoric	Site	1983 (P.M. Ogrey, R. M. Harmon, Basin Research Associates, Inc.); 1983 (R.S. Wiberg, M. R. Clark, Holman & Associates); 2010 (J. Grant, A. Reynolds, ICF International); 2015 (H. Koenig, ESA)
P-43-000623/ CA-SCL-000675	"Coyote Creek Site"	Prehistoric	Site	1989 (Robert Cartier, Archaeological Resource Management)
P-43-000624/ CA-SCL-000677	The 237/880 Site	Prehistoric	Site	1989 (R. Cartier, Archaeological Resource Management); 1995 (John Holson, Pacific Legacy); 2015 (Phil Kaijankoski, FWARG); 2016 (Eric Wohlgemuth, FWARG)
P-43-001060/ CA-SCL-000678	ARCO Burials	Prehistoric	Site	1989 (A. Banet, M. Fong, M. Tannam, Basin Research Associates)
P-43-003145	EB6 Oyster Shell	Prehistoric	Site	2015 (N. Scher, Far Western Anthropological Research Group, Inc.)

[a] Project Study Area for Table 3.5-1 includes the project site and the surrounding 1-mile buffer.



For Official Use Only. Public Disclosure of Archaeological Site Locations is Prohibited (54 USC 307103)

LEGEND

- Project Location
- Archaeological Survey Area
- Architectural Survey Area
- Areas Accessible for Archaeological Survey

North

0 1,000 2,000

Approximate scale in feet

Figure 3.5-1
Survey Coverage Map
San José Data Center (SJC02)
San José, California

JACOBS

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3.5.3.2 Built Environment Resources

A review of the City's Historic Resources Inventory (City of San José 2016), the *Envision San José General Plan* (City of San José 2018), *County of Santa Clara Historic Context Statement* (County of Santa Clara 2012), County of Santa Clara *Heritage Resource Inventory* (County of Santa Clara 2018), and other sources for historical information on built environment resources was conducted. In addition, the NRHP, CRHR, Historic American Building Survey, Historic American Engineering Record, Historic American Landscape Survey, and other repositories of documentation of historical resources were also reviewed. In total, 26 built environment resources were identified within approximately 1 mile of the project (four within the Project site and 22 within the Project Study Area); however, none of these resources were recommended as eligible for either the CRHR or the NRHP.

The records search at the Northwest Information Center at Sonoma State University performed in May 2019 identified 22 historical built environment resources within 1 mile of the project. These resources are described in Table 3.5-2.

A complete discussion of the 22 historical built resources identified in the 1-mile buffer may be found in Appendix 3.5-A, *Cultural Resource Investigation in Support of the San José Data Center (SJC02) Project*.

Table 3.5-2. Built Environment Resources 45 Years or Older Within the Project Study Area[a]

Address	APN	Year Built	Eligibility
1500 Barber Lane	086-01-018, 086-01-019	c.1861-1940	3S (recommended eligible based on survey)
Magnolia Drive (no address)	086-02-077, 086-02-072, 086-02-068, 086-02-067	c. 1920	6Z (not eligible)
Barber Lane (no address)	086-02-091	c. 1945	6Z (not eligible)
Barber Lane (no address)	086-02-091	c. 1930-1940s	6Z (not eligible)
701 S. Abel Street	086-05-025	Range of ages	6Z (not eligible)
783 Milpitas – Alviso Road	22-54-009	c. 1920-1950	6Z (not eligible)
Alviso – Milpitas Road (no address)	22-90-026	c. 1950-1980s	6Z (not eligible)
Alviso – Milpitas Road (no address)	22-54-020	c. 1975	6Z (not eligible)
4271 North First Street	097-01-027, 097-50-001, 097-01-028, 097-02-042, 097-02-026	c. 1925	6Z (not eligible)
Milpitas Alviso Road (eastern end)	22-54-017	c. 1915	6Z (not eligible)
Milpitas Alviso Road (eastern end)	22-56-009	c. 1970s	6Z (not eligible)
Milpitas Alviso Road (eastern end)	22-56-009	c. 1970s	6Z (not eligible)
Northeast Corner of First Street and Hwy 237	15-30-104	c. 1984	6Z (not eligible)
3990 Zanker Road	097-04-020	c. 1982	6Z (not eligible)
Hwy 237 near Barber Lane	N/A	c. 1978	6Z (not eligible)
Horizon Circle	15-34-043	c. 1980	6Z (not eligible)
Hwy 237 and North First Street	N/A	c. 1929	6Z (not eligible)
Alviso – Milpitas Road (no address)	15-30-099	c. 1920	6Z (not eligible)

Table 3.5-2. Built Environment Resources 45 Years or Older Within the Project Study Area[a]

Address	APN	Year Built	Eligibility
775 Barber Lane	N/A	c. 1988	6Z (not eligible)
Boots Road	N/A	c. 1920	6Z (not eligible)
3544 N. First Street	97-07-003	1885	6Z (not eligible)
700 Los Esteros Road	15-31-024	1956	3D (recommended eligible)

[a] Project Study Area for Table 3.5-2 includes the project site and the surrounding 1-mile buffer.

Notes:

c. = circa
N/A = not applicable

The architectural study area used for this project includes properties within a one-parcel boundary of the project site based on the California Energy Commission guidance. The architectural study area is established to analyze the project's potential for impacts to historical resources. A windshield survey was completed for the adjacent parcels within the study area. The records search at the Northwest Information Center at Sonoma State University performed in May 2019 identified four historical built environment resources within the project site. No additional properties over 45 years were identified within the one-parcel buffer. The resources within the project site include structures at 1515, 1591, 1625, and 1657 Alviso – Milpitas Road. Within the project site, two of the four originally recorded buildings are still standing. These buildings are identified in Table 3.5-3 and discussed further in Sections 3.5.3.3 through 3.5.3.6.

Table 3.5-3. Built Environment Resources 45 Years or Older Within the Project Site

Address	APN	Year Built	Description
1515 Alviso – Milpitas Road	N/A	c. 1980	No longer extant
1591 Alviso – Milpitas Road	015-31-054	c. 1920	Residential home and farm staging area
1625 Alviso – Milpitas Road	N/A	c. 1930	No longer extant
1657 Alviso – Milpitas Road	015-31-054	c. 1923	One-story Craftsman Prairie-style house

Notably, the project site was the subject of a 2017 CEQA Environmental Impact Report as an element of the "237 Industrial Center Project" (City of San José 2017) ("2017 EIR"). The analysis in the 2017 EIR concluded that no historical resources were present but that geoarchaeological conditions indicated theoretical potential for buried resources to be present. Therefore, several mitigation measures adopted during the EIR process will be incorporated into this project as design features to lower potential significant impacts to a level below significance.

3.5.3.3 1515 Alviso – Milpitas Road

This property, P-43-003605 was first evaluated by Caltrans District 4 in 1985 and was recommended as not eligible for the NRHP (King 1985).

PaleoWest Archaeology revisited the property on July 16, 2019, and determined that the property is no longer extant.

3.5.3.4 1591 Alviso – Milpitas Road

Centered along the frontage of a large agricultural site north of Highway 237, this house and related ancillary buildings serve as a residential use and farm staging area for the ranch site operated by Cilker Orchards. Mostly hidden within a massing of large shrubs and trees, the one-story National-style vernacular house was built in the 19th century and may have been placed on this site as early as the mid-1890s when owned by William Boots. At that time, buildings are first identified on this site on the first USGS map for this area, surveyed in 1895 and published in 1899. The farm was then 79 acres in size just outside the town of Alviso. Now 65.4 acres in size (due to acreage loss resulting from the Coyote Creek channelization), the L-shaped ranch was developed with orchards during the 20th century and converted to row crops during the 1970s.

This property, P-43-003578, was first evaluated by Caltrans District 4 in 1984 and was recommended as not eligible for the NRHP (King 1984a). This property was recorded and evaluated for inclusion on the CRHR and as a San José City Landmark (Local Register) by Franklin Maggi of Archives & Architecture, Inc. in July of 2016. The property was recommended as ineligible for inclusion on the CRHR or the Local Register (Maggi 2016).

PaleoWest Archaeology revisited the property on July 16, 2019. The current condition of the property appears to be largely unchanged, with the exception of additional deterioration from that observed during the 2016 field visit.

Based on research and field observations, there is no additional information or changes to the property that could potentially alter the 1984 and 2016 eligibility recommendations made by Caltrans District 4 and Archives & Architecture, Inc. PaleoWest Archaeology concurs with the recommendation made by Caltrans District 4 and Archives & Architecture, Inc. that this property does not appear to be eligible for inclusion on the NRHP, the CRHR, or the Local Register under any criteria.

3.5.3.5 1625 Alviso – Milpitas Road

This property, P-43-003579, was first evaluated by Caltrans District 4 in 1984 and was recommended as not eligible for the NRHP (King 1984b).

PaleoWest Archaeology revisited the property on July 16, 2019, and determined that the property is no longer extant.

3.5.3.6 1657 Alviso – Milpitas Road

The building located at 1657 Alviso-Milpitas Road is a one-story Craftsman Prairie-style house with Mission Revival influences built circa 1929 to 1930 for the farming family (discussed in Section 3.5.3.4) who operated a large pear orchard just outside the town of Alviso. As previously mentioned, the ranch was reduced in size from 79 acres to 65.4 acres due to acreage loss from the Coyote Creek channelization. The remaining L-shaped ranch was mostly converted to row crops during the 1970s.

This property, P-43-003585, was first evaluated by Caltrans District 4 in 1984 and was recommended as not eligible for the NRHP (King 1984c). This property was recorded and evaluated for inclusion on the CRHR and as a San José City Landmark (Local Register) by Franklin Maggi of Archives & Architecture, Inc. in July of 2016. The property was recommended as ineligible for inclusion on the CRHR or as a City of San José Landmark; however; it was found to be eligible for inclusion on the City of San José Historic Resources Inventory (Maggi 2016).

PaleoWest Archaeology revisited the property on July 16, 2019. The current condition of the property appears to have deteriorated from what was observed during the 2016 field visit. The building appears to be abandoned, and many of the windows have been destroyed and infilled with plywood.

Based on research and field observations, there is no additional information or changes to the property that could potentially alter the 1984 and 2016 eligibility recommendations for the NRHP, CRHR, or as a City of San José Landmark made by Caltrans District 4 and Archives & Architecture, Inc. PaleoWest Archaeology concurs with the recommendation made by Caltrans District 4 and Archives & Architecture, Inc. that this property does not appear to be eligible for inclusion on the NRHP, CRHR, or as a City Landmark under any criteria.

PaleoWest does not concur with the 2016 recommendation that the property is eligible for inclusion on the City of San José Historic Resources Inventory. In subsequent years, the property has fallen into neglect, and vandalism has compromised the integrity of the building. While the architect of the building has not been identified, the previous evaluation by Archives & Architecture based part of their evaluation on the assumption that the building was the work of master architects Wolfe & Higgins. No records have been identified to confirm this assumption, as was discussed in the 2016 report. With adjustments on the City of San José's Historic Evaluation Sheet, pending discovery of documentation for the involvement of Wolfe & Higgins, the current conditions of the property, and the updated evaluation by PaleoWest staff, P-35-003585 obtains a score of 22.45 for the City of San José's Historic Evaluation criteria and is, therefore, not eligible for the City of San José's Historic Resources Inventory.

3.5.3.7 Native American Consultation and Ethnography

A summary of outreach and consultation to California Native American tribes and an ethnographic context is provided in Section 3.18, Tribal Cultural Resources, and an evaluation of the potential impacts of the project on tribal cultural resources is contained therein as well.

3.5.4 Environmental Impacts and Mitigation Measures

a. Would the project cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?

Less Than Significant Impact. No prehistoric or ethnographic resources were identified within the project site. The record search indicated that no fewer than 261 cultural resources studies were conducted within 1 mile of the project site, of which 45 included portions or all of the project site. At least 8 studies that included subsurface archaeological testing were conducted within 0.25 mile of the project site (S-004292, S-006015, S-006122, S-006538, S-19063, S-037096, S-046337, and S-046753). For additional information regarding these surveys, please see Appendix X3.5A Cultural Resources Technical Report.

Background research suggests that the project site is located approximately 2.5 miles southwest of the ethnographic village of *Ulístac* (Brown 1994).

The geologic Map of Santa Clara County shows the area of the project as late Holocene natural levee and floodplain deposits (Qhfp and Qhl) (Helley and Westling 1989). The age and depositional nature of these deposits are such that the project site retains the potential for unknown, buried cultural resources despite previous ground-disturbing activities at the site.

As a result of the extent of ground-disturbing activities as part of the project, there is potential to impact as-yet unknown, buried archaeological resources in those parts of the project site that encounter native, undisturbed sediments. If these resources were to be exposed or destroyed, it would be considered a significant impact. Based on the potential of encountering a buried resource in the project site, the project will include a design measure to develop and implement a Worker Environmental Awareness Program (WEAP) prior to ground-disturbing activities. The WEAP, discussed in Section 2.5.3 of the Project Description, includes establishment of protocols to be implemented if inadvertent discoveries of buried cultural resources or human remains are encountered during construction.

According to Policy ER-10.1 in the *Envision San José General Plan*, proposed development sites that have been identified as archaeologically or paleontologically sensitive, "require investigation during the planning process in order to determine whether potentially significant archaeological or

paleontological information may be affected by the project and then require, if needed, that appropriate mitigation measures be incorporated into the project design" (City of San José 2018)

In accordance with General Plan Policy ER-10.1 (City of San José 2018) and consistent with the findings and conditions of the 2017 EIR, recommended measures to be implemented by the proposed project. With implementation of the following mitigation measures, incorporated into the project as design features, and compliance with applicable laws and regulations that govern cultural resources, the proposed project would not result in significant impacts to subsurface archaeological resources.

b. Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?

Less than Significant Impact. Please see response to question (a).

c. Would the project disturb any human remains, including those interred outside of formal cemeteries?

Less Than Significant Impact. As discussed in question (a), as a result of the extent of ground-disturbing activities as part of the project, there is potential to impact buried cultural resources, including human remains. The protocols included in the WEAP will provides guidance should human remains be discovered during construction. Implementation of the WEAP (see Section 2.5.3) will reduce impacts to unknown human remains to less than significant.

Previously Identified Measures Incorporated as Project Design Features:

CUL-1.1: Prior to the issuance of any grading permit, the project will be required to complete subsurface testing to determine the extent of possible resources onsite. Subsurface testing shall be completed by a qualified archaeologist. Based on the findings of the subsurface testing, an archaeological resources treatment plan shall be prepared by a qualified archaeologist and submitted to City of San José for approval prior to the issuance of grading permits.

CUL-1.2: The project will implement the approved treatment plan prior to the issuance of grading permits. The approved treatment plan will utilize data recovery methods to reduce impacts on subsurface resources.

CUL-1.3: All prehistoric and historic-era features identified during exploration will be evaluated by a qualified archaeologist based on the California Register of Historical Resources criteria consistent with the archaeological treatment plan. After completion of the field work, all artifacts will be cataloged, and the appropriate forms will be completed and filed with the Northwest Information Center of the California Archaeological Inventory at Sonoma State University by the qualified archaeologist in coordination with the City of San José prior to issuance of occupancy permits (temporary or final).

CUL-1.4: In the event that prehistoric or historic resources are encountered during excavation and/or grading of the site, all activity within a 50-foot radius of the find shall be stopped, the City of San José shall be notified, and a qualified archaeologist will examine the find. The archaeologist will evaluate the find(s) to determine if they meet the definition of a historical, archaeological, or tribal cultural resource and make appropriate recommendations regarding the disposition of such finds prior to issuance of building permits for any construction occurring within the above-referenced 50-foot radius. If the finds do not meet the definition of a historical, archaeological, or tribal cultural resources, no further study or protection is necessary prior to project implementation. If the find(s) does meet the definition of a historical, archaeological, or tribal cultural resource, then it will be avoided by project activities. If avoidance is not feasible, adverse effects to such resources will be mitigated in accordance with the recommendations of the archaeologist. Recommendations will include collection, recordation, and analysis of any significant cultural materials. A report of findings

documenting any data recovery would be submitted to the City of San José, NAHC (tribal cultural resources) and the Northwest Information Center.

The project applicant will ensure that construction personnel does not collect or move any cultural material and will ensure that any fill soils that may be used for construction purposes does not contain any archaeological materials.

CUL-1.5: In the event that human remains are discovered during excavation and/or grading of the site, all activity within a 50-foot radius of the find will be stopped. The Santa Clara County Coroner shall be notified immediately and will make a determination as to whether the remains are of Native American origin or whether an investigation into the cause of death is required. If the remains are determined to be Native American, the Coroner shall notify the Native American Heritage Commission (NAHC) within 24 hours of the identification. Once the NAHC identifies the most likely descendants (MLD), the descendants will make recommendations regarding proper burial (including the treatment of grave goods), which will be implemented in accordance with Section 15064.5(e) of the CEQA Guidelines. The archaeologist will recover scientifically-valuable information, as appropriate and in accordance with the recommendations of the MLD. A report of findings documenting any data recovery shall be submitted to the City of San José and the Northwest Information Center.

New Proposed Mitigation Measures: None.

3.5.5 References

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3.6 Energy

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources during project construction or operation?	☐	☐	☒	☐
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	☐	☐	☐	☒

Environmental checklist established by CEQA Guidelines, Appendix G.

3.6.1 Setting

The San José Data Center (SJC02) will be located within the City of San José (City) on an approximately 64.5-acre site and will consist of two data center buildings totaling over approximately 479,000 square feet of space. The project will include 40 3.0-megawatt (MW) standby diesel generators (20 per building) to provide electrical power to support the information technology (IT) load during utility outages or certain onsite electrical equipment interruptions or failures, as well as the installation of 20 3-MW emergency diesel generators at each building. In addition to the 40 backup generators, the project will include two administrative generators, rated at 1.25 MW and 0.5 MW, to support administrative functions during an interruption in the normal delivery of electrical power from the utility. The facility design will not require more than approximately 99 MW of electrical power, which will be used only for backup power for onsite data center operations in the event of an electrical outage by Pacific Gas & Electric (PG&E), although the estimated load is 92 MW.

The land has been used historically for farming since the early 1920s but is not currently in agricultural use. There are two vacant residences, a mobile home, and a storage shed/warehouse currently onsite, which will be demolished as part of the SJC02 project. To the north of the project site are the San José/Santa Clara Regional Wastewater Treatment Plant sludge drying beds, to the south is Highway 237, to the west is the Los Esteros Critical Energy Facility, a PG&E substation, and to the east is Coyote Creek. The project is anticipated to begin construction in the 3rd quarter of 2020, with operations beginning in the 1st quarter of 2022.

3.6.1.1 Applicable Regulations, Plans, Codes and Policies

Federal

No federal laws, regulations, or standards related to energy apply to the project

State

California Senate Bill 100 (SB 100), The 100 Percent Clean Energy Act of 2018

SB 100 declares that the Public Utilities Commission, California Energy Commission, and California Air Resources Board should plan for 100 percent of total retail sales of electricity in California to come from eligible renewable energy resources and zero carbon resources by December 31, 2045. This requirement applies to PG&E, which would be the source of electricity supply for the SJC02 project.

California Senate Bill 350 (SB 350), Clean Energy and Pollution Reduction Act of 2015

Establishes new clean energy, clean air, and greenhouse gas reduction goals, among other energy and climate objectives, by 2030. Compliance with the requirements of SB 350 is incorporated into the City's design review process that will apply to the project.

California Energy Efficiency Standards for Residential and Nonresidential Buildings—Green Building Code (2011), Title 24 Update (2014)

The California Green Buildings Standards Code applies to planning, design, operation, construction, use, and occupancy of newly constructed buildings and requires installation of energy- and water-efficient indoor/outdoor infrastructure. Compliance with the Green Building Code is incorporated into the City's design review process that will apply to the project.

City of San José Greenhouse Gas Reduction Strategy

The City of San José is in the process of updating their *Greenhouse Gas Reduction Strategy* in response to Senate Bill 32. The City's *Greenhouse Gas Reduction Strategy* will be used in conjunction with the Envision San José 2040 General Plan to verify that implementation of the General Plan aligns with the greenhouse gas reduction targets set by Assembly Bill (AB) 32 (City of San José 2015). Once it is finalized, the Greenhouse Gas Reduction Strategy will serve as a qualified Climate Action Plan for the City of San José. Compliance with the City's greenhouse gas emission requirements will be incorporated into the City's design review process that will apply to the project.

City of San José General Plan Land Use Policies

Goals and policies to guide land use development within the City are established by the San José General Plan (2011). Applicable San José General Plan goals and policies regarding energy are presented in Section 3, Environmental Leadership of the San José General Plan, and summarized in Table 3.6-1, along with a discussion of project consistency.

Table 3.6-1. Project Consistency with San Jose General Plan (2011) Land Use Goals and Policies

Land Use Policy	Project Consistency
Energy	
MS-2.1: Develop and maintain policies, zoning regulations, and guidelines that require energy conservation and use of renewable energy sources.	Consistent. The project would use lighting control to reduce energy usage for new exterior lighting and air economization for building cooling. Water-efficient landscaping and ultra-low flow plumbing fixtures in the proposed buildings will limit potable water consumption. Furthermore, the project would use materials (wallboard partitions, ceiling tiles, and floor surfaces) that include post-consumer waste.
MS-2.2: Encourage maximized use of on-site generation of renewable energy for all new and existing buildings.	
MS-2.3: Utilize solar orientation (i.e., building placement), landscaping, design, and construction techniques for new construction to minimize energy consumption.	
MS-2.4: Promote energy efficient construction practices.	
MS-2.6: Promote roofing design and surface treatments that reduce the heat island effect of new and existing development and support reduced energy use, reduced air pollution, and a healthy urban forest. Connect businesses and residents with cool roof rebate programs through City outreach efforts.	
MS-2.7: Encourage the installation of solar panels or other clean energy power generation sources over parking areas.	

The project will be required to comply with applicable provisions in the City's General Plan and zoning ordinance, as verified by the City's design review process.

3.6.2 Environmental Impacts and Mitigation Measures

a) Would the project result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources during project construction or operation?

Demolition and Construction

Less than Significant. Demolition and construction of the project will require the use of nonrenewable energy resources, primarily fossil fuels (oil, gasoline, and diesel), for construction equipment and vehicles. It is anticipated that these nonrenewable energy resources will be used efficiently during demolition and construction activities and would not result in long-term depletion of the resources. Therefore, the consumption of these resources would not be unnecessary, inefficient, or a wasteful use.

Additionally, the Applicant will use Best Management Practices during demolition and construction to ensure the reduction of GHG emissions. Best Management Practices will consist of limitations on vehicles idling when unnecessary, and equipment will be properly maintained to reduce potential fuel waste.

Staging areas will be located at or near worksites to minimize, to the extent feasible, having to move materials long distances. The project is located in a large, urban area with a large local construction labor supply (as discussed more fully in the Population and Housing section), thus minimizing transportation-related energy use for commuting to the extent feasible.

Operations and Maintenance

Less than Significant. During operation of the project, the SJC02 project will use both nonrenewable energy resources and renewable energy resources in PG&E's portfolio of resources. The combined total number of hours of operation for reliability purposes (i.e., readiness testing and maintenance) for all the generators is limited to no more than 42 hours per generator annually. At this rate, the total quantity of diesel fuel used for all the generators operating at full load equates to approximately 8,205 barrels per year (bbl/yr). When compared to California's diesel fuel supply (approximately 341,036,000 bbl/yr (CEC 2018)), this rate is insignificant (0.00237 percent).

The standby generators will use nonrenewable resources, such as diesel and lubricating oils. Except for maintenance and testing operation, the standby generators will only be used during interruptions in PG&E's electrical service. Use of the standby generators will be further limited to approximately 42 hours per year per generator for maintenance and testing (see Table 2-4 in Section 2 Project Description). Under emergency conditions (defined as the loss of electrical power to the SJC02 project), the generators will use nonrenewable resources for limited periods of time and for short durations necessary to maintain data center operations. The standby generators selected for the SJC02 project have efficiency ratings comparable to other popular diesel-fueled generators of similar generating capacity. Due to the critical nature of a data center's operation, the use of renewable generation sources (wind, hydroelectric, or solar) on their own will not satisfy the SJC02 project's need for a reliable source of electrical power. The space and resource requirements for a maximum of 99 MW (with an expected load of 92 MW) of renewable power and their intermittent nature make such applications infeasible for this project and site; in addition, there are potentially adverse environmental impacts of some renewable generation technology (for instance, wind generation) that makes this problematic as well. Renewable generation resources, such as solar or wind, coupled with a battery installation, require significantly more space than what is available on the project site, and will not fit within the proposed space occupied by the standby generators. Current commercial fuel

cells are generally limited to lower energy density gaseous fuels such as natural gas or hydrogen, with their inherent concerns regarding adequate storage volumes and safety concerns. Therefore, using nonrenewable resources as contemplated by project operations is not unnecessary, inefficient, or wasteful.

Power Usage Effectiveness (PUE) is a metric for comparing the efficiency of computer server facilities and is a common metric for determining how effectively a data center's infrastructure systems can deliver power to its computer systems. It is defined as the ratio of total facility electrical use divided by the IT use (PUE equals the total facility source energy divided by IT source energy). The ideal PUE is 1, where all electrical power supports the IT equipment.

The PUE has been used as a guideline for measuring energy and power efficiencies associated with data centers since 2007 (ASHRAE 2013, 2016). The PUE factor started at a base point of 2.0 and has since migrated down to 1.25 or lower, which demonstrating a significant improvement over the years. The SJC02 project is expected to achieve a PUE of 1.25 or lower based on conformance with local, state, and federal energy efficiency building codes and standards.

Some other energy-efficient/energy-saving measures which may be incorporated into the project include the following: low-energy adiabatic cooling systems; limiting mechanical refrigeration needs and lowering the required refrigerant volume; transferring waste heat from the servers to occupied areas of the building; energy-efficient lighting system to reduce lighting power density by incorporating occupancy sensors and aggressive daylighting; and building insulation.

b) Would the project conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

No Impact. During operation, the SJC02 project will receive electricity from PG&E that is on track to meet the requirements of SB 350, which has set energy efficiency and renewable electricity targets to increase California's electricity purchases from 33 percent by 2020 to 50 percent by 2030. In 2018 PG&E delivered over 85 percent of its electricity from GHG-free resources (PG&E 2018). The 2018 power mixes included 34 percent non-emitting nuclear generation, 13 percent large hydroelectric facilitates, 39 percent eligible renewable resources, such as wind, geothermal, biomass, and small hydro, and 15 percent natural gas and other generating technologies (PG&E 2019). In addition, PG&E's 2018 Integrated Resource Plan stated that it expects to exceed the 50 percent eligible renewable resources threshold requirements by 2031 (PG&E 2018). As PG&E procures more renewable energy for its portfolio, less nonrenewable energy sources will be needed, and less nonrenewable power will be provided to the SJC02. The project is not expected to use nonrenewable energy sources in an unnecessary, inefficient, or wasteful manner, and will have a less than significant impact on energy resources, as explained more fully above.

In addition to electricity use for operations, the SJC02 project will also be designed to comply with the applicable provisions of the California Green Building Code, and to meet both the California Energy Code and California Building Code requiring energy efficient design. Through energy efficient design and increased renewable electricity use, as appropriate and feasible, the project would neither conflict with nor obstruct state or local plans for renewable energy or energy efficiency; therefore, the project would have no adverse impact on them.

Previously Identified Mitigation Measures:

None.

New Proposed Mitigation Measures:

None.

3.6.3 References

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3.7 Geology and Soils

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving	☐	☐	☒	☐
i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	☐	☐	☒	☐
ii. Strong seismic ground shaking?	☐	☐	☒	☐
iii. Seismic related ground failure, including liquefaction?	☐	☐	☒	☐
iv. Landslides?	☐	☐	☒	☐
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐
c) Be located on geologic units or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?	☐	☐	☒	☐
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	☐	☐	☒	☐
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	☐	☐	☐	☒
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☐	☒	☐

Environmental checklist established by CEQA Guidelines, Appendix G.

3.7.1 Setting

The San José Data Center (SJC02) will be located within the City of San José on an approximately 64.5-acre site and will consist of two data center buildings totaling over approximately 479,000 square feet of space. The project will include 40 3.0-megawatt (MW) standby diesel generators (20 per building) to provide electrical power to support the information technology (IT) load during utility outages or certain onsite electrical equipment interruptions or failures, as well as the installation of 20 3-MW emergency diesel generators at each building. In addition to the 40 backup generators, the project will include two administrative generators, rated at 1.25 MW and 0.5 MW, to support administrative functions during an interruption in the normal delivery of electrical power from the utility. The facility design will not require more than approximately 99 MW of electrical power, which will be used only for backup power for onsite data center operations in the event of an electrical outage by Pacific Gas & Electric (PG&E), although the estimated load is 92 MW.

The land has been used historically for farming since the early 1920s but is not currently in agricultural use. There are two residences, a mobile home, and a storage shed/warehouse currently onsite, which will be demolished as part of the SJC02 project. To the north of the project site are the San José/Santa Clara Regional Wastewater Treatment Plant sludge drying beds, to the south is Highway 237, to the west is the Los Esteros Critical Energy Facility, a PG&E substation, and to the east is Coyote Creek. The project is

anticipated to begin construction in the 3rd quarter of 2020, with operations beginning in the 1st quarter of 2022.

3.7.1.1 Geology and Soils

The project site is in the Santa Clara Valley, a relatively broad and level alluvial basin, bounded by the San Francisco Bay to the north, the Santa Cruz Mountains to the west and southwest, and the Diablo Mountain Range to the east and southeast. The Santa Clara Valley's basin contains alluvial deposits derived from the Diablo Mountain Range and the Santa Cruz Mountains (City of San José 2017b).

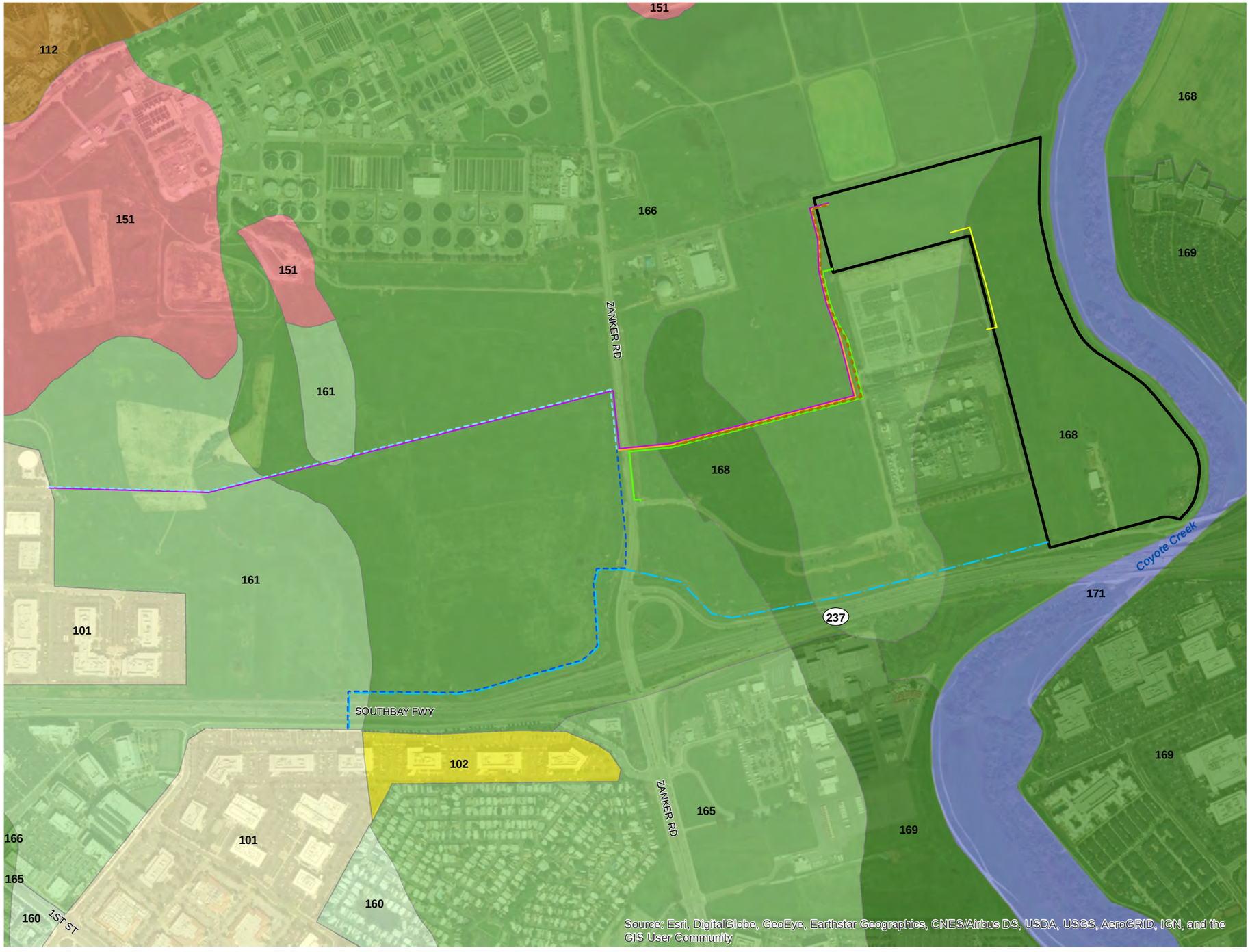
The project site is underlain by Holocene age (less than 11,000 years old) floodplain basin deposits (Qhfp) and natural levee deposits (Qhl) (Figures 3.7-1 and 3.7-2) (Helley and Wesling 1989). The basin and levee deposits are generally described as dark-colored clay with clayey sand and sand layers, rich in organic material, and deposited within the levees and flood plains. Based on borings conducted at the project site as part of geotechnical investigations conducted in 2016, the site is underlain predominately by granular materials of clayey sands, sands, and sands and gravels with variable clay content, sandy clays, with layers of lean to fat clays, and dense/hard interbedded gravels and sands (Kleinfelder 2016). There are no unique geologic features on, or adjacent to, the project site. The topography of the project site and the surrounding area is relatively flat (Figure 3.7-2).

The near-surface material across the project site has been observed to have low to medium expansion potential (Kleinfelder 2019) Expansive soil can undergo volume changes with changes in moisture content. Specifically, when wetted during the rainy season, expansive soil tends to swell; when dried during the summer months, the material shrinks. However, expansive soil can be mitigated through removal or mixing with non-expansive soil. The Geotechnical Investigation Report for the site is provided as Appendix 3.7A and the Geotechnical Memorandum is provided as Appendix 3.7B.

3.7.1.2 Groundwater

Based on the depth of historically high groundwater map prepared by the California Geological Survey for the Milpitas Quadrangle (DOC 2001), the depth of historically high groundwater levels in the site vicinity is between 5 and 10 feet below the existing ground surface. Fluctuations in the level of the groundwater may occur due to variations in rainfall, underground drainage patterns, and other factors not evident at the time measurements were made. According to recent exploratory boring and cone penetration test dissipation tests conducted at the project site, groundwater was encountered at depths of 12 feet to 22 feet and at a depth of 7 feet, respectively (Kleinfelder 2016).

The San José Municipal Water System (SJMWS) has the ability to meet increased demand in a variety of ways, such as purchasing additional water from San Francisco Public Utilities Commission when available, relying more heavily on local groundwater resources, or encouraging conservation and recycled water use among its existing customers to reduce existing potable water demands. The potable demands of the proposed Project fall easily within growth forecasts for industrial water use put forth in SJMWS's 2015 Urban Water Management Plan. Further discussion regarding water use as defined by the Water Supply Assessment (WSA) for the site can be found in Section 3.10 Hydrology and Water Quality as well as in Section 3.19 Utilities and Service Systems.



LEGEND

SOIL TYPE

- 101: Urban land, 0 to 2 percent slopes, basins
- 102: Urban land, 0 to 2 percent slopes, alluvial fans
- 112: Xerorthents, trash substratum 15 to 30 percent slopes
- 151: Embarcadero silty clay loam, drained, 0 to 2 percent slopes
- 160: Urbanland-Clear Lake complex, 0 to 2 percent slopes
- 161: Clear Lake silty clay, 0 to 2 percent slopes, drained
- 165: Urbanland-Campbell complex, 0 to 2 percent slopes, protected
- 166: Campbell silt loam, 0 to 2 percent slopes, protected
- 168: Elder fine sandy loam, protected, 0 to 2 percent slopes
- 169: Urbanland-Elder complex, 0 to 2 percent slopes, protected
- 171: Elder fine sandy loam, 0 to 2 percent slopes, rarely flooded
- Project Site
- Proposed Storm Drain
- Proposed Sanitary Sewer
- Proposed Reclaimed Water
- Proposed Water Line Route #1
- Proposed Water Line Route #2
- Proposed Water Line Route #3
- Proposed Shared Water Line
- Proposed Electrical Supply Line

U.S. Department of Agriculture, Natural Resources Conservation Service, 2017
Soil Survey Geographic (SSURGO) database for Santa Clara Area, California, Western Part

0 750 1,500
Approximate scale in feet

N

Figure 3.7-1
Soil Types within Project Area
San José Data Center (SJC02)
San José, California

JACOBS

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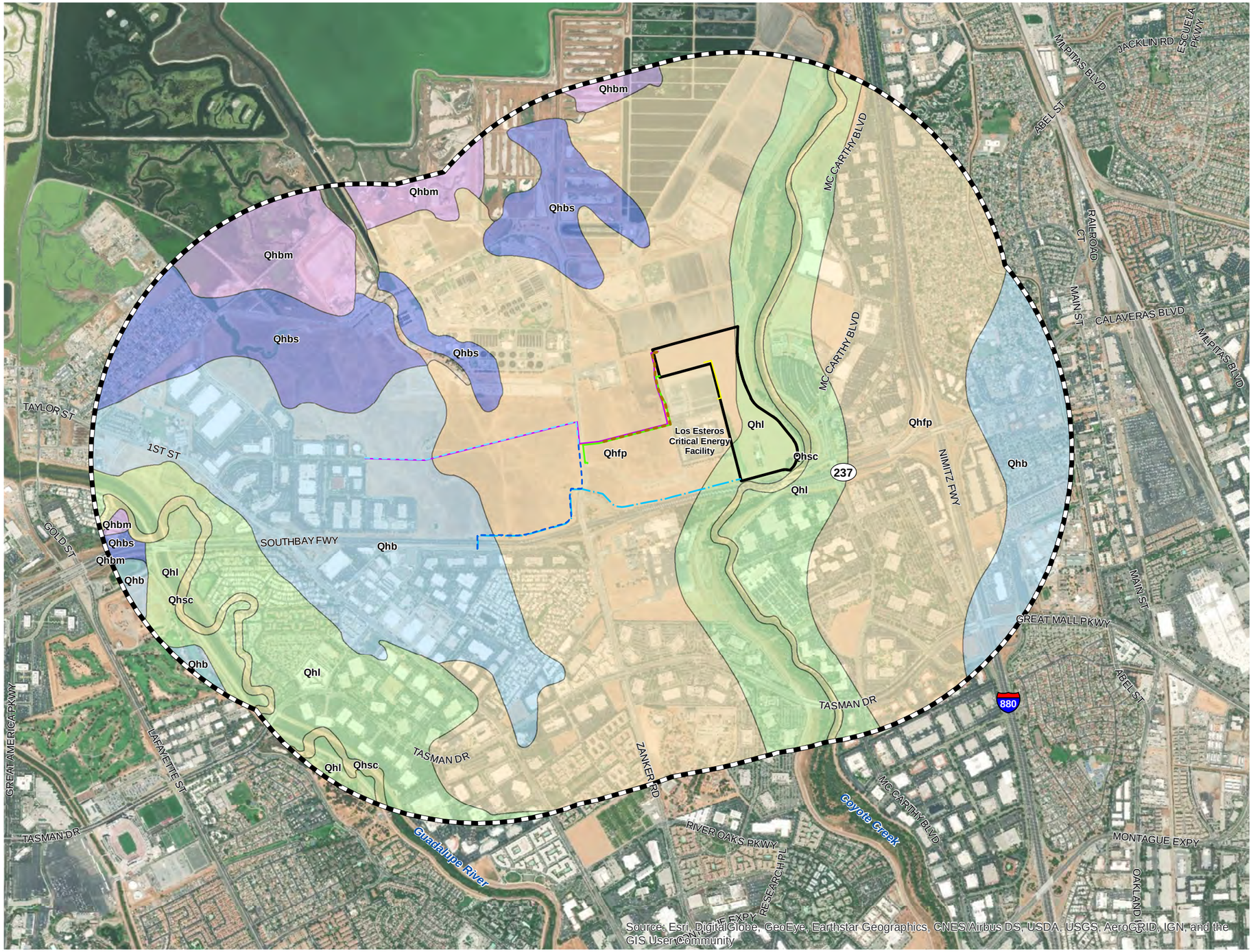

LEGEND

- Project Site
- 1-Mile Buffer
- Qhsc: Holocene Stream Channel Deposits
- Qhl: Holocene Natural Levee Deposits
- Qhfp: Holocene Floodplain Deposits
- Qhb: Holocene Floodbasin Deposits
- Qhbs: Holocene Floodbasin Deposits (salt-affected)
- Qhbm: Holocene Estuary Deposits (Bay Mud)
- Proposed Storm Drain
- Proposed Sanitary Sewer
- Proposed Reclaimed Water
- Proposed Water Line Route #1
- Proposed Water Line Route #2
- Proposed Water Line Route #3
- Proposed Shared Water Line
- Proposed Electrical Supply Line

N

0 2,000 4,000

Approximate scale in feet

Figure 3.7-2
Geology Within 1 Mile of the Project Site
San José Data Center (SJC02)
San José, California

JACOBS

GEOLOGIC MAP FROM Helley and Wesling (1989) USGS Open-File Report 89-671

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3.7.1.3 Seismicity and Seismic Hazards

Significant earthquakes that occur in the Bay Area are generally associated with crustal movement along well-defined active fault zones of the San Andreas fault system, which regionally trend in a northwesterly direction. Figure 3.7-3 identifies the regional earthquake faults in the project vicinity. Three of the major earthquake faults (the San Andreas fault [17 miles to the west], the Hayward fault [5 miles to the northeast], and the Calaveras fault [7 miles to the east]) that comprise the San Andreas fault system extend through the Bay Area region (DOC 2015). The Silver Creek fault is approximately 0.4 mile to the west of the site, but this fault has not been active since the quaternary age. The project site is not located within a currently designated Alquist-Priolo Earthquake Fault Zone (known formerly as a Special Studies Zone). No known surface expression of active faults is believed to cross the site (Kleinfelder 2016). The geotechnical investigation utilized a design-level peak ground acceleration $(PGA)_m$ of 0.58g for analysis at the site. In accordance with the California Building Standards Code (California Building Standards Commission 2016) for which the project will be required to comply, structural design of facilities in California are required to incorporate design features to ensure public safety if a design-level seismic event generates sufficient ground motion to impact the structural integrity of the facility.

3.7.1.4 Liquefaction

During strong ground shaking, loose, saturated, cohesionless soils can experience a temporary loss of shear strength and act as a fluid. This phenomenon is known as liquefaction. Liquefaction depends on the depth to water, grain size distribution, relative soil density, degree of saturation, and intensity and duration of the earthquake. The potential hazard associated with liquefaction is seismically induced settlement.

The project site is within a State- and County-designated Liquefaction Hazard Zone (City of San José 2018). To evaluate the potential impact from liquefaction, the geotechnical investigation determined that several layers could potentially experience liquefaction triggering with settlements on the order of 1 to 6 inches (Kleinfelder 2019).

3.7.1.5 Lateral Spreading

Lateral spreading typically occurs as a form of horizontal displacement of relatively flat-lying alluvial material toward an open or ‘free’ face (such as an open body of water, channel, or excavation). In soils, this movement is generally due to failure along a weak plane and may often be associated with liquefaction. As cracks develop within the weakened material, blocks of soil displace laterally towards the open face. Cracking and lateral movement may gradually propagate away from the face as blocks continue to break free. Generally, failure in this mode is analytically unpredictable, because it is difficult to evaluate where the first tension crack will occur. Coyote Creek is located adjacent to the eastern boundary of the project site. The preliminary geotechnical investigation determined that there is potential for lateral spreading to affect the proposed data building in the western portion of the site and that steps may be necessary, from a geotechnical design perspective, to address this concern.

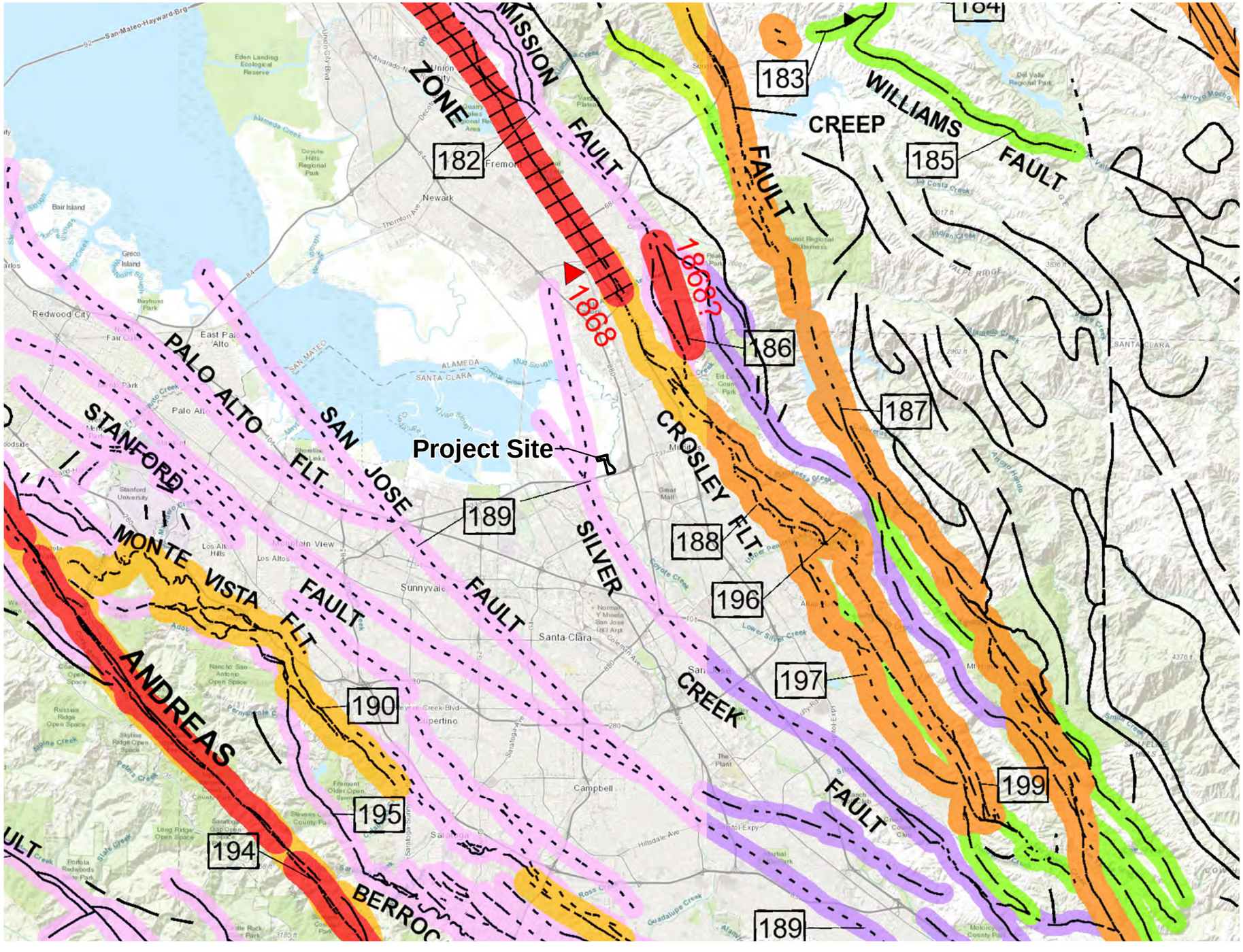
3.7.1.6 Regulatory Setting

Development within the City of San José is subject to various federal, state, and local regulations aimed at reducing potential impacts of geologic and seismic hazards to people, property, and the environment.

Federal and State Laws and Regulations

As described in Section 3.10 Hydrology and Water Quality and noted further below, erosion control is regulated by the Federal Clean Water Act, State of California Porter Cologne Water Quality Act, the National Pollutant Discharge Elimination System (NPDES), and City General Plan policies 6-29 and 8-14.

The California Alquist-Priolo Earthquake Fault Zoning Act requires the State Geologist to establish regulatory zones (known as Earthquake Fault Zones) around the surface traces of active faults and to issue appropriate maps.



LEGEND

Project Site

Fault Classification (Regional)

Activity

- Historic
- Holocene
- Late Quaternary
- Quaternary

Source:

Service Layer Credits: California Geological Survey, C.W. Jennings, W.A. Bryant
Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

N

0 3 6

Approximate scale in miles

Figure 3.7-3
Regional Fault Map
San José Data Center (SJC02)
San José, California

JACOBS

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City of San José Municipal Code

Local agencies must regulate the construction of buildings used for human occupancy in these zones. The California Building Code (in Title 24, California Code of Regulations) serves as the basis for the design and construction of buildings in the state. Currently, the 2016 California Building Code contains provisions for earthquake safety based on factors including occupancy type, soil and rock profile, the strength of the ground, and distance to seismic resources. City of San José Municipal Code Title 24 of the San José Municipal Code includes the 2016 California Building, Plumbing, Mechanical, Electrical, Existing Building, Historical Building, and Green Building Codes. Requirements for building safety and earthquake hazard reduction are also addressed in Chapter 17.40 (Dangerous Buildings) and Chapter 17.10 (Geologic Hazards Regulations) of the Municipal Code.

Requirements for grading, excavation, and erosion control are included in Chapter 17.04 (Building Code, Part 6 Excavation and Grading). In accordance with the Municipal Code, the Director of Public Works must issue a Certificate of Geologic Hazard Clearance prior to the issuance of grading and building permits within defined geologic hazard zones.

Envision San José 2040 General Plan

The Envision San José 2040 General Plan includes the following policies applicable to all development projects in San José.

Policy EC-3.1: Design all new or remodeled habitable structures in accordance with the most recent California Building Code and California Fire Code as amended locally and adopted by the City of San José, including provisions regarding lateral forces.

Policy EC-3.2: Within seismic hazard zones identified under the Alquist-Priolo Fault Zoning Act, California Seismic Hazards Mapping Act and/or by the City of San José, complete geotechnical and geological investigations and approve development proposals only when the severity of seismic hazards have been evaluated and appropriate mitigation measures are provided as reviewed and approved by the City of San José Geologist. State guidelines for evaluating and mitigating seismic hazards and the City-adopted California Building Code will be followed.

Policy EC-4.1: Design and build all new or remodeled habitable structures in accordance with the most recent California Building Code and municipal code requirements as amended and adopted by the City of San José, including provisions for expansive soil, and grading and storm water controls.

Policy EC-4.2: Approve development in areas subject to soils and geologic hazards, including unengineered fill and weak soils and landslide-prone areas, only when the severity of hazards have been evaluated and if shown to be required, appropriate mitigation measures are provided. New development proposed within areas of geologic hazards shall not be endangered by, nor contribute to, the hazardous conditions on the site or on adjoining properties. The City of San José Geologist will review and approve geotechnical and geological investigation reports for projects within these areas as part of the project approval process.

Policy EC-4.4: Require all new development to conform to the City of San José's Geologic Hazard Ordinance.

Policy EC-4.5: Ensure that any development activity that requires grading does not impact adjacent properties, local creeks and storm drainage systems by designing and building the site to drain properly and minimize erosion. An Erosion Control Plan is required for all private development projects that have soil disturbance of one acre or more, are adjacent to a creek/river, and/or are located in hillside areas. Erosion Control Plans are also required for any grading occurring between October 15 and April 15.

Policy EC-4.7: Consistent with the San José Geologic Hazard Ordinance, prepare geotechnical and geological investigation reports for projects in areas of known concern to address the implications of irrigated landscaping to slope stability and to determine if hazards can be adequately mitigated.

Policy ES-4.9: Permit development only in those areas where potential danger to health, safety, and welfare of the persons in that area can be mitigated to an acceptable level.

The project will be required to comply with all applicable federal, state and local laws and regulations and will need to obtain building permits that would be issued by the City of San José (City). The issuance of the building permits and oversight provided by the City will confirm that the project complies with the applicable regulatory framework.

3.7.1.6.1 Federal Clean Water Act and State Porter-Cologne Water Quality Control Act – Construction Site Discharges

Under the federal Clean Water Act, discharge of stormwater from construction sites must comply with the conditions of a National Pollutant Discharge Elimination System permit. The State Water Board has adopted a statewide General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities (Construction General Permit) that applies to projects resulting in 1 or more acres of soil disturbance. For projects disturbing more than 1 acre of soil, a construction Stormwater Pollution Prevention Plan (SWPPP) is required that specifies site management activities to be implemented during site development. These management activities include construction stormwater best management practices; erosion and sedimentation controls; dewatering; runoff controls; and construction equipment maintenance. The San Francisco Bay Regional Water Quality Control Board (RWQCB) requires a Notice of Intent to be filed prior to any stormwater discharge from construction activities, and that the SWPPP be implemented and maintained onsite.

3.7.1.6.2 Federal Paleontological Laws, Ordinances, Regulations, and Standards

The National Environmental Policy Act as amended (Pub. L. 91-190, 42 U.S.C. 4321-4347, January 1, 1970, as amended by Pub. L. 94-52, July 3, 1975, Pub. L. 94-83, August 9, 1975, and Pub. L. 97-258 § 4(b), September 13, 1982) recognizes the continuing responsibility of the federal government to “preserve important historic, cultural, and natural aspects of our national heritage...” (Sec. 101 [42 U.S.C. § 4321]) (#382). This can be interpreted to refer to paleontological as well as cultural resources.

3.7.1.6.3 State Paleontological Laws, Ordinances, Regulations, and Standards

The California Environmental Quality Act (CEQA) encourages the protection of all aspects of the environment by requiring state and local agencies to prepare multidisciplinary analyses of the environmental impacts of a project and to make decisions based on the findings of those analyses. CEQA includes in its definition of historical resources, “any object [or] site …that has yielded or may be likely to yield information important in prehistory” (California Code of Regulations, Title 14, § 15064.5(a)(3)(D)), which is typically interpreted as including fossil materials and other paleontological resources. More specifically, destruction of a “unique paleontological resource or site or unique geologic feature” may be a significant impact under CEQA (CEQA Guidelines Appendix G.V.(c)).

3.7.1.6.4 Local Paleontological Regulations

The City’s General Plan (2011) was reviewed for provisions relevant to paleontological resources. No requirements, policies, goals, or objectives relevant to paleontological resources were found.

3.7.2 Environmental Impacts and Mitigation Measures

a) Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:

i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.

Less Than Significant Impact. Although the project site is located within the seismically active San Francisco Bay region, the nearest active fault (Hayward) is approximately 4.4 miles from the project site (DOC 2015). The project site is not within a state of California Earthquake Fault Zone or within the trace of any known active fault; furthermore, the project will be required to comply with all applicable laws and regulations governing seismic safety, which will help further reduce risk of human exposure in the event of ground rupture. Therefore, there is a less than significant direct or indirect impact of human exposure to ground rupture.

ii) Strong seismic ground shaking?

Less Than Significant Impact. The design of the project, including, among other things, the building foundations, would include an assessment of the potential impacts of strong seismic ground shaking from a site-specific design-level seismic event. Seismic hazards will be minimized, to the extent feasible, by conformance to the applicable seismic design criteria of the California Building Standards Code (California Building Standards Commission 2016). Furthermore, the Geotechnical Memorandum, included as Appendix 3.7B, includes updated recommendations for ground improvement to further reduce, to the extent feasible, the ground settlement hazard at the site. A project-specific geotechnical engineering report will be provided to the City building official for review and approval prior to issuance of a building permit, and the project will be required to comply with all recommendations in this report when constructing the project. With implementation of seismic design criteria per the California Building Standards Code (California Building Standards Commission 2016), as well as the anticipated project-specific recommendations in the final geotechnical engineering report, the project would not expose people or property, directly or indirectly, to significant impacts associated with geologic or seismic ground shaking.

iii) Seismic-related ground failure, including liquefaction?

Less than Significant Impact. The site is located within an earthquake-induced Liquefaction Hazard Zone, and there is potential for soil layers at the site to liquefy during a seismic event. Analyses indicate that liquefaction-induced settlement at the project site could range from less than 0.5 inch up to 7.5 inches in the upper 50 feet. Therefore, the proposed structures will be designed and constructed in accordance with applicable provisions of the California Building Standards Code (California Building Standards Commission 2016) that are designed to address liquefaction concerns to the extent feasible.

In addition, as discussed under question (a)(i), a project-specific design will be included within a geotechnical engineering report and provided to the City building department for review and approval prior to the issuance of a building permit, and the project will be required to comply with all recommendations in this report when constructing the project. Therefore, with implementation of the seismic design criteria for ground failure and the anticipated project-specific recommendations in the final geotechnical engineering report, the project would not expose people or property to any significant direct or indirect impacts associated with geologic or seismic conditions onsite, including liquefaction.

iv) Landslides?

Less Than Significant Impact. As the project site is relatively flat with no open faces or slopes near the site, there is low potential for landslides and, therefore, there are no direct or indirect significant impacts associated with landslides are expected to occur.

b) Would the project result in substantial soil erosion or the loss of topsoil?

Less Than Significant Impact. Construction activities associated with the project (including excavation, trenching, and grading) may temporarily increase sedimentation and erosion by exposing soils to wind and runoff until construction is complete and new vegetation is established. As discussed in Section 3.10, Hydrology and Water Quality, the project will be subject to construction-related stormwater permit requirements. Prior to any ground-disturbing construction activity, the project must comply with the Construction General Permit, which includes filing a Notice of Intent with the San Francisco Bay RWQCB, coordinating with the City, and preparing and implementing a SWPPP. The SWPPP will include best management practices for stormwater quality control, including soil stabilization practices, sediment control practices, and wind erosion control practices. When construction is complete, the project will be required to file a Notice of Termination with the San Francisco Bay RWQCB and the City, documenting that all elements to the SWPPP have been implemented.

By complying with existing permits and other applicable laws and regulations, substantial soil erosion or loss of topsoil will not occur; and runoff from the project site would not violate the applicable waste discharge requirements or otherwise contribute to the degradation of stormwater runoff quality. Therefore, impacts related to erosion and loss of topsoil would be less than significant and no mitigation is required.

c) Would the project be located on geologic units or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?

Less than Significant Impact. Lateral spreading appears possible for the southeastern portion of the project site, and liquefaction is potentially significant in the eastern portion of the project site. This potential impact will be reduced, for instance, by the construction of a shear key of improved soil between the building and Coyote Creek to the east. Ground improvements related to lateral spreading has been addressed in the Geotechnical Memorandum, included as Appendix 3.7B, includes updated recommendations for ground improvements to reduce, to the extent feasible, the ground settlement hazard at the site. Additionally, a project-specific geotechnical engineering report will be conducted prior to final design, which will incorporate project design features needed to address potential lateral spreading; this report will need to be approved by the City and the recommendations therein will need to be implemented in project construction. Both the geotechnical engineering report and final project design documents will be provided to the City's building official for review and approval prior to issuance of a building permit. With implementation of applicable design criteria per the California Building Standards Code (California Building Standards Commission 2016), as well as the incorporation of the anticipated project-specific design recommendations in the final geotechnical engineering report, the project would not expose people or property, directly or indirectly, to unstable geologic or soil units that could result in significant impacts in this regard.

d) Would the project be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?

Less than Significant impact. Highly to very highly expansive soils are present across the site. This condition can be eliminated by verifying that slabs-on-grade have sufficient reinforcement and are supported on a layer of non-expansive soil, along with limiting moisture changes in the near-surface soils, among other design criteria. The Geotechnical Memorandum, included as Appendix 3.7B, includes updated recommendations for ground improvements at the site to reduce the potential

effects of expansive soils. The project-specific geotechnical engineering report, along with the final project design, will be required to address, as needed, any potential issues arising from expansive soils. Final project design documents will be provided to the City's building official for review and approval prior to issuance of a building permit, and the project will be required to incorporate all recommendations therein. With implementation of applicable design criteria per the California Building Standards Code (California Building Standards Commission 2016), as well as the incorporation of the anticipated project-specific mitigation recommendations in the final geotechnical engineering report, the project would not be located on expansive soil such that it would create substantial direct or indirect risks to life or property, and therefore impacts would be less than significant.

e) Would the project have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?

No Impact. The project will connect to an existing City sanitary sewer connection and will not require septic tanks or an alternative wastewater disposal system. Therefore, there would be no impact to soils as a result of sanitary waste disposal from the project.

f) Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Less Than Significant Impact. The level of paleontological sensitivity at the project site is considered to be moderate (Jacobs 2019) (see Appendix 3.7C). The project site is located in the Santa Clara Valley, an area known to have scientifically significant but widespread or intermittent fossil discoveries. Surficial sediment has been mapped as Holocene (11,700 years before present), and paleontological evidence indicates that Pleistocene (2.6 million to 11,700 years before present) sediment may also be present at or near the surface. Nine fossil sites have been found at or near the ground surface within 5 miles of the project site. However, the general area has been extensively developed over the last 50 years as part of the technology research and development area known as Silicon Valley. The project site itself has been used historically for farming since the early 1920s, with both orchards and row crops.

Disturbance of paleontological resources could occur during the construction activities (such as grading, trenching for utilities, and installation of soil improvements and foundations). The maximum depth of soil disturbance is estimated to be approximately 35 to 65 feet below ground surface. Once the project is constructed, there is no potential to disturb paleontological resources during operations, because there would be no earth-moving activities required for operations.

Grading and excavation activities may encounter sediments with moderate to high paleontological potential in the shallow subsurface. As a project design feature, the project will implement a Worker Environmental Awareness Training Program, which will provide training to construction personnel regarding proper procedures (including identification and notification) in the event fossil materials are encountered during construction.

Proposed Mitigation Measures: None.

3.7.3 References

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3.8 Greenhouse Gas Emissions

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	☒	☐
b) Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☒	☐

Environmental checklist established in Appendix G of the *2019 California Environmental Quality Act (CEQA) Statute & Guidelines* (AEP 2019).

3.8.1 Setting

The San José Data Center (SJC02) will be located within the City of San José on an approximately 64.5-acre site and will consist of two data center buildings totaling over approximately 479,000 square feet of space. The project will include 40 3.0-megawatt (MW) standby diesel generators (20 per building) to provide electrical power to support the information technology (IT) load during utility outages or certain onsite electrical equipment interruptions or failures, as well as the installation of 20 3-MW emergency diesel generators at each building. In addition to the 40 backup generators, the project will include two administrative generators, rated at 1.25 MW and 0.5 MW, to support administrative functions during an interruption in the normal delivery of electrical power from the utility. The facility design will not require more than approximately 99 MW of electrical power, which will be used only for backup power for onsite data center operations in the event of an electrical outage by Pacific Gas & Electric (PG&E), although the estimated load is 92 MW.

The land has been used historically for farming since the early 1920s but is not currently in agricultural use. There are two vacant residences, a mobile home, and a storage shed/warehouse currently onsite, which will be demolished as part of the SJC02 project. To the north of the project site are the San José/Santa Clara Regional Wastewater Treatment Plant sludge drying beds, to the south is Highway 237, to the west is the Los Esteros Critical Energy Facility, a PG&E substation, and to the east is Coyote Creek. The project is anticipated to begin construction in the 3rd quarter of 2020, with operations beginning in the 1st quarter of 2022.

Unlike emissions of criteria and toxic air pollutants, which have local or regional impacts, emissions of greenhouse gases (GHGs) have a much broader, global impact. Global warming associated with the greenhouse effect is a process whereby GHGs accumulating in the atmosphere contribute to an increase in the temperature of the earth's atmosphere. The principal GHGs contributing to global warming and associated climate change are carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), and fluorinated compounds, such as hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. Emissions of GHGs contributing to global climate change are attributable in large part to human activities associated with the transportation, industrial/manufacturing, utility, residential, commercial, and agricultural sectors.

3.8.1.1 Regulatory Background

Federal Laws and Regulations

In April 2007, the U.S. Supreme Court held that GHG emissions are pollutants within the meaning of the Clean Air Act (CAA). In reaching its decision, the Supreme Court also acknowledged that climate change results, in part, from anthropogenic causes (Massachusetts et al. v. Environmental Protection Agency 549

U.S. 497, 2007). The Supreme Court's ruling paved the way for the regulation of GHG emissions by the U.S. Environmental Protection Agency (EPA) under the CAA.

In response to this Supreme Court decision, on December 7, 2009, the EPA Administrator signed two distinct findings regarding GHGs under Section 202(a) of the CAA:

- Endangerment Finding: That the current and projected concentrations of GHGs in the atmosphere threaten the public health and welfare of current and future generations.
- Cause or Contribute Finding: That the combined emissions of GHGs from new motor vehicles and new motor vehicle engines contribute to GHG pollution, which threatens public health and welfare.

In 2009, EPA issued the Final Mandatory Reporting of Greenhouse Gases Rule, which requires reporting of GHG emissions from large sources and suppliers in the U.S. This rule requires suppliers of fossil fuels and industrial GHGs, manufacturers of vehicles and engines outside of the light-duty sector, and facilities that emit more than 25,000 metric tons of carbon dioxide equivalent (CO_2e) per year to submit annual reports to EPA. The rule is intended to collect accurate and timely emissions data to guide future policy decisions on climate change.

With the 2010 GHG Tailoring Rule, EPA mandated that Prevention of Significant Deterioration (PSD) and Title V operating permit requirements would apply to facilities whose potential to emit stationary source CO_2e emissions would exceed 100,000 tons per year. This changed in 2014 when the Supreme Court decision in Utility Air Regulatory Group v. EPA, et al. (Supreme Court Case 12-1146) found that EPA does not have the authority to require PSD and Title V permitting for facilities based solely on GHG emissions. Rather, the Supreme Court found that EPA can regulate GHG emissions from sources that are already subject to PSD and Title V operating permit requirements due to emissions of other pollutants.

The project would not be subject to the federal laws and regulations noted herein, because the facility will not emit more than 25,000 metric tons of CO_2e per year, as demonstrated in Section 3.8.3, and is not subject to PSD and Title V operating permit requirements due to emissions of other pollutants, as demonstrated in Section 3.3.

State Laws and Policies

Executive Order S-3-05, issued in 2005, established GHG emissions reduction targets for the state of California. The targets called for a reduction of GHG emissions to 2000 levels by 2010, 1990 levels by 2020, and 80 percent below 1990 levels by 2050. The California Environmental Protection Agency Secretary is required to coordinate development and implementation of strategies to achieve the GHG reduction targets.

In 2006, the California State Legislature passed the Global Warming Solutions Act of 2006 (Assembly Bill [AB] 32), which provides the framework for regulating GHG emissions in California. This law requires the California Air Resources Board (CARB) to design and implement emission limits, regulations, and other measures such that statewide GHG emissions are reduced in a technologically feasible and cost-effective manner to 1990 levels by 2020. The statewide 2020 emissions limit is 431 million metric tons of CO_2e (CARB 2017a).

Part of CARB's direction under AB 32 was to develop a scoping plan that contains the main strategies California will use to reduce the GHG emissions that contribute to climate change. CARB first approved the AB 32 Scoping Plan in 2008 and released its latest update in 2017. The Scoping Plan includes a range of GHG reduction actions, which include the following: direct regulations; alternative compliance mechanisms; monetary and non-monetary incentives; voluntary actions; market-based mechanisms such as a cap-and-trade system; and a fee regulation to fund the AB 32 program.

One key regulation resulting from AB 32 was CARB's Regulation for the Mandatory Reporting of Greenhouse Gas Emissions, which came into effect in January 2009, with the most recent amendments

in 2018. This regulation requires annual GHG emissions reporting from electric power entities, fuel suppliers, CO_2 suppliers, operators of petroleum and natural gas systems, and industrial facilities that emit 10,000 metric tons or more of CO_2e per year from stationary combustion and/or process sources. The project would not be impacted by this regulation, because its stationary combustion GHG emissions are expected to be below the reporting threshold of 10,000 metric tons of CO_2e per year.

To best support the reduction of GHG emissions consistent with AB 32, CARB released the Short-Lived Climate Pollutant (SLCP) Reduction Strategy in March 2017. This plan, required by Senate Bill (SB) 605 (the Small Business Procurement and Contract Act), establishes targets for statewide reductions in SLCP emissions of 40 percent below 2013 levels by 2030 for methane and hydrofluorocarbons and 50 percent below 2013 levels by 2030 for anthropogenic black carbon (CARB 2017b). The SLCP Reduction Strategy was integrated into the 2017 update to CARB's Scoping Plan.

In 2006, the California Public Utilities Commission and California Energy Commission established requirements for utilities under the Electricity Greenhouse Gas Emission Standards Act (SB 1368[1]), which requires that generation and contracts be subject to a GHG Environmental Performance Standard of 1,100 pounds (or 0.5 metric ton) of CO_2 per megawatt-hour (MWh) of electricity produced. The GHG Environmental Performance Standard applies to base load power from new power plants, new investments in existing power plants, and new or renewed contracts with terms of 5 years or longer, including contracts with power plants located outside of California.[2] Implementation of the AB 32 Scoping Plan requires careful coordination on the state's energy policies, meaning that the California Public Utilities Commission and CARB must work closely to implement the recommendations in the Scoping Plan. The project would not be subject to this GHG Environmental Performance Standard, as it is not a new or existing power plant and does not establish or renew a power contract.

On April 29, 2015, Governor Brown issued Executive Order B-30-15, directing state agencies to implement measures to reduce GHG emissions 40 percent below their 1990 levels by 2030 and to achieve the previously stated goal of an 80 percent GHG reduction by 2050. On September 8, 2016, SB 32, codified as Section 38566 of the Health and Safety Code, was enacted. It extends California's commitment to reduce GHG emissions by requiring the state to reduce statewide GHG emissions by 40 percent below 1990 levels by 2030. In response, CARB updated the AB 32 Scoping Plan in November 2017 to establish a path that will get California to its 2030 target.

In May 2016, CARB prepared the Mobile Source Strategy, which addresses the current and proposed programs for reducing all mobile source emissions, including GHG emissions. The Mobile Source Strategy identifies programs that the state and federal government have or will adopt, which further the goals of the Scoping Plan. Some programs provide incentives to facilitate increased purchase of new, lower emission light-, medium-, and heavy-duty vehicles to aid the state in achieving emission reduction goals. Other programs require certain engine years to upgrade the engine to newer, cleaner engines by specific dates or strict performance standards for specific model years. These programs for more stringent emissions are required by state and federal law and are monitored by CARB or EPA.

In 2002, California initially established its Renewables Portfolio Standard (RPS), with the goal of increasing the percentage of renewable energy in the state's electricity mix to 20 percent by 2017. State energy agencies recommended accelerating that goal, and California Executive Order S-14-08 (November 2008) required California utilities to reach the 33 percent renewable electricity goal by 2020, consistent with the AB 32 Scoping Plan. In April 2011, SB 2 of the First Extraordinary Session (SB X1-2) was signed into law. SB X1-2 expressly applies the new 33 percent RPS to all retail sellers of electricity by December 31, 2020, and establishes renewable energy standards for interim years prior to 2020.

[1] Public Utilities Code Section 8340 et seq.

[2] See rule at http://www.cpuc.ca.gov/PUBLISHED/FINAL_DECISION/64072.htm.

On October 7, 2015, SB 350 was signed into law, establishing new clean energy, clean air, and GHG reduction goals for 2030 and beyond. SB 350 increases California's renewable electricity procurement goal from 33 percent by 2020 to 50 percent by 2030. SB 100, signed into law on September 10, 2018, advances the RPS deadlines to 50 percent renewable resources by December 31, 2026, and 60 percent by December 31, 2030. In addition, SB 100 establishes policy that renewable energy resources and zero-carbon resources supply 100 percent of all retail sales of electricity by December 31, 2045.

Regional Plans and Programs

The Bay Area Air Quality Management District (BAAQMD) adopted the *2017 Bay Area Clean Air Plan* on April 19, 2017 (BAAQMD 2017a). The 2017 Clean Air Plan provides a regional strategy to protect public health and the climate. To protect public health, the plan describes how the BAAQMD will continue its progress toward attaining all state and federal ambient air quality standards and eliminating health risk disparities from exposure to air pollution among Bay Area communities. To protect the climate, the plan defines a vision for transitioning the region to a post-carbon economy needed to achieve ambitious GHG emission reduction targets for 2030 and 2050, and provides a regional climate protection strategy that will put the Bay Area on a pathway to achieve those GHG emission reduction targets.

BAAQMD publishes CEQA Guidelines (last updated May 2017 [BAAQMD 2017b]) to assist lead agencies in evaluating a project's potential impacts on climate change. The CEQA Guidelines describe the criteria BAAQMD uses when reviewing and commenting on the adequacy of environmental documents. It recommends thresholds for use in determining whether projects would have significant adverse environmental impacts, identifies methodologies for estimating project GHG emissions and predicting potential impacts, and identifies measures that can be used to avoid or reduce climate change impacts.

Under the requirements of SB 375, all metropolitan regions in California must complete a Sustainable Communities Strategy (SCS) as part of a Regional Transportation Plan. In the Bay Area, the Metropolitan Transportation Commission (MTC) and Association of Bay Area Governments (ABAG) are jointly responsible for developing and adopting an SCS that integrates transportation, land use, and housing to meet GHG reduction targets set by CARB. In July 2017, the MTC and ABAG approved *Plan Bay Area 2040*, which is a strategic update to the previous plan approved in July 2013. The Bay Area GHG reduction targets established by CARB in September 2010 include a seven percent reduction in GHG emissions per capita from passenger vehicles by 2020 compared to 2005 emissions. Similarly, *Plan Bay Area 2040* includes a target to reduce GHG emissions per capita from passenger vehicles 15 percent by 2035 compared to 2005 emissions. The emission reduction targets are limited to those projects associated with land use and transportation strategies and align with the strategies identified in the BAAQMD's 2017 Clean Air Plan (MTC & ABAG 2017).

Local Plans and Policies

Envision San José 2040 General Plan. The *Envision San José 2040 General Plan* was adopted by the City Council in November 2011, and most recently amended in December 2018. The City's progress towards achieving key goals are evaluated every 4 years. This General Plan centers on 12 major strategies that reflect the community's desire to see San José grow into a more prominent city through 2040, while taking on a growing environmental and economic leadership role (City of San José 2018). The General Plan provides the basis for the City's GHG Reduction Strategy, while expanding upon the City of San José's Green Vision. Both of these climate-specific plans are described in the following paragraphs.

Green Vision and Climate Smart San José. The *Green Vision*, adopted in October 2007, was a 15-year sustainability plan to steer economic growth while reducing GHG emissions. Its 10 goals included supporting development of new clean technology industries; becoming more energy efficient; producing and using electricity from clean and renewable sources; constructing green buildings; diverting waste from landfills; and expanding the use of recycled water (City of San José 2019b).

Climate Smart San José replaced the *Green Vision* in February 2018 and has nine overarching strategies with the overall goal of reducing GHG emissions while assuring a long-term water supply. This plan charts a course to meeting the GHG emission reduction targets of the international Paris Agreement, which calls for limiting the rise in average global temperature to below 2 degrees Celsius (City of San José 2019a).

City of San José GHG Reduction Strategy. The *City of San José GHG Reduction Strategy* is a comprehensive plan to achieve the City's share of statewide emissions reductions for the 2020 timeframe established by AB 32, while meeting the mandates outlined in the BAAQMD's CEQA Guidelines. Adopted in June 2011, and most recently amended in December 2015, the Strategy identifies GHG emissions reduction measures to be implemented by development projects as part of three categories: built environment and energy; land use and transportation; and recycling and waste reduction (City of San José 2015). Some measures are mandatory for all proposed development projects and others are voluntary, where voluntary measures could be incorporated as mitigation measures at the City's discretion. The City is currently updating its GHG Reduction Strategy in response to SB 32, and will build upon *Climate Smart San José*.

CEQA clearance for development projects is required to address the consistency of individual projects with the goals and policies in the General Plan designed to reduce GHG emissions. Compliance with the mandatory and voluntary measures, if required by the City, would confirm an individual project's consistency with the GHG Reduction Strategy and, accordingly, the General Plan.

3.8.1.2 Existing Conditions

The City prepares an annual report to assess progress towards meeting the GHG reduction targets established in the GHG Reduction Strategy and to recommend next steps to help the City meet its targets. This report also tracks changes in community-wide GHG emissions since 2008, which is the City's base year. Table 3.8-1 summarizes the City's 2017 GHG emissions inventory, which is the most recent inventory available (ICLEI 2019).

This GHG emissions inventory includes direct and indirect GHG emissions attributable to human activities. As shown in Table 3.8-1, transportation emissions, from on- and off-road vehicles, railcars, pleasure boats, and in-boundary flights, were the largest source of emissions, comprising 63 percent. Residential, commercial, and industrial energy, including electricity and natural gas use, were the next largest sources of emissions, comprising 13, 11, and 7 percent, respectively. Each of the other sectors represented 5 percent or less of total emissions, including solid waste disposal, the transmission and treatment of water and sewage, and natural gas distribution (ICLEI 2019).[3]

Table 3.8-1. City of San José 2017 Greenhouse Gas Emissions Inventory

End-Use Sector	Total Emissions (%)	CO_2e Emissions (Metric Tons per Year)
Residential Energy	13	763,961
Commercial Energy	11	627,496
Industrial Energy	7	399,690
Transportation and Mobile Sources	63	3,589,159
Solid Waste	5	271,862
Water and Wastewater	<1	29,235
Process and Fugitive Emissions	<1	30,262
Total	100	5,711,665

Source: ICLEI 2019

[3] Emissions from the residential, commercial, and industrial energy sectors have decreased the most over time, likely as a result of PG&E's cleaner electricity portfolio and reduced energy consumption.

3.8.2 Methodology and Significance Criteria

3.8.2.1 Methodology

Emissions of CO_2e from short-term project demolition and construction activities were evaluated, with detailed emission calculations presented in Appendix 3.3-A, including the assumptions employed. Demolition and construction-related GHG emissions from the project would result from fuel combustion in construction equipment and on- and offsite vehicle trips, such as material haul trucks, worker commutes, and delivery vehicles. Emissions were estimated using construction equipment fuel consumption from the OFFROAD2017 Web Database[4], vehicle fuel economy from the EMFAC2017 Web Database[5], vehicle idling emission factors from EMFAC2017, and emission factors by fuel type and/or vehicle category from The Climate Registry (TCR 2019).

Emissions of CO_2e from long-term project operations were also evaluated, with detailed emission calculations presented in Appendix 3.3-B, including the assumptions employed. Emissions would result from operation of 40 standby diesel generators, 2 administrative diesel generators, offsite vehicle trips for worker commutes and material deliveries, cooling units, and facility upkeep (such as architectural coatings, consumer product use, landscaping, water use, waste generation, and electricity use). Diesel stationary combustion emissions were estimated using emission factors from EPA's Final Mandatory Reporting of Greenhouse Gases Rule, as presented in 40 Code of Federal Regulations (CFR) 98.33. Vehicle emissions were estimated using vehicle fuel economy from the EMFAC2017 Web Database, vehicle idling emission factors from EMFAC2017, and emission factors by fuel type or vehicle category, or both, from The Climate Registry. Facility upkeep emissions were estimated using the California Emissions Estimator Model (CalEEMod), based on the square footage of the buildings to be constructed, paved areas, and project-specific electricity and water use. The CalEEMod output is included in Appendix 3.3-B.

The cooling-related emissions would result from use of refrigerants in operation of five 18-ton Daikin variable refrigerant flow cooling units, two 4.5-ton variable refrigerant flow cooling units, and one 14-ton cooling unit. Based upon manufacturer data, each 18-ton unit contains 51.6 pounds of R-410A (two 25.8 pound systems), each 4.5-ton unit contains 15.8 pounds of R-410A, and the 14-ton unit contains 25.8 pounds of R-410A, for a facility total of 315.4 pounds of R-410A. Based on the conservative allowable annual leak rate of 20 percent for commercial cooling equipment, per 40 CFR 82.157(c)(2)(i), the maximum expected refrigerant leak mass would be approximately 63 pounds of R-410A per year. Use of a global warming potential of 1,923.5, from the Intergovernmental Panel on Climate Change's 5th Assessment Report (IPCC 2014), would indicate a maximum allowable refrigerant release of approximately 55 metric tons of CO_2e per year. Details of these emission calculations are included in Appendix 3.3-B.Significance Criteria.

According to Section 15002(g) of the CEQA Guidelines, "a significant effect on the environment is defined as a substantial adverse change in the physical conditions which exist in the area affected by the proposed project" (AEP 2019). As stated in Section 15064(b) of the CEQA Guidelines, the significance of an activity may vary with the setting (AEP 2019). CEQA allows for significance criteria established by air pollution control district(s) to be used to assess the impact of a project related to GHG emissions, at the discretion of the reviewing agency.

As discussed, BAAQMD has published CEQA Guidelines that include recommended thresholds for use in determining whether projects would have significant adverse environmental impacts.[6] Specifically, BAAQMD has adopted a threshold of 1,100 metric tons of CO_2e per year for evaluating climate change

[4] The OFFROAD2017 Web Database is available at: https://www.arb.ca.gov/orion/.

[5] The EMFAC2017 Web Database is available at: http://www.arb.ca.gov/emfac/2017/.

[6] BAAQMD has initiated an update to its current CEQA Guidelines and thresholds of significance to reflect new or revised requirements in the State CEQA Guidelines, recent court decisions, improved analytical methodologies, and new mitigation strategies. However, until new guidance is approved, the thresholds of significance from the 2017 CEQA Guidelines are still considered appropriate for determining a project's significance.

impacts from land use development projects and a threshold of 10,000 metric tons of CO_2e per year for evaluating climate change impacts from stationary source projects. Land use development projects include residential, commercial, industrial, and public land uses and facilities, whereas stationary source projects include land uses that would accommodate processes and equipment that emit GHG emissions and require a local air district permit to operate (BAAQMD 2017b). Given that the project would accommodate diesel generators requiring BAAQMD permits to operate, the stationary source project threshold is applicable to this project, instead of the land use development project threshold.

The BAAQMD's 10,000 metric tons of CO_2e per year threshold is consistent with stationary source thresholds adopted by other air quality management districts throughout the state and is intended to capture 95 percent of all GHG emissions from new permit applications from stationary sources in the San Francisco Bay Area Basin (BAAQMD 2017b). The project's standby and administrative generators would be permitted sources, and the BAAQMD's 10,000 metric tons of CO_2e per year threshold was used to analyze the significance of emissions that would be produced by the generators. The BAAQMD's CEQA significance thresholds apply to stationary source GHG emissions and to GHG emissions due to construction. Therefore, emissions from mobile sources and area sources, such as electricity use and water delivery, associated with project operation would not be included for comparison to this threshold, based on guidance in the BAAQMD's CEQA Guidelines (BAAQMD 2017b).

Therefore, GHG impacts from the project's standby and administrative generators would be considered to have a less-than-significant impact if estimated emissions would be below the BAAQMD's threshold of 10,000 metric tons of CO_2e per year. Furthermore, GHG impacts from all other project-related emission sources would be considered to have a less-than-significant impact if the project would be consistent with the *City of San José GHG Reduction Strategy* and applicable regulatory programs and policies adopted by CARB or other California agencies.

3.8.3 Environmental Impacts and Mitigation Measures

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. As shown in Table 3.8-2, standby and administrative generator maintenance and testing would generate 3,529 metric tons of CO_2e per year. Emissions from the standby and administrative generators would be less than the BAAQMD's stationary source threshold of 10,000 metric tons of CO_2e per year and would, therefore, have a less-than-significant impact on the environment, consistent with the BAAQMD CEQA guidance for stationary sources.

Table 3.8-2. Greenhouse Gas Emissions from Stationary Sources During Project Operation

Source	Annual Emissions (Metric Tons per Year of CO_2e)
Stationary Sources – Standby and Administrative Generators	3,529
BAAQMD Threshold	10,000
Exceeds Threshold (Y/N)?	No

Source: BAAQMD 2017b

Demolition and Construction Emissions. As discussed, demolition and construction of the project would result in GHG emissions generated by on- and offsite vehicle trips (material haul truck, worker commute, and delivery vehicle trips) and operation of construction equipment. These sources would generate approximately 3,800 metric tons of CO_2e during the 17-month construction period, which includes a 1-month demolition period. Because demolition and construction emissions would cease once construction is complete, they are considered short-term. The BAAQMD's CEQA Guidelines do not identify a GHG emission threshold for demolition and construction-related emissions. Instead, BAAQMD recommends that GHG emissions from demolition and construction be quantified and disclosed. BAAQMD further recommends incorporation of Best Management Practices to reduce

GHG emissions during demolition and construction, as feasible and applicable. Best Management Practices (BMPs) may include use of alternative-fueled (for example, biodiesel or electric) construction vehicles and equipment for at least 15 percent of the fleet, use of at least 10 percent of local building materials, and recycling or reusing at least 50 percent of demolition and construction waste (BAAQMD 2017b), although none of these BMPs are assumed for purposes of this analysis.

Operational Emissions. As stated, GHG emissions from project operation would consist of emissions from operation of the standby and administrative diesel generators, cooling units, offsite vehicle trips for worker commutes and material deliveries, and facility upkeep, including architectural coatings, consumer product use, landscaping, water use, waste generation, and electricity use. Project-specific details of these emission sources are provided in this section, as available.

Project Stationary Combustion Sources. The standby and administrative generators would be operated only for testing and maintenance purposes, with non-emergency operation of each generator limited by permit to 42 hours per year. If all 42 generators were operated at full load for the full 42 hours per year, the generators would consume 8,205[7] barrels per year (bbl/year) of diesel fuel. The proposed consumption of diesel fuel by the generators would be approximately 0.002[8] percent of the total California capacity.

Project Cooling Units. As stated previously, the cooling-related fugitive emissions would result from use of refrigerants in operation of five 18-ton Daikin variable refrigerant flow cooling units, two 4.5-ton variable refrigerant flow cooling units, and one 14-ton cooling unit. Based upon manufacturer data, the facility's total capacity would be 315.4 pounds of R-410A. Using a conservative allowable annual leak rate of 20 percent for commercial cooling equipment, per 40 CFR 82.157(c)(2)(i), the maximum expected refrigerant leak mass would be approximately 63 pounds of R-410A per year or 55 metric tons of CO_2e per year.

Project Electricity Usage. The primary function of the data center is to house computer servers, which require electricity 24 hours a day to operate. The projected maximum demand for the entire project is 91.75 megawatts (MW). On an annual basis, the project would consume up to the maximum electrical usage of 803,730 MWh per year. However, to provide maximum project flexibility, emission estimates for energy use were based on a maximum demand of 99 MW, or 867,240 MWh per year, which is the maximum allowed for projects eligible for the Small Power Plant Exemption under California Energy Commission regulations.

Project Mobile Emission Sources. Approximately 100 employees would be employed at the project site on a daily basis, split over three shifts, with approximately 30 daily vendor trips.

Project Water Consumption and Waste Generation. Water consumption results in indirect emissions from electricity usage for water conveyance and wastewater treatment. Indoor uses at the project site would generate a water demand of approximately 29.1 acre-feet per year with recycled water being the primary source, based on availability from the City. Daily operations at the data center would generate waste, which would result in fugitive GHG emissions during decomposition.

Summary of GHG Emissions. Emissions from stationary combustion sources, namely diesel generator testing and maintenance, are presented in Table 3.8-2. Estimated emissions from energy use, cooling units, mobile and area sources, water use, and waste generation (i.e., project operation) are summarized in Table 3.8-3.

[7] Calculated as: 202.0 gallons per hour x 42 hours per year x 40 3-MW generators + 90.5 gallons per hour x 42 hours per year x 1 1.25-MW generator + 34.4 gallons per hour x 42 hours per year x 1 0.5-MW generator = 344,606 gallons per year = 8,205 bbl/yr.

[8] Calculated as follows, based on the California Energy Commission's 2018 Weekly Fuels Watch Report: 8,205 bbl/yr / 341,036,000 (calculated as the sum of total distillates for refinery stocks and refinery production) bbl/yr = 0.002 percent. Report is available at https://www.energy.ca.gov/almanac/petroleum_data/fuels_watch/, and was accessed September 9, 2019.

Table 3.8-3. Greenhouse Gas Emissions from Energy Use, Cooling Units, Mobile Sources, Area Sources, Water Use, and Waste Generation During Project Operation

Source	Annual Emissions (Metric Tons per Year of CO_2e)
Energy Use[a]	253,279
Cooling Units	55.2
Mobile Sources[b]	457
Area Sources[c]	0.01
Water Use	27.9
Waste Generation	303
Total	254,122

[a] Energy use emissions include emissions from electricity use.
[b] Mobile source emissions include emissions from worker commute and vendor trips.
[c] Area source emissions include emissions from architectural coatings, consumer products, and landscaping.

As compared to the CO_2e emissions in Table 3.8-1, the standby and administrative generators would comprise less than 1 percent of the total City GHG emissions. As shown in Table 3.8-3, operation of the project would generate 254,122 metric tons of CO_2e per year. Inclusion of emissions from the project's maximum possible electricity use, refrigerant leakage from cooling units, and other non-stationary sources would bring the project's contribution to a maximum of 5 percent of the total City GHG emissions. This emissions estimate does not include efficiency measures that would be pursued as part of the project, nor does it reflect implementation of state and local measures to reduce GHG emissions (for example, SB 350 and SB 100). The project would comply with all applicable City and state green building measures, including Title 24, Part 6, California Energy Code baseline standard requirements for energy efficiency, based on the 2016 Energy Efficiency Standards requirements, and the 2016 California Green Building Standards Code, commonly referred to as CALGreen (California Code of Regulations, Part 11). In addition, the project would include electrical vehicle charging stations as required. All required water use reduction measures would also be incorporated in the building design, including the use of recycled water in the fluid coolers when evaporative cooling is required[9].

Conclusion Based on the BAAQMD's CEQA guidance for stationary-source projects, the threshold to determine the significance of an impact from GHG emissions is 10,000 metric tons of CO_2e per year. Stationary-source projects include land uses that would accommodate processes and equipment that emit GHG emissions and would require a BAAQMD permit to operate. If estimated annual emissions of operational-related GHGs exceed these levels, the project would result in a cumulatively considerable contribution of GHG emissions and a cumulatively significant impact to global climate change. For the project, estimated stationary source emissions (i.e., the 42 standby generators) would be less than the 10,000 metric tons of CO_2e per year threshold and would not be cumulatively significant.

b) Would the project conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

Less Than Significant Impact. The project would not conflict with any applicable plan, policy, or regulation adopted to reduce GHG emissions. The *City of San José GHG Reduction Strategy*, which is part of the *Envision San José 2040 General Plan*, identifies a series of GHG emissions reduction measures to be implemented by development projects that would allow the City to achieve its GHG reduction goals by 2035. The measures are sorted into three key categories: built environment and energy; land use and transportation; and recycling and waste reduction. The GHG Reduction

[9] The fluid coolers are of a hybrid design, meaning that they normally operate in air cooling only mode, but will enable evaporative cooling when ambient temperatures exceed 75 degrees Fahrenheit.

Strategy includes measures applicable to City government and existing and new development projects in the City. Discussion of the project's conformance with the applicable reduction measures for new development in the GHG Reduction Strategy are provided in subsequent text.

Energy Efficiency Measures. Measure MS-2.8 of the *Envision San José 2040 General Plan* requires evaluation of operational energy efficiency and inclusion of operational design measures consistent with benchmarks, such as those in EPA's EnergyStar Program for new data centers. The EnergyStar score for data centers applies to spaces specifically designed and equipped to meet the needs of high-density computing equipment, such as server racks used for data storage and processing. The objective of the EnergyStar score is to provide a fair assessment of the energy performance of a property relative to its peers, taking into account the climate, weather, and business activities at the property (EPA 2019). Based on current designs, the project would have an EnergyStar score indicating better-than-average performance relative to other data centers, because, for instance, the project incorporates the following design features: use of recycled water, all electric comfort and water heating, drought-tolerant, native landscaping, and minimal glazing to reduce energy loses. .

Power Usage Effectiveness (PUE) is another metric used to compare the efficiency of facilities that house computer servers. PUE is defined as the ratio of total facility energy use to Information Technology (IT) (server) power draw (for example, PUE = Total Facility Source Energy/IT Source Energy), and generally ranges from 1.25 to 3.0 for most data centers (EPA 2019). For example, a PUE of 2 means that the data center or laboratory must draw 2 watts of electricity for each 1 watt of power consumed by the IT/server equipment. It is equal to the total energy consumption of a data center (for all fuels) divided by the energy consumption used for the IT equipment. The ideal PUE is one where all power drawn by the facility goes to the IT infrastructure. With implementation of the proposed mechanical and electrical design of the building and the anticipated data center occupancy, the project's PUE would be 1.25 or better.

Water Conservation Measures. Development standards for water conservation would be applied to increase efficiency in indoor and outdoor water use areas in accordance with all applicable requirements and standards. Specifically, the project would comply with all applicable City and state water conservation (indoor and outdoor) measures, including Title 24, Part 6, California Energy Code baseline standard requirements for energy efficiency, based on the 2016 Energy Efficiency Standards requirements, and CALGreen. For the project, these measures would include the following:

- Water efficient landscaping with low-usage plant material to minimize irrigation requirements
- Sourcing of site irrigation from 100 percent non-potable water, based on availability of recycled water
- Use of recycled water in fluid coolers when evaporative cooling is required
- Use of ultra-low flow toilets and plumbing fixtures consistent with CalGreen mandatory measures for water reduction

Applicable General Plan Policies. The City adopted the *Envision San José 2040 General Plan* to accommodate planned housing and employment growth through 2035. The General Plan includes goals and policies to address sustainability aimed at reducing the City's contribution to GHG emissions, many of which are specifically repeated in the City's GHG Reduction Strategy. For the project, implementation of policies that increase energy efficiency or reduce energy use (through confirmation of compliance with all applicable requirements, criteria, and standards) would effectively reduce indirect GHG emissions associated with energy generation. The consistency of the project with the applicable built environment and energy, land use and transportation, and recycling and waste policies in the GHG Reduction Strategy is analyzed in Table 3.8-4. As shown, the project would be consistent with the applicable sustainability policies in the GHG Reduction Strategy.

Table 3.8-4. Project Consistency with GHG Reduction Strategy Sustainability Policies

Emission Reduction Policies	Project Consistency
Built Environment and Energy Policies	
MS-2.3: Encourage consideration of solar orientation, including building placement, landscaping, design, and construction techniques for new construction to minimize energy consumption.	Consistent. The project would use lighting control to reduce energy usage for new exterior lighting and air economization for building cooling, when feasible. Water-efficient landscaping and ultra-low flow plumbing fixtures in the proposed buildings would limit water consumption. Furthermore, the project would use materials (wallboard partitions, ceiling tiles, and floor surfaces) that include post-consumer waste.
MS-2.7: Encourage the installation of solar panels or other clean energy power generation sources over parking areas.	
MS-2.11: Require new development to incorporate green building practices, including those required by the Green Building Ordinance.	
MS-14.4: Implement the City's Green Building Policies, so that new construction and rehabilitation of existing buildings fully implements industry best practices, including the use of optimized energy systems, selection of materials and resources, water efficiency, sustainable site selection, passive solar building design, and planting of trees and other landscape materials to reduce energy consumption.	
MS-2.8: Develop policies which promote energy reduction for energy-intensive industries. For facilities such as data centers, which have high energy demand and indirect GHG emissions, require evaluation of operational energy efficiency and inclusion of operational design measures as part of development review consistent with benchmarks such as those in EPA's EnergyStar Program for new data centers. Also require consideration of distributed power production for those facilities to reduce GHG emissions.	Consistent. The project would be designed to have a PUE of 1.25 or better and an EnergyStar score indicating better-than-average performance relative to other data centers.
MS-17.2: Ensure that development within San José is planned and built in a manner consistent with sustainable use of current and future water supplies by encouraging sustainable development practices, including low-impact development, water-efficient development, and green building techniques.	Consistent. The project would use recycled water for landscape irrigation and the fluid coolers. Ultra-low flow plumbing fixtures in the proposed buildings would also limit potable water consumption, consistent with water-efficient development.
MS-19.4: Require the use of recycled water wherever feasible and cost-effective to serve existing and new development.	
Land Use and Transportation Policies	
TR-7.1: Require large employers to develop programs to reduce the vehicle trips and vehicle miles generated by their employees through the use of shuttles, provision for car-sharing, bicycle sharing, carpool, parking strategies, transit incentives, and other measures.	Consistent. The project would include bicycle and pedestrian amenities and promote employee vehicle trip reductions consistent with the City's requirements.
TR-8.5: Promote participation in car share programs to minimize the need for parking spaces in new and existing development.	
TR-6.7: As part of the project development review process, ensure that adequate off-street loading areas in new large commercial, industrial, and residential developments are provided, and that they do not conflict with pedestrian, bicycle, or transit access and circulation.	Consistent. The project would provide off-street loading areas for material haul trucks and delivery vendors during both demolition/construction and operation.
Recycling and Waste Policies	
MS-6.5: Reduce the amount of waste disposed in landfills through waste prevention, reuse, and recycling of materials at venues, facilities, and special events.	Consistent. The project would promote waste prevention, reuse, and recycling in accordance with applicable requirements and standards.

While not specifically identified as sustainability policies in the City's GHG Reduction Strategy, the *Envision San José 2040 General Plan* also includes a number of policies intended to minimize air

pollutant and toxic air contaminant emissions from new and existing development, including during demolition and construction activities. As demonstrated in Section 3.3, the project would be consistent with these policies as follows:

- Assessing projected air emissions in conformance with the BAAQMD CEQA Guidelines and applicable state and federal standards, including preparation of a health risk assessment
- Identifying and implementing feasible air emission reduction measures
- Including dust, particulate matter, and construction equipment exhaust control measures, consistent with the mitigation measures recommended in the BAAQMD CEQA Guidelines

Bay Area 2017 Clean Air Plan. The *2017 Bay Area Clean Air Plan* includes performance objectives, consistent with the state's climate protection goals under AB 32 and SB 375, designed to reduce emissions of GHG emissions to 1990 levels by 2030 and 80 percent below 1990 levels by 2050. Due to the relatively high electrical demand of the project, energy efficiency measures would be included in the design and operation of the onsite electrical and mechanical systems.

Plan Bay Area 2040/California SB 375. Under the requirements of SB 375, the MTC and ABAG developed an SCS with the adopted *Plan Bay Area 2040* to achieve the Bay Area's regional GHG reduction target. *Plan Bay Area 2040* sets a 15 percent GHG emissions reduction per capita target from passenger vehicles by 2035 when compared to 2005 emissions. However, these emission reduction targets are only intended for projects associated with land use and transportation strategies. The project would generate 130 total daily vehicle trips, including vendors and employee trips. Due to the limited number of employees and visitors at the project site, the project would have less-than-significant traffic impacts during operation. Thus, the project would not contribute to a substantial increase in passenger vehicle travel within the region.

California SB 100. SB 100 advances the RPS renewable resources requirement to 50 percent by 2026 and 60 percent by 2030. It also requires renewable energy resources and zero-carbon resources to supply 100 percent of all retail sales of electricity by 2045. This requirement applies to the Pacific Gas and Electric Company (PG&E), which would be the project's primary source of electricity supply.

AB 32 Scoping Plan. The vast majority of the project's GHG emissions would result from energy use. Multiple AB 32 Scoping Plan measures address GHG emissions from energy. For example, the Cap-and-Trade Program, through the regulation of upstream electricity producers, would account for GHG emissions from the project and require emissions from covered sectors to be reduced by the amounts needed to achieve AB 32's 2030 goal.

Conclusion. With implementation of the project's efficiency measures in accordance with all applicable laws and regulations, GHG emissions related to the project, including emissions associated with demolition, construction, operations, and maintenance, would be less than significant. The project would not conflict with the *City of San José GHG Reduction Strategy* or other plans, policies, or regulations adopted for the purpose of reducing the emissions of GHGs. Stationary source emissions would also be less than BAAQMD's threshold of 10,000 metric tons of CO_2e per year.

Previously Identified Mitigation Measures: None.

New Proposed Mitigation Measures: None

3.8.4 References

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3.9 Hazards and Hazardous Materials

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☒	☐	☐
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☐	☒	☐
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one quarter mile of an existing or proposed school?	☐	☐	☐	☒
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☒	☐
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?	☐	☐	☐	☒
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☒
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	☐	☐	☐	☒

Environmental checklist established by CEQA Guidelines, Appendix G.

3.9.1 Setting

The San José Data Center (SJC02) will be located within the City of San José on an approximately 64.5-acre site and will consist of two data center buildings totaling over approximately 479,000 square feet of space. The project will include 40 3.0-megawatt (MW) standby diesel generators (20 per building) to provide electrical power to support the information technology (IT) load during utility outages or certain onsite electrical equipment interruptions or failures, as well as the installation of 20 3-MW emergency diesel generators at each building. In addition to the 40 backup generators, the project will include two administrative generators, rated at 1.25 MW and 0.5 MW, to support administrative functions during an interruption in the normal delivery of electrical power from the utility. The facility design will not require more than approximately 99 MW of electrical power, which will be used only for backup power for onsite data center operations in the event of an electrical outage by Pacific Gas & Electric (PG&E), although the estimated load is 92 MW.

The land has been used historically for farming since the early 1920s but is not currently in agricultural use. There are two vacant residences, a mobile home, and a storage shed/warehouse currently onsite, which will be demolished as part of the SJC02 project. To the north of the project site are the San José/Santa Clara Regional Wastewater Treatment Plant (WWTP) sludge drying beds, to the south is Highway 237, to the west is the Los Esteros Critical Energy Facility (LECEF), a PG&E substation, and to the east is Coyote Creek. The project is anticipated to begin construction in the 3rd quarter of 2020, with operations beginning in the 1st quarter of 2022.

3.9.2 Historical Contamination, Investigation, and Remediation

Information on historical contamination, investigation, and remediation at the SJC02 project site was derived from a Phase 1 Environmental Site Assessment (ESA) and a Phase 1 Environmental Site Assessment Update (Cornerstone Earth Group [Cornerstone] 2016) that were included as Appendix I and Appendix J of the Draft Environmental Impact Report, (2017 DEIR), 237 Industrial Center Project (City 2017a), and attached hereto as Appendix 1A. Although the both Phase I ESAs were primarily developed for the project site, windshield surveys and database searches included all offsite utility corridors[1]

The Phase 1 ESA (Cornerstone 2015) was performed in accordance with ASTM International (ASTM) E 1527-13 titled, “Standard Practice for Environmental Site Assessments” (ASTM Standard) and compliance with the U.S. Environmental Protection Agency (EPA) rule entitled, “Standards and Practices for All Appropriate Inquiries; Final Rule (AAI Rule). The Phase 1 ESA documents were prepared in connection with the contemplated sale of the project site by helping to identify Recognized Environmental Conditions (RECs), as defined by ASTM E 1527-13. In addition to a reconnaissance site visit and drive-by observations of adjoining properties, the Phase 1 ESA reviewed database reports from regulatory agencies and selected government agencies to assess past and current site uses and hazardous materials management practices. As part of this work, the Phase 1 ESA included a review of a previously completed Phase 1 ESA (Cardno 2015a) and a Shallow Soil Assessment (Cardno 2015b), as well as a Preliminary Site Assessment for 1595 Alviso-Milpitas Road (ES 1991) that was obtained from the Geotracker Database. The Phase 1 ESA Update (Cornerstone 2016) conducted additional soil sampling and analyses to address unresolved issues related to the former orchard pesticide use and to confirm the status of previous site remediation efforts

3.9.2.1 Subject Property

The site has been used for agricultural purposes (orchards and row crops) since at least the 1920s. although it is not currently in agricultural use. Earliest records indicate that the project site was planted as a pear orchard by the Jackson family around 1923. The project site was acquired by the Cilker family in December 1961, and they reportedly cultivated peaches, nectarines, and apples, along with the existing pear trees. During the time the orchard was in operation, pesticides were applied by vehicle throughout the orchard. Pesticide inventory records were not kept. In later years (circa 1985 to 2000), the Cilker family leased land use privileges to Mr. Tom Mitsuyoshi, who cultivated row crops including lettuce and asparagus. Since the 2000s, the agricultural land has been fallow (Cornerstone 2015).

A Preliminary Site Assessment (ES 1991) was prepared for the project site and the adjacent Santa Clara Valley Water District (SCVWD) property to the east in support of the Coyote Creek Flood Control Improvement Project, which regraded the adjacent eastern property and constructed an earthen levee to channelize Coyote Creek. Observations by Earth Sciences Associates (ES) of the project site at that time indicated the presence of the currently existing structures, as well as a canopy-covered equipment storage area to the north of the existing on-site warehouse The open equipment storage area included mechanical farm equipment, 55-gallon drums, and three above-ground storage tanks (ASTs). The upright drums were unlabeled and mostly empty and were either on pallets or directly upon the soil. One drum containing waste oil was placed within a metal catch pan. A diesel AST (approximately 250 gallons) was located in the east-central portion of the storage area and was reported to be in good condition. A second waste oil AST (approximately 500 gallons) was located in the northwestern portion of the storage yard and, reportedly, showed evidence of overfilling as indicated by staining on the AST and soils beneath it. The third AST was not described (Cornerstone 2015).

Across from the on-site warehouse on the eastern side of the access road, ES (1991) reported various items including stockpiled soil (10 to 15 cubic yards); and scrap metal consisting of old farm equipment, a pile of old car batteries, a pesticide storage trailer, and a diesel AST (approximately 500 to 1,000 gallons). The soil stockpile was believed by ES to have likely originated from the removal of a 3,000-gallon gasoline underground storage tank (UST) in 1988. This gasoline UST removal reportedly occurred near the

[1] Although both Phase I ESAs were primarily developed for the project site, windshield surveys and database searches included all offsite utility corridors

northeastern corner of the existing on-site warehouse and the canopy-covered farm equipment storage area to the north. Initial confirmatory soil sampling results indicated residual total petroleum hydrocarbons as gasoline (TPH-g) and benzene, toluene, ethylbenezene, and xylenes (BTEX) contamination in the UST excavation. An additional unidentified amount of soil was over-excavated from the former UST area in October 1991. TPH-g and BTEX compounds were detected in those confirmatory samples at concentrations up to 840, 0.15, 3.7, 4, and 10 milligrams per kilogram (mg/kg), respectively. In December 1991, three groundwater wells were installed in the former UST area. No TPH-g or BTEX compounds were detected in the soil samples collected from those borings, nor were they detected in any of the groundwater samples collected over four consecutive quarters. The SCVWD (1998) issued a case closure letter for the UST release, stating that no further action was required and that the very low levels of contaminants that remained in on-site soils had not resulted in adverse groundwater impacts. The three onsite monitoring wells in the former UST area were abandoned under permit from SCVWD in 1998.

An additional Phase 1 ESA was incorporated as part of Cornerstone 2015 Phase I. This Phase I ESA prepared by Cardno was conducted for a 13-acre parcel in the northwestern portion of the project site (Cardno 2015a), which concluded that pesticide or herbicide use on the agricultural land represented an REC[2]. [] For that reason, the Phase 1 ESA was followed up with a limited sampling and analysis effort, in which 12 four-point composite samples of shallow soils were collected at an approximate depth of 1 foot (Cardno 2015b). These shallow soil samples were analyzed for organochlorine and organophosphorous pesticides and herbicides, which detected organochlorine pesticides (DDT and related compounds DDE and DDD) at concentrations up to 0.27 mg/kg, 1.4 mg/kg, and 0.093 mg/kg, respectively. No organophosphorous pesticides or herbicides were reported. The DDT, DDE, and DDD results were all below the corresponding EPA Regional Screening Levels (RSLs) for residential/unrestricted property uses, as well as the industrial RSLs. Because the analytical results were less than the corresponding human health-based environmental screening levels (i.e., EPA RSLs), surficial soils were not considered to pose a significant risk for human health; however, risks to ecological receptors were not considered. Furthermore, it should be noted that the sum of the DDT, DDE, and DDD concentrations (commonly referred to as total DDT) in soils, was reported at concentrations (maximum 1.631 mg/kg; average 1.356 mg/kg), which exceed the Total Threshold Limit Concentration (TTLC) of 1.0 mg/kg[3]. Cornerstone stated that onsite soils are not considered a hazardous waste until the soil is discarded or disposed offsite (Cornerstone 2015).

As a follow-up to their Phase 1 ESA, a program of subsurface investigation and laboratory analyses was conducted to address the environmental concerns related to past use of the project site for agricultural purposes (Cornerstone 2016). In particular, the investigation focused on the potential for lead paint soil contamination around existing structures, as well as pesticide contamination in agricultural fields and around existing structures and reported pesticide handling/mixing areas near water sources. The investigation also sought to document environmental conditions associated with former ASTs and USTs and several soil stockpiles that were noted in the Phase 1 ESA. This environmental investigation collected 72 soil samples from 38 locations on the project site using a combination of hand sampling and direct push drilling equipment. Four boring locations were selected near the former AST areas with three soil samples and one groundwater grab sample in each boring that were analyzed for TPH-g and volatile organic compounds (VOCs) (EPA Method 8260B) and diesel/oil range TPH (EPA Method 8015M). Groundwater was observed in the borings at an approximate depth of 20 to 25 feet below ground surface (Cornerstone 2016).

The follow-up environmental investigation detected several organochlorine pesticides in soil samples from agricultural areas and near structures and stockpiles that were mostly less than their respective residential screening criteria (except for 4,4'-DDE, 4,4'-DDT, chlordane, and dieldrin). Lead was also detected in several soil samples greater than residential screening criteria. The reported lead and organochlorine pesticide concentrations did not exceed commercial environmental screening criteria except for a few soil samples collected near a former farm equipment storage area that contained elevated lead concentrations. Arsenic concentrations ranged up to 70 mg/kg, which exceeds its

[2] Since the Cardno Phase I ESA is located within the project boundaries and limited sampling was conducted, this Phase I ESA is still appropriate for use as it provides information regarding historical contamination at this site.

[3] Under Title 22 of the California Code of Regulations (22 CCR) the TTLC is defined as the concentration at which a solid waste is considered as a hazardous waste for waste disposal classification purposes.

toxicity-based screening levels and regional natural background concentrations that were reported in published studies. Elevated lead and arsenic concentrations were detected at the greatest frequency and magnitude in the near surface soil samples. This is consistent with prior agricultural uses of the project site, because lead and arsenic are common components in some pesticides. However, because the elevated concentrations of pesticide components were primarily found within the upper few feet of soil and limited mobility of these components, it was concluded that the likelihood of groundwater impacts from pesticides was low (Cornerstone 2016).

The potential for soluble lead in the near-surface soil samples was evaluated by selective sample testing (i.e., samples with highest total lead concentrations) for Soluble Threshold Limit Concentration (STLC) extraction techniques. The STLC results from those samples exceeded the STLC of 5 milligrams per liter (mg/L), the level at which a solid waste is considered hazardous per Title 22 California Code of Regulations. Cornerstone noted that, similar to what was previously identified for the total DDT concentrations, soils (such as excess soil generated during construction) would be considered as a hazardous waste if there were any plans to remove them from the site (Cornerstone 2016).

The soil and groundwater samples collected from the former AST locations did not detect VOCs or gasoline-range petroleum hydrocarbons above the laboratory reporting limits. Diesel- and oil-range petroleum hydrocarbons were detected in some soil or groundwater grab samples, or both, but at concentrations that were less than their respective residential environmental screening criteria. Based on these findings, Cornerstone (2016) concluded that the former AST locations and the canopy-covered farm equipment storage structure did not significantly affect soil or groundwater environmental conditions. However, since the specific prior locations of the ASTs were not known, it was recommended that protocols be established in a Site Management Plan (SMP) for handling contaminated soils that could be encountered during construction activities.

Cornerstone (2016) also concluded that regulatory agencies would require remedial measures to reduce potential health risks to future occupants of the project site resulting from exposure to pesticide contamination in the soils.

3.9.2.2 Adjacent Properties

The adjacent property to the east, was part of the Cilker property before it was acquired by SCVWD. For the adjacent eastern property, ES (1991) reported that there were two residences and a storage shed. There were two water supply wells near the shed, as well as three groundwater monitoring wells that were installed by Geomatrix, Inc. as part of a study by the U.S. Geological Survey (USGS) for the National Earthquake Hazards Reduction Program. The offsite USGS wells, in the northeastern portion of the property, were used to monitor groundwater levels and indicated groundwater at between 12 and 14 feet below ground surface in 1989. Soil samples were collected by ES at three locations on the easterly property (samples A and B) within agricultural field areas and one location (sample C) collected between the storage shed and residences where pesticide handling was reported. Only samples B and C were analyzed. DDE was reported to have been detected at 0.130 mg/kg in sample B collected at 1 to 1.5 feet below ground surface. The organochlorine pesticide results for sample C were not reported. Analyses of the two soil samples did not detect any compounds based on the other analyses for TPH with BTEX Distinction (EPA Method 8015/8020), TPH (EPA Method 8015); or halogenated volatile organics (EPA Method 8010) (ES 1991).

According to the Phase 1 ESA (Cornerstone 2015), the Geotracker database additionally contained a letter from the San Francisco Bay Regional Water Quality Control Board (SFB RWQCB 1995) entitled *Remedial Action Completion Certificate for Former Cilker Property, 1595 Milpitas-Alviso Road, San José, Santa Clara County, California* along with a case closure summary. This document is associated with a historical pesticide release that is associated with the adjacent offsite eastern property that was originally part of the Cilker property but which, subsequently, was acquired by SCVWD. The associated figure identifying the offsite eastern property was not included in the scan in Appendix F of the Phase 1 ESA; it was not possible to positively identify the actual location, especially since the ‘Site Facility Address’ is given as 1595 Milpitas-Alviso Road (former address). However, as the SFB RWQCB document states that “The former Cilker property was completely regraded and revegetated in late 1992, as part of the Coyote Creek Flood Control Improvement Project. An earthen levee has been built over the site.”, it was

concluded that this document actually references the adjacent property to the east of the project site. While this pesticide release area was not specifically identified in the ES (1991) Preliminary Site Assessment, it is believed that the approximate location is shown as the 'Eastern Portion of Parcel' on Figure 3 of that document and currently lies beneath the realigned Coyote Creek or its associated levees.

The SFB RWQCB (1995) document indicated that 50 soil and debris samples were collected between a depth 0 to 10 feet below ground surface. The organochlorine pesticides DDT, DDD, and DDE in these samples were detected at maximum levels of 20 parts per million (ppm, roughly equivalent to mg/kg), 6.2 ppm, and less than 5.0 ppm, respectively. Following the removal of approximately 42 cubic yards of contaminated soil and debris, DDT, DDD, and DDE levels in confirmatory soil samples from the excavation were 0.45 ppm, 0.16 ppm, and 0.84 ppm, respectively. Groundwater was also collected from six monitoring wells and analyzed for organochlorine pesticides. DDT, DDD, and DDE were detected in these groundwater samples at maximum concentrations of 0.16 parts per billion (ppb), 0.16 ppb, and 0.81 ppb, respectively. These groundwater analytical results exceeded the EPA Regional Screening Levels (RSLs) for tap water for DDD and DDE, 0.031 micrograms per liter (μg/L, roughly equivalent to ppb) and 0.046 μg/L, respectively.

The SFB RWQCB (1995) document also notes that the pesticides Dinoseb and 2, 4-DB were illegally dumped on site in August 1992. These organochlorine pesticides were also part of the onsite soil removal action. Analysis of confirmatory soil samples in the excavation where an additional 6 cubic yards was removed indicated residual concentrations of 2,4-DB of less than 0.20 ppm. There were residual concentrations of Dinoseb: the highest level was 130 ppm at a single location, where only 4 of 22 samples had any detectable levels of Dinoseb. The 130 ppm level, which was inadvertently left on site, is less than the Preliminary Remediation Goal (PRG) for industrial soil but greater than the PRG for residential soil (65 ppb). Analysis of groundwater samples collected from two monitoring wells constructed in this location did not detect any Dinoseb or 2,4-DB.

The adjacent property to the west is currently occupied by LECEF at 800 Thomas Foon Chew Way (formerly 151 Alviso-Milpitas Road). Regulatory records indicate that hazardous materials are used and stored at the LECEF site but, aside from a leaking underground storage tank case listing, the records did not indicate spills or releases of hazardous materials. Regulatory records indicate that a 300-gallon gasoline UST and two 10,000-gallon diesel USTs were removed from the LECEF property under permit from the San José Fire Department in November 2001. Similar to the subject property, the LECEF property had been previously used for agricultural purposes including orchards, row crops, and greenhouses. Records indicate that the gasoline UST was in good condition at the time of removal and the analysis of a confirmatory soil sample did not detect any gasoline-related constituents. Groundwater was not encountered during the gasoline UST removal (Cornerstone 2015).

At the diesel UST locations on the LECEF property, confirmatory soil samples from the bottom of the excavations did not detect petroleum hydrocarbons. Groundwater was encountered in these excavations at a depth of 12.5 to 13 feet below ground surface. Total petroleum hydrocarbons as diesel (TPH-d) was detected at 3,300 μg/L in the groundwater grab sample from one of the diesel USTs (No. 2), but no TPH-d was detected in the other UST (No. 1) excavation. No BTEX or tert-methyl butyl ether constituents were detected in the groundwater samples from either UST excavation. The Santa Clara Valley Water District (SCVWD) issued a case closure letter dated August 15, 2002, stating that "no further action related to petroleum release(s) is required" (Cornerstone 2015).

A third 10,000-gallon diesel UST on the LECEF property reportedly floated to the ground surface during a flood in 1982. Petroleum hydrocarbons were not detected in soil or groundwater samples from this former UST location collected by Lowkey Associates in 2000. A 2002 report by Piers Environmental Services indicates that an additional UST was removed from the LECEF property under Fire Department oversight in July 2002. No oil range petroleum hydrocarbons, TPH-g, TPH-d, or BTEX compounds were detected in the confirmatory soil sample collected from below the UST. Cornerstone (2015) concluded that the former USTs on the LECEF property appear unlikely to have significantly affected environmental conditions for soil, soil vapor, or groundwater on that adjacent property. They also concluded that there were no other offsite spill incidents that appear likely to have affected soil, soil vapor, or groundwater conditions at the subject property.

3.9.3 Regulatory Restrictions

Cornerstone (2015) contracted with Environmental Data Resources, Inc. (EDR) to conduct a search for the project site and associated property liens or activity use limitations (AULs) among Federal databases, such as EPA-listed properties subject to land use restrictions (engineering or institutional controls) or Superfund liens, and State-listed properties maintained by the California Department of Toxic Substances Control (DTSC). The project site was not identified on either the above-mentioned federal or state lists. A Preliminary Title Report by Stewart Title of California (dated May 24, 2013) did not identify any environmental liens for the subject property.

As reported by Cornerstone (2015), Cardno ATC (2015a) had also contracted with EDR to conduct a search for information regarding property liens or AULs but did not identify any in connection with the subject property.

3.9.4 Regulatory Setting

Federal, state, and local laws and regulations govern the use, transport, and storage of hazardous materials. The implementation and enforcement of these local, state, and Federal laws and regulations regarding the use, storage, and transport of hazardous materials (including setbacks for flammable storage from property lines) verify that the potential for impacts to offsite land uses, in the event of an accidental release as a result of the project, will be less than significant with mitigation (as explained further in Section 3.9.5).

The U.S. Environmental Protection Agency (EPA) is the federal administering agency for hazardous waste programs. State agencies include the California Environmental Protection Agency (Cal/EPA), Department of Toxic Substances Control (DTSC), State Water Resources Control Board (SWRCB), and the California Air Resources Board (CARB). Regional agencies include the San Francisco Bay Regional Water Quality Control Board (RWQCB), and the Bay Area Air Quality Management District (BAAQMD). Local agencies including the San José Fire Department (SJFD) and the Santa Clara County Department of Environmental Health (SCCDEH) have been granted the responsibility for implementation and enforcement of many hazardous materials regulations under the Certified Unified Program Agency (CUPA) program. The Santa Clara Valley Water District (SCVWD) monitors groundwater quality and supports groundwater clean-up efforts.

Existing City regulations that reduce or avoid impacts with hazards and hazardous materials include the following:

- City of San José Hazardous Materials Release Response Plans and Inventory
- City of San José Hazardous Materials Storage Ordinance and Toxic Gas Ordinance
- City of San José Building and Fire Codes
- City of San José Municipal Code (Chapters 6.14, 17.12, 17.88, and 20.80)

3.9.4.1 Federal

U.S. Environmental Protection Agency. The EPA is the federal agency responsible for enforcement and implementation of federal laws and regulations pertaining to hazardous materials. The legislation includes the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (commonly referred to as “Superfund”), the Superfund Amendments and Reauthorization Acts of 1986, and the Resource Conservation and Recovery Act of 1986. The EPA provides oversight and supervision for site investigations and remediation projects, and has developed land disposal restrictions and treatment standards for the disposal of certain hazardous wastes.

3.9.4.2 State

California Environmental Protection Agency. Cal/EPA serves as the umbrella agency for the DTSC, the Office of Environmental Health Hazard Assessment (OEHHA), and the SWRCB and its associated regional Water Boards.

Department of Toxic Substances Control. The DTSC regulates remediation of sites where discharges to land could potentially present a public health risk. California legislation, for which the DTSC has primary enforcement authority, includes the Hazardous Waste Control Act and the Hazardous Substance Account Act. The DTSC generally acts as the lead agency for soil and groundwater cleanup projects, and establishes cleanup and action levels for subsurface contamination that are equal to, or more restrictive than, federal levels.

Office of Environmental Health Hazard Assessment. The mission of the OEHHA is to protect and enhance public health and the environment by objective scientific evaluation of risks posed by hazardous substances.

State Water Resources Control Board. The SWRCB, through its nine regional boards, regulates discharge of potentially hazardous materials to waterways and aquifers and administers basin plans for groundwater resources in various regions of the State. The San Francisco Bay RWQCB is the regional board that has jurisdiction over the project area. The SWRCB provides oversight for sites at which the quality of groundwater or surface waters is threatened and has the authority to require investigations and remedial actions.

Regional Water Quality Control Board. San Francisco Bay RWQCB regulates discharges and releases to surface and groundwater in the project area. The RWQCB generally oversees cases involving groundwater contamination. Within the San Francisco Bay RWQCB, the County of San Mateo Health Services Agency (CSMHSA) handles most leaking underground storage tank (LUST) cases, so the RWQCB may oversee cases involving other groundwater contaminants (i.e., spills, leaks, incidents, and clean-up cases). In the case of spills at a project site, the responsible party would notify the CSMHSA, and then a lead regulator (either the CSMHSA, RWQCB or DTSC) would be determined.

3.9.4.3 Local

Envision San José 2040 General Plan

The Envision San José 2040 General Plan includes policies applicable to all development projects in San José. The following are applicable to the proposed project:

Policy EC-7.1: For development and redevelopment projects, require evaluation of the proposed site's historical and present uses to determine if any potential environmental conditions exist that could adversely impact the community or environment.

Policy EC-7.2: Identify existing soil, soil vapor, groundwater, and indoor air contamination and mitigation for identified human health and environmental hazards to future users and provide as part of the environmental review process for all development and redevelopment projects. Mitigation measures for soil, soil vapor, and groundwater contamination shall be designed to avoid adverse human health or environmental risk, in conformance with regional, State, and Federal laws, regulations, guidelines, and standards.

Policy EC-7.3: Where a property is located in near proximity of known groundwater contamination with volatile organic compounds or within 1,000 feet of an active or inactive landfill, evaluate and mitigate the potential for indoor air intrusion of hazardous compounds to the satisfaction of the City's Environmental Compliance Officer and appropriate regional, state and federal agencies prior to approval of a development or redevelopment project.

Policy EC-7.4: On redevelopment sites, determine the presence of hazardous building materials during the environmental review process or prior to project approval. Mitigation and remediation of hazardous building materials, such as lead-paint and asbestos-containing materials, shall be implemented in accordance with state and federal laws and regulations.

Policy EC-7.5: On development and redevelopment sites, require all sources of imported fill to have adequate documentation that it is clean and free of contamination and/or acceptable for the proposed

land use considering appropriate environmental screening levels for contaminants. Disposal of groundwater from excavations on construction sites shall comply with local, regional, and state requirements.

Alviso Master Plan

The Alviso Master Plan includes policies applicable to all development projects within the plan area. The following policies are specific to hazardous materials and are applicable to the proposed project.

- *Industrial/Non-Industrial Relationships Policy 1:* Industrial uses are not allowed to store, handle, dispose, and/or use acutely hazardous materials within one-quarter mile of residential uses, George Mayne School, New Chicago Marsh (I.e., National Wildlife Refuge) and other sensitive uses and habitats.
- *Industrial/Non-Industrial Relationships Policy 1:* The Light Industrial areas located north of State Street and adjacent to Coyote Creek should mitigate potential negative environmental impacts to nearby natural resources.

3.9.5 Environmental Impacts and Mitigation Measures

a) Would the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

Less Than Significant Impact With Mitigation. During the demolition, excavation and construction phase of the project, heavy equipment will be used for grading, excavation, ground improvement, and construction. The equipment will require minimal onsite fueling and limited maintenance, which could potentially result in spills of petroleum products or hazardous materials in construction staging areas. However, the likelihood of incidental spills would be minor: storage of any hazardous materials onsite during construction will be on appropriately sized secondary containment; fueling will occur over secondary containment; and most maintenance activities will occur at an offsite location. The project will also implement applicable best management practices (BMPs) included in a National Pollutant Discharge Elimination System-mandated Stormwater Pollution Prevention Plan (SWPPP) during construction to minimize this potential. Relevant BMPs would include designated fueling and maintenance areas removed from drainages and supplied with temporary spill containment equipment, such as absorbent booms and pads, and petroleum waste disposal containers. Further discussion regarding the SWPPP is provided in Section 3.10, Hydrology and Water Quality. Other hazardous materials that may be used during construction include paints, adhesives, cleaners, solvents, welding gases, spent lead acid batteries, and used waste lubricants. Due to their age, the existing, vacant residences likely contain both asbestos and lead-based paint. Prior to demolition appropriate permits will be obtained in accordance with Bay Area Air Quality District (BAAQMD) regulations, and the buildings will be abated with waste disposed of appropriately.

The SJC02 project design does not require deep foundations. Onsite soil conditions require ground improvements in the form of densification techniques. The densification technique(s) involve the vertical/horizontal compaction of soils beneath the foundations to reduce the total settlement to acceptable levels. The intent of the ground improvement design would be to increase the density of the onsite soils and compressible clays by laterally displacing and/or densifying the existing in-place soils. Workers will be protected by the development and implementation of the Site Management/Health and Safety Plans in accordance with applicable laws and regulations.

As previously mentioned, any surface soil that will be removed from the site may be considered as a California Hazardous Waste due to elevated levels of total DDT or lead associated with past agricultural use of pesticides. Any soils removed from the project site would be sampled and tested to determine appropriate disposal options at an approved facility. Similarly, because of the known presence of pesticide constituents in surface soils, representatives of an appropriate local or state regulatory agency, such as Santa Clara County Department of Environmental Health (SCCDEH) Site Mitigation Program or DTSC, may require the removal of excess surficial soils or the implementation of institutional or engineering controls (or some combination of both). Consultation with either the SCCDEH or DTSC and participation in the appropriate cleanup program, as well as incorporation of

mitigation measure MM HAZ 1.1 and MM HAZ 1.2 would confirm that the site development occurs in a manner that is protective of human health and the environment and does not result in any significant impacts.

During the operational phase of the project, diesel fuel for use by the emergency standby generators and valve sealed lead acid batteries in the uninterruptable power supply will be used/stored onsite. The diesel fuel will be stored in double-walled belly tanks underneath each generator and will be used only for emergencies, testing and maintenance purposes. Testing and maintenance will be limited to no more than 50 hours of operation per generator annually. Therefore, deliveries of diesel fuel to refill the belly tanks will be infrequent. As a result, the project will not create a significant hazard to the public through the routine transport, use, or disposal of hazardous materials at the site and no reportable quantities of acutely or extremely hazardous materials will be transported, stored, or used at the site.

The valve-sealed lead acid batteries will be located in each data center building's electrical room. The batteries are maintenance-free and require no additional electrolyte. Once the batteries have reached their useful life, they are replaced, and the spent battery is returned for recycling. As a result, the project would not create a significant impact on the environment in this regard.

b) Would the project create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

Less Than Significant Impact. The project will include 40 standby generators, each with a storage capacity of approximately 9,100 gallons of diesel fuel. The 500-kW standby generator will have a storage capacity of 2,000 gallons, and the 1,250-kW standby generator will have a storage capacity of 4,800 gallons. The generator storage tanks are double-walled and will be monitored electronically for leakages, which will significantly reduce any risk of an accidental release. Furthermore, in the highly unlikely event of an accidental release of diesel fuel, the storage tanks' electronic monitoring system would trigger an alarm in the SJC02 security office alerting personnel of a detected leak resulting in a response to control any accidental releases as quickly as possible.

Diesel fuel delivery will occur on an infrequent, as-needed basis via a tanker truck. Diesel delivery trucks will follow standard spill prevention practices, such as using wheel chocks to secure the truck in a stationary position until disconnection of the transfer lines is complete. If a pump hose should break during fueling, an emergency pump shut-off will be activated. In addition, catch basins located at each generator's fill port will be closed during fueling events to prevent the escape of any small spills. As a result of the engineered controls, there is a less than significant impact that an accidental release of diesel fuel will create a significant hazard to the public or environment.

c) Would the project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

No Impact. The nearest school is the Anthony Spangler Elementary School in Milpitas, California that is located approximately 0.75 mile to the east of the SJC02 project site. There are no schools within a 0.25-mile radius of the SJC02 project site. Therefore, there will be no hazardous materials emitted from the site capable of creating offsite impacts at a nearby existing or proposed school, and there will be no impact.

d) Would the project be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?

Less than Significant Impact. The project site and immediately adjacent properties are not on the State of California Hazardous Waste and Substances Site List (also known as the Cortese List). The project is not currently subject to institutional or engineering controls or AULs; however, the project site has recognized environmental conditions related to past use of pesticides for agricultural purposes. It is expected that development and construction of the site will undergo either consultation and approval under the Site Cleanup Program with SCCDEH or DTSC consultation

under the Voluntary Cleanup Program prior to commencement of construction to ensure public health and the environment are protected. Therefore, the construction and operation of the SJC02 project is not expected to create a significant hazard to the public or the environment.

e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?

No Impact. The project site is located approximately 3.3 miles north-northeast of the Norman Y. Mineta San José International Airport and is more than 5.8 miles east of the Moffat Federal Airfield. The project site is located outside of any designated airport safety zones or airport noise contours (SCCALUC 2016) for the Norman Y. Mineta San José International Airport. Therefore, the project would have no impact as a result in a safety hazard or result in excessive noise impacts for people residing or working in the project area.

f) Would the project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

No Impact. As described in Section 3.15, Public Services, the City of San José Fire Department will serve the project site. The project does not include any changes to the existing public roadways that provide emergency access to the site. Therefore, the project would not impair the implementation of, or physically interfere with any adopted emergency response plan or emergency evacuation plan and no impact would occur.

g) Would the project expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?

No Impact. As described in Section 3.20, Wildfire, while the site is currently fallow farmland, it is surrounded by industrial facilities to the east, Highway 237 to the south, and WWTP sludge drying fields to the north. To the east is the City of Milpitas and commercial facilities. Neither Milpitas nor the City of San José is identified to be within a State of California Fire Hazard Severity Zone (Cal Fire 2019) at the wildland and urban interface. As a result and as further explained in Section 3.20, Wildfire, there will be no risk of exposing people or structures to a significant risk of loss, injury or death involving wildland fires.

Previously Identified Mitigation Measures Incorporated into the Project Design:

MM HAZ-1.1 A Site Management Plan (SMP) shall be prepared and implemented and any contaminated soils found in concentrations above established thresholds shall be removed and disposed of according to California Hazardous Waste Regulations or the contaminated portions of the site shall be capped beneath the planned development under the regulatory oversight of the Santa Clara County Hazardous Materials Compliance Division (HMCD) or the California Department of Toxic Substances Control (DTSC). The contaminated soil removed from the site shall be hauled off-site and disposed of at a licensed hazardous materials disposal site.

Components of the SMP shall include, but shall not be limited to:

- A detailed discussion of the site background;
- Preparation of a Health and Safety Plan by an industrial hygienist;
- Notification procedures if previously undiscovered significantly impacted soil or free fuel product is encountered during construction;
- Onsite soil reuse guidelines based on the California Regional Water Quality Control Board (RWQCB), San Francisco Bay Region's reuse policy;
- Sampling and laboratory analyses of excess soil requiring disposal at an appropriate off-site waste disposal facility;
- Soil stockpiling protocols; and

- Protocols to manage groundwater that may be encountered during trenching and/or subsurface excavation activities.

MM HAZ-1.2 All contractors and subcontractors at the project site shall develop a Health and Safety Plan (HSP) specific to their scope of work and based upon the known environmental conditions for the site. The HSP shall be approved by the PBCE Supervising Environmental Planner and Environmental Services Department (ESD) and implemented under the direction of a Site Safety and Health Officer. The HSP shall include, but shall not be limited to, the following elements, as applicable:

- Provisions for personal protection and monitoring exposure to construction workers;
- Procedures to be undertaken in the event that contamination is identified above action levels or previously unknown contamination is discovered;
- Procedures for the safe storage, stockpiling, and disposal of contaminated soils;
- Provisions for the onsite management and/or treatment of contaminated groundwater during extraction or dewatering activities; and
- Emergency procedures and responsible personnel.

The SMP shall be submitted to HMCD, DTSC, or equivalent regulatory agency for review and approval. Copies of the approved SMP shall be provided to the PBCE Supervising Environmental Planner and Environmental Services Department (ESD) prior to issuance of grading permits.

New Proposed Mitigation Measures: None

3.9.6 References

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3.10 Hydrology and Water Quality

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	☐	☐	☒	☐
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	☐	☐	☒	☐
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or through the addition of impervious surfaces, in a manner which would:	☐	☐	☒	☐
(i) Result in substantial erosion or siltation on- or off-site;	☐	☐	☒	☐
(ii) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;	☐	☐	☒	☐
(iii) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or	☐	☐	☒	☐
(iv) Impede or redirect flood floods?	☐	☐	☐	☒
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	☐	☐	☒	☐
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	☐	☐	☐	☒

Environmental checklist established by CEQA Guidelines, Appendix G

3.10.1 Setting

The San José Data Center (SJC02) will be located within the City of San José on an approximately 64.5-acre site and will consist of two data center buildings totaling over approximately 479,000 square feet of space. The project will include 40 3.0-megawatt (MW) standby diesel generators (20 per building) to provide electrical power to support the information technology (IT) load during utility outages or certain onsite electrical equipment interruptions or failures, as well as the installation of 20 3-MW emergency diesel generators at each building. In addition to the 40 backup generators, the project will include two administrative generators, rated at 1.25 MW and 0.5 MW, to support administrative functions during an interruption in the normal delivery of electrical power from the utility. The facility design will not require more than approximately 99 MW of electrical power, which will be used only for backup power for onsite data center operations in the event of an electrical outage by Pacific Gas & Electric (PG&E), although the estimated load is 92 MW.

The land has been used historically for farming since the early 1920s but is not currently in agricultural use. There are two residences, a mobile home, and a storage shed/warehouse currently onsite, which will be demolished as part of the SJC02 project. To the north of the project site are the San José/Santa Clara Regional Wastewater Treatment Plant sludge drying beds, to the south is Highway 237, to the west is the Los Esteros Critical Energy Facility, a PG&E substation, and to the east is Coyote Creek. The project is anticipated to begin construction in the 3rd quarter of 2020, with operations beginning in the 1st quarter of 2022.

3.10.2 Surface Water

The project site is in the Baylands watershed (SCVURPPP 2005). Except for two vacant residences and a storage shed/warehouse, the site is undeveloped. Surface water runoff is currently assumed to sheet flow offsite towards Zanker Road and, ultimately, to drain into Coyote Creek via Artesian Slough. See additional discussion of storm drainage in Section 3.19, Utilities and Service Systems.

Water quality in urban creeks is influenced by pollutants from urban stormwater runoff (such as metals, pesticides and herbicides, oil and grease, animal waste, and trash). As discussed in this section, several regulatory programs have been developed to protect the environment from urban stormwater runoff pollution.

3.10.2.1 Groundwater

The site is in the Santa Clara Valley groundwater subbasin, which covers a surface area of 297 square miles and forms a northwest-trending, elongated valley bounded by the Santa Cruz Mountains to the west and the Diablo Range to the east. Recharge generally occurs along the margins and in the southern basin area, where coarse-grained sediments predominate. The project site is located over a confined area, where a laterally extensive, low-permeability barrier (an aquitard) restricts the vertical flow of groundwater (SCVWD 2016a). This protects the underlying groundwater from shallow contamination.

The groundwater basin provides water storage for municipal and other uses. Groundwater quality is typically very good, and most public water supply wells do not require any treatment beyond disinfection (SCVWD 2016a). The site is in the San José Municipal Water System's (SJMWS) North San José (NSJ)/Alviso service area, which receives potable water that is a mix of wholesale water purchased from the San Francisco Public Utilities Commission (SFPUC) and locally-produced groundwater drawn from the Santa Clara Valley groundwater subbasin. SJMWS owns and operates four groundwater wells in the Santa Clara Valley groundwater subbasin and pumped approximately 1,286 acre-feet (AF) in 2015 (CH2M 2016). For additional discussion of water supplies, see Section 3.19, Utilities and Service Systems.

The mostly undeveloped site is located in the Baylands watershed, an area with more than 65 percent impervious surfaces. Therefore, there is very little percolation to groundwater. In other words, the site does not contribute to groundwater recharge. For additional discussion about depth to groundwater, historic contamination, investigation, and remediation, and recent exploratory boring and cone penetration test (CPT) dissipation tests conducted at the site (see Section 3.7 Geology Appendix 3.7 *Geotechnical Investigation Report* and Section 3.9 Hazards and Hazardous Materials).

3.10.2.2 Flooding

The site is located within flood zone "X", which is defined as areas of reduced flood risk due to levees (FEMA 2014). The site is not within an area mapped as vulnerable to sea level rise (CalAdapt 2019) or tsunami risk (CEMA et al. 2009).

The site is within the inundation zones of one upstream reservoir. Anderson Dam and Reservoir are located on Coyote Creek approximately 25 miles upstream. The dam and reservoir are operated by Santa Clara Valley Water District (SCVWD). The Anderson Dam Flood Inundation Map shows that dam failure could result in flooding at the site (SCVWD 2016b). Seismic remediation is needed, and SCVWD is currently undertaking the Anderson Dam Seismic Retrofit Project. Construction of the retrofit project is scheduled to be complete in 2028 (SCVWD 2019).

3.10.3 Regulatory Background

3.10.3.1 Federal Clean Water Act and State Porter-Cologne Water Quality Control Act – Municipal Stormwater Discharges

The primary laws protecting water quality are the federal Clean Water Act and the California Porter-Cologne Water Quality Control Act. The Clean Water Act is the main federal law governing surface water pollution. In California, the State Water Resources Control Board (SWRCB) administers the Clean Water Act water pollution control and water quality functions. The SWRCB provides policy guidance and delegates authority to nine regional boards that regulate surface water and groundwater quality within their respective regions, including planning, permitting, and enforcement activities. The San Francisco Bay Regional Water Quality Control Board (RWQCB) administers the federal Clean Water Act and state Porter-Cologne Water Quality Control Act in the project area.

Stormwater runoff from urban impervious surfaces and roadways can overwhelm drainage systems and pollute streams, bays, and the ocean. Section 402 of the federal Clean Water Act prohibits the discharge of any pollutant to waters of the United States from a point source, unless that discharge is authorized by a National Pollutant Discharge Elimination System (NPDES) permit. Point sources include stormwater discharges from discrete conveyances such as pipes, storm drains, or manmade ditches and channels. Each regional board is responsible for addressing region-wide water quality concerns by adopting, monitoring compliance with, and enforcing NPDES permits.

Under its Clean Water Act and Porter-Cologne Water Quality Control Act authority, the San Francisco Bay RWQCB issued a Municipal Regional Stormwater NPDES Permit (Municipal Regional Permit) to 76 Bay Area municipalities, including the City of San José (City). The permit contains requirements for controlling the potential impacts of land development on stormwater quality and flow. To meet the permit requirements, projects must include appropriate site design measures, pollutant source controls, and treatment control measures, with a verification program to ensure the proper operation and maintenance of treatment control measures. The permit also requires that projects producing increases in runoff peak flows, volumes, and durations that may cause erosion in downstream receiving water must also include hydromodification control measures.

3.10.3.2 Federal Clean Water Act and State Porter-Cologne Water Quality Control Act – Construction Site Discharges

Under the federal Clean Water Act, discharge of stormwater from construction sites must comply with the conditions of an NPDES permit. The SWRCB has adopted a statewide General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities (Construction General Permit) that applies to projects resulting in 1 or more acres of soil disturbance. For projects disturbing more than 1 acre of soil, a construction Stormwater Pollution Prevention Plan (SWPPP) is required that specifies site management activities to be implemented during site development. These management activities include construction stormwater best management practices, erosion and sedimentation controls, dewatering, runoff controls, and construction equipment maintenance. The San Francisco Bay RWQCB requires a Notice of Intent to be filed prior to any stormwater discharge from construction activities, and that the SWPPP be implemented and maintained onsite.

3.10.3.3 Sustainable Groundwater Management Act

The Sustainable Groundwater Management Act (SGMA) was enacted in 2014, establishing a new structure for locally managing California's groundwater. SGMA provides for the establishment of Groundwater Sustainability Agencies for designated groundwater basins or subbasins, and the development of Groundwater Sustainability Plans for most groundwater basins. Under SGMA, a groundwater basin would be managed to avoid undesirable results such as lowering of groundwater levels, reduction of groundwater storage, seawater intrusion, degraded water quality, land subsidence, and depletion of interconnected surface water. SGMA requires the adoption of Groundwater Sustainability Plans by 2022 (or earlier for basins with critical overdraft), and sustainable groundwater operations must be achieved within 20 years after completing the plan. If a functionally equivalent groundwater plan has

already been developed, then a Groundwater Sustainability Agency may submit that plan as an alternative to a Groundwater Sustainability Plan.

The SCVWD is the SGMA Groundwater Sustainability Agency for the Santa Clara Valley groundwater subbasin and developed its Groundwater Management Plan for the Santa Clara and Llagas Subbasin (SCVWD 2016a) as functionally equivalent to a Groundwater Sustainability Plan.

3.10.3.4. City of San José Local Policies and Regulations

City of San José Post-Construction Urban Runoff Management (Policy 6-29)

The City's Policy No. 6-29 implements the stormwater treatment requirements of Provision C.3 of the Municipal Regional Stormwater NPDES Permit. The City's Policy No. 6-29 requires all new and redevelopment projects regardless of size and land use to implement postconstruction Best Management Practices (BMPs) and Treatment Control Measures (TCMs) to the maximum extent practicable. This policy also established specific design standards for postconstruction TCMs for projects that create, add, or replace 10,000 square feet or more of impervious surface area to use site design and source control measures and numerically-sized Low Impact Development (LID) stormwater treatment measures in accordance with the strategies set forth in the policy.

City of San José Hydromodification Management (Policy 8-14)

The City's Policy No. 8-14 implements the stormwater treatment requirements of Provision C.3 of the Municipal Regional Stormwater NPDES Permit. Policy No. 8-14 requires all new and redevelopment projects that create or replace 1 acre or more of impervious surface to manage development-related increases in peak runoff flow, volume, and duration, where such hydromodification is likely to cause increased erosion, silt pollutant generation or other impacts to beneficial uses of local rivers, streams, and creeks. The policy requires these projects to be designed to control project-related hydromodification through a Hydromodification Management Plan (HMP). As noted herein, based on the SCVUPPP watershed map for the City of San José, the project site is exempt from the NPDES hydromodification requirements because it is located in a catchment to hardened channel or tidal area, or both.

Envision San José 2040 General Plan

The Envision San José 2040 General Plan includes policies applicable to all development projects in San José, as follows:

- Policy ER-8.1: Manage stormwater runoff in compliance with the City's Post-Construction Urban Runoff (6-29) and Hydromodification Management (8-14) Policies.
- Policy ER-8.3: Ensure that private development in San José includes adequate measures to treat stormwater runoff.
- Policy ER-8.5: Ensure that all development projects in San José maximize opportunities to filter, infiltrate, store and reuse or evaporate stormwater runoff onsite.
- Policy EC-4.1: Design and build all new or remodeled habitable structures in accordance with the most recent California Building Code and municipal code requirements as amended and adopted by the City of San José, including provisions for expansive soil, and grading and storm water controls.
- Policy EC-5.16: Implement the Post-Construction Urban Runoff Management requirements of the City's Municipal NPDES Permit to reduce urban runoff from project sites.
- Action EC-7.10: Require review and approval of grading, erosion control and dust control plans prior to issuance of a grading permit by the Director of Public Works on sites with known soil contamination. Construction operations shall be conducted to limit the creation and dispersion of dust and sediment runoff.
- *Alviso Master Plan*

- The following policies are specific to hydrology and water quality and are specific to the proposed project:
- Environmental Protection Policy 1: All new parking, circulation, loading, outdoor storage, utility, and other similar activity areas must be located on paved surfaces with proper drainage to avoid potential pollutants from entering the groundwater, Guadalupe River, Coyote Creek, or San Francisco Bay. Storm
- Drainage Policy 1: All new development projects should be evaluated to determine the possible need for additional storm drainage facilities.

Environmental Impacts and Mitigation Measures

a) Would the project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?

Less Than Significant Impact. The Municipal Regional Permit requires that projects include appropriate site design measures, pollutant source controls, and treatment control measures, as well as regulating hydromodification from certain new development and redevelopment projects. To implement the Municipal Regional Permit, an association of 13 cities and towns (including the City of San José), the County of Santa Clara, and the SCVWD formed the Santa Clara Valley Urban Runoff Pollution Prevention Program (SCVURPPP). Impacts to urban runoff are evaluated in terms of consistency with the SCVURPPP.

The SCVURPPP developed the Stormwater Handbook to address the permit's site design measures, pollutant source controls, and treatment control measures (SCVURPPP 2016). To comply with the Stormwater Handbook, runoff from the project's access roads and sidewalks would be directed via a piped network to the stormwater pipeline which begins in the northwestern corner of the project site and eventually ties into the City of San José's stormwater system in the vicinity of Nortech Parkway. In addition a bioswale has been included in the project design along the entire eastern boundary adjacent to the project fenceline. The bioswale will be designed such that the full volume of stormwater runoff can be captured onsite in accordance with applicable sizing standards and requirements. As the soil in this area is characterized as having low permeability, a pump station has been incorporated into the design which will pump the stormwater to the onsite stormwater system network. (See Figure 2-1 Site Plan). During the City's detailed design review process, the City will review the proposed site design measures for consistency with the Stormwater Handbook, and will impose permit conditions on the project that require compliance with all applicable measures. As required by the Stormwater Handbook, the bioswale and any other required measures must be installed, operated, and maintained by qualified personnel, including maintenance and inspection record-keeping.

The SCVURPPP developed the Hydromodification Management Plan to address the permit's hydromodification requirements (SCVURPPP 2005). The Hydromodification Management Plan includes exemptions based on stream segment conditions, including a map of exempt stream segments and catchments based on channel type and upper tidal extent. The site drains to an onsite stormwater system that connects to the City's stormwater system in the vicinity of Nortech Parkway. Therefore, the project is exempt based on stream segment conditions and is not subject to hydromodification requirements.

In addition to complying with applicable requirements of the Municipal Regional Permit and the Stormwater Handbook, the project will be subject to construction-related storm water permit requirements. Prior to any ground-disturbing construction activity, the project must comply with the Construction General Permit, which includes filing a Notice of Intent with the San Francisco Bay RWQCB, coordinating with the City, and preparing and implementing a SWPPP. The SWPPP will include best management practices for stormwater quality control, including soil stabilization practices, sediment control practices, and wind erosion control practices. When construction is complete, the project will be required to file a Notice of Termination with the San Francisco Bay RWQCB and City, documenting that all elements to the SWPPP have been implemented.

By complying with existing permits and handbooks and all other applicable laws and regulations, runoff from the site would not violate the applicable water quality standards or waste discharge requirements or otherwise contribute to the substantial degradation of surface or ground water quality.

b) Would the project substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?

Less Than Significant Impact. The mostly undeveloped site is located in the Baylands watershed, an area with more than 65 percent impervious surfaces. Therefore, there is very little percolation to groundwater. In other words, the site does not contribute to groundwater recharge. The project will result in no change to this condition. In addition, the site is not located in a groundwater recharge area (SCVWD 2016a).

The Groundwater Management Plan (SCVWD 2016a) describes existing and potential actions to achieve basin sustainability goals and ensure continued sustainable groundwater management. The plan references compliance with the Municipal Regional Permit as the primary means of protecting groundwater supplies from the adverse effects of stormwater runoff. As discussed above, the project will be required to comply with the Municipal Regional Permit; therefore, the project will not impede sustainable groundwater management by interfering substantially with groundwater recharge.

For the reasons discussed in this Section and in Section 3.19, Utilities and Service Systems, water supply impacts will be less than significant. Therefore, the project will not impede sustainable groundwater management by substantially decreasing groundwater supplies.

c) Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner, which would:

i. Result in substantial erosion or siltation on- or off-site?

Less Than Significant Impact. See (a).

ii. Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?

Less Than Significant Impact. See (a) and Section 3.19, Utilities and Service Systems, for a discussion of the City's storm drainage facilities, and capacity to serve the project.

iii. Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?

Less Than Significant Impact. See (a) and Section 3.19, Utilities and Service Systems, for a discussion of the City's storm drainage facilities, and capacity to serve the project.

iv. Impede or redirect flood flows?

No Impact. The project is not within a flood hazard zone; therefore, the project would not impede or redirect flood flows.

d) Is the project in flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?

Less than Significant Impact. The site is in an area of reduced flood risk due to levees (FEMA 2014), is not in a tsunami inundation zone (CEMA et al. 2009), and is not in an area mapped as vulnerable to sea level rise (CalAdapt 2019). Risk of inundation from dam failure is being managed by the SCVWD Dam Safety Program. There are no landlocked bodies of water near the site that would affect the site in the event of a seiche. Overall, there is little risk that inundation of the site could release pollutants into the environment. For additional analysis of the risk of releasing pollutants into the environment, see Section 3.9, Hazards and Hazardous Materials.

e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

No Impact. As described in (a) previously, the project will be required to comply with the Municipal Regional Permit and Construction General Permit. As described in (b) previously, the project will be required to comply with the Groundwater Management Plan. The project will not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater plan; therefore, there will be no impact.

Previously Identified Mitigation Measures: None.

Proposed Mitigation Measures: None.

3.10.4 References

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3.11 Land Use and Planning

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Physically divide an established community?	☐	☐	☐	☒
b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☒	☐

Environmental checklist established by CEQA Guidelines, Appendix G.

3.11.1 Setting

3.11.1.1 Site and Surrounding Land Uses

The San José Data Center (SJC02) will be located within the City of San José (City) on an approximately 64.5-acre site and will consist of two data center buildings totaling over approximately 479,000 square feet of space. The project will include 40 3.0-megawatt (MW) standby diesel generators (20 per building) to provide electrical power to support the information technology (IT) load during utility outages or certain onsite electrical equipment interruptions or failures, as well as the installation of 20 3-MW emergency diesel generators at each building. In addition to the 40 backup generators, the project will include two administrative generators, rated at 1.25 MW and 0.5 MW, to support administrative functions during an interruption in the normal delivery of electrical power from the utility. The facility design will not require more than approximately 99 MW of electrical power, which will be used only for backup power for onsite data center operations in the event of an electrical outage by Pacific Gas & Electric (PG&E), although the estimated load is 92 MW.

The land has been used historically for farming since the early 1920s but is not currently in agricultural use. There are two vacant residences, a mobile home, and a storage shed/warehouse currently onsite, which will be demolished as part of the SJC02 project. To the north of the project site are the San José/Santa Clara Regional Wastewater Treatment Plant sludge drying beds, to the south is Highway 237, to the west is the Los Esteros Critical Energy Facility, a PG&E substation, and to the east is Coyote Creek. The project is anticipated to begin construction in the 3rd quarter of 2020, with operations beginning in the 1st quarter of 2022.

3.11.1.2 City of San José General Plan Land Use Designation

The project site is designated Light Industrial under the adopted *Envision San José 2040 General Plan* (Figure 3.11-1). This land use designation is defined as follows:

- This designation is intended for a wide variety of industrial uses and excludes uses with unmitigated hazardous or nuisance effects. Warehousing, wholesaling, and light manufacturing are examples of typical uses in this designation. Light Industrial designated properties may also contain service establishments that serve only employees of businesses located in the immediate industrial area. Office and higher-end industrial uses, such as research and development, are discouraged in order to preserve the scarce, lower cost land resources that are available for companies with limited operation history (i.e., start-up companies) or lower cost industrial operations.
- Because of the limited supply of land available for industrial/suppliers/services firms in the City, Land Use Policies in the General Plan restrict land use changes on sites designated Light Industrial. (City of San José 2011)

3.11.1.3 City of San José Zoning Ordinance

The project site was the subject of the City of San José 237 Industrial Center Project, for which a Final Environmental Impact Report (2017 EIR) was certified in September 2017 (City of San José 2017a). In October 2017, the City approved a Special Use Permit (SUP) (SP16-053) and a rezoning of the project site from A(PD) to LI Light Industrial, consistent with the General Plan land use designation of the site (City of San José 2017b).

The City's Municipal Code, Chapter 20.50 – Industrial Zoning Districts, describes allowed uses in the LI Light Industrial zone:

- The light industrial zoning district is intended for a wide variety of industrial uses and excludes uses with unmitigated hazardous or nuisance effects. The design controls are less stringent than those for the industrial park zoning district. Examples of typical uses are warehousing, wholesaling, and light manufacturing. Sites designated light industrial may also contain service establishments that serve only employees of businesses located in the industrial areas. In addition, warehouse retail uses may be allowed where they are compatible with adjacent industrial uses and will not constrain future use of the subject site for industrial purposes. When located within an area with a combined industrial/ commercial general plan designation, a broader range of uses will be considered including uses such as retail, church/ religious assembly, social and community centers, recreational uses, or similar uses but only when the non-industrial use does not result in the imposition of additional constraints on neighboring industrial users in the exclusively industrial areas. (City of San José 2019)

Municipal Code Section 20.50.100 further describes allowed uses and permit requirements in the Light Industrial zone. Table 20-110 of the Municipal Code identifies permitted, conditional, special, administrative, and restricted uses, in addition to land uses not permitted in each zone (City of San José 2019). Data centers are identified as a use that require a SUP within the Light Industrial zone.

A summary of development standards in the Light Industrial zone is provided in Table 3.11-1

Table 3.11-1. Summary of Development Standards, Light Industrial Zone

Requirement	Development Standard
Front Setback	15 feet to building
	20 feet to parking
Side Setback	0 feet, or 25 feet if adjacent to residential
Rear Setback	0 feet, or 25 feet if adjacent to residential
Maximum Height	50 feet unless a different maximum is established in Chapter 20.85 of the City of San José Zoning Ordinance[a]

[a]An alternative maximum height may be established as described in Chapter 20.85. Where an alternative maximum height restriction has been established as described in Chapter 20.85, that regulation described in Chapter 20.85 shall govern and control over the provisions in this section.

Applicable lighting guidelines for the Light Industrial zone include the following:

- All lighting or illumination shall conform with any lighting policy adopted by the city council. This includes City Council Lighting Policy 4-3 which requires private development to use energy-efficient outdoor lighting that is fully shielded and not directed skyward.
- No ground-mounted light fixture shall exceed twenty-five feet in height.
- Any lighting located adjacent to riparian areas shall be directed downward and away from riparian areas. (City of San José 1994)

Landscape guidelines for the Light Industrial zone are found in the landscape and irrigation guidelines, adopted by the City Council (City of San José 1993); the General Plan, as amended; the Riparian

Corridor Policy Study (City of San José 1994); the C.3 Stormwater Handbook, prepared for the Santa Clara Valley Urban Runoff Pollution Prevention Program (SCV 2016); and the current Post-Construction Urban Runoff Management Policy approved by the City Council (City of San José 2011b). Landscape guidelines applicable to the SJC02 project include the following:

- All setback areas, exclusive of permitted off-street parking areas and private egress, or circulation, shall be landscaped.
- All landscaped areas shall be maintained in perpetuity, and all dead plant materials replaced with viable plant materials in conformance with an approved permit.
- Tree wells in a parking lot shall be a minimum 40 square feet, with a minimum 5-foot net dimension.
- All landscaped areas shall be designed and maintained in conformance with City Council Policy No. 6-29, entitled "City Council Policy on Post Construction Urban Runoff Management," as the same may be amended from time to time.

Parking guidelines for the Light Industrial zone are found in Chapter 20.90 of the Municipal Code and specify the following:

- Vehicle Parking: 1 space per 250 square feet of office/meeting/technician work space, plus 1 space for each 5,000 square feet of floor area devoted to computer equipment space
- Bicycle Parking: 1 space per 5,000 square feet of office/meeting/technician work space, plus 1 space for each 50,000 square feet of floor area devoted to computer equipment space
- At least eighty percent of the bicycle parking spaces shall be provided in short-term bicycle parking facilities and at most twenty percent shall be provided in long-term bicycle facilities (City of San José 2019)

3.11.1.4 Alviso Master Plan

The project site is located within the boundaries of the Alviso Master Plan area (Figure 3.11-2). Under the Alviso Master Plan (City of San José 1998) , the project site has a land use designation of Light Industrial, as follows:

- Light Industrial: This designation allows a wide variety of industrial uses, excluding any uses with unmitigated hazardous or nuisance effects. Examples of typical uses are warehousing, wholesaling, light manufacturing, and industrial supplier/service businesses (i.e., businesses which provide needed services or supplies to other businesses).
- Only low intensity uses (i.e., those with low employment densities) are allowed in the Light Industrial area located near Coyote Creek. Appropriate screening and landscaping is required in both light industrial areas. Landscaping and screening along State Street should create a more compatible edge with the adjacent residential neighborhood, and along Route 237, it should protect views of Alviso from the freeway. Uses adjacent to the marshland and Coyote Creek need to be environmentally sensitive by minimizing both point and non-point source pollution and other potential negative impacts.

On November 6, 2001, the City Council adopted a General Plan text amendment to the Alviso Master Plan to allow maximum building heights of 100 feet for a 140-acre site north of State Route 237 and approximately 2,000 feet east of Zanker Road (File No. GP01-T-05). This allowed an increase in maximum building height from 50 feet to 100 feet. The project site is located within this area.

3.11.1.5 Applicable Plans, Policies, and Regulations

Goals and policies to guide land use development within the City are established by the *Envision San José 2040 General Plan* (City of San José 2011a). The City's applicable General Plan policies are presented in Table 3.11-2, along with a discussion of project consistency.

Municipal Code Section 20.50.100 describes allowed uses and permit requirements in the Light Industrial zone. This code section identifies data centers as a use that requires a SUP within the Light Industrial zone. The project site was the subject of the City of San José 237 Industrial Center Project, for which a Final EIR was certified in September 2017.[1] In October 2017, the City approved an SUP (SP16-053) and a rezoning of the project site from A(PD) to LI Light Industrial, consistent with the General Plan land use designation of the site (Figure 3.11-3).

Concurrent with the Small Power Plant Exemption (SPPE) Application, the project owner is pursuing an amendment to the existing SUP and anticipates that the City will prepare an Addendum to the City of San José 237 Industrial Center Project EIR for purposes of CEQA compliance with the City's discretionary entitlement process. However, the SPPE issued by the California Energy Commission is required before the City can approve a CEQA action or issue a new SUP or other discretionary entitlements with respect to the project.

3.11.2 Environmental Impacts and Mitigation Measures

a) Would the project physically divide an established community?

No Impact. The project will not change the project boundaries or involve construction of new offsite elements that could divide the community; therefore, no impact will occur.

b) Would the project cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?

Less than Significant Impact. The project does not conflict with any land use plan, policy, or regulation established by the City that was adopted for the purpose of avoiding or mitigating an environmental effect.

The maximum height in the LI Light Industrial Zoning District, as stated in Table 20-120 of the San José Municipal Code, is 50 feet, unless a different maximum is established as specified in Section 20.85.010(C)(2) (Specific Height Restrictions) of the San José Municipal Code. This section provides that the governing height restriction for properties that are located within specific plan areas are set by the height restrictions within that specific plan document. The project site is located in the Alviso Master Plan, which allows heights for this site up to 100 feet. The project is proposing a maximum height of approximately 31 feet[2] and therefore complies with the height requirement.

The project will be required to comply with the lighting guidelines established for the Light Industrial zone including, among other things, by installing LED lighting throughout the project site, as required by City Council Policy 4-3 Outdoor Lighting on Private Developments. The project would also use pole-mounted lighting that does not exceed 25-feet tall and which is directed downwards and away from riparian areas.

The project will be required to comply with the landscape guidelines established for the Light Industrial zone and additionally will be required to comply with the City's Riparian Corridor Policy Study which requires 100-foot setbacks from nearby waterways and precludes buildings, outdoor storage, parking and other paved areas, and ornamental landscaping within the setback zone, as shown in the site plan.

Section 20.90.060 (Number of Parking Spaces Required) of the San José Municipal Code sets forth the vehicle parking requirements (City of San José 2019). Section 20.100.1300(8)(1)(d) of the San José Municipal Code allows for a Development Exception Permit to be utilized for exceptions to the off-street parking and loading requirements and regulations of Title 20 (Zoning Ordinance). The

[1] https://www.sanjoseca.gov/index.aspx?NID=6072

[2] The proposed data center buildings will be approximately 27 feet tall, with some mechanical equipment extending to a max height of 31 feet.

parking study used for the 237 Industrial Center Project SUP showed that data centers do not generate substantial trips due to the very low number of employees required to operate a data center. The Applicant may apply for a Development Exception Permit with the City under Section 20.100.1300(8)(1)(d), if necessary, and will provide the number of parking spaces required by the City.

Table 20-190 in Section 20.90.060 of the Municipal Code requires one bicycle parking space per 5,000 square feet of office/meeting/technician work space, plus one parking space for each 50,000 square feet of floor area, or fraction thereof devoted to computer equipment space (City of San José 2019). Based on the square footage of office/meeting/technician work space area, as well as computer equipment spaces, the project will be required to provide 15 bicycle parking spaces. The project will be required to comply with the bicycle parking requirement by providing 35 bicycle parking spaces, as shown in the site plan.

Project consistency with *Envision San José 2040 General Plan* Land Use Policies (City of San José 2011a) is shown in Table 3.11-2.

Table 3.11-2. Project Consistency with the City of San José 2040 General Plan Land Use Policies

Land Use Policy	Project Consistency
Land Use	
Policy CD-1.1: Require the highest standards of architectural and site design, and apply strong design controls for all development projects, both public and private, for the enhancement and development of community character and for the proper transition between areas with different types of land uses.	Consistent. The project would be designed in accordance with applicable architectural and site design standards.
Policy CD-4.9: For development subject to design review, ensure the design of new or remodeled structures is consistent or complementary with the surrounding neighborhood fabric (including but not limited to prevalent building scale, building materials, and orientation of structures to the street).	Consistent. The project would be designed in accordance with applicable design standards, including taking into consideration land use and design compatibility considerations with surrounding uses.
Policy ER-2.1: Ensure that new public and private development adjacent to riparian corridors in San José are consistent with the provisions of the City's Riparian Corridor Policy Study and any adopted Santa Clara Valley Habitat Conservation Plan/Natural Communities Conservation Plan (HCP/NCCP).	Consistent. The project has been designed to comply with the City's Riparian Corridor Policy Study. The project is considered a covered project under the SCVHP and will be required to comply with the conditions and pay applicable fees of the SCVHP, to be determined during the Amended Special Use Permit process.
Policy ER-2.2: Ensure that a 100-foot setback from riparian habitat is the standard to be achieved in all but a limited number of instances, only where no significant impacts would occur.	Consistent. Site design for the Project includes a 100-foot setback from Coyote Creek, in compliance with the City's Riparian Corridor Policy Study.
Policy ER-2.3: Design new development to protect adjacent riparian corridors from encroachment of lighting, exotic landscaping, noise and toxic substances into the riparian zone.	Consistent. The project includes shielded lighting and lighting directed away from the adjacent riparian corridor. No ornamental plants will be planted within the setback from the riparian corridor, and the setback and riparian zone will be protected from toxic substances by the installation of stormwater controls and other best management practices. During operations, noise impacts are anticipated to increase in the riparian corridor beyond existing levels

Table 3.11-2. Project Consistency with the City of San José 2040 General Plan Land Use Policies

Land Use Policy	Project Consistency
Air Quality	
Policy MS-10.1: Assess projected air emissions from new development in conformance with the BAAQMD CEQA Guidelines and relative to state and federal standards. Identify and implement air emissions reduction measures.	Consistent. The project's air quality impacts have been assessed in conformance with the BAAQMD CEQA Guidelines and relative to state and federal standards; the air quality analysis includes best management practices and anticipated permit conditions that will be imposed on and/or incorporated into the project to verify that emissions impacts are less than significant.
Policy MS-13.1: Include dust, particulate matter, and construction equipment exhaust control measures as conditions of approval for subdivision maps, site development and planned development permits, grading permits, and demolition permits. At minimum, conditions shall conform to construction mitigation measures recommended in the current BAAQMD CEQA Guidelines for the relevant project size and type.	Consistent. The analysis contained in Section 3.3, Air Quality, has been conducted consistent with Policy MS-13.1 and includes best management practices and permit conditions to reduce and/or avoid significant emissions impacts.
Policy MS-13.2: Construction and/or demolition projects that have the potential to disturb asbestos (from soil or building material) shall comply with all the requirements of the California Air Resources Board's air toxic control measures (ATCMs) for Construction, Grading, Quarrying, and Surface Mining Operations.	Consistent. The analysis contained in Section 3.9, Hazards and Hazardous Materials, identifies best management practices to be put in place to survey, and if necessary, abate asbestos and lead-based paint from existing structures that will be demolished as part of the project.
Policy TR-6.4: Plan industrial and commercial development so that truck access through residential areas is avoided. Minimize truck travel on streets designated in this General Plan as Residential Streets.	Consistent. The project does not require truck travel on streets designated in the General Plan as Residential Streets.
Policy TR-7.1: Require large employers to develop TDM programs to reduce the vehicle trips generated by their employees.	Consistent. The project would incorporate TDM measure during construction and operation, as discussed in Section 3.17 Transportation.
Energy	
CD-5.6: Design lighting locations and levels to enhance the public realm, promote safety and comfort, and create engaging public spaces. Seek to balance minimum energy use of outdoor lighting with goal of providing safe and pleasing well-lit spaces. Consider the City's outdoor lighting policies in development review processes.	Consistent. The project would be designed in accordance with applicable design standards, including those that address outdoor lighting.
Water	
Policy MS-3.2: Promote use of green building technology or techniques that can help reduce the depletion of the City's potable water supply, as building codes permit. For example, promote the use of captured rainwater, graywater, or recycled water as the preferred source for non-potable water needs such as irrigation and building cooling, consistent with Building Codes or other regulations.	Consistent. The project would be built in accordance with the applicable City's Green Building Measures, including. among other things, incorporation of water efficient fixtures and landscaping, use of recycled water, and recycling of solid waste.
Policy MS-3.3: Promote the use of drought tolerant plants and landscaping materials for non-residential and residential uses.	Consistent. The project landscaping will be required to comply with the City's applicable planting/landscaping requirements by planting native, drought tolerant plants, with the use of recycled water for irrigation while plantings are being established.

Table 3.11-2. Project Consistency with the City of San José 2040 General Plan Land Use Policies

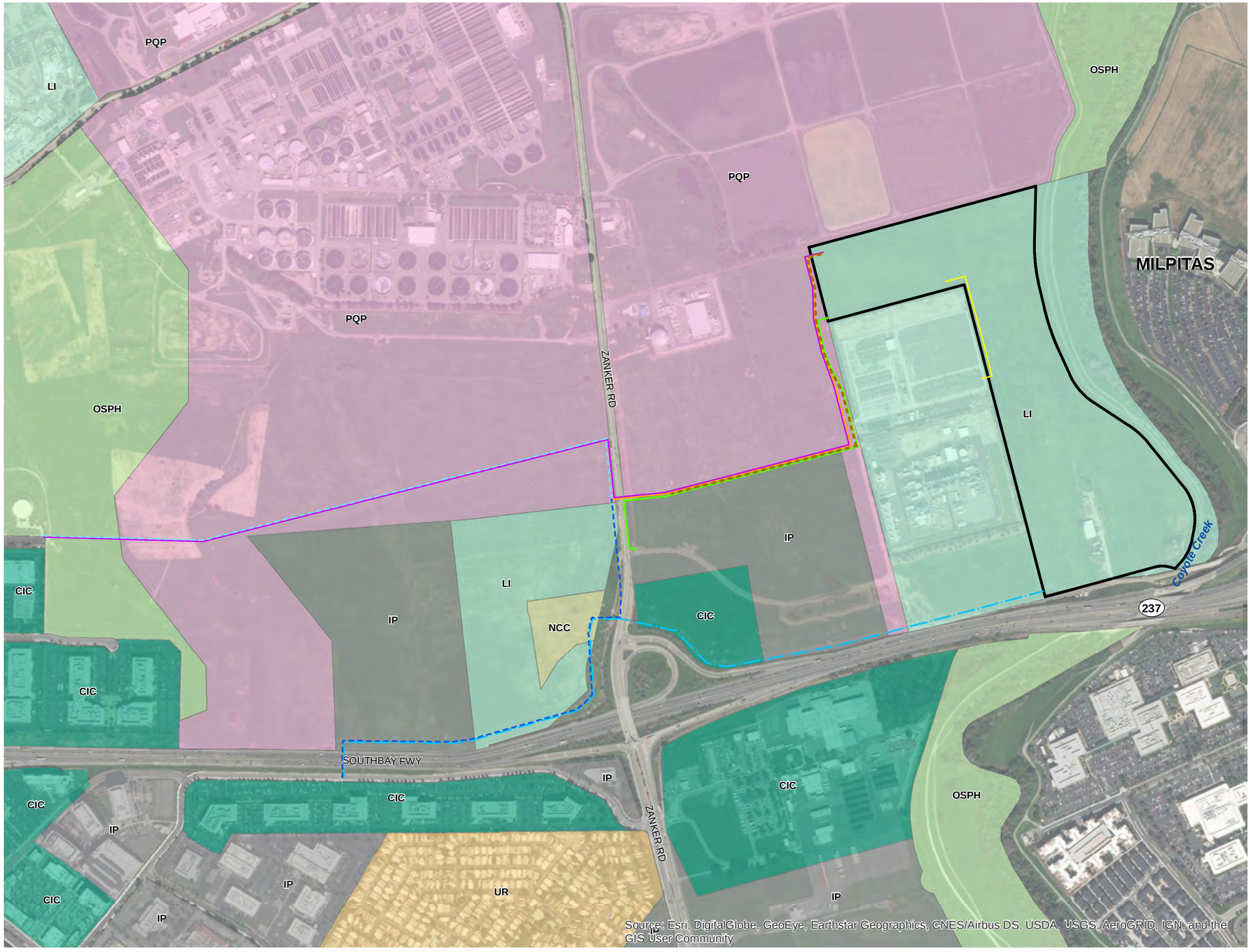
Land Use Policy	Project Consistency
Noise	
Policy EC-1.1: Locate new development in areas where noise levels are appropriate for the proposed uses. Consider federal, state and City noise standards and guidelines as a part of new development review.	Consistent. The project is not considered a noise sensitive land use. Furthermore, there are no noise sensitive land uses in proximity to the project site, and the project will be required to comply with all applicable noise standards and requirements. Furthermore, the facility has been designed such that operational noise impacts are not expected to increase noise levels in the riparian corridor beyond existing levels
Policy EC-1.2: Minimize the noise impacts of new development on land uses sensitive to increased noise levels (Categories 1, 2, 3 and 6) by limiting noise generation and by requiring use of noise attenuation measures such as acoustical enclosures and sound barriers, where feasible. The City considers significant noise impacts to occur if a project would: • Cause the DNL at noise sensitive receptors to increase by five dBA DNL or more where the noise levels would remain "Normally Acceptable"; or • Cause the DNL at noise sensitive receptors to increase by three dBA DNL or more where noise levels would equal or exceed the "Normally Acceptable" level.	
Policy EC-1.3: Mitigate noise generation of new non-residential land uses to 55 dBA DNL at the property line when located adjacent to existing or planned noise sensitive residential and public/quasi-public land uses.	
Policy EC-1.6: Regulate the effects of operational noise from existing and new industrial and commercial development on adjacent uses through noise standards in the City's Municipal Code.	
Policy EC-2.3: Require new development to minimize vibration impacts to adjacent uses during demolition and construction. For sensitive historic structures, a vibration limit of 0.08 in/sec PPV will be used to minimize the potential for cosmetic damage to a building. A vibration limit of 0.20 inches per second PPV will be used to minimize the potential for cosmetic damage at buildings of normal conventional construction.	

Notes:

BAAQMD = Bay Area Air Quality Management District
CEQA = California Environmental Quality Act
DNL = Day/Night Average Sound Level

PPV = Peak Particle Velocity
SCVHP = Santa Clara Valley Habitat Conservation Plan
TDM = Transportation Demand Management

Proposed Mitigation Measures: None.



LEGEND

City of San Jose Land Use

- IP - Industrial Park
- LI - Light Industrial
- CIC - Combined Industrial/Commercial
- NCC - Neighborhood/Community Commercial
- UR - Urban Residential
- PQP - Public/Quasi-Public
- OSPH - Open Space, Parklands and Habitat
- Project Site
- Proposed Storm Drain
- Proposed Sanitary Sewer
- Proposed Reclaimed Water
- Proposed Water Line Route #1
- Proposed Water Line Route #2
- Proposed Water Line Route #3
- Proposed Shared Water Line
- Proposed Electrical Supply Line

N

0 750 1,500

Approximate scale in feet

Figure 3.11-1
Envision San Jose 2040 General Plan
Land Use Designations
San José Data Center (SJC02)
San José, California

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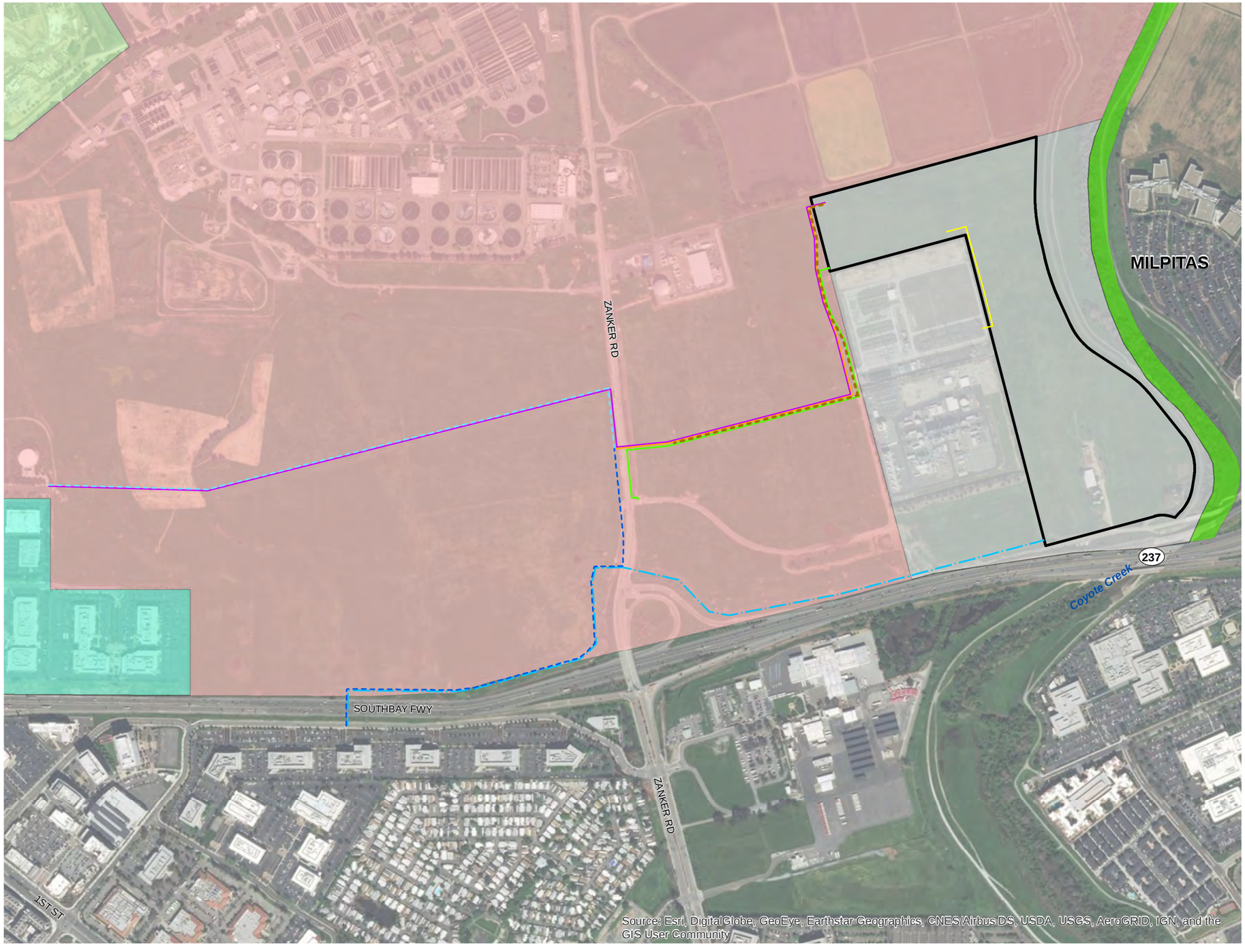

LEGEND

Alviso Master Plan

- Light Industrial
- Industrial Park with Mixed Industrial Overlay
- Private Open Space
- Public Parks and Open Space
- Public/Quasi-Public
- Project Site
- Proposed Storm Drain
- Proposed Sanitary Sewer
- Proposed Reclaimed Water
- Proposed Water Line Route #1
- Proposed Water Line Route #2
- Proposed Water Line Route #3
- Proposed Shared Water Line
- Proposed Electrical Supply Line

N

0 750 1,500

Approximate scale in feet

Figure 3.11-2
Alviso Master Plan Land Use Designations
San José Data Center (SJC02)
San José, California

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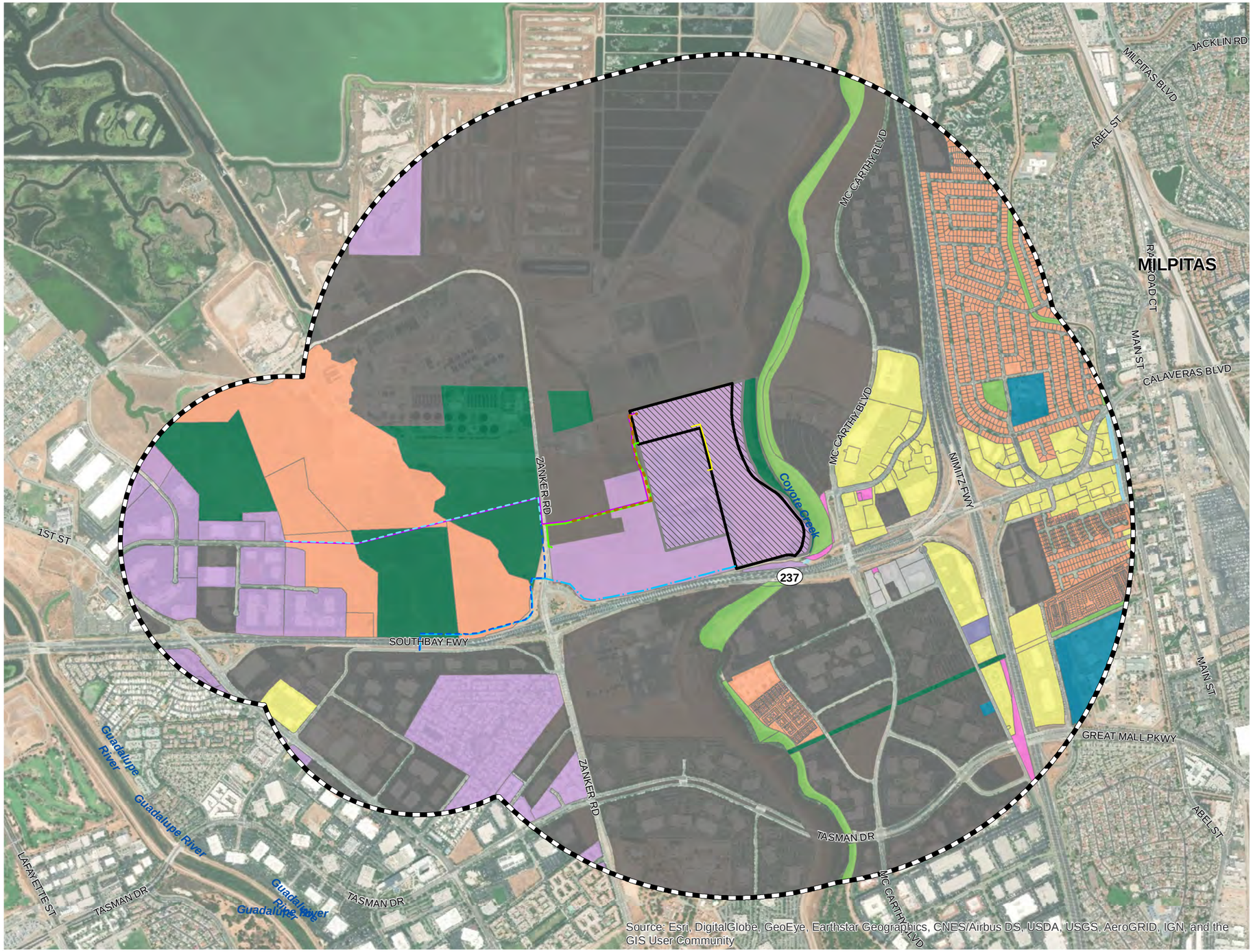

LEGEND

- Proposed Storm Drain
- Proposed Sanitary Sewer
- Proposed Reclaimed Water
- Proposed Water Line Route #1
- Proposed Water Line Route #2
- Proposed Water Line Route #3
- Proposed Shared Water Line
- Proposed Electrical Supply Line
- Project Buffer (1-mile Site, 1/2-mile Linears)
- Project Site

Zoning Type

- Light Industrial *
- Agriculture
- Commercial
- Highway Services
- Industrial
- Institutional
- Mixed Use
- Park Open Space
- Planned Development
- Residential
- Waterways
- Other

Notes:
* = In October 2017, the City Council of the City of San José rezoned the project site to LI - Light Industrial Zoning District. Original source data does not reflect this.
Source:
City of Milpitas and City of San José

N

0 2,000 4,000

Approximate scale in feet

Figure 3.11-3
Zoning Map
San José Data Center (SJC02)
San José, California

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3.12 Mineral Resources

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the State?	☐	☐	☐	☒
b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?	☐	☐	☐	☒

Environmental checklist established by CEQA Guidelines, Appendix G.

3.12.1 Setting

3.12.1.1 Mineral Resources

The San José Data Center (SJC02) will be located within the City of San José on an approximately 64.5-acre site and will consist of two data center buildings totaling over approximately 479,000 square feet of space. The project will include 40 3.0-megawatt (MW) standby diesel generators (20 per building) to provide electrical power to support the information technology (IT) load during utility outages or certain onsite electrical equipment interruptions or failures., as well as the installation of 20 3-MW emergency diesel generators at each building. In addition to the 40 backup generators, the project will include two administrative generators, rated at 1.25 MW and 0.5 MW, to support administrative functions during an interruption in the normal delivery of electrical power from the utility. The facility design will not require more than approximately 99 MW of electrical power, which will be used only for backup power for onsite data center operations in the event of an electrical outage by Pacific Gas & Electric (PG&E), although the estimated load is 92 MW.

The land has been used historically for farming since the early 1920s but is not currently in agricultural use. There are two residences, a mobile home, and a storage shed/warehouse currently onsite, which will be demolished as part of the SJC02 project. To the north of the project site are the San José/Santa Clara Regional Wastewater Treatment Plant sludge drying beds, to the south is Highway 237, to the west is the Los Esteros Critical Energy Facility, a PG&E substation, and to the east is Coyote Creek. The project is anticipated to begin construction in the 3rd quarter of 2020, with operations beginning in the 1st quarter of 2022.

The project site, located within the City of San José (City), is in an area identified as Mineral Resource Zone 1 (MRZ-1) for aggregate materials by the State of California (DOC 1996). The MRZ-1 designation identifies the site as an area where geologic information indicates that no significant mineral resources are present. The project site and surrounding area are not known to support significant mineral resources of any type. Other than the Communication Hill Area (not located on or near the project site), which contains mineral deposits that are of regional significance as a source of constriction aggregate materials, the City does not have mineral deposits subject to SMARA (City of San José 2011). In addition, the Division of Mine Reclamation's list of mines, referred to as the AB 3098 List and regulated under the Surface Mining and Reclamation Act (SMARA), does not include any mines within the City (DOC 2016).

Regulatory Setting

There are no regulatory approvals or permits required to comply with mineral resources related laws, ordinances, regulations, or standards.

3.12.2 Environmental Impacts and Mitigation Measures

a) Would the project result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the State?

No Impact. The project area does not contain any known or designated mineral resources. Therefore, the project would not result in the loss of availability of a known mineral resource.

b) Would the project result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?

No Impact. The project area and does not contain any known or designated mineral resources. Therefore, the project would not result in the loss of availability of a locally important mineral resource recovery site.

Proposed Mitigation Measures:

None.

3.12.3 References

California Department of Conservation (DOC). 1996. *Revised Mineral Land Classification Map*. Aggregate Resources Only. South San Francisco Bay Production-Consumption Region. Mountain View Quadrangle. Open-File Report 96-03. Accessed June 5, 2019. ftp://ftp.consrv.ca.gov/pub/dmg/pubs/ofr/OFR_96-03/.

California Department of Conservation (DOC). 2016. *AB 3098 List*. Accessed May 30, 2019. https://www.conservation.ca.gov/dmr/SMARA%20Mines/ab_3098_list.

City of San José. 2011. *Draft Program Environmental Impact Report for the Envision San Jose 2040 General Plan*. June. Accessed June 6, 2019. http://www.sanjoseca.gov/index.aspx?NID=4974.

3.13 Noise

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☐	☒	☐
b) Generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☒	☐
c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒

Environmental checklist established by CEQA Guidelines, Appendix G.

3.13.1 Setting

The San José Data Center (SJC02) will be located within the City of San José on an approximately 64.5-acre site and will consist of two data center buildings totaling over approximately 479,000 square feet of space. The project will include 40 3.0-megawatt (MW) standby diesel generators (20 per building) to provide electrical power to support the information technology (IT) load during utility outages or certain onsite electrical equipment interruptions or failures, as well as the installation of 20 3-MW emergency diesel generators at each building. In addition to the 40 backup generators, the project will include two administrative generators, rated at 1.25 MW and 0.5 MW, to support administrative functions during an interruption in the normal delivery of electrical power from the utility. The facility design will not require more than approximately 99 MW of electrical power, which will be used only for backup power for onsite data center operations in the event of an electrical outage by Pacific Gas & Electric (PG&E), although the estimated load is 92 MW.

The land has been used historically for farming since the early 1920s but is not currently in agricultural use. There are two vacant residences, a mobile home, and a storage shed/warehouse currently onsite, which will be demolished as part of the SJC02 project. To the north of the project site are the San José/Santa Clara Regional Wastewater Treatment Plant sludge drying beds, to the south is Highway 237, to the west is the Los Esteros Critical Energy Facility (LECEF), a PG&E substation, and to the east is Coyote Creek. The project is anticipated to begin construction in the 3rd quarter of 2020, with operations beginning in the 1st quarter of 2022.

The project site is zoned as LI (Light Industrial) and designated as Light Industrial in the *Envision San José General Plan* 2040 (General Plan; City of San José 2011) and the Alviso Master Plan. The nearest sensitive receptor (residence) is located over 1,600 feet to the south, on the opposite side of Highway 237 and behind several large office buildings. The intervening parcels include commercial developments and a hotel. The Norman Y. Mineta San José International Airport is located approximately 3.4 miles to the southwest.

Prominent existing noise sources near the project site include automobile traffic along Highway 237 (approximately 100 feet to the south), the LECEF power plant to the west, industrial and commercial land uses to the north and east, and Interstate 880 to the east.

3.13.2 Technical Background

This section provides background information on noise and vibration, particularly how each is characterized and measured.

3.13.2.1 Noise Background

Acoustics is the study of sound, and noise is defined as unwanted sound. Airborne sound is a rapid fluctuation or oscillation of air pressure above and below atmospheric pressure creating a sound wave. Acoustical terms used in this report are summarized in Table 3.13-1.

Table 3.13-1. Definitions of Acoustical Terms

Term	Definition
Ambient Noise Level	The composite of noise from all sources near and far. The normal or existing level of environmental noise or sound at a given location. The ambient level is typically defined by the energy averaged Leq level.
Background Noise Level	The underlying ever-present lower level noise that remains in the absence of intrusive or intermittent sounds. Distant sources, such as traffic, typically make up the background. The background level is generally defined by the L90 percentile noise level.
Intrusive	Noise that intrudes over and above the existing ambient noise at a given location. The relative intrusiveness of a sound depends upon its amplitude, duration, frequency, time of occurrence, tonal content, the prevailing ambient noise level as well as the sensitivity of the receiver. The intrusive level is generally defined by the L10 percentile noise level.
Hertz (Hz)	The number of complete pressure fluctuations per second above and below atmospheric pressure. Hertz is a measure of the pitch of the sound. Middle C of a piano has a frequency of 262 Hz while the lowest C on an 88 key piano has a frequency of 33 Hz and the highest C has a frequency of 4186 Hz.
Pure Tone	A pure tone as used by the California Energy Commission (CEC) exists if the one-third octave band sound pressure level in the band with the tone exceeds the arithmetic average of the two contiguous bands by 5 decibels (dB) for center frequencies of 500 Hz and above, or by 8 dB for center frequencies between 160 Hz and 400 Hz, or by 15 dB for center frequencies less than or equal to 125 Hz.
Sound Pressure Level Decibel (dB)	A unit describing the amplitude of sound, equal to 20 times the logarithm to the base 10 of the ratio of the pressure of the sound measured to the reference pressure, which is 20 micropascals (20 micronewtons per square meter).
A-Weighted Sound Pressure Level (dBA)	The sound level in decibels as measured on a sound level meter using the A-weighted filter network. The A-weighted filter de-emphasizes the very low and very high frequency components of the sound in a manner similar to the frequency response of the human ear. All sound levels in this report are A-weighted unless stated otherwise.
Equivalent Sound Level (Leq)	The average sound level, on an equal energy basis, during the measurement period.
Percentile Level (Ln)	The sound level exceeded during “n” percent of the measurement period, where “n” is a number between 0 and 100 (for example, L90)
Day-Night Noise Level (Ldn or DNL)	The energy averaged A-weighted sound level during a 24-hour day, obtained after addition of 10 decibels penalty for the hours between 10:00 p.m. to 7:00 a.m.

The most common metric is the overall A-weighted sound level measurement that has been adopted by regulatory bodies worldwide. The A-weighting network measures sound similar to the way in which a person perceives or hears sound. There is consensus that A-weighting is appropriate for estimation of the hazard of noise-induced hearing loss. With respect to other effects, such as annoyance, A-weighting is acceptable if there is largely middle and high frequency noise present, but if the noise is unusually high at low frequencies, or contains prominent low-frequency tones, the A-weighting may not give the most appropriate measure. Compared with other noise sources, solar and battery storage facilities are not typically substantial sources of unusual low-frequency noise and are broad band or do not generate

strong low-frequency tones. Therefore, A-weighting provides the most appropriate measure for evaluating acceptable and unacceptable sound levels for projects such as this project.

A-weighted sound levels are typically measured or presented as equivalent noise level (L_{eq}), which is defined as the average noise level, on an equal energy basis for a stated period of time and is commonly used to measure steady-state sound or noise that is usually dominant. Statistical methods are used to capture the dynamics of a changing acoustical environment. Statistical measurements are typically denoted by $L_{xx,}$ where xx represents the percentile of time the sound level is exceeded. The L_{90} is a measurement that represents the noise level that is exceeded during 90 percent of the measurement period. Similarly, the L_{10} represents the noise level exceeded for 10 percent of the measurement period.

Some metrics used in determining the impact of environmental noise consider the differences in response that people have to daytime and nighttime noise levels. During the nighttime, exterior background noises are generally lower than those of daytime levels. However, most household noise also decreases at night, and exterior noise becomes more noticeable. Furthermore, most people sleep at night and are sensitive to intrusive noises. To account for human sensitivity to nighttime noise levels, the day-night sound level (L_{dn} or DNL) was developed. L_{dn} is a noise index that accounts for the greater annoyance of noise during the nighttime hours.

L_{dn} values are calculated by averaging hourly L_{eq} sound levels for a 24-hour period and applying a weighting factor to nighttime L_{eq} values. The weighting factor, which reflects the increased sensitivity to noise during nighttime hours, is added to each hourly L_{eq} sound level before the 24-hour L_{dn} is calculated. For the purposes of assessing noise, the 24-hour day is divided into two time periods, with the following weightings:

- Daytime: 7:00 a.m. to 10:00 p.m. (15 hours) weighting factor of 0 decibels (dB)
- Nighttime: 10:00 p.m. to 7:00 a.m. (9 hours) weighting factor of 10 dB

The two time periods are then averaged to compute the overall L_{dn} value. For a continuous noise source, the L_{dn} value is easily computed by adding 6.4 dB to the overall 24-hour noise level (L_{eq}). For example, if the expected continuous noise level from the power plant was 60.0 decibels (A-weighted scale) (dBA), the resulting L_{dn} from the plant would be 66.4 dBA.

The effects of noise on people can be listed in three general categories:

1) Subjective effects of annoyance, nuisance, and dissatisfaction
2) Interference with activities such as speech, sleep, and learning
3) Physiological effects such as startling and hearing loss

In most cases, environmental noise produces effects in the first two categories only. However, workers in industrial plants may experience noise effects in the third category. No completely satisfactory way exists to measure the subjective effects of noise, or to measure the corresponding reactions of annoyance and dissatisfaction. This lack of a common standard results from the wide variation in individual thresholds of annoyance and habituation to noise. Thus, an important way of determining a person's subjective reaction to a new noise is by comparing it to the existing or 'ambient' environment to which that person has adapted. In general, the more the level or the tonal (frequency) variations of a noise exceed the previously existing ambient noise level or tonal quality, the less acceptable the new noise will be, as judged by the exposed individual.

Table 3.13-2 shows the relative A-weighted noise levels of common sounds measured in the environment and in industry for various sound levels.

Table 3.13-2. Typical Sound Levels Measured in the Environment and Industry

Noise Source at a Given Distance	A-Weighted Sound Level (decibels)	Noise Environments	Subjective Impression
Shotgun (at shooter's ear)	140	Carrier flight deck	Painfully loud
Civil defense siren (at 100 feet)	130		
Jet takeoff (at 200 feet)	120		Threshold of pain
Loud rock music	110	Rock music concert	
Pile driver (at 50 feet)	100		Very loud
Ambulance siren (at 100 feet)	90	Boiler room	
Pneumatic drill (at 50 feet)	80	Noisy restaurant	
Busy traffic; hair dryer	70		Moderately loud
Normal conversation (at 5 feet)	60	Data processing center	
Light traffic (at 100 feet); rainfall	50	Private business office	
Bird calls (distant)	40	Average living room, library	Quiet
Soft whisper (at 5 feet); rustling leaves	30	Quiet bedroom	
	20	Recording studio	
Normal breathing	10		Threshold of hearing

Source: Beranek 1998.

3.13.2.2 Vibration Background

Most agencies typically reference the Federal Transit Administration (FTA) guidance manual criteria for vibration damage (2018). In addition to the FTA guidance manual, the Federal Railroad Administration (FRA 2005, 2012) provides thresholds for various land uses. Both the FTA and FRA provide a methodology for the assessment for potential vibration resulting from rail operations, in addition to potential vibrations from construction activities. Caltrans has also published the *Transportation and Construction Vibration Guidance Manual* (2013). Caltrans has not established a standard for vibration but rather presents a range of potential criteria. For continuous vibration from traffic, a peak particle velocity (PPV) of 0.2 inches per second is indicated in the Caltrans guidance to be "Annoying" but not "Unpleasant" and a level of 0.1 inch per second is indicated as "Begins to Annoy."

The criteria for damage from construction activities was established by FTA and is reproduced in Table 3.13-3.

Table 3.13-3. FTA Construction Vibration Damage Criteria

Building Category	PPV (inches per second)	Approximate L_v[a]
I. Reinforced concrete, steel, or timber (no plaster)	0.5	102
II. Engineered concrete and masonry (no plaster)	0.3	98
III. Non-engineered timber and masonry buildings	0.2	94
IV. Buildings extremely susceptible to vibration damage	0.12	90

Source: FTA 2018

[a] RMS vibration velocity level in VdB relative to 1 micro-inch/second.

Notes:

RMS = root-mean-square

VdB = vibration decibels

The vibration from various construction equipment was established by FTA and is reproduced as Table 3.13-4.

Table 3.13-4. FTA Vibration Source Levels for Construction Equipment[a]

Equipment	PPV at 25 f33t (inches per second)	Approximate L_v at 25 feet
Vibratory roller	0.210	94
Hoe ram	0.089	87
Large bulldozer	0.089	87
Calsson drilling	0.089	87
Loaded trucks	0.076	86
Jackhammer	0.035	79
Small bulldozer	0.003	58

Source: FTA 2018

[a] RMS velocity in decibels (VdB) relative to 1 micro-inch/second.

Pile driving is the construction activity with the greatest likelihood to create perceptible offsite vibrations, but is not anticipated for the project. Only a vibratory roller is indicated in Table 3.13-4 to slightly exceed the 0.2 inches per second guideline when operated within 25 feet of a Type III-structure and would rapidly dissipate to below this guideline at 50 feet. Regardless of the criteria used, the potential for damage from construction is limited to areas very close (i.e., onsite) to the activity.

3.13.3 Regulatory Background

This section outlines the regulatory framework regarding noise and vibration that is relevant for the purposes of this analysis.

3.13.3.1 Envision San José General Plan 2040

The *Envision San José General Plan 2040* (City of San José 2011) describes the levels of exterior noise that are considered compatible for various land uses to guide land use planning decisions which are duplicated in Table 3.13-5. Table 3.13-6 shows the acceptable and unacceptable noise levels by land use category from the State of California Guidelines for the preparation and content of Noise Elements of General Plans.

Table 3.13-5. Land Use Compatibility Guidelines for Community Noise in San José

LAND USE CATEGORY	COMMUNITY NOISE EXP. LDN OR CNEL DB 55 60 65 70 75 80
1. Residential, Hotels and Motels, Hospitals and Residential Care[a]	
2. Outdoor Sports and Recreation, Neighborhood Parks and Playgrounds	
3. Schools, Libraries, Museums, Meeting Halls, Churches	
4. Office Buildings, Business Commercial, and Professional Offices	
5. Sports Arena, Outdoor Spectator Sports	
6. Public and Quasi-Public Auditoriums, Concert Halls, Amphitheaters	

[a] Noise mitigation to reduce interior noise levels pursuant to Policy EC-1.1 is required.

Normally Acceptable

- Specific land use is satisfactory, based upon the assumption than any buildings involved are of normal conventional construction, without any special noise requirements.

Conditionally Acceptable

- Specified land use may be permitted only after detailed analysis of the noise reduction requirements and needed noise insulation features included in the design.

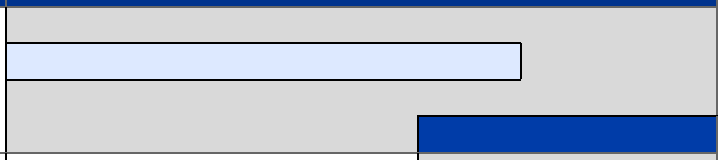
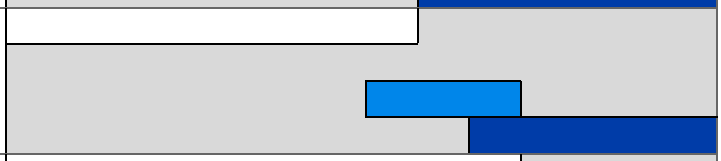
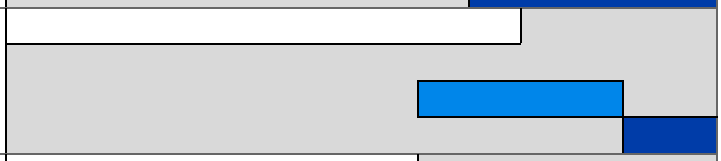
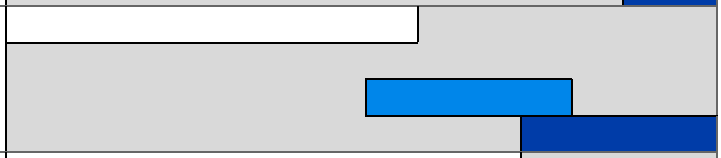
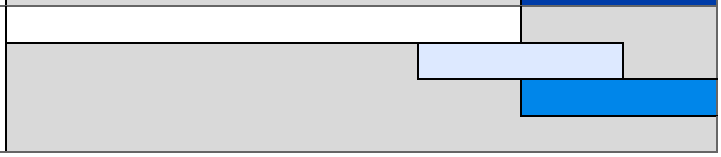
Unacceptable

- New construction or development should generally not be undertaken because mitigation is usually not feasible to comply with noise element policy

Table 3.13-6. State Guidelines for Preparation and Content of General Plan Noise Elements

LAND USE CATEGORY	COMMUNITY NOISE EXP. LDN OR CNEL DB 55 60 65 70 75 80
1. Residential low-density single family, duplex, mobile homes	
2. Residential multi-family	
3. Transient lodging—motels, hotels	
4. Schools, libraries, churches, hospitals, nursing homes	
5. Auditoriums, concert halls, amphitheaters	

Table 3.13-6. State Guidelines for Preparation and Content of General Plan Noise Elements

LAND USE CATEGORY	COMMUNITY NOISE EXP. LDN OR CNEL DB 55 60 65 70 75 80
6. Sports arena, outdoor spectator sports	
7. Playgrounds, neighborhood parks	
8. Golf courses, riding stables, water recreation, cemeteries	
9. Office buildings, business commercial and professional	
10. Industrial, manufacturing utilities, agriculture	

Source: Guidelines for the preparation and content of Noise Elements of General Plan. Prepared by the California State Office of Noise Control.

Interpretation:

Normally Acceptable

- Specific land use is satisfactory, based upon the assumption than any buildings involved are of normal conventional construction, without any special noise requirements.

Conditionally Acceptable

- New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements has been made and needed noise insulation features have been included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning will normally suffice.

Normally Unacceptable

- New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features must be included in the design.

Clearly Unacceptable

- New construction or development should generally not be undertaken.

NA

General Plan Goal EC-1.2 states that the City should "Minimize the noise impacts of new development on land uses sensitive to increased noise levels (Categories 1, 2, 3 and 6) by limiting noise generation and by requiring use of noise attenuation measures such as acoustical enclosures and sound barriers, where feasible. The City considers significant noise impacts to occur if a project would cause either of the following:

- Cause the DNL at noise sensitive receptors to increase by five dBA DNL or more where the noise levels would remain "Normally Acceptable".

- Cause the DNL at noise sensitive receptors to increase by three dBA DNL or more where noise levels would equal or exceed the “Normally Acceptable” level. (City of San José 2011)

General Plan policy EC-2.3 states that “A continuous vibration limit of 0.20 in/sec PPV will be used to minimize the potential for cosmetic damage at buildings of normal conventional construction. Equipment or activities typical of generating continuous vibration include but are not limited to: excavation equipment; static compaction equipment; vibratory pile drivers; pile-extraction equipment; and vibratory compaction equipment. Avoid use of impact pile drivers within 125 feet of any buildings, and within 300 feet of historical buildings or buildings in poor condition.” (City of San José 2011)

3.13.3.2 City of San José Municipal Code

Chapters 20.40 and 20.50 of the City of San José (City) Municipal Code regulates noise and vibration for the project (City of San José 2017). The noise ordinance is intended to protect the public welfare from unnecessary, excessive, and unreasonable noise and vibration from fixed sources in the community. Table 3.13-7 outlines the applicable City Municipal Code sections, as related to noise and vibration, for the project. The City may permit a project to exceed Municipal Code noise limits through the issuance of a Conditional or Special Use Permit.

3.13.3.3 Santa Clara County Comprehensive Land Use Plan for Norman Y. Mineta San José International Airport

The Santa Clara County Airport Land Use Commission has an adopted Comprehensive Land Use Plan (CLUP) for the Norman Y. Mineta San José International Airport (Windus 2011). The project site is located outside of the Airport Influence Area and Noise Restriction Areas identified within the CLUP. Since the Project site lies outside of the Norman Y. Mineta San José International Airport Influence Area, the CLUP standards do not apply.

3.13.4 Thresholds of Significance

The CEQA Guidelines state that a project would normally be considered to have a significant impact if noise levels conflict with adopted environmental standards or plans, or if noise levels generated by the project would substantially increase existing noise levels at noise-sensitive receivers on a permanent or temporary basis. CEQA does not define what noise level increase would be substantial.

General Plan Goal EC-1.2 states that the City should “Minimize the noise impacts of new development on land uses sensitive to increased noise levels (Categories 1, 2, 3 and 6 in Table 3.13-5) by limiting noise generation and by requiring use of noise attenuation measures such as acoustical enclosures and sound barriers, where feasible. In addition to the City’s noise level compatibility standards, the City considers significant noise impacts to occur if a project would cause result in either of the following:

- Cause the DNL at noise sensitive receptors to increase by five dBA DNL or more where the noise levels would remain “Normally Acceptable”
- Cause the DNL at noise sensitive receptors to increase by three dBA DNL or more where noise levels would equal or exceed the “Normally Acceptable” level (City of San José 2011)

Goal EC 2.3 states “A continuous vibration limit of 0.20 in/sec PPV will be used to minimize the potential for cosmetic damage at buildings of normal conventional construction. Equipment or activities typical of generating continuous vibration include but are not limited to: excavation equipment; static compaction equipment; vibratory pile drivers; pile-extraction equipment; and vibratory compaction equipment. Avoid use of impact pile drivers within 125 feet of any buildings, and within 300 feet of historical buildings, or buildings in poor condition.” (City of San José 2011)

Table 3.13-7. Noise and Vibration Standards Within the City of San José

General Plan Policies	
Policy EC-1.1	Locate new development in areas where noise levels are appropriate for the proposed uses. Consider federal, state and City noise standards and guidelines as a part of new development review.
Policy EC-1.2:	Minimize the noise impacts of new development on land uses sensitive to increased noise levels (Categories 1, 2, 3 and 6) by limiting noise generation and by requiring use of noise attenuation measures such as acoustical enclosures and sound barriers, where feasible. The City considers significant noise impacts to occur if a project would: • Cause the DNL at noise sensitive receptors to increase by five dBA DNL or more where the noise levels would remain "Normally Acceptable"; or • Cause the DNL at noise sensitive receptors to increase by three dBA DNL or more where noise levels would equal or exceed the "Normally Acceptable" level.
Policy EC-1.6:	Regulate the effects of operational noise from existing and new industrial and commercial development on adjacent uses through noise standards in the City's Municipal Code.
Policy EC-2.3	Require new development to minimize vibration impacts to adjacent uses during demolition and construction. A vibration limit of 0.20 in/sec PPV will be used to minimize the potential for cosmetic damage at buildings of normal conventional construction. Avoid use of impact pile drivers within 125 feet of any buildings, and within 300 feet of historical buildings, or buildings in poor condition
Municipal Code	
20.50.300 - Performance standards.	A. In the IP, LI, HI, CIC, and the TEC zoning districts no primary, secondary, incidental or conditional use or activity related thereto shall be conducted or permitted: 1. In a manner that causes or results in the harmful discharge of any waste materials into or upon the ground, into or within any sanitary or storm sewer system, into or within any water system or water, or into the atmosphere; or 2. In a manner that constitutes a menace to persons or property or in a manner that is dangerous, obnoxious, or offensive by reason of the creation of a fire, explosion, or other physical hazard, or by reason of air pollution, odor, smoke, noise, dust vibration, radiation, or fumes; or 3. In a manner that creates a public or private nuisance. B. Without limiting the generality of the preceding subsection, the following specific standards shall apply in the industrial zoning districts: 1. Incineration. There shall be no incineration on any site of any waste material. 2. Vibration. There shall be no activity on any site that causes ground vibration which is perceptible without instruments at the property line of the site. 3. Air pollution. Total emissions from any use or combination of uses on a site shall not exceed the emissions and health risk thresholds as established by the director of planning. 4. Noise. a. The sound pressure level generated by any use or combination of uses shall not exceed the decibel level at any property line as shown in Table 20-135, except upon issuance and in compliance with a special use permit as provided in Chapter 20.100.

Table 20-135 - Noise Standards

	Maximum Noise Level in Decibels at Property Line
Industrial use adjacent to a property used or zoned for residential purposes	55
Industrial use adjacent to a property used or zoned for commercial purposes	60
Industrial use adjacent to a property used or zoned for industrial or use other than commercial or residential purposes	70

3.13.5 Environmental Impacts and Mitigation Measures

a) Would the project result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Less Than Significant Impact

Demolition, Excavation, and Construction

The General Plan identifies that "City considers significant construction noise impacts to occur if a project located within 500 feet of residential uses or 200 feet of commercial or office uses would: Involve substantial noise generating activities (such as building demolition, grading, excavation, pile driving, use of impact equipment, or building framing) continuing for more than 12 months" (City of San José 2011). The closest residence is over 1,600 feet away, the nearest LECEF building is over 200 feet from the boundary, and the closest commercial or office buildings are over 650 feet to the east, past Coyote Creek in the City of Milpitas. Therefore, demolition and construction of the project will comply with the City's General Plan noise requirements.

The San José Municipal Code 20.100.450 states that if the project is within 500 feet of a residential unit, construction is limited to the hours of 7:00 AM through 7:00 PM, Monday through Friday, with no weekend construction allowed, unless expressly allowed in a Development Permit or other planning approval. While the nearest residence is located further than 500 feet from the project boundary and these construction hour limits would not apply to the project accordingly, demolition, excavation, and construction are anticipated to occur during these established times. However, there may be occasional work on weekends and late evenings as needed.

The San José Municipal Code does not establish noise limits for demolition or construction activities occurring within the City limits; therefore, for purposes of this analysis, there is no quantitative construction-related noise threshold that must be used in determining the project's impacts. Accordingly, given the distance of the adjacent residential, office and commercial uses, and the lack of any construction-related noise standards, construction-related impacts of the project would be less than significant. For informational purposes, it is noted that construction of the SJC02 project is expected to use equipment similar to other commercial projects that typically varies between 75 and 95 dBA at 50 feet. The sound level from individual pieces of construction equipment decreases at a rate of 6 dB per doubling of distance. Pile driving, typically the loudest construction activity, is not anticipated; however, one or a combination of vibro replacement using stone columns, drilled displacement columns, grouting, or vibro-compaction methods may be employed during construction. Additionally, construction equipment will be properly maintained to manufacturer specifications and will include exhaust mufflers to reduce engine noise.

Operations

The project will be required to adhere to the applicable noise limits summarized herein. Noise sources associated with normal operations are primarily associated with mechanical heating, ventilation, and air conditioning equipment ~~(primarily cooling towers?)~~ and short duration routine testing of the emergency generators. Generator readiness testing is limited to the hours of 7:00 am to 7:00 pm for each of the 42 generators.

Emergency use of generators are required to be in compliance with noise standards within the City (Sections 20.80.2030 and 20.200.1190), and infrequent testing is subject to the City's noise limits. The generator specifications will confirm sufficient exhaust silencing and other design measures, if required, such that the project is in compliance with the City sound limit. This results in compliant noise levels adjacent to IP – Industrial Park and LI – Light Industrial zoning.

While generator testing is of limited duration and full-load emergency operation of the generators is anticipated to be a very rare event, the project will be required to comply with the applicable Cal/OSHA requirements.

b) Would the project result in generation of excessive groundborne vibration or groundborne noise levels?

Less Than Significant Impact.

Demolition, Excavation, and Construction

As indicated in Section 3.13.2, pile driving—the construction activity typically associated with the highest vibration levels—is not anticipated. However, one or a combination of vibro replacement using stone columns (densification), drilled displacement columns (densification), grouting (shear reinforcement) or vibro-compaction (densification) methods will be employed during construction. Construction equipment and activities are typical to those used at other similar industrial projects and are not anticipated to result in offsite excessive groundborne vibration or groundborne noise levels. The adjacent LECEF facility has a few small structures, but all are more than 200 feet from the SJC02 property line; thus, they are outside of the 125-foot requirement for adjacent structures and would not be impacted by construction related noise or vibration. Furthermore, the existing onsite structures will be demolished prior to commencement of construction; therefore, there are no structures of historical or cultural significance within 300 feet of the project site that would be impacted by construction related noise or vibration.

Operations

The equipment that would be used in the project is well balanced and is designed to produce very low vibration levels throughout the life of the project. Any imbalance, which is not expected, could contribute to ground vibration levels in the vicinity of the equipment and would be corrected by _____.

Therefore, the project would not result in the generation of excessive groundborne vibration or noise levels during demolition, construction, or operations.

c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

No Impact

The project site is located outside of the CLUP Noise Restriction Area and the Airport Area of Influence, and is located approximately 3.4 miles from the closest public airport. Moreover, as noted herein, the project will be consistent with the noise compatibility policies set forth in the CLUP. For the following reasons, the project would have no impact in this regard and would not expose people working in the project area to excessive noise levels.

Previously Identified Mitigation Measures: None.

New Proposed Mitigation Measures: None.

3.13.6 References

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3.14 Population and Housing

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Induce substantial unplanned population growth in an area, either directly for example, by proposing new homes and businesses or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☒	☐
b) Misplace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☒	☐

Environmental checklist established by CEQA Guidelines, Appendix G.

3.14.1 Setting

The San José Data Center (SJC02) will be located within the City of San José on an approximately 64.5-acre site and will consist of two data center buildings totaling over approximately 479,000 square feet of space. The project will include 40 3.0-megawatt (MW) standby diesel generators (20 per building) to provide electrical power to support the information technology (IT) load during utility outages or certain onsite electrical equipment interruptions or failures, as well as the installation of 20 3-MW emergency diesel generators at each building. In addition to the 40 backup generators, the project will include two administrative generators, rated at 1.25 MW and 0.5 MW, to support administrative functions during an interruption in the normal delivery of electrical power from the utility. The facility design will not require more than approximately 99 MW of electrical power, which will be used only for backup power for onsite data center operations in the event of an electrical outage by Pacific Gas & Electric (PG&E), although the estimated load is 92 MW.

The land has been used historically for farming since the early 1920s but is not currently in agricultural use. There are two residences, a mobile home, and a storage shed/warehouse currently onsite, which will be demolished as part of the SJC02 project. To the north of the project site are the San José/Santa Clara Regional Wastewater Treatment Plant sludge drying beds, to the south is Highway 237, to the west is the Los Esteros Critical Energy Facility, a PG&E substation, and to the east is Coyote Creek. The project is anticipated to begin construction in the 3rd quarter of 2020, with operations beginning in the 1st quarter of 2022..

Table 3.14-1 shows the historical and projected populations for the study area, which consists of the City of San José and other cities within and around a 6-mile radius of the project site. Population projections between 2018 and 2025 show a growth ranging from -0.3 to 19.4 percent (-0.04 to 2.4 percent per year).

Table 3.14-1. Historical and Projected Populations

Area	2010[a]	2018[b]	2020[c]	2025[c]	Projected Population Change 2018-2025		
					Number	Percent (%)	Percent per Year (%)
Campbell	39,349	42,969	43,700	44,620	1,924	4.3	0.5
Cupertino	58,302	60,091	63,515	64,730	4,639	7.2	0.9
Fremont	214,089	235,439	231,970	234,595	-844	-0.3	-0.04
Milpitas	66,790	74,865	90,645	92,895	18,030	19.4	2.4
San José	945,942	1,051,316	1,028,210	1,110,405	59,089	5.3	0.7
Santa Clara	116,468	129,604	131,655	137,215	7,611	5.5	0.7

Table 3.14-1. Historical and Projected Populations

Area	2010[a]	2018[b]	2020[c]	2025[c]	Projected Population Change 2018-2025		
					Number	Percent (%)	Percent per Year (%)
Sunnyvale	140,081	153,389	149,935	157,705	4,316	2.7	0.3
Santa Clara County (total for all cities)	1,781,642	1,956,598	1,986,340	2,098,695	142,097	6.8	0.8

[a] United States Census Bureau 2019

[b] CA DOF 2018b

[c] ABAG 2019

The California Employment Development Department 2016-2026 Occupational Employment Projections for the San José-Sunnyvale-Santa Clara Metropolitan Statistical Area (MSA)[1] show that the 2026 projected employment for the construction occupations is 54,300, a 1.2 percent annual average percent increase from 2016 employment levels of 48,300 (CA EDD 2016). The projected employment for general and operations managers is 19,590 (a 1.2 percent annual average percent change) from 2016 estimated employment levels of 17,520. The projected employment for security guards is 9,390 (a 1.0 percent annual average percent change) from 2016 estimated employment levels of 8,510. The projected employment for janitors is 17,910 (a 0.8 percent annual average percent change) from 2016 estimated employment levels of 16,520.

Table 3.14-2 presents housing supply data for the study area. Year 2018 housing estimates indicated 25,877 vacant housing units within Santa Clara County, representing a vacancy rate of 3.9 percent (CA DOF 2018a).

Table 3.14-2. Housing Supply Estimates in the Study Area

Housing Supply		Total	Vacant
Campbell	Number	17,868	896
	Percent	100	5.0
Cupertino	Number	21,031	907
	Percent	100	4.3
Fremont	Number	76,279	1,136
	Percent	100	1.5
Milpitas	Number	21,643	709
	Percent	100	3.3
San José	Number	335,164	10,879
	Percent	100	3.2
Santa Clara	Number	48,144	1,699
	Percent	100	3.5
Sunnyvale	Number	59,242	2,664
	Percent	100	4.5
Santa Clara County	Number	667,970	25,877
	Percent	100	3.9

Source: CA DOF 2018a

[1] The MSA covers the entire San José – Sunnyvale and Santa Clara area and is not exclusive to the study area.

3.14.2 Environmental Impacts and Mitigation Measures

a) Would the project induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

Less Than Significant Impact. Construction of the project would employ an average of 60 workers per month and reach a peak workforce of approximately 129. Construction begins in the 3rd quarter of 2020, with operations beginning in the 1st quarter of 2022.

All of the construction workforce is expected to be recruited from the greater Bay Area, which includes a large construction workforce within the study area As a result of the relatively short construction window, the likelihood that the construction workforce will relocate closer to the project site is fairly remote. Therefore, the project will not directly induce substantial unplanned population growth with respect to local housing.

During operation, the project will employ approximately 100 personnel (including security and onsite management). All of the operations workforce is expected to be recruited from the greater Bay Area, which includes a sufficient workforce to accommodate the project's operational employment needs. As with the construction workforce, most operational workers are not likely to relocate closer to the project site. If some operations workers were to relocate, housing data shows a vacancy rate of 3.9 percent in Santa Clara County and 3.2 percent in the City of San José. The housing counts in the study area indicate a sufficient supply of available housing units within the study area for the nominal number of operations workers who may seek housing closer to the project.

While the project includes a total of 42 backup generators, these generators serve the project exclusively and are not capable of transmitting electrical power to the electrical grid and will not be an extension of infrastructure that will result in indirect population growth.

Accordingly, the project will not directly or indirectly induce a substantial unplanned population growth in the study area.

b) Would the project displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

Less Than Significant Impact. The project is proposed on land zoned Light Industrial (LI), according to the City of San José Planning Division (City of San José 2019), although the project site has been used historically for farming since the early 1920s. Two vacant residences and a storage shed/warehouse currently exist onsite; because these residences are vacant, development of the project will not displace people, and only two houses will be demolished. Although the vacancy rate is lower than the industry accepted 5 percent benchmark, the housing counts in the study area indicate a sufficient supply of available housing units . Therefore, development of the project will not displace substantial numbers of existing people or housing, thereby necessitating the construction of replacement housing elsewhere, and the project will have a less than significant impact in this regard..

Proposed Mitigation Measures: None.

3.14.3 References

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3.15 Public Services

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Public Services Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service rations, response times, or other performance objectives for any of the public services.				
a) Fire protection?	☐	☐	☒	☐
b) Police protection?	☐	☐	☒	☐
c) Schools?	☐	☐	☐	☒
d) Parks?	☐	☐	☐	☒
e) Other public facilities?	☐	☐	☐	☒

Environmental checklist established by CEQA Guidelines, Appendix G

3.15.1 Setting

The San José Data Center (SJC02) will be located within the City of San José on an approximately 64.5-acre site and will consist of two data center buildings totaling over approximately 479,000 square feet of space. The project will include 40 3.0-megawatt (MW) standby diesel generators (20 per building) to provide electrical power to support the information technology (IT) load during utility outages or certain onsite electrical equipment interruptions or failures, as well as the installation of 20 3-MW emergency diesel generators at each building. In addition to the 40 backup generators, the project will include two administrative generators, rated at 1.25 MW and 0.5 MW, to support administrative functions during an interruption in the normal delivery of electrical power from the utility. The facility design will not require more than approximately 99 MW of electrical power, which will be used only for backup power for onsite data center operations in the event of an electrical outage by Pacific Gas & Electric (PG&E), although the estimated load is 92 MW.

The land has been used historically for farming since the early 1920s but is not currently in agricultural use. There are two residences, a mobile home, and a storage shed/warehouse currently onsite, which will be demolished as part of the SJC02 project. To the north of the project site are the San José/Santa Clara Regional Wastewater Treatment Plant sludge drying beds, to the south is Highway 237, to the west is the Los Esteros Critical Energy Facility, a PG&E substation, and to the east is Coyote Creek. The project is anticipated to begin construction in the 3rd quarter of 2020, with operations beginning in the 1st quarter of 2022.

3.15.1.1 Fire Protection and Emergency Response

Fire protection within the City of San José is provided by the San José Fire Department (SJFD), which currently has 33 fire stations. The nearest Fire Station to the project site is Station 29, located at 199 Innovation Drive, approximately 1.6 miles from the SJC02 (City of San José 2019a

The SJFD's response times (City-wide) were an average of approximately 14.6 minutes in 2018 (City of San José 2019f). In addition, the SJFD has an inter-city agreement with the City of Milpitas Fire Department to confirm that essential services are provided in a timely manner. Through these agreements, and adequate staffing, the SJFD maintains adequate response times.

3.15.1.2 Police Protection

Police protection within the City of San José is provided by the San José Police Department (SJPD). The project site is located in the SJPD's Central Division, which is staffed by five lieutenants. The nearest SJPD Station to the project site is the main police station, located at 201 West Mission Street, approximately 5.3 miles south of the project SJC02 (City of San José 2019b).

The SJPD's response times (City-wide) were an average of approximately 9.2 minutes for the highest priority calls in 2017-2018 (City of San José 2019e). In addition, SJPD has an inter-city agreement with the City of Milpitas Police Department to confirm that essential services are provided in a timely manner. Through these agreements, and adequate staffing, the SJPD maintains adequate response times.

3.15.1.3 Schools

The project site is in the Santa Clara Unified School District (SCUSD), which includes 17 elementary schools, 1 kindergarten-to-8th-grade school, 3 middle schools, 2 comprehensive high schools, 3 alternative high schools, 1 alternative program, and 1 adult education campus (SCUSD 2019a). The school district had an enrollment of 11,645 students in the 2017/2018 year (CDE 2019). In the SCUSD, the nearest elementary school to the project site is Kathryn Hughes Elementary school located at 4949 Calle De Escuela and is approximately 2.3 miles to the west. The nearest combination elementary/middle school is the Don Callejon K-8 School, located at 4176 Lick Mill Boulevard. approximately 2 miles to the southwest. The nearest high school is the Adrian Wilcox High School located 5.1 miles to the southwest at 3250 Monroe Street. Each of these schools (Kathryn Hughes, Don Callejon, and Adrian Wilcox) is currently at capacity (Pers. Comm., Healy 2019). However, three new schools (elementary, middle, and high schools) collectively referred to as the Agnews Campus, are scheduled to open in 2020 (elementary and middle schools) and 2021 (high school) within the vicinity of the project (SCUSD 2019b) and will provide additional capacity for this area of the SCUSD.

The project site is located within the boundaries of the SCUSD and is adjacent to the City of Milpitas; therefore, the following information is included for informational purposes only. The City of Milpitas is served by the Milpitas Unified School District (MUSD), which includes 10 elementary schools, 2 middle schools, 2 high schools, and 1 adult education location (MUSD 2019). The school district had an enrollment of 10,318 students in the 2017/2018 year (CSD 2017). In the MUSD, the nearest elementary school is Spangler Elementary School located at 140 North Abbott Avenue and is approximately 0.8 mile to the east. The nearest high school is the Calaveras Hills High School located at 1331 E Calaveras Boulevard and is approximately 2.4 miles to the east.

3.15.1.4 Parks

Although the project site is within the City of San José, the location is near the border of the City of Milpitas.

Under direction of the Parks, Recreation and Neighborhood Services Department, the City of San José provides and manages approximately 3,520 acres of parklands and open space, and over 100 miles of multi-use trails and greenways. Of these parklands, 9 are citywide/regional parks and over 180 are neighborhood parks. The City of San José has 181 parks, 5 tot lots, 49 community centers, 5 aquatics centers, 2 community parks, 17 community gardens, and 1 regional trail (City of San José 2019c). The closest parks to the project site, within San José city limits, are Moitozo Park (located 1.2 miles southwest of the project site), and Northwood Park (located 2.8 miles southeast of the project site). The City of Milpitas has 38 parks, trails, athletic and community centers (See California 2019). The closest parks to the project site, within Milpitas city limits, are Starlite Park (located 0.7 mile east of the project site), and Pinewood Park (located 1.3 miles south of the project site) (Google Earth Pro 2019).

The project site is also surrounded by several pedestrian and bike trails. According to the Santa Clara County Trails Master Plan, the Northern Recreation Retracement Bike Route is located on the east of the

project site and is part of the Juan Bautista de Anza National Historic Trail; the Coyote Creek Trail is located east of the project site (Santa Clara County Parks 2015); and the proposed extension of the San Francisco Bay Trail is located on the western side of the project site (Santa Clara County Parks 2015). At this time, the extension has not yet been completed. The Coyote Creek Trail was designated as a national recreational trail in 2009 (American Trails 2009). Additional information and analysis regarding recreation and the project's potential impacts in this regard can be found in Section 3.16.

3.15.1.5 Other Public Facilities

The San José Public Library has 25 branches that serve the City of San José. The closest library to the project site is the Aviso Branch Library, which is approximately 1.9 miles west of the project site (City of San José 2019d).

Although the project site is located within the boundaries of the City of San José, the site is adjacent to the City of Milpitas, which is therefore included for informational purposes only. The City of Milpitas is served by the Santa Clara County Library District, which has eight branches throughout Santa Clara County. The closest library to the project site is the Milpitas Library, which is approximately 1.2 miles east of the project site (SCCLD 2019). In addition to the library, the adjacent City of Milpitas is also home to the Milpitas Community Center, located approximately 2.6 miles east of the project site (City of Milpitas 2019).

3.15.2 Environmental Impacts and Mitigation Measures

Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:

a) Fire protection?

Less than Significant Impact. The project site has historically been used for farming since the 1920s (although it is currently fallow farmland), is partially developed (with two residences and a storage shed/warehouse existing onsite), and is already serviced by the City of San José Fire Department, which has ready access to the site via an existing roadway network. The peak operational workforce of approximately 100 employees at shift change associated with the project will have a negligible effect on the service populations of the facilities based on the City of San José Fire Department's ability to continue to maintain internal response times. In addition, emergency response times will be consistent and maintained through inter-city agreements. The project design includes updated fire suppression systems, as well as the design of the roadways to meet Fire Code standards, consistent with applicable local, state, and federal building standards and codes. The project facilities will undergo City of San José building design reviews to verify that the facility conforms to the applicable San José Municipal Fire and Environmental Codes to reduce potential fire risks. The project is not expected to increase demand beyond the planned growth in the General Plan and Alviso Master Plan; it will comply with existing policies and building and fire codes; and the nature of the project would not increase the demand for fire protection in a manner that would require new or physically altered facilities in order to maintain acceptable service ratios, response times or other performance objectives. Therefore, less than significant impacts will occur.

b) Police Protection?

Less than Significant Impact. The peak operational workforce of approximately 100 employees associated with the project will have a negligible effect on the service populations of the police stations that serve the project site based on the City of San José Police Department's ability to continue to maintain internal response times. In addition, emergency response times will be consistent and maintained through inter-city agreements. The entire project site will be secured by fencing and will include a sophisticated security system with full-time video monitoring coverage and onsite security personnel, which will minimize the potential for criminal activity at the facility and,

thus, the need for police protection. The project is not expected to increase demand beyond the planned growth in the General Plan and Alviso Master Plan; it will include substantial security features that will help to minimize needs for police protection; and the nature of the project will not increase the demand for fire protection in a manner that would require new or physically altered facilities in order to maintain acceptable service ratios, response times or other performance objectives. Therefore, less than significant impacts will occur.

c) Schools?

No Impact. The project will not include new residential uses and will not have any significant direct or indirect impacts on school attendance or school facilities. Workers required for construction are expected to be from the greater Bay Area. Furthermore, operational employees are also expected from the local area and are not expected to relocate near to the project site in a manner that would cause a substantial increase in demand on local schools. In the unlikely event that any workers relocate, there will be sufficient capacity at local schools given the proposed plans for the new Agnews Campus, which will provide additional capacity to the area and has boundaries for new schools that overlap with the project area (SCUSD 2019c). Therefore, there will be no impacts.

d) Parks?

No Impact. The project will not include new residential uses and will not have any significant direct or indirect impacts on park facilities. Given the time frame of construction for the project, few, if any, construction workers are anticipated to relocate near the project site as a result of the project. Furthermore, for operational employees, it is also expected that they will be employed primarily from the Bay Area and will not relocate near the project site in a manner that would cause a substantial increase in demand on local parks and related recreational facilities. In the unlikely event that any workers relocate, there are sufficient parks and recreational facilities to accommodate this negligible increase in use, and no new or expanded facilities will be necessary to serve the project. Construction of the proposed project would not significantly affect the recreational operations on the Coyote Creek Trail, as it is located on the eastern side of the creek. Construction of the proposed light industrial uses may temporarily affect trail access along this boundary, but trail users will be notified through sign notices should there be a potential for them to be affected. The proposed trail connections would be constructed according to the requirements of Caltrans for Class 1 trails. See Section 3.16 Recreation section for additional information in this regard

Furthermore, as an additional community benefit, the proposed project includes the extension of a Class I improved trail from Ranch Drive along the southern boundary of the site to the end of the existing bike trail (shown on Figure 3.16-2) in order to provide a trail connection to the Coyote Creek Trail, which will further confirm that there are no impacts in this regard.

The project is not expected to substantially increase employment in the City of San José or City of Milpitas, and the project will have a negligible impact in the usage of or demand for parks or other recreational facilities.

e) Other Public Facilities?

No Impact. It is expected that construction and operations workers for the project would be drawn from the greater Bay Area. As noted herein, the construction and operations workforce would not likely relocate closer to the project site. If a nominal number of workers were to relocate, the few new residents would likely have a negligible increase in the usage of, or demand for, libraries, and would not trigger the need for any new or expanded facilities. Therefore, the project would have no impact.

Proposed Mitigation Measures: None.

3.15.3 References

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See California. 2019. *California Parks*. Accessed May 22, 2019. http://www.seecalifornia.com/parks/milpitas-parks.html.

3.16 Recreation

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☒	☐
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment?	☐	☐	☒	☐

Environmental checklist established by CEQA Guidelines, Appendix G.

3.16.1 Setting

The San José Data Center (SJC02) will be located within the City of San José on an approximately 64.5-acre site and will consist of two data center buildings totaling over approximately 479,000 square feet of space. The project will include 40 3.0-megawatt (MW) standby diesel generators (20 per building) to provide electrical power to support the information technology (IT) load during utility outages or certain onsite electrical equipment interruptions or failures, as well as the installation of 20 3-MW emergency diesel generators at each building. In addition to the 40 backup generators, the project will include two administrative generators, rated at 1.25 MW and 0.5 MW, to support administrative functions during an interruption in the normal delivery of electrical power from the utility. The facility design will not require more than approximately 99 MW of electrical power, which will be used only for backup power for onsite data center operations in the event of an electrical outage by Pacific Gas & Electric (PG&E), although the estimated load is 92 MW.

The land has been used historically for farming since the early 1920s but is not currently in agricultural use. There are two residences, a mobile home, and a storage shed/warehouse currently onsite, which will be demolished as part of the SJC02 project. To the north of the project site are the San José/Santa Clara Regional Wastewater Treatment Plant sludge drying beds, to the south is Highway 237, to the west is the Los Esteros Critical Energy Facility (LECEF), a PG&E substation, and to the east is Coyote Creek. The project is anticipated to begin construction in the 3rd quarter of 2020, with operations beginning in the 1st quarter of 2022.

The study area for recreation-related project impacts is the City of San José and the City of Milpitas (as the project is located within San José city limits, in proximity to the border of city of Milpitas). The City of San José has 181 parks, 5 tot (toddler) lots, 49 community centers, 5 aquatics centers, 2 community parks, 17 community gardens, and 1 regional trail (City of San José 2019). The closest parks to the project site, within San José city limits, are Moitozo Park (located approximately 1.2 miles southwest of the project site), and Northwood Park (located approximately 2.8 miles southeast of the project site). The City of Milpitas has 38 parks, trails, athletic and community centers (See California 2019). The closest City of Milpitas parks to the project site are Starlite Park (located approx. 0.7 mile east of the project site), and Pinewood Park (located approx. 1.3 miles south of the project site) (Google Earth Pro 2019).

The project site is also surrounded by several existing pedestrian and bike trails, shown on Figure 3.16-1. According to the Santa Clara County Trails Master Plan, the Northern Recreation Retracement Bike Route is located to the east of the project site and is part of the Juan Bautista de Anza National Historic Trail; the Coyote Creek Trail is located to the east of the project site (Santa Clara County Parks 2015); and the proposed extension of the San Francisco Bay Trail is located on the western side of the project

site along Zanker Road (Santa Clara County Parks 2015)[1]. The Coyote Creek Trail was designated as a national recreational trail in 2009 (American Trails 2009).

The project site is not located within a designated scenic area or corridor based on the City of San José General Plan. In addition, the project site is not located along or visible from a state-designated scenic highway. There are no scenic views within the project area. While views of the surrounding hillsides are visible, the area is relatively flat: prominent viewpoints, other than the adjacent LECEF facility, SR 237, and the levee, are limited. There are no City-, County-, or state-designated scenic vistas, highways, or other scenic resources within the project area (City of San José 2017

3.16.1.1 Environmental Impacts and Mitigation Measures

a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

Less Than Significant Impact. The project will have a peak of approximately 100 employees (during shift change) to operate the facility (see Section 3.14, Population and Housing). These workers are expected to be drawn from the South Bay area. The approximately 100 operational workers are not expected to move closer to the project site. While a certain number of these workers may, on occasion, utilize existing neighborhood and regional parks or other recreational facilities, this nominal usage is not expected to increase the use of existing parks or recreational facilities to the extent that substantial physical deterioration of the park or facility will occur.

b) Does the project include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment?

Less Than Significant Impact. As noted herein, the project is not anticipated to increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated. Nevertheless, as an additional community benefit, the proposed project includes the extension of a Class I improved trail from Ranch Drive along the southern boundary of the site to the end of the existing bike trail (shown on Figure 3.16-2) in order to provide a trail connection to the Coyote Creek Trail. The potential impacts of installing these trail improvements are evaluated throughout this document in the applicable environmental topic areas; to the extent that any significant impacts would result, feasible mitigation measures also have been identified in the relevant environmental topic section. In addition, while not required under CEQA but as a courtesy to trail users, during the construction of the trail, signs will be posted notifying trail users of construction schedule and hours. If required, construction traffic will be redirected, to the extent feasible, and reroutes will be posted.

Previously Identified Mitigation Measures: None.

Proposed Mitigation Measures: None.

[1] The proposed extension of the San Francisco Bay Trail does not yet exist.

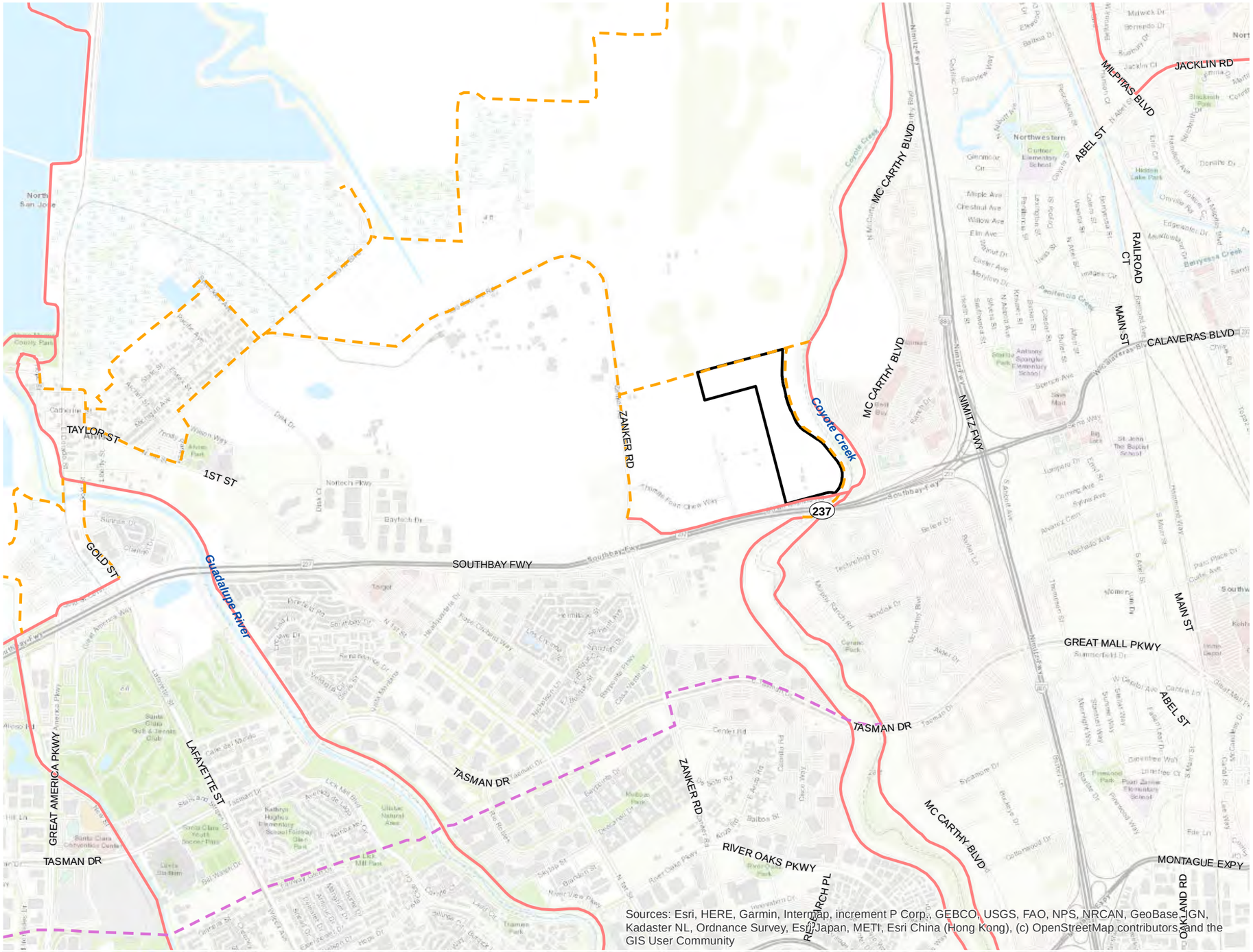

Figure 3.16-1
Recreational Trails
in the Vicinity of the Project
San José Data Center (SJC02)
San José, California

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LEGEND

Project Site

Trail Connection

N

0 300 600

Approximate scale in feet

Figure 3.16-2
Class I Trail Connection to Coyote Creek Trail
San José Data Center (SJC02)
San José, California

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3.16.2 References

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See California. 2019. *California Parks*. Accessed May 22, 2019. http://www.seecalifornia.com/parks/milpitas-parks.html.

3.17 Transportation

This section describes existing conditions and potential impacts on transportation as a result of construction and operation of the project. The project's potential effects on transportation were evaluated using the significance criteria set forth in Appendix G of the California Environmental Quality Act (CEQA) Guidelines. The analysis concludes that, although existing traffic conditions will be temporarily affected by project construction, project-related impacts on transportation will be less than significant. The project design includes the development of a Construction Traffic Control Plan. The conclusions are summarized in the CEQA Environmental Checklist and discussed in more detail in this section.

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?	☐	☐	☒	☐
b) Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?	☐	☐	☒	☐
c) Substantially increase hazards due to a geometric design feature e.g., sharp curves or dangerous intersections or incompatible uses e.g., farm equipment?	☐	☐	☒	☐
d) Result in inadequate emergency access?	☐	☐	☒	☐

Environmental checklist established by CEQA Guidelines, Appendix G.

3.17.1 Setting

The San José Data Center (SJC02) will be located within the City of San José on an approximately 64.5-acre site and will consist of two data center buildings totaling over approximately 479,000 square feet of space. The project will include 40 3.0-megawatt (MW) standby diesel generators (20 per building) to provide electrical power to support the information technology (IT) load during utility outages or certain onsite electrical equipment interruptions or failures, as well as the installation of 20 3-MW emergency diesel generators at each building. In addition to the 40 backup generators, the project will include two administrative generators, rated at 1.25 MW and 0.5 MW, to support administrative functions during an interruption in the normal delivery of electrical power from the utility. The facility design will not require more than approximately 99 MW of electrical power, which will be used only for backup power for onsite data center operations in the event of an electrical outage by Pacific Gas & Electric (PG&E), although the estimated load is 92 MW.

The land has been used historically for farming since the early 1920s but is not currently in agricultural use. There are two residences, a mobile home, and a storage shed/warehouse currently onsite, which will be demolished as part of the SJC02 project. To the north of the project site are the San José/Santa Clara Regional Wastewater Treatment Plant sludge drying beds, to the south is Highway 237, to the west is the Los Esteros Critical Energy Facility (LECEF), a PG&E substation, and to the east is Coyote Creek. The project is anticipated to begin construction in the 3rd quarter of 2020, with operations beginning in the 1st quarter of 2022.

Section 3.17.1.1 describes the existing regional and local road network, bicycle and pedestrian facilities, and transit service in the project study area.

3.17.1.1 Existing Road Network

The regional road network is shown on Figure 3.17-1. Regional access to the site will be provided by freeways near the project site, including US Highway 101 (US 101); Interstate (I-)680 and I-880; State Route (SR) 237; and local roadways Zanker Road, North McCarthy Boulevard, Thomas Foon Chew Way, and North 1st Street. Direct regional access is provided via the SR 237/North McCarthy Boulevard interchange, with local access via Alviso Milpitas Road. Other major roadways within the vicinity of the project include Tasman Drive and Montague Expressway. Details of the road network are provided in the subsequent paragraphs.

Freeways and Expressways

SR 237 is a six-lane highway that runs from east-west from SR 82 (El Camino Real) in Mountain View to I-680 in Milpitas, connecting the East Bay to the San Francisco Peninsula. SR 237 provides direct regional roadway access to and from the site to I-880, I-680, and US 101. Access to the site is provided via the SR 237/Zanker Road interchange. Average daily traffic (ADT) volumes are 72,500 vehicles per day and peak hour volumes are 5,700 vehicles per hour (both directions) near the SR 237/North McCarthy Boulevard interchange (Caltrans 2018).

US 101 provides north-south regional access between San Francisco to the north and San José to the south. US 101 has 8 to 10 lanes and serves as a major commuter route in Silicon Valley. US 101 connects to SR 237 west of the site, and I-880 south of the site, to provide regional access. US 101 has an ADT of 202,000 vehicles per day and peak hour volumes are 11,900 vehicles per hour (both directions) near the US 101/SR 237 interchange (Caltrans 2018). Other nearby interchanges are at Lawrence Expressway and Bowers Avenue/Great America Parkway.

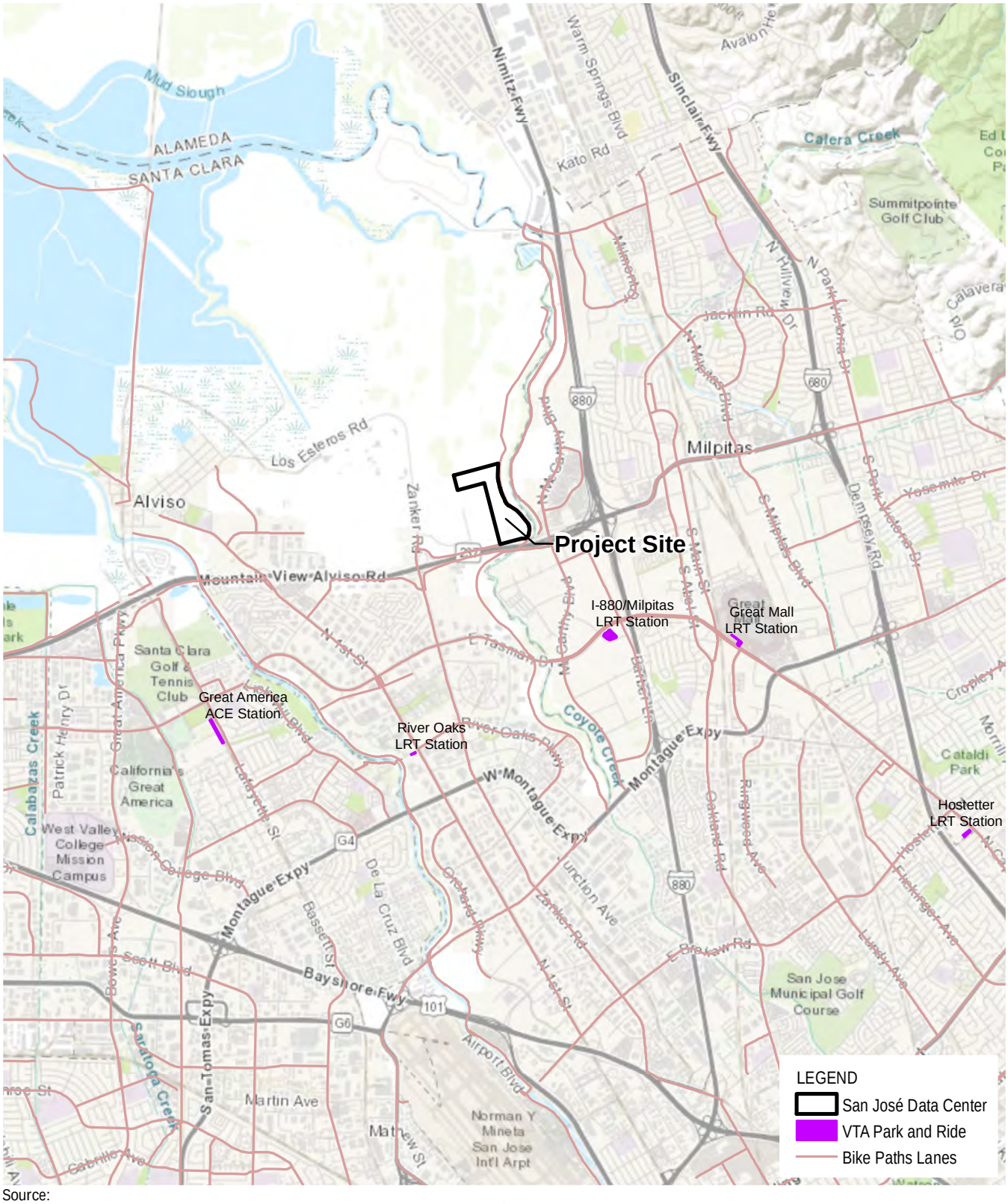
I-680 provides north-south regional access between Fairfield to the north and San José to the south. I-680 has 10 lanes in the vicinity of the project. The nearest access to and from the SJC02 project site via I-680 is at the East Calaveras Boulevard interchange to the east. I-680 has an ADT of 153,300 vehicles per day and peak hour volumes of 10,200 vehicles per hour (both directions) near the East Calaveras Boulevard interchange (Caltrans 2018).

I-880 is a north-south freeway that extends north to Oakland and south to I-280 in San José, before becoming SR 17 to Santa Cruz. I-880 has six lanes in the vicinity of the project. Access to the site is provided via the SR 237/I-880 interchange to the east. I-880 has an ADT of 234,000 vehicles per day and peak hour volumes of 16,100 vehicles per hour (both directions) near the I-880/SR 237 interchange (Caltrans 2018).

Montague Expressway is an eight-lane, generally east-west, divided expressway that connects with US 101 on the west and I-680 to the east. West of US 101, the Montague Expressway becomes San Tomas Expressway. Montague Expressway provides direct access to US 101. Montague Expressway has an ADT of 83,210 vehicles per day between Mission College Boulevard and US 101 (City of Santa Clara 2010).

Local Roadways

Zanker Road is a two- to six-lane arterial that runs north/south from Los Esteros Road to Old Bayshore Highway with connections to SR 237, Montague Expressway, and US 101. Freeway access from the project site is provided via the Zanker Road interchange with SR 237. No recent data are available from the City of San José's online traffic count geographic information system (GIS) database (https://www.arcgis.com/home/webmap/viewer.html?webmap=723f618a25944d2b91bb382b61a84d2c), but the reported 2005 ADT on Zanker Road north of River Oaks Parkway was 12,461 vehicles per day.



Source:
ESRI Service Layer, City of Santa Clara, Santa Clara County, VTA

N

0 1 2

Approximate scale in miles

Figure 3.17-1
Local Transportation Network
San José Data Center (SJC02)
San José, California

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North 1st Street is a four- to six-lane principal arterial which extends north south through San José to Alviso. North First Street is six lanes between SR 237 and Tasman Drive. South of Tasman Drive, North First Street has four lanes. The Santa Clara County Light Rail Transit (LRT) system operates in the median of the roadway between Downtown San José and Tasman Drive.[1] The 2016 ADT on North 1st Street, south of Cursor Road, was 11,722 vehicles per day, per the City's traffic count GIS database.

Tasman Drive is an east-west arterial that extends from Lawrence Expressway to I-880. The roadway is generally four lanes in the North San José area and widens to six lanes east of North McCarthy Boulevard. East of I-880, the roadway transitions to Great Mall Parkway into Milpitas. The Santa Clara County LRT system operates in the median of the roadway between Sunnyvale and Milpitas. The 2015 ADT on Tasman Drive, east of Baypoint Road, was 14,491 vehicles per day, per the City's traffic count GIS database.

North McCarthy Boulevard is a four-lane roadway running north-south in Milpitas, to the east of the project site. North McCarthy Boulevard provides connections from Landing Road in the north, to SR 237, East Tasman Drive and Montague Expressway.

Alviso Milpitas Road is a two-lane roadway which provides access to and from Ranch Drive and the Coyote Creek Trail trailhead from Thomas Foon Chew Way.

Thomas Foon Chew Way is a two-lane private access road which provides direct access to and from LECEF, located directly east of the project site.

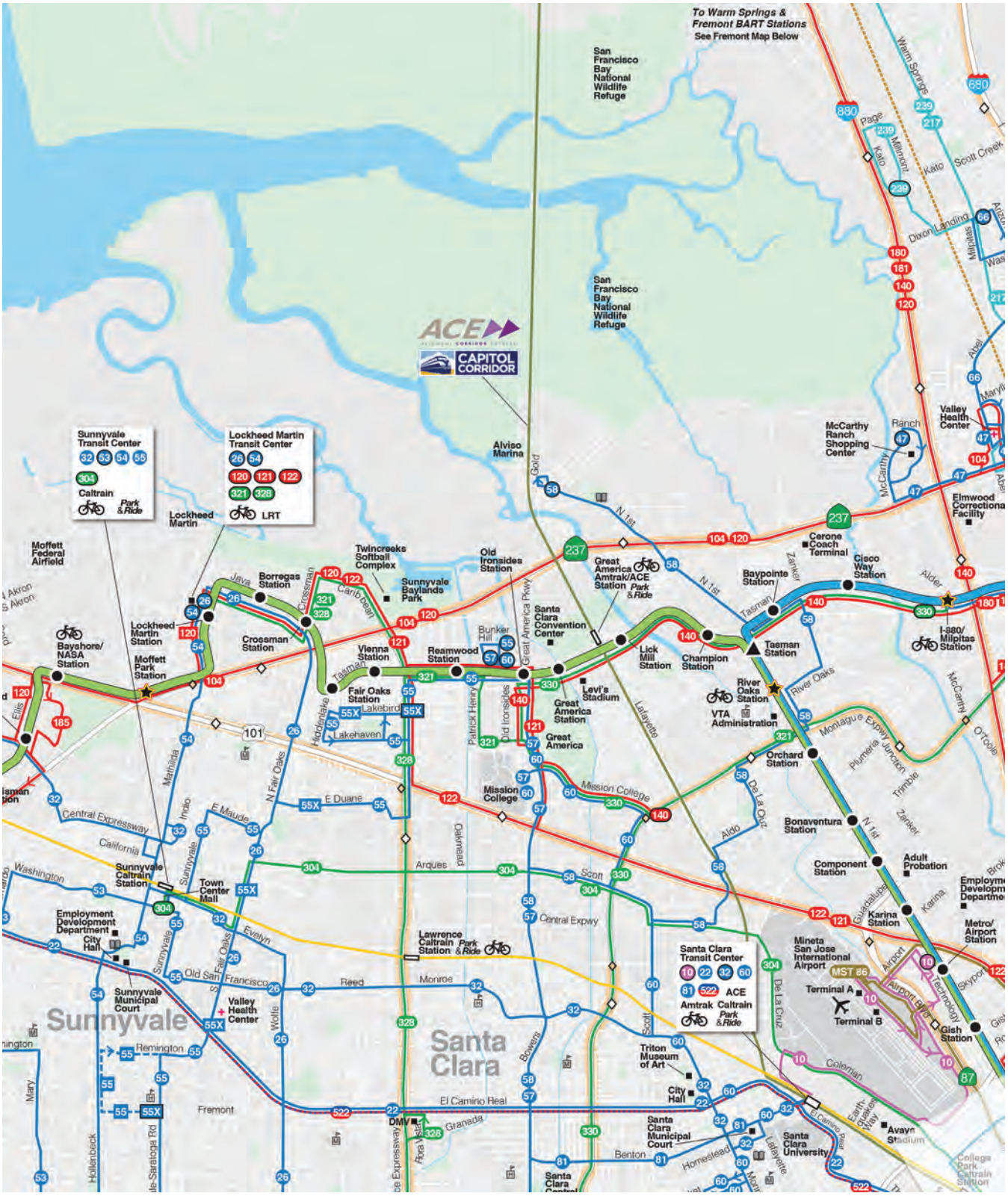
Ranch Drive is a two-lane roadway with a left/right turn pocket lane, serving commercial businesses in Milpitas, to the west of the project site.

3.17.1.2 Transit

The greater San Francisco Bay Area is served by an extensive public transit network of rail, buses, and ferries. The transit network in the study area is shown on Figure 3.17-2. Existing public transit service within the City of San José is primarily provided by the Santa Clara Valley Transportation Authority (VTA) and consists of bus, light rail transit, and paratransit services. Commuter rail lines stopping at the Santa Clara Transit Station include Caltrain, operated by the Peninsula Joint Powers Board, and Altamont Commuter Express, operated by the San Joaquin Regional Rail Commission. In addition to the Altamont Commuter Express Train, the Capitol Corridor commuter rail line, operated by the Capitol Corridor Joint Powers Authority, stops at the Great America Station, providing services from Sacramento to San José through the city of Santa Clara.

Bus services in the project area include local bus route 47 on North McCarthy Boulevard and Ranch Drive; local bus route 58 on North 1st Street; express bus routes 104 and 120 on SR 237; and express bus routes 180, 181, 140, and 120 on I-880.

[1] 237 Industrial Project Draft EIR, City of San José 2017, 191.



Source: Valley Transportation Authority, Bus & Rail Map, January 2019.

Figure 3-17.2
Transit Network
San José Data Center (SJC02)
San José, California

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3.17.1.3 Bicycle and Pedestrian Network

The City of San José Bike Plan 2020 (2020 San José Bike Plan) includes a network of existing and proposed bicycle and pedestrian Class I paths and trails (i.e., separated, off-street, multi-use paths), Class II bike lanes (i.e., on-street striped/signed bike lanes) and Class III bike routes (i.e., on-street, signed-only routes).

The project site is also surrounded by several pedestrian and bike trails. According to the Santa Clara County Trails Master Plan, the Northern Recreation Retracement Bike Route is located on the east of the project site and is part of the Juan Bautista de Anza National Historic Trail; the Coyote Creek Trail is located south of the project site (Santa Clara County Parks 2015); and the proposed extension of the San Francisco Bay Trail is located on the western side of the project site (Santa Clara County Parks 2015). The Coyote Creek Trail was designated as a national recreational trail in 2009 (American Trails 2009).

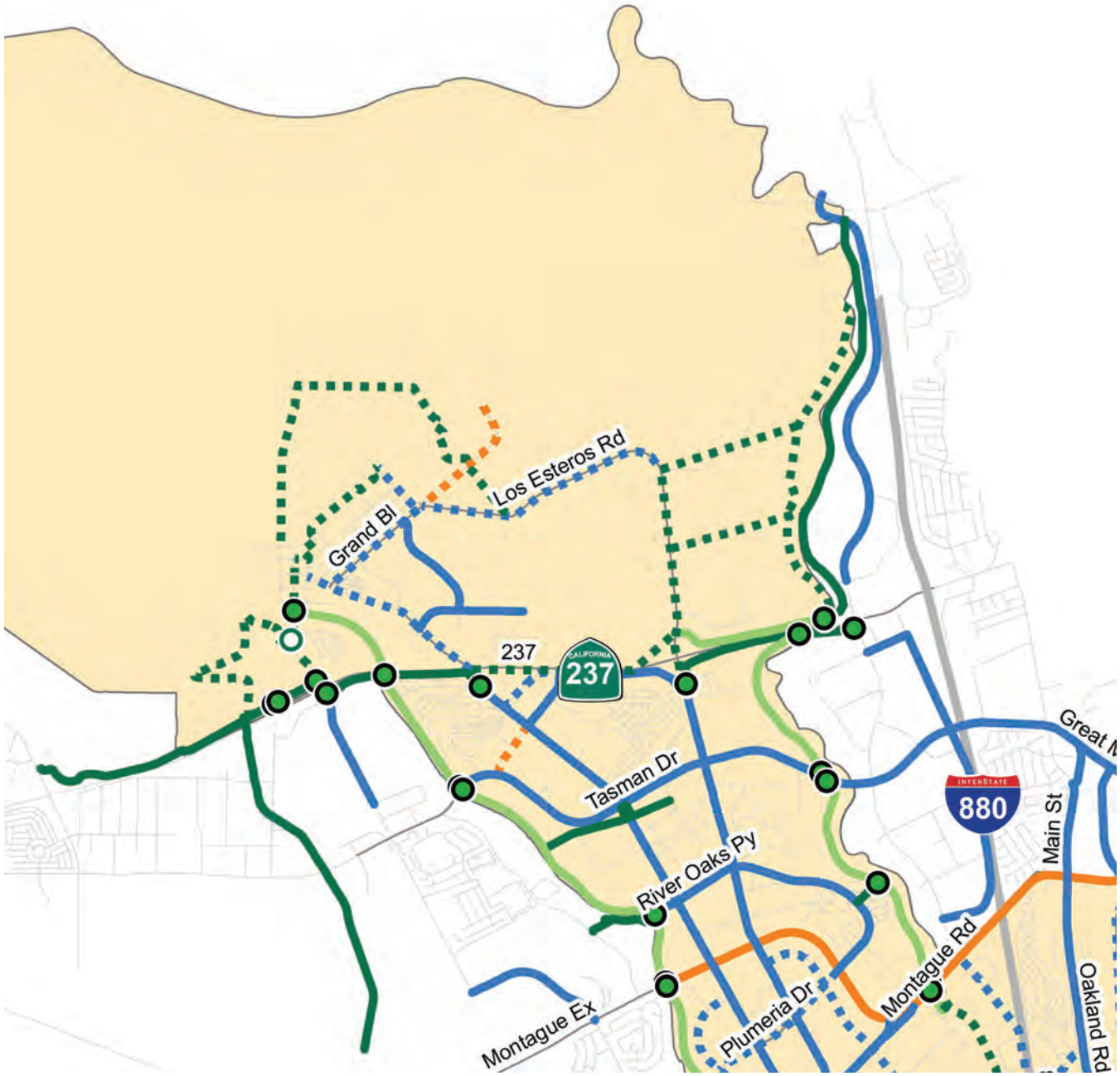
Existing and planned bicycle, pedestrian, and trail facilities within the project vicinity include the following:

- **SR 237 –** Existing paved off-street Class I trails are located on the southern side of SR 237.
- **Zanker Road** – Zanker Road is an "on-street primary bicycle facility". Class II on-street bikeways begin at the intersection of Zanker Road and SR 237. Class I off-street trails are planned as part of the 2020 San José Bike Plan to connect to the existing Class II bikeway and continue north along Zanker Road. The trails will be part of the San Francisco Bay Trail system.
- **North McCarthy Boulevard –** The Metropolitan Transportation Commission (MTC) classifies North McCarthy Boulevard as a Class II regional bike facility.
- **Coyote Creek Trail –** Coyote Trail is a Class I trail that runs north-south, to the eastern side of the project site and parallel to Coyote Creek. The trail is part of the San Francisco Bay Trail system.
- **Alviso Milpitas Road –** An unpaved Class I trail is located on Alviso Milpitas Road, south of the project site.
- **Other Class I Trails –** Other Class I trails are planned along McCarthy Lane, north of the project site.

Pedestrian facilities in the immediate project vicinity are limited. There are sidewalks on both sides of Zanker Road south of the SR 237 eastbound ramps. There are no sidewalks on Zanker Road north of the SR 237 westbound ramps. There are also no sidewalks on Ranch Drive between the project site and North McCarthy Boulevard. The Coyote Creek Trail is located on the eastern side of the creek, east of the project site. Access to the trail is currently provided on Alviso-Milpitas Road along the southern border of the site.[2]

Figures 3.17-3 through 3.17-5 detail the City of San José trails and bikeways within the vicinity of the project study area, per the 2020 San José Bike Plan and the San Francisco Bay Trail[3].

[2] City of San José, 237 Industrial Center Project, 2017, 192.
[3] San Francisco Bay Trail, http://baytrail.org/baytrailmap.html.



Source: City of San José, San José Bike Plan 2020, November 2009.

Legend

Trails (Off-Street: Class I Bikeway)
- Existing (Paved)
- Existing (Unpaved)
- Planned
- Existing Trail Access
- Planned Trail Access

Bike Lanes (On-Street: Class II Bikeway)
- Existing (Basic)
- Planned

Bike Routes (On-Street: Class III Bikeway)
- Existing (Basic)
- Planned

Bike Bridges (Pedestrian Over Crossing)
- Existing
- Planned

Figure 3-17.3
Primary Bikeway Network
San José Data Center (SJC02)
San José, California

JACOBS®

Source: City of San José, San José Bike Plan 2020, November 2009.

Legend

Trails (Off-Street: Class I Bikeway)
- Existing (Paved)
- Existing (Unpaved)
- Planned
- Existing Trail Access
- Planned Trail Access

Bike Lanes (On-Street: Class II Bikeway)
- Existing (Basic)
- Planned

Bike Routes (On-Street: Class III Bikeway)
- Existing (Basic)
- Planned

Bike Bridges (Pedestrian Over Crossing)
- Existing
- Planned

Figure 3-17.4
Bikeway Network
San José Data Center (SJC02)
San José, California

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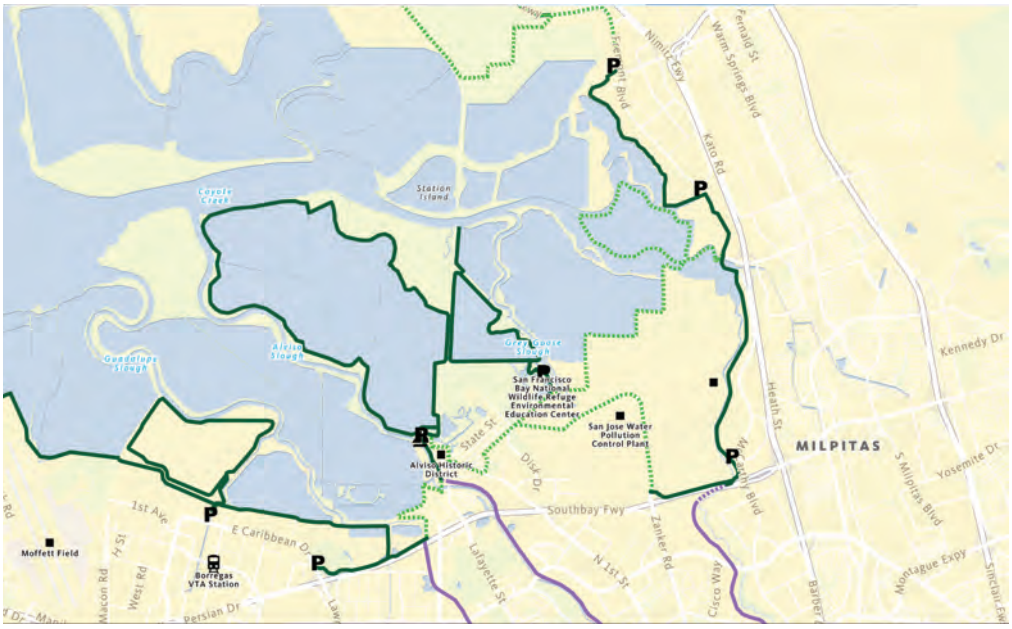

Source: San Fransisco Bay Trail Navigational Map, 2019.

Figure 3-17.5
San Francisco Bay Trail Network
San José Data Center (SJC02)
San José, California

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3.17.2 Regulatory Background

3.17.2.1 State of California

Senate Bill (SB) 743 (2013) addresses the limitations of measuring impacts using level of service (LOS) analysis and provides an alternative to using LOS in the environmental review process. The focus is on assessing project-related changes in vehicle-miles traveled (VMT), but the comprehensive guidance found at the Office of Planning and Research website at http://opr.ca.gov/ceqa/updates/sb-743/, which implements SB 743 changes to CEQA transportation analysis is project-dependent. Also, the revisions to the CEQA Guidelines are not required for implementation by affected jurisdictions until July 1, 2020, although as noted herein, the City of San José has already adopted the VMT methodology for purposes of assessing transportation impacts under CEQA .[4]

3.17.2.2 Santa Clara Valley Transportation Authority

VTA is both the regional transportation agency and Congestion Management Authority Agency for Santa Clara County (CMA 2017). VTA uses LOS to assess transportation impacts. Traffic is assessed via the regional Congestion Management Program (CMP), where LOS E is identified as the standard for Santa Clara County. LOS data have been collected for the CMP network since 1991 and serve as the baseline condition. Freeway segments and CMP intersections that operated at LOS F when monitoring began in 1991 are exempt from meeting the LOS E standard.

3.17.2.3 City of San José

Transportation Analysis Policy (2018)

On February 27, 2018, San José become the fourth city in California to adopt the VMT metric when the San José City Council adopted City Council Policy 5-1, entitled *Transportation Analysis Policy*. Council Policy 5-1 aligns the City of San José's transportation analysis with State law, and the major strategies, goals, and policies of the Envision San José 2040 General Plan (City of San José 2011).

The new policy establishes VMT as the City's metric for CEQA transportation analysis and officially removes transportation LOS as an impact to be measured for the purposes of CEQA.[5] The shift from LOS to VMT was further established by a new reference for all VMT-related analysis at the *City of San José CEQA Transition to Vehicle Miles Traveled Metric* website found at http://www.sanjoseca.gov/index.aspx?NID=5571(City of San José 2018).

Transportation Impact Analysis Handbook (2018)

This revised Transportation Impact Analysis Handbook serves as a guideline for VMT based analysis and implements the City's new Council Policy 5-1. The 2018 Handbook replaces and updates the Traffic Impact Analysis Handbook Volumes I and II (2009 and 2011) and its LOS requirement to align with the and Envision San José 2040 General Plan (2011) and Council Policy 5-1.

3.17.3 Methodology

Consistent with City of San José Council Policy 5-1, a VMT analysis has been applied to assess potential CEQA impacts of the project.

[4] http://opr.ca.gov/docs/20190122-743_Technical_Advisory.pdf.
[5] Envision San José 2040, San José General Plan, http://www.sanJoséca.gov/DocumentCenter/View/474, 43.

VMT is a measure of the total amount of vehicle travel on the roadway network and can be used to assess the relative amount of travel a project is expected to generate.[6] Potential VMT impacts were analyzed using the San José VMT Evaluation Tool.

The City of San José calculates VMT using the Origin-Destination VMT method, which measures the full distance of personal motorized vehicle-trips with one ending within the subject project. When assessing an office or industrial project, the subject project's VMT is divided by the number of employees expected to occupy the project to determine the VMT per employee of the project.[7] Even though the SJC02 project is a relatively small project from a trip perspective when using a traditional measure of traffic impacts (there will only be approximately 150 trips per day during operation), the City's guidance requires analysis on a per capita (i.e., per employee) basis.

Per the 2018 City of San José Transportation Impact Handbook, "when a project does not meet the screening criteria to be excluded from a detailed CEQA transportation analysis, a detailed CEQA transportation analysis will be required to evaluate a project's VMT generation against the appropriate thresholds of significance".[8] The screening criteria is intended for projects that are expected to result in less-than-significant VMT impacts based on project description, characteristics, or location, or a combination thereof, such as infill projects and local-serving retail and public facilities. Based on this initial screening criteria, the project does not qualify for exception from VMT analysis; therefore, a VMT analysis is required.

Potential VMT impacts can be analyzed using the San José VMT Evaluation Tool for the operational phase. (There is no guidance for evaluation VMT for temporary construction activities.) The San José VMT Evaluation Tool is an Excel-based tool that evaluates whether proposed land use projects in the City of San José would generate VMT impacts. The starting point for each land use project is the per capita/ per employee VMT for the 0.5-mile radius surrounding the project site, as calculated using the City's travel demand model and adjusted to the parcel level. This initial VMT estimate is compared to impact thresholds as outlined in San José's VMT impacts policy City Council Policy 5-1. Projects that would trigger a VMT impact can evaluate a variety of strategies to reduce those impacts. The strategies and VMT reductions applied in the tool are derived from research literature and case studies.[9]

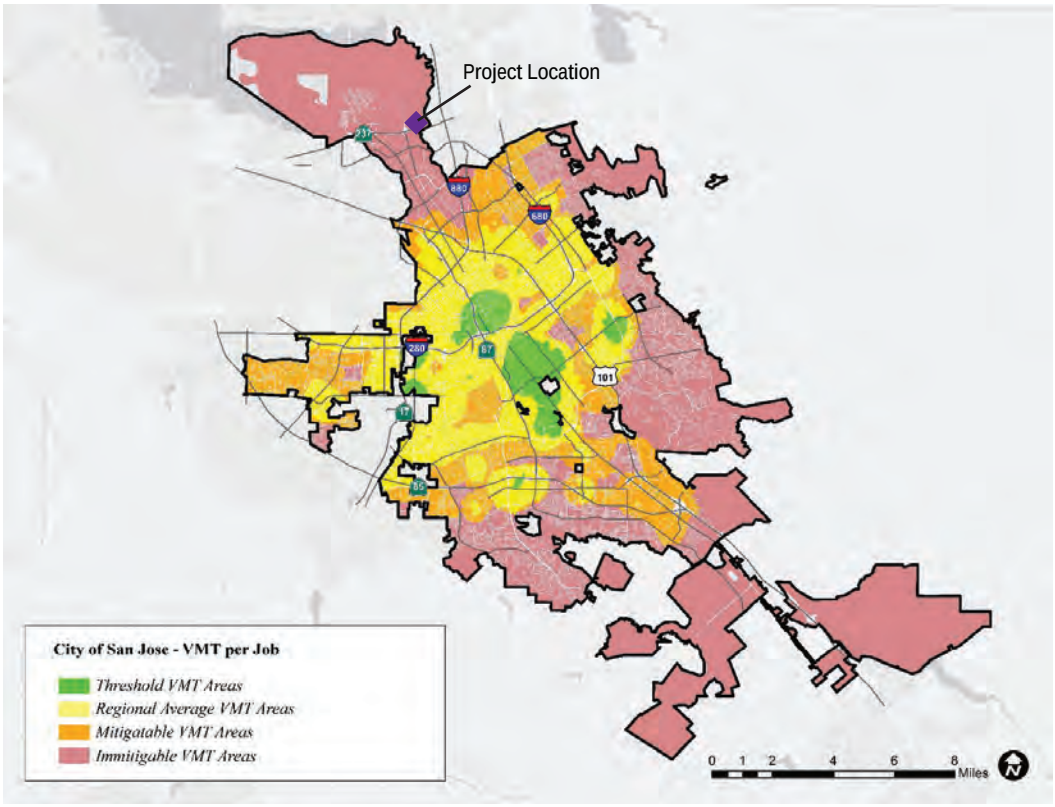
The SJC02 project qualifies as an industrial employment project because it is not a commercial development with public access. Defined thresholds and significance criteria for industrial employment uses are shown in Table 3.17-1. For Industrial Employment Projects within the City of San José, the current VMT level is 14.37 VMT per employee, and, the VMT threshold of significance is set at that value.

Table 3.17-1. City of San José Thresholds of Significance for Development Projects

Project Types	Significance Criteria	Current Level	Threshold
Industrial Employment Uses	Project VMT per employee exceeds existing regional average VMT per employee	14.37 VMT per employee (regional average)	14.37 VMT per employee

However, as shown on Figure 3.17-6**,** the project site (shown as a purple diamond) is located within the City's designated "Immitigable VMT Area" for workers (Figure 13 in the Transportation Analysis Handbook). These are areas where the VMT per employee is higher than the regional average. The City's guidance does not define the analysis required for projects in these immitigable areas (see Appendix 3.17A).

[6] City of San José, 2018 Transportation Analysis Handbook, http://sanjoseca.gov/DocumentCenter/View/76537, 9.
[7] City of San José, 2018 Transportation Analysis Handbook, http://sanjoseca.gov/DocumentCenter/View/76537, 9.
[8] City of San José, 2018 Transportation Analysis Handbook, http://sanjoseca.gov/DocumentCenter/View/76537, 16.
[9] City of San José, San José VMT Evaluation Tool: User Guide, http://sanjoseca.gov/DocumentCenter/View/75865, 2.



Source: City of San José, Transportation Analysis Handbook, April 2018.

Figure 3-17.6
Project Location per the City of San José's VMT Heat Map
San José Data Center (SJC02)
San José, California

JACOBS

3.17.4 Construction and Operational Transportation Impacts

Historically, traffic operations have been assessed using LOS, a sliding scale from A through F, where LOS A represents best traffic flow and LOS F represents significant traffic delay. LOS criteria for local roadways and freeways are shown in Table 3.17-2 .

Table 3.17-2. LOS Criteria for Freeways

LOS	Density (passenger cars/mile/lane)	Travel speed (MPH)	Description
A	≤ 11	≥67	Free Flow
B	11 < density ≤ 18	65 ≤ spend < 67	Reasonably Free Flow
C	18 < density ≤ 26	67 ≤ speed < 65	Stable Flow
D	26 < density ≤ 46	42 ≤ speed < 62	Unstable Flow
E	46<density ≤ 58	30 ≤ speed < 42	Capacity Flow
F	>58	<30	Forced Flow

Source: VTA CMP 2017

Notes:

> = greater than
< = less than
≤ = less than or equal to

Per the 2014 VTA CMP, the City of San José's minimum LOS standard is LOS D.

LOS data were obtained from the CMP Monitoring and Conformance Report (VTA 2017) and the CMP Program Document (VTA 2017). Figures 3.17-7 and 3.17-8 and Table 3.17-3 summarize the baseline (2016) peak hour LOS for freeway segments near the project site.

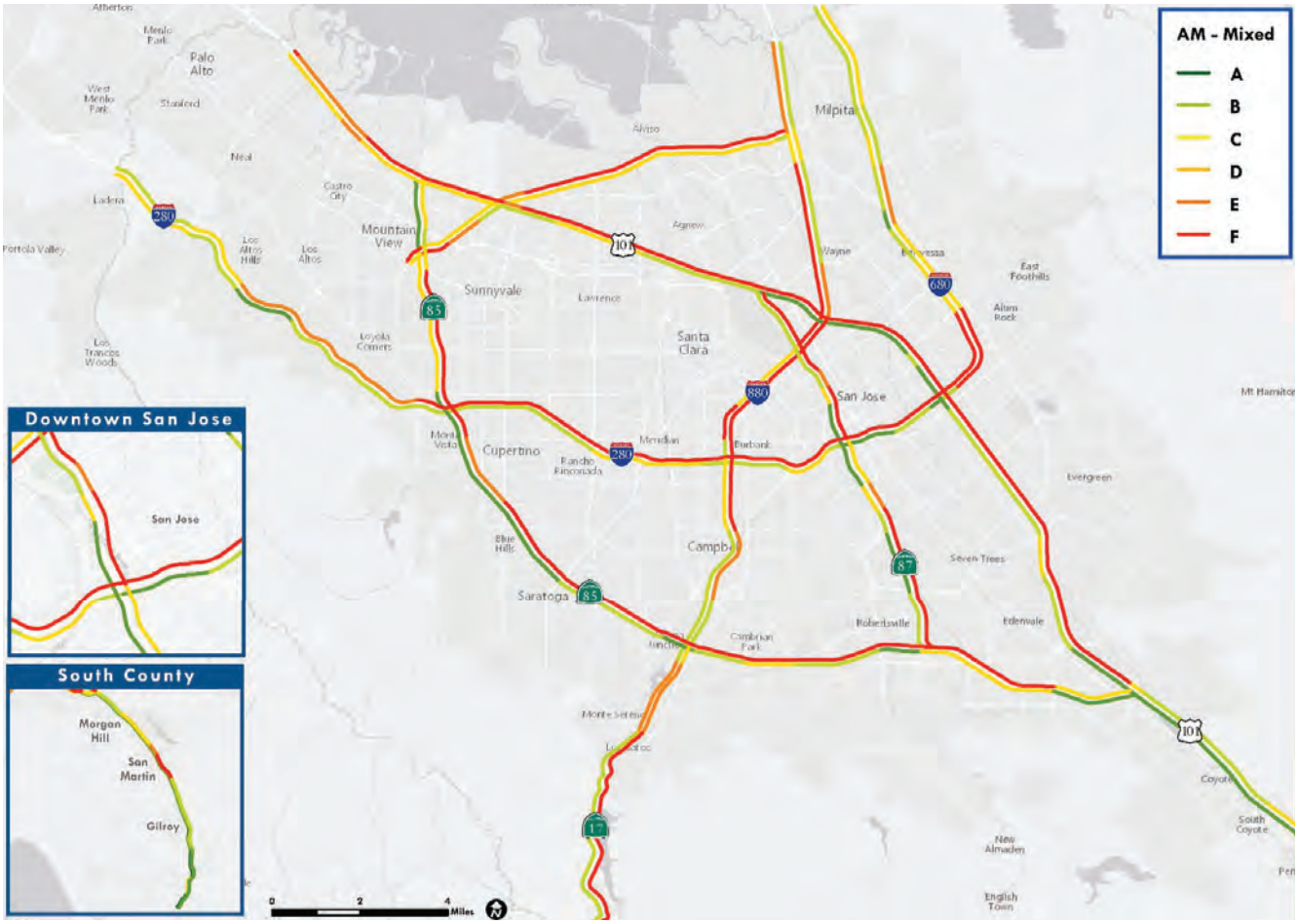
As shown in Table 3.17-3, significant congestion (LOS F) occurs on WB SR SB 237, I-880, NB US 101, and during the AM peak hour and on WB SR 237, SB I-880, SB US 101, and NB 101 during the PM peak hour

Table 3.17-3. Freeway LOS for AM and PM Peak Periods (2016)

Segment	AM Peak[a]	PM Peak[a]
EB SR 237 (US 101 to I-680)	D	D
WB SR 237 (US 101 to I-680)	F	F
SB I-880 (Scott Creek Road to SR 237)	E	C
SB I-880 (SR 237 to US 101)	F	F
NB I-880 (Scott Creek Road to SR 237)	B	C
NB I-880 (SR 237 to US 101)	B	C
SB US 101 (SR 237 to I-880)	B	F
NB US 101 (SR 237 to I-880)	F	C
SB US 101 (SR 237 to Embarcadero Road)	D	F
NB US 101 (SR 237 to Embarcadero Road)	F	F

Source

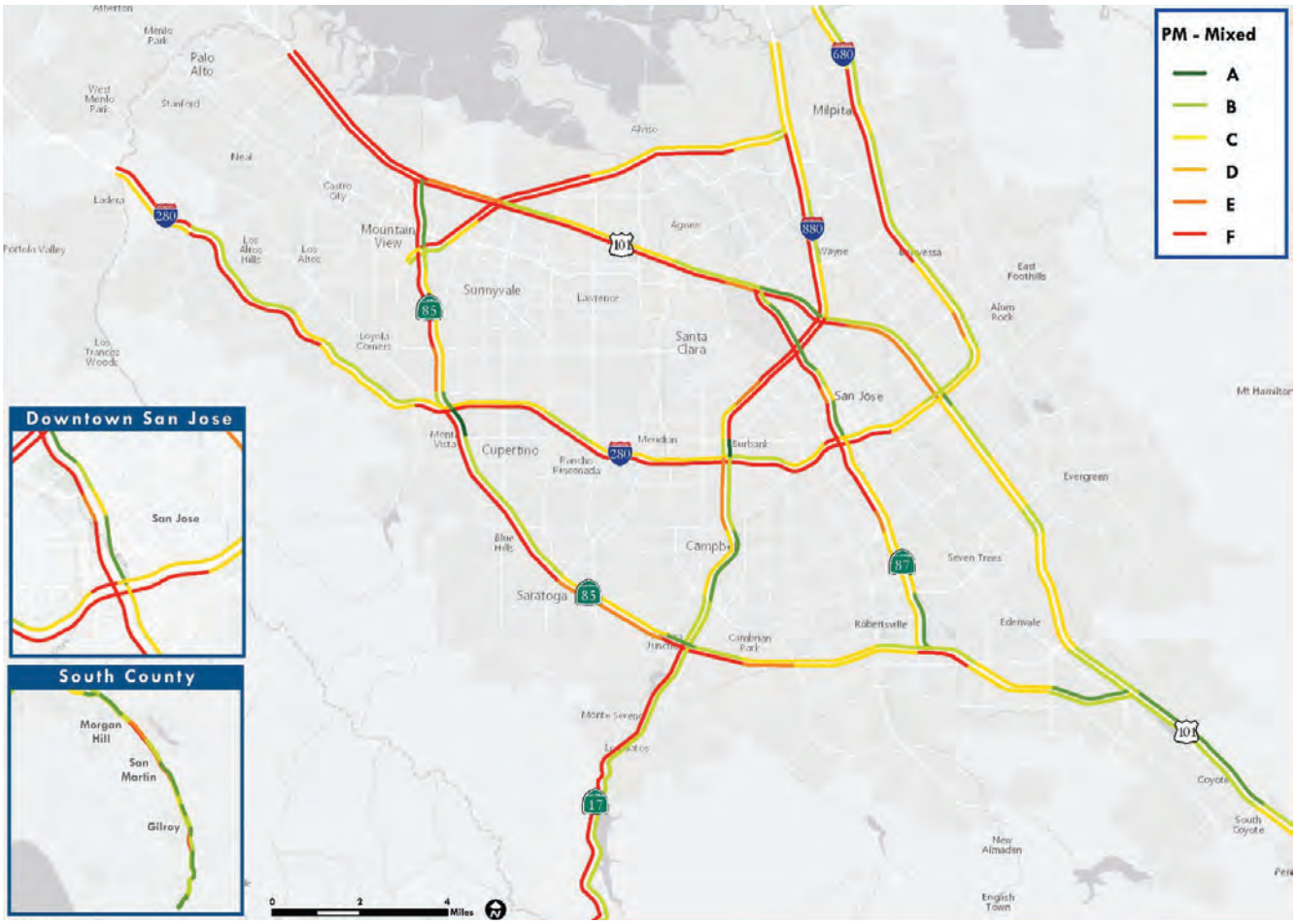
[a] VTA CMP 2017



Source: Congestion Management Agency for Santa Clara County, 2017 Congestion Management Program Document.

Figure 3-17.7
Freeway LOS for AM Mixed Flow
San José Data Center (SJC02)
San José, California

JACOBS



Source: Congestion Management Agency for Santa Clara County, 2017 Congestion Management Program Document.

Figure 3-17.8
Freeway LOS for PM Mixed Flow
San José Data Center (SJC02)
San José, California

JACOBS

3.17.4.1 Construction Impacts

Construction of the project is anticipated to take approximately 17 months and will result in a temporary short-term increase in local traffic resulting from construction-related workforce traffic, and equipment and material deliveries.

Traffic-generating construction activities related to the project will consist of the daily arrival and departure of construction workers to the site, and trucks hauling equipment and materials to the work site. All the construction activities will occur onsite and within the off-site infrastructure alignment areas. The majority of the project's construction-related trips (vehicle and truck trips) will occur on the roadways identified in Section 3.17-1.

As a conservative estimate assumed that there will be up to a maximum 305 AM peak hour trips and 305 PM peak hour trips, for a total of 610 daily construction worker trips. Many of the construction worker trips will be expected to occur prior to the AM and PM peak hours, in accordance with typical construction schedules. To the extent feasible, it is anticipated that truck trips will occur throughout the day and will be scheduled for off-peak hours. However, to be conservative, they were assumed to all occur in the peak hours, as reported in Table 3.17-4.

Table 3.17-4. Construction Trip Generation

Trip Type	AM Peak Hour			PM Peak Hour		
	In	Out	Total	In	Out	Total
Delivery/Haul Trucks	30	30	60	30	30	60
Delivery/Haul Trucks PCE (1.5)			90			90
Workers	215	0	215	0	215	215
Total Construction Traffic in PCE	--	--	305	--	--	305

Notes:
-- = not applicable
PCE = passenger car equivalent

The 305 trips in the peak hour will be distributed on the regional freeway system, including SR 237, I-880, and US 101. Existing average annual daily traffic (AADT) volumes and peak hour volumes (Caltrans 2018) are shown in Table 3.17-5.

Table 3.17-5. Existing Traffic Volumes (2017)

Route	Interchange	Peak Hour AADT (Back)	Peak Hour AADT (Ahead)	Back AADT	Ahead AADT
US 101	SR 237	11,900	13,900	170,100	197,400
SR 237	US 101	5,700	7,800	71,400	98,700
SR 237	Great America Parkway	12,200	12,400	130,200	140,700
SR 237	North 1st Street / Taylor Street	12,400	11,100	140,700	140,700
SR 237	Zanker Road	11,100	11,400	140,700	146,000
SR 237	EB SR 237/ North McCarthy Boulevard	5,700	5,700	72,500	72,500
SR 237	WB SR 237/ North McCarthy Boulevard	5,800	5,300	73,500	66,000
SR 237	I-880	11,600	4,800	148,100	67, 200
I-880	SR 237	16,100	20,100	180,000	225,000

Construction activities will generate increases in traffic on the regional and local road network, but the effects will be short-term and typical of construction projects in the vicinity and throughout the City. Additional traffic volumes would be minimal (less than 1 percent of peak hour traffic and less than 0.1 percent of daily traffic) relative to existing volumes.

Truck traffic is anticipated to be routed along Alviso Milpitas Road to the SR 237/North McCarthy Boulevard interchange, where direct regional access is available to I-880 and or US 101 and would not significantly affect off-street trails along North McCarthy Boulevard or SR 237, which are separated from the roadway. Similarly, truck traffic would not be anticipated to be distributed along local bus lines along North McCarthy Boulevard interchange and Ranch Drive, given that direct access is available at the SR 237/North McCarthy Boulevard interchange.

The project site is not directly served by transit. However, there are many nearby transit services, including local bus service along North McCarthy Boulevard and Ranch Drive, and express bus service on SR 237. Construction of the project will occur onsite (and also in the offsite infrastructure alignment areas) and will not physically obstruct any transit facilities. Construction of the project could slightly increase the demand for transit if construction workers, employees, or visitors, or a combination thereof, used nearby rail or bus service to commute to the site. However, the temporary increase in demand will not significantly delay or overburden these facilities.

Project construction will also not significantly obstruct any of the pedestrian or bicycle facilities in the area or interfere with any future pedestrian or bike plans for the area, as all construction will occur onsite. Traffic increases generated by the project will be less than significant and will not have significant impacts on pedestrians or bicyclists.

VMT evaluations were not conducted for construction impacts.

3.17.4.2 Operational Impacts

It is estimated that project operations will require a total of approximately 100 onsite employees over three shifts, which is expected to generate up to 54 AM peak hour (inbound) trips and 54 PM peak hour (outbound) trips. An average of ten delivery trucks are anticipated during the AM and PM peak hours, with a maximum of 30 AM and 30 PM peak hour trips. The project trips are summarized in Table 3.17-6.

Table 3.17-6. Operations Trip Generation

Trip Type	AM Peak Hour			PM Peak Hour		
	In	Out	Total	In	Out	Total
Maximum Delivery Trucks	15	15	30	15	15	30
Average Delivery Trucks	5	5	10	5	5	10
Workers	54	-	54	-	54	54

Traffic volumes during the operations phase are lower than the construction phase, so traffic impacts will be further reduced. Operations of the project will occur entirely on-site and will have a minimal effect on transit or bicycle facilities. Truck traffic is anticipated to be routed similar to the construction traffic.

Potential VMT impacts were analyzed using the San José VMT Evaluation Tool, as shown in Appendix 3.17A. Based on the VMT calculation estimate, the project (operations) would generate an estimated 16.84 VMT per employee, above the San José industrial VMT threshold for industrial employment uses of 14.37 VMT per employee, but less than the area average of 17.30 VMT per employee.

3.17.5 Environmental Impacts and Mitigation Measures

a) Would the project conflict with program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?

Less than Significant Impact.

Based on the analysis in Section 3.17.4.2, the project will have less than significant impacts to programs, ordinances, or policies regarding the multimodal circulation system.

For the roadway system, the City of San José Council Policy 5-1 focuses impact evaluation on VMT (evaluated in 3.17.5 (b)), so any potential LOS impacts within the City (e.g., at intersections) would not be a conflict with the programs, plans, ordinances, or policies within the City. VTA uses LOS E as the standard for the regional system, but the analysis conducted in Section 3.17.4 indicates that the impacts on the regional system will be minimal. Furthermore, the project represents an infill development adjacent to major transit/transportation corridors needed to facilitate alternative commute modes. Similarly, there will be only minimal effects to other modes (transit, bicycle, and pedestrian).

b) Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?

Less than Significant Impact The project will generate new trips during the operations phase that will have a lower-than-average VMT (16.84), on a per-employee basis, than the surrounding area (17.30).

The estimated VMT per employee is above the San José industrial VMT threshold for industrial employment uses of 14.37 VMT per employee. However, the project is in a defined "immitigable" area for worker VMT. The City of San José's Transportation Analysis Handbook provides tools for reducing Project VMT when it exceeds the threshold(s) of significance (City of San José 2019). Four categories of VMT reduction mitigation measures are as follows:[10]

1) **Project Characteristics** – Changes in project characteristics such as increase in project density or increase in project land use mix
2) **Multimodal Network Improvements** – Multimodal network improvement measures such as bicycle and pedestrian improvements and first mile/last mile connections
3) **Parking Measures** – Parking measures such as limiting the supply of vehicular parking and increasing bicycle parking
4) **Transportation Demand Management (TDM)** – TDM measures such as ridesharing programs, discounted transit programs, telecommuting and alternative work schedule programs, employee parking "cash outs" for on-site parking, or commute trip reduction programs

None of these measures can be applied to reduce VMT below the regional average value for this project. Given the nature and location of the site, only very limited TDM measures (e.g., ridesharing incentives) could feasibly affect VMT, and none would affect VMT per employee. Any TDM measures would only reduce the number of vehicle trips, not the average VMT for each trip. Since the City's definition of the project area is immitigable, the basis for VMT comparison was the surrounding area VMT. The Project VMT per employee is lower; therefore, the determination is that the VMT impacts are less-than-significant.

Also, the assessment is based on average VMT, but the City's technical procedures do not consider the number of trips in determining an impact. The small number of trips (100 daily employees and 10 to 30 truck trips) reinforces the conclusion that the VMT impacts will be less than significant.

[10] City of San José, 2018 Transportation Analysis Handbook, http://sanjoseca.gov/DocumentCenter/View/76537, 25.

c) Would the project substantially increase hazards due to a geometric design feature or incompatible uses?

Less than Significant Impact.

Project construction or operations will not permanently alter any public roadways or intersections, nor will it introduce a design feature or incompatible uses to the project area. Project construction and operation will occur entirely on-site and within the offsite infrastructure alignment areas. Therefore, the project will not increase hazards due to geometric design features of roadways or incompatible use, because construction traffic and impacts will be temporary and finite with impacted public roadways repaired to pre-construction conditions. Impacts will be less than significant.

For aviation, the Norman Y. Mineta San José International Airport is located approximately 3.4 miles southwest of the site. The Federal Aviation Administration (FAA) establishes a maximum structure height of 212 feet above mean sea level (amsl) at the project site (Santa Clara County ALUC 2016). The highest point of the proposed Project Site, the top of the rooftop chiller unit, is approximately 31 feet above ground level. The SJDC will not exceed the FAA's height limit of 212 amsl. The project also does not meet the 200-foot threshold for FAA notification and review per Title 14, Part 77, Section 77.9 of the Code of Federal Regulations. Because the height of the project will not exceed the FAA's height limitation of 212 feet or require FAA review, project structures will not be expected to pose an obstruction hazard to aircraft.

The project's emergency standby generators will discharge thermal plumes (i.e., high-velocity columns of hot air) during operation. Thermal plume velocities will be greatest at the discharge points, with plume velocities decreasing with increasing altitude. Plume velocities will also be highest during certain weather conditions, such as cool temperatures and calm winds. High-velocity thermal plumes have the potential to affect aviation safety, and the FAA has amended the *Aeronautical Information Manual* to establish thermal plumes as potential flight hazards (FAA 2014). Aircraft flying through thermal plumes may experience significant air disturbances, such as turbulence and vertical shear. The FAA manual advises that, when able, a pilot should fly upwind of smokestacks and cooling towers to avoid encountering thermal plumes.

A peak vertical plume velocity of 10.6 meters per second (5.3 meters per second average plume velocity) is used as a screening threshold for potential impacts to aviation. Based on the SPPE of a comparable local data center in the neighboring City of Santa Clara, this velocity generally defines the point at which aircraft begin to experience severe turbulence.[11]

Based on the thermal plume modeling methodology used in the CEC's previous data center cases, an assessment of the thermal plume velocities for the project was prepared. Appendix 3.17B presents the thermal plume calculations based on the *Aviation Safety and Buoyant Plumes*, prepared by Peter Best, et. al. (year).

The Project's thermal plume velocity assessment show that the air cooler exhaust velocity is less than the 10.6 meters per second peak rate at 46.6 feet above grade, or 16 feet above the air cooler fan outlet. Aircraft will not be operating 16 feet above the air cooler fan outlet. Furthermore, project calculations of the thermal plume velocities show that the air cooler exhaust velocity is less than the 5.3 meters per second average rate at 88.6 feet above grade, or 58 feet above the air cooler fan outlet. The standby generators are expected to result in similar thermal plume velocities (69 feet for merged plumes above the ground to a 5.3 meter per second plume velocity) as the air cooler fan outlets, which are not expected to result in increased safety hazards as aircraft are not expected to operate within 58 feet above the project site.

The project will not increase any other hazards. Construction will not result in any hazards to motorists, bicyclists, or pedestrians. Impacts will be less than significant.

[11] Laurelwood Data Center (LDC) Small Power Plant Exemption Application, February 2019.

d) Result in inadequate emergency access?

Less than Significant Impact.

The project will not physically block any access roads or result in traffic congestion that could significantly compromise timely access to this facility or any other location, because the project site is located away from public roadways and the underground linear features will impede emergency vehicle access. Emergency access to the site will continue to be provided from the existing driveways on Alviso Milpitas Road. Therefore, the impact will be less than significant.

Previously Identified Mitigation Measures: None.

New Proposed Mitigation Measures: None.

3.17.6 References

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Federal Aviation Administration (FAA). 2014. *Aeronautical Information Manual*. Change 1. U.S. Department of Transportation. July 24.

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Santa Clara Valley Transportation Authority (VTA). 2017. *2017 CMP Monitoring and Conformance Report*. Accessed January 2019. http://vtaorgcontent.s3-us-west-1.amazonaws.com/Site_Content/CMP_2017_Monitoring_Report.pdf.

3.18 Tribal Cultural Resources

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Tribal Cultural Resources a) Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:				
(i) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k), or	☐	☒	☐	☐
(ii) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	☐	☐	☒	☐

Environmental checklist established by CEQA Guidelines, Appendix G.

3.18.1 Setting

The San José Data Center (SJC02) will be located within the City of San José (City) on an approximately 64.5-acre site and will consist of two data center buildings totaling over approximately 479,000 square feet of space. The project will include 40 3.0-megawatt (MW) standby diesel generators (20 per building) to provide electrical power to support the information technology (IT) load during utility outages or certain onsite electrical equipment interruptions or failures, as well as the installation of 20 3-MW emergency diesel generators at each building. In addition to the 40 backup generators, the project will include two administrative generators, rated at 1.25 MW and 0.5 MW, to support administrative functions during an interruption in the normal delivery of electrical power from the utility. The facility design will not require more than approximately 99 MW of electrical power, which will be used only for backup power for onsite data center operations in the event of an electrical outage by Pacific Gas & Electric (PG&E), although the estimated load is 92 MW.

The land has been used historically for farming since the early 1920s but is not currently in agricultural use. There are two vacant residences, a mobile home, and a storage shed/warehouse currently onsite, which will be demolished as part of the SJC02 project. To the north of the project site are the San José/Santa Clara Regional Wastewater Treatment Plant sludge drying beds, to the south is Highway 237, to the west is the Los Esteros Critical Energy Facility, a PG&E substation, and to the east is Coyote Creek. The project is anticipated to begin construction in the 3rd quarter of 2020, with operations beginning in the 1st quarter of 2022..

The City is situated within the valley created by the Santa Cruz and Gavilan Mountains on the west and the Diablo Range on the east. The Santa Clara Valley is a structural valley (it was created by the uplifting mountains, as opposed to erosional forces [NPS 2007; SFEI 2010]).

An analysis of historical maps and field notes identifies that the project site, proposed linear routes, and the immediately surrounding vicinity were used for agricultural purposes as early as the late 19th century.

PaleoWest Archaeology (PaleoWest) reviewed several historical U.S. Geological Survey (USGS) maps including the San José, CA (1889, 1947, and 1953a) and the Milpitas, CA (1961, 1968, 1973, and 1980) quadrangles. Based on a review of historical USGS maps, the project site, linear routes, and vicinity were settled as early as 1889 with buildings, likely associated with farming, and roads in the surrounding area (USGS 1889). Between 1889 and 1953, depictions of the project site, linear routes, and vicinity on USGS changed little; however, the 1953 USGS map depicts the project site, linear routes and vicinity as farmland being primarily used as an orchard (USGS 1947, 1953b). Two additional buildings are depicted on the USGS map for 1973 that were not depicted in the 1961 and 1968 maps (USGS 1961, 1968, 1973). The project site, linear routes, and vicinity continued to be shown as orchard land in the 1980 USGS map (USGS 1980). The elevation of the project site ranges between 13 and 17 feet above mean sea level.

The geologic map of Santa Clara County shows the soils of the project site and proposed offsite linear routes as late Holocene mud deposits (Qhym) (Graymer et al. 2006). The age and depositional nature of these deposits are such that the project site, as well as the proposed offsite linear routes, retain the potential for unknown, buried cultural resources despite minor previous ground-disturbing activities at the site.

The project site and associated offsite linears are located north of downtown San José, about 0.5 mile west of the intersection of Interstate 880 and CA Route 237. Land use in the area was historically agricultural, with the project site originally occupied by an orchard, but is currently featuring fallow fields. To the west of the project site is a water treatment plant. A channelized portion of Coyote Creek is located immediately to the east of the project site.

The project site has remained mostly undeveloped and used for agriculture and livestock since 1859. The project is anticipated to begin construction in the 2nd quarter of 2020, with operations beginning in the 1st quarter of 2022.

A complete discussion of the prehistoric, ethnographic, and historical setting may be found in Appendix 3.5-A, *Cultural Resource Investigation in Support of the San Jose Data Center (SJC02) Project*.

3.18.2 Regulatory Setting

3.18.2.1 California Native American Tribes, Lead Agency Tribal Consultation Responsibilities, and Tribal Cultural Resources

Assembly Bill 52 (AB 52) amended the California Environmental Quality Act (CEQA) to specifically provide that “a project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment” (Public Resources Code [PRC] Section [§] 21084.2). AB 52 further defined the consultation requirements of lead agencies and defined the terms California Native American tribes and tribal cultural resources for the purposes of CEQA.

A California Native American tribe is a “Native American tribe located in California that is on the contact list maintained by the Native American Heritage Commission (NAHC) for the purposes of Chapter 905 of the Statutes of 2004” (PRC, §21073). Lead agencies implementing CEQA are responsible to conduct tribal consultation with California Native American tribes about tribal cultural resources within specific timeframes, observant of tribal confidentiality; if tribal cultural resources could be impacted by project implementation, lead agencies are to proceed with the consultation to points of agreement or termination.

Tribal cultural resources are either of the following:

1) Sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are either of the following:

   a) Included or determined to be eligible for inclusion in the California Register of Historical Resources (CRHR).

   b) Included in a local register of historical resources as defined in PRC §5020.1(k).

2) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in PRC, §5024.1(c). In applying the aforesaid criteria, the lead agency shall consider the significance of the resource to a California Native American tribe (PRC, §21074[a]).

A cultural landscape that meets the criteria of PRC, §21074(a), is a tribal cultural resource to the extent that the landscape is geographically defined in terms of its size and scope (PRC, §21074[b]). Historical resources, unique archaeological resources, and non-unique archaeological resources, as defined in PRC, §§21084.1, 21083.2(g), and 21083.2(h) may also be a tribal cultural resource if they conform to the criteria of PRC, §21074(a). See also Section 3.5, Cultural Resources.

3.18.2.2 General Plan Policy

The *Envision San José General Plan 2040* (2011) does not have any goals or policies specifically directed to tribal cultural resources. However, there is significant overlap between tribal cultural resources and historical resources. Section 3.5, Cultural Resources, details those policies of the General Plan relevant to tribal cultural resources.

3.18.2.3 Criteria for Local Significance

The City does not have any criteria for local significance specifically directed to tribal cultural resources. However, there is significant overlap between tribal cultural resources and historical resources. Section 3.5, Cultural Resources, details those criteria for local significance that are relevant for tribal cultural resources.

3.18.2.4 Tribal Cultural Resources

Tribal cultural resources are a category of resources recently introduced into CEQA by AB 52. Tribal cultural resources are resources that are any of the following: sites, features, places, cultural landscapes, sacred places, or objects that are included in, or determined eligible to, the CRHR, or are included on a local register of historical resources as defined in Subdivision K of PRC, §5020.1.

Tribal cultural resources can be prehistoric, ethnographic, or historical. Tribal cultural resources eligible for the CRHR are considered historical resources, and more information regarding historical resources can be found in Section 3.5, Cultural Resources.

3.18.3 Ethnographic Context

The Costanoans are the Native Americans who inhabited the Bay Area since time immemorial. The Costanoan designation refers to those who spoke one of eight separate, but related, languages. The Costanoan language is similar to Miwok and is part of the Utian language family within the Penutian stock. Tamyen (Santa Clara Costanoan) was spoken around the southern end of San Francisco Bay and the lower Santa Clara Valley (and would have been spoken by those in the area of the project).

Each village was a separate and politically autonomous group, generally referred to as a tribelet or a village community. Tribelets were the basic unit of political organization, consisting of a central village, sometimes satellite villages, and resource gathering camps, occupied by around 200 people (Levy 1978, Milliken 1995). Chiefs, either women or men, descended from their patrilineal relative. A large number of tribelets and villages were present in the Santa Clara Valley and surrounding area. There were three tribelets in proximity to the project area: the tribelet of *Alson* occupied the area east of Aliso, with the *Puichon* to the west, and *Tamien* to the south around Santa Clara (Milliken et al. 2009). All of these presumably spoke dialects of the Tamyen language (Levy 1978). Background research suggests that the closest ethnographic village to the project area is *Ulístac*, 2.5 miles southwest (Brown 1994).

Like most other Native Americans in California, acorns were the staple food of the Costanoan people in the Santa Clara region. Other nuts such as buckeye, California laurel, and hazelnuts were also eaten. The Costanoans practiced a type of slash-and-burn agriculture to promote the growth of the nuts and

seeds upon which they relied. The primary mammals taken by the Costanoan included the black-tailed deer, elk, antelope, grizzly bear, mountain lion, sea lion, and whale. Waterfowl, salmon, steelhead, and lampreys were also important components of the Costanoan diet (Levy 1978).

Thatched, domed houses were the most common type of structure for the Costanoans. Sweathouses along the banks of rivers were also constructed, in addition to dance enclosures and assembly houses (Levy 1978).

Bodies were either buried or cremated on the day of death. The Chalon and Rumsen groups likely practiced inhumation, while the Chochenyo and Ramaytush usually cremated their dead. Cremations also entailed burning the deceased's property (Kroeber 1976; Levy 1978).

Trade was important for the Costanoan groups, and their primary partners in trade were the Plains Miwok, Sierra Miwok, and Yokuts. The Costanoan provided coastal resources such as mussels, abalone shell, dried abalone, and salt to the Yokuts in exchange for pinon pine nuts. The Miwok obtained olivella shells from the Costanoans. Warfare was conducted both between Costanoan tribelets and also between the Costanoans and the Esselen, Salinan, and Northern Valley Yokuts (Davis 1961; Levy 1978).

A common archaeological manifestation of a Costanoan village site is the shell mound deposits. Mussels are the primary shells that constitute these mounds, in addition to other household wastes (Kroeber 1976).

A total of seven Spanish missions were established in Costanoan territory between 1770 and 1797. By 1810, the last Costanoan village was subsumed within the mission system. Missions in the Bay Area mixed together various language and cultural groups, including the Esselen, Foothill Yokuts, Plains Miwok, Saclan Miwok, Lake Miwok, Coast Miwok, and Patwin. The mission closest to the project site was Santa Clara de Asiss, built in 1777. The mission is no longer extant, but the area is still rich in archaeological manifestations from the mission period and before (Levy 1978).

More detailed prehistoric and historical context statements can be found in Section 3.5, Cultural Resources.

3.18.4 Native American Consultation

PaleoWest contacted the NAHC on May 29, 2019, to obtain a search of the Sacred Lands File and a list of tribes who could potentially be interested in the project. The NAHC responded on June 17, 2019, (Totton, pers. comm. 2019) that results of the Sacred Lands File search were positive and that the North Valley Yokuts should be contacted; the NAHC also provided a list of five additional California Native American Tribes to contact (Table 3.18-1). Letters were sent to these groups on July 9, 2019 (see Tribal Cultural Resources Table 1). Follow-up phone calls were made on July 15, 2019, and July 22, 2019. A copy of all letters and records of conversation are provided as Appendix 3.18A.

Table 3.18-1. California Native American Tribes Contacted for the SJDC02 Data Center Project

Tribe	Cultural Affiliation	Response to Date
Amah Mutsun Tribal Band	Ohlone/Costanoan, northern Valley Yokuts	Outside of traditional tribal territory, declined to comment.
Amah Mutsun Tribal Band of Mission San Juan Bautista	Ohlone/Costanoan	Requested that the construction crews receive cultural resources awareness training and, if anything is found, to have an Archaeological Monitor and a Native American Monitor.
Northern Valley Yokuts Tribe	Ohlone/Costanoan, Northern Valley Yokuts, Bay Miwok	Asked for official consultation with the Lead Agency, site visit, copies of cultural resources assessments, and the results of any records searches for the Project Area. Will provide copy of final technical report once complete. A copy of the technical report was provided on July 23, 2019.

Table 3.18-1. California Native American Tribes Contacted for the SJDC02 Data Center Project

Tribe	Cultural Affiliation	Response to Date
Muwekma Ohlone Indian Tribe	Ohlone/Costanoan	Conducted follow-up call on 7/15/19. No response. Conducted a second follow-up phone call on 7/22/19. No answer, and unable to leave a message. Sent a follow-up email 7/22/19.
The Ohlone Indian Tribe	Ohlone/Costanoan, Bay Miwok, Plains Miwok, Patwin	Is aware of numerous precontact sites in the general Project vicinity. Asked for records search results and USGS map. Provided USGS map of Project area of 7/16/19, and will provide copy of final technical report once complete. A copy of the technical report was provided on July 23, 2019.
Indian Canyon Mutsun Band of Costanoan	Ohlone/Costanoan	Recommends that a Native American monitor be present during all ground disturbing activities.

3.18.5 Summary of Tribal Cultural Resources

PaleoWest conducted a records search at the Northwest Information Center at Sonoma State University in May 2019. The record search indicated that no fewer than 261 cultural resources studies were conducted within 1 mile of the project site, of which 45 include portions or all of the project site. At least 8 studies that included subsurface archaeological testing were conducted within 1.0 mile of the project site and offsite linear corridor boundaries and include the following: S-004292, S-006015, S-006122, S-006538, S-19063, S-037096, S-046337, and S-046753. For additional information regarding these surveys please see Appendix 3.5A, Cultural Resources Technical Report.

No prehistoric cultural resource sites, or potential tribal cultural resources, were documented within the project site. In total, 10 prehistoric sites and 2 multicomponent sites (prehistoric and historical) are documented within 1 mile of the project site and linear offsite boundaries. Consultation with California Native American tribes did not result in the identification of any tribal cultural resources that could be impacted by the project.

3.18.6 Environmental Impacts

Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:

(i) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k)?

Less than Significant Impact with Mitigation Incorporated. No prehistoric cultural resource sites, or potential tribal cultural resources, which are listed or eligible for listing, were documented within the project site. See also Section 3.5, Cultural Resources, for additional information. There are 10 prehistoric sites and 2 multicomponent sites documented within 1 mile of the project site. Consultation with California Native American tribes did not result in the identification of any tribal cultural resources that could be impacted by the project. Therefore, there will not be any significant impacts to tribal cultural resources that are listed in the CRHR or other state registers, National Register of Historic Places, or local register of historical resources. However, because there is always the possibility of discovering previously unknown tribal cultural resources during ground disturbance activities (as explained further herein), mitigation measures are recommended to reduce impacts to a less than significant level.

(ii) A resource determined by the lead agency, in its discretion, and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe?

Less Than Significant Impact. No prehistoric cultural resource sites or potential tribal cultural resources (which have been determined by the lead agency to be significant) were documented within the project site. See also Section 3.5, Cultural Resources, for additional information. A total of 10 prehistoric sites and 2 multicomponent sites were documented within 1 mile of the project site. Consultation with California Native American tribes did not result in the identification of any tribal cultural resources that could be impacted by the project.

Background research suggests that the project site is located approximately 2.5 miles southwest of the ethnographic village of *Ulístac* (Brown 1994).

The geologic Map of Santa Clara County shows the project site and offsite linears as late Holocene mud deposits (Qhym) (Graymer et al. 2006). The age and depositional nature of these deposits are such that the project site and offsite linears retains the potential for unknown, buried cultural resources despite previous ground-disturbing activities at the site.

As a result of the extent of ground-disturbing activities as part of the project, there is potential to impact as-yet unknown, buried cultural resources that could be considered tribal cultural resources in those parts of the project site that contain native, undisturbed sediments.

Although the records search and archaeological survey did not indicate the presence of any prehistoric sites within the project site or offsite linears, the NAHC Sacred Lands File search came back positive and the North Valley Yokuts asked for official Agency consultation. As ground disturbance associated with the project could result in the exposure and destruction of buried, as-yet unknown prehistoric archaeological resources that could be considered tribal cultural resources, it would be considered a significant impact if these resources were to be exposed or destroyed.

The following specific mitigation measures will be printed out on all construction documents and implemented during construction to avoid significant impacts on subsurface tribal cultural resources.

Previously Identified Mitigation Measures Incorporated into the Project Design:

The Draft Environmental Impact Report for the 237 Industrial Center Project (City 2017a) did not specifically call out Tribal Cultural Resources. However, in the First Amendment to the Draft Environmental Impact Report for the 237 Industrial Center Project (City 2017b) , while there still was only a Cultural Resource section, tribal resources were added into MM CUL-1.4. Therefore, MM CUL -1.4 has been included in both here and in Section 3.5 Cultural Resources for completeness and to verify that all impacts are mitigated to a less than significant level.

MM CUL-1.4:

In the event that prehistoric or historical resources are encountered during excavation or grading of the site, or both, all activity within a 50-foot radius of the find will be stopped, the City of San José will be notified, and a qualified archaeologist will examine the find. The archaeologist will evaluate the find(s) to determine if they meet the definition of a historical, archaeological, or tribal cultural resource and make appropriate recommendations regarding the disposition of such finds prior to issuance of building permits for any construction occurring within the above-referenced 50-foot radius. If the finds do not meet the definition of a historical, archaeological, or tribal cultural resource, no further study or protection is necessary prior to project implementation. If the find(s) does meet the definition of a historical, archaeological, or tribal cultural resource, then it will be avoided by project activities. If avoidance is not feasible, adverse effects to such resources will be mitigated in accordance with the recommendations of the archaeologist. Recommendations will include collection, recordation, and

analysis of any significant cultural materials. A report of findings documenting any data recovery would be submitted to the City of San José, NAHC (tribal cultural resources) and the Northwest Information Center.

The project applicant will verify that construction personnel do not collect or move any cultural material and will verify that any fill soils that may be used for construction purposes do not contain any archaeological materials.

New Proposed Mitigation Measures:

MM TCR-1.1: Prior to and for the duration of ground disturbance, the project owner will provide Worker Environmental Awareness Program training to all existing and any new employees. This training should include the following: a discussion of applicable laws and penalties under the laws; samples or visual aids of artifacts that could be encountered in the project vicinity, including what those artifacts may look like partially buried, or wholly buried and freshly exposed; and instructions to halt work in the vicinity of any potential cultural resources discovery.

MM TCR-1.2: In the event that human remains are discovered during on-site construction activities, all activity within a 50-foot radius of the find shall be stopped. The Santa Clara County Coroner will be notified and will make a determination as to whether the remains are of Native American origin or whether an investigation into the cause of death is required. If the remains are determined to be Native American, the Coroner will notify the NAHC. All actions taken under this mitigation measure will comply with Health and Human Safety Code § 7050.5(b).

3.18.7 References

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3.19 Utilities and Service Systems

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Utilities and Service Systems				
a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	☐	☐	☒	☐
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years?	☐	☐	☒	☐
c) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☒	☐
d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	☐	☐	☒	☐
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	☐	☐	☒	☐

Environmental checklist established by CEQA Guidelines, Appendix G.

3.19.1 Setting

The San José Data Center (SJC02) will be located within the City of San José on an approximately 64.5-acre site and will consist of two data center buildings totaling over approximately 479,000 square feet of space. The project will include 40 3.0-megawatt (MW) standby diesel generators (20 per building) to provide electrical power to support the information technology (IT) load during utility outages or certain onsite electrical equipment interruptions or failures, as well as the installation of 20 3-MW emergency diesel generators at each building. In addition to the 40 backup generators, the project will include two administrative generators, rated at 1.25 MW and 0.5 MW, to support administrative functions during an interruption in the normal delivery of electrical power from the utility. The facility design will not require more than approximately 99 MW of electrical power, which will be used only for backup power for onsite data center operations in the event of an electrical outage by Pacific Gas & Electric (PG&E), although the estimated load is 92 MW.

The land has been used historically for farming since the early 1920s but is not currently in agricultural use. There are two vacant residences, a mobile home, and a storage shed/warehouse currently onsite, which will be demolished as part of the SJC02 project. To the north of the project site are the San José/Santa Clara Regional Wastewater Treatment Plant sludge drying beds, to the south is Highway 237, to the west is the Los Esteros Critical Energy Facility (LECEF), a PG&E substation, and to the east is Coyote Creek. The project is anticipated to begin construction in the 3rd quarter of 2020, with operations beginning in the 1st quarter of 2022.

3.19.1.1 Potable Water Supply

San José Municipal Water System (SJMWS) currently has three sources of potable water supply:

1) Water purchased wholesale from the San Francisco Public Utilities Commission (SFPUC)
2) Groundwater
3) Water purchased wholesale from Santa Clara Valley Water District (SCVWD)

The SCVWD system does not serve the North San José service area (City of San José 2017).

For redundancy purposes, the project will have three proposed potable water lines. As shown on Figure 1-2, Water Line Route #1 and Water Line Route #2 begin in the northwestern corner of the project. Both routes travel south to the proposed entrance road, Nortech Extension. From there, they both turn west to Zanker Road. At Zanker Road, Water Line Route #1 heads north briefly and then west, ultimately connecting to the Nortech valve. Water Line Route #1 is approximately 1.5 miles (7,900 feet) long. At Zanker Road, Water Line Route #2 turns south before turning west alongside Highway 237, and eventually turning south to go under Highway 237 to connect to the new Holger valve. Water Line Route #2 is approximately 1.3 miles (7,100 feet) long. Water Line Route #3 begins at the southwestern corner of the project, and heads generally east to Zanker Road, where it will parallel Water Line Route #2 connecting to the new Holger valve. Water Line Route #3 is approximately 1.4 miles (7,500 feet) long. The water will come from the San José Municipal Water System to the project.

3.19.1.2 Recycled and Reclaimed Water Supply

Recycled water is produced at South Bay Water Recycling (SBWR), a system operated by the San José-Santa Clara Regional Wastewater Facility (RWF). Located less than 1 mile to the northeast of the project site, the RWF is responsible for collecting and treating the sewage and other wastewater from six surrounding South Bay jurisdictions: SJMWS, San José Water Company, California Water Service, Great Oaks Water Company, and the Cities of Santa Clara and Milpitas (City of San José 2019d).

As shown on Figure 1-2, reclaimed water will be used at the site for landscaping and cooling purposes. The reclaimed water line will start at the northwestern corner of the project site and proceed south to the proposed entrance road, Nortech Extension. From there the line turns west and ends at an existing reclaimed water line that is oriented generally north to south. The reclaimed water line will be approximately 0.5 mile (2,900 feet) long. The reclaimed water will flow from SBWR to the project.

3.19.1.3 Wastewater Service

The City's Water and Sewer Utility is responsible for the wastewater system. Wastewater is conveyed from the City's sewer systems to the RWF, which is jointly owned by the cities of San José and Santa Clara, but operated by the San José Environmental Services Department. The RWF treats an average of 110 million gallons per day (mgd) of wastewater, with a capacity of up to 167 mgd (City of San José 2019).

As shown on Figure 1-2, a sanitary sewer line will begin at the northwestern corner of the project site, and head south to the proposed entrance road, where the line turns to the west. At Zanker Road, the line turns south and will connect to the existing sanitary sewer force main/pump station at the corner of Zanker Road and Thomas Foon Chew Way. The sewer line is approximately 0.6 mile (3,300 feet) long. Wastewater will flow from the project to the RWF.

3.19.1.4 Storm Sewer Service

The City owns and operates a municipal storm drainage system that provides service to the project site. The City's storm drains flow directly to a creek and then to the South San Francisco Bay.

As shown on Figure 1-2, the stormwater line for the project will begin in the northwestern corner of the project site, paralleling the water line route, terminating at Nortech Parkway extension off of Zanker Road

where it will tie into the City of San José's stormwater system in the vicinity of Nortech Parkway. The stormwater line to Zanker Road is approximately 0.55 mile (3,000 feet) long. Stormwater will flow from the project to the municipal storm drainage system.

3.19.1.5 Solid Waste

Republic Services has an agreement with the City of San José to collect garbage, recyclables, and organics from all businesses (City of San José 2019c). Republic Services collects waste using a Wet/Dry system. San José businesses receive "Wet" collection service for organics, such as food waste, and "Dry" collection service for recyclables and everything else. All waste is sorted locally at the Newby Island Resource Recovery Park (NIRRP). After sorting, recyclable materials are captured for reuse, diverting them from landfill and organic material is taken to a Zero Waste Energy Development facility, where it is put through an anaerobic digestion process, ultimately producing electricity and compost. The Zero Waste Energy Development facility process up to 90,000 tons per year of organic waste generating approximately 1.6 MW of renewable power. The Newby Island Landfill is capable of processing up to 110 tons of municipal solid waste per hour and would service all the commercial waste produced by businesses in the City of San José (Republic Services 2019).

3.19.1.6 Electrical Services

Electrical services for the City are provided through the San José Clean Energy. San José Clean Energy (SJCE) is known as a community choice energy program. SJCE will generate the electricity, but it will be transmitted and distributed in San José through PG&E. PG&E is responsible for maintaining power lines. SJCE is governed by San José City Council, with input from a Community Advisory Commission (San José Clean Energy 2019).

As shown on Figure 1-2, the onsite substation will be located in the northwestern corner of the project site and will interconnect to the PG&E substation via two, 0.2-mile-long distribution lines. The approximately 1,000-foot-long electrical supply lines will be located along the fenceline of the project site, between the project site and the LECEF.

3.19.1.7 Telecommunication

The Applicant is in early discussions with fiber optics providers to provide fiber-based telecommunications services. The Applicant anticipates fiber being provided to the facility via established rights-of-way, as is the industry common practice. The Applicant anticipates working with private commercial fiber providers in the area. In general, these companies have significant infrastructure in place along roadways; therefore, it is anticipated that any such infrastructure will be located in the adjacent roadway (Zanker Road) for interconnection of telecommunication services.

3.19.1.8 Natural Gas

No natural gas will be used at the site.

3.19.1.9 Existing Water Consumption

According to California's Water Conservation Board, the overall water consumption in San José during the month of August 2017 was 2,306 million gallons. Water consumption in the City of San José decreased 6.10 percent compared to August 2016. Overall, consumption in August has decreased 26.14 percent when compared to August 2013. The average industrial use in city of San José was 700-acre feet per year (AF/yr) (Southern California Public Radio 2016).

3.19.1.10 Water Supply Assessment

In May 2017, a Water Supply Assessment (WSA) (provided as Appendix 3.19A) was prepared by the City of San José pursuant to the requirements of Senate Bill 610 for the 237 Industrial Center EIR (2017 EIR) (an earlier version of the SJC02 Project that was approved after the City Council certified the 2017 EIR)

(City of San José 2017). The purpose of the WSA was to evaluate whether "the total projected water supplies, determined to be available for the project during normal, single dry, and multiple dry water years during a 20-year projection, will meet the projected water demand associated with the proposed project, in addition to existing and planned future uses, including agricultural and manufacturing uses.

The WSA determined that sufficient water supply was available for the 237 Industrial Center project, which assumes up to 129.5 AF/yr of potable water use. As the SJC02 project is expected to use up to 29.1 AF/yr of water (including both potable and recycled water), the previous water supply assessment appears to show that a sufficient water supply exists.

As discussed at length in the WSA, SJMWS has the ability to meet increased demand in a variety of ways, such as purchasing additional water from SFPUC when available, relying more heavily on local groundwater resources, or encouraging conservation and recycled water use among its existing customers to reduce existing potable water demands. The potable demands of the proposed project, similar to the demands of the 237 Industrial Center project, fall easily within growth forecasts for industrial water use put forth in SJMWS's 2015 UWMP.

The project expects to have a peak operational water demand of 292 gallons per minute (gpm), with a daily average use of 267 gpm (25,981 gallons). The expected annual use is 9,483,211 gallons or 29.1 AF/yr.

3.19.1.11 Wastewater Discharge

Project wastewater will primarily be generated from the chillers used in the comfort cooling system. The project's expected peak wastewater discharge rate is 91 gpm, with an average discharge rate of 66 gpm. The average daily wastewater discharge is expected to be 6,454 gallons, with an annual expected wastewater discharge of 2,355,751 gallons.

3.19.1.12 Regulatory Background

Federal Clean Water Act

The State Water Resources Control Board, and its nine Regional Water Quality Control Boards (RWQCB), are responsible for the regulation and enforcement of the water quality protection requirements of the federal Clean Water Act (CWA) and the state's Porter-Cologne Water Quality Control Act (Porter-Cologne). The National Pollutant Discharge Elimination System (NPDES) is the permitting program that allows point source dischargers to comply with the CWA and Porter-Cologne laws. This regulatory framework protects the beneficial uses of the state's surface and groundwater resources for public benefit and environmental protection. Protection of water quality will be achieved by the project by complying with applicable NPDES permits from the State Water Resources Control Board or the San Francisco Bay RWQCB.

California Water Code, Sections 10910-10915

California Water Code, Sections 10910-10915 (California Public Law 2016), requires water service providers to evaluate stresses to the water supply service system caused by project developments. The code sections require public water systems to prepare water supply assessments for certain defined development projects subject to the California Environmental Quality Act. As discussed in Section 3.19.1.11, a WSA was prepared by the City of San José in May 2017, which remains adequate for purposes of evaluating the project in this document.

California Energy Efficiency Standards for Residential and Nonresidential Buildings—Green Building Code (2011), Title 24 Update (CEC 2015)

The California Green Buildings Standards Code applies to planning, design, operation, construction, use, and occupancy of newly constructed buildings and requires installation of energy- and water- efficient

indoor infrastructure. The related waste management plan is required to allow for diversion of 50 percent of the generated waste away from the landfill.

The City of San José's Construction & Demolition Diversion (CDD) Program is in line with the Green Building Code and confirms that at least 75 percent of this waste is recovered and diverted from landfills (City of San José 2019a).

City of Santa José General Plan

The Envision San José 2040 General Plan (City of San José 2019b), adopted in 2011 and amended in 2018, includes numerous policies related to utilities and service systems. With respect to waste, the City's Recycling / Zero Waste strategy aims to maximize diversion from landfills and reduce generation of waste; provide environmental leadership and quality waste management service delivery; and confirm that the City's zero waste programs are fiscally sustainable.

3.19.2 Environmental Impacts and Mitigation Measures

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

Less than Significant Impact.

Water/Wastewater Treatment: The project's operational workforce is estimated to be a maximum of 100 employees onsite with daily water usage for sanitary, landscaping, and process uses of approximately 267 gpm on an average basis. The project is expected to generate a maximum daily discharge rate of up to 91 gpm of wastewater and an annual average of approximately 2.4 million gallons per year. Project operations will not require expanding City of San José water services or wastewater treatment beyond the capacity of the existing facilities, and the impact to water services and wastewater treatment facilities would be less than significant. The 237 Industrial Center EIR concluded that a wastewater discharge of over 400 gpm would not impact the wastewater conveyance and treatment system. Therefore, impacts on City of San José wastewater conveyance and treatment system from the project's substantially lower wastewater discharge of 91 gpm are expected to be comparable or less than those analyzed in the EIR. As such, impacts to wastewater systems will be less than significant.

Stormwater Drainage: The project will include multiple design features to reduce stormwater runoff including landscaping and collection of stormwater to a bioretention area. Furthermore, a 100-foot buffer zone from the toe of the Coyote Creek levee will be established along the eastern boundary of the site to minimize any stormwater impacts to the existing levee and to control the discharge of stormwater. The stormwater design will comply with both the City's and RWQCB's requirements, and there is sufficient capacity in the City's existing storm drainage system to accommodate the project. Therefore, the impacts will be less than significant.

Electric Power: The project will use approximately 788,400,000 kilowatt-hours of electricity annually (90,000 kW * 8,760 hours/year). Electrical demand during project operations would not be substantial on a regional or statewide scale and would not significantly affect existing users. Based on the California Independent System Operation's 2020 Local Capacity Technical Study[1], there were no local capacity requirement deficiencies identified in the Greater Bay area in either 2020 or 2024. A deficiency would indicate a need for additional electrical capacity, in the form of either transmission upgrades, new generation, or some combination, in the area. The project would not require new or expanded electric power utilities; therefore, potential impacts are less than significant.

[1] http://www.caiso.com/Documents/Final2020LocalCapacityTechnicalReport.pdf

b) Would the project have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years?

Less than Significant Impact. The project is expected to use about 29.1 AF/yr of combined recycled and potable water. The use of recycled and potable water will not impact local water supplies and sufficient water supplies are available to support the project. The City determined previously that sufficient water supplies exist during multiple dry years to serve a project with significantly higher annual water use requirements the proposed site. The impacts from the project on water supplies will be less than significant.

c) Would the project result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

Less than Significant Impact. The City determined previously that a project with substantially higher wastewater discharge would not result in a significant impact to wastewater conveyance or treatment systems. The project will not result in a significant wastewater discharge, and impacts from the project on the City's wastewater system capacity will be less than significant.

d) Would the project generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?

Less than Significant Impact. The Newby Island Landfill in San José would provide adequate disposal space for the solid waste associated with the project's demolition, construction, and operations through 2024. During operations, the project is expected to generate approximately 130 pounds per day (or 0.07 ton per day) of solid waste, an insignificant increase of waste. The maximum daily amount of solid waste allowed at the Newby Island Landfill is 3,260 tons per day (Republic Services 2019).

The City's Construction & Demolition Diversion (CDD) Program ensures that at least 75 percent of this waste is recovered and diverted from landfills (City of San José 2019a). Utilizing the "Wet/ Dry" garbage collection system the project will help sort, recyclable materials for reuse, and thus diverting them from landfill. The impact resulting from the project on landfill capacity would be less than significant. Furthermore, the project will be required to comply with the CDD program in order to receive a Certificate of Final Occupancy.

e) Would the project comply with federal, state, and local management and reduction statutes and regulations related to solid waste?

Less than Significant Impact. The project's solid wastes would be disposed of in accordance with the federal CWA and with the state of California's and the City's requirements for safe waste handling and disposal. Impacts will be less than significant.

Proposed Mitigation Measures: None.

3.19.3 References

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3.20 Wildfire

If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☒
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	☐	☐	☐	☒
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines, or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	☐	☐	☒	☐
d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	☐	☐	☐	☒

Environmental checklist established by CEQA Guidelines, Appendix G.

3.20.1 Setting

The San José Data Center (SJC02) will be located within the City of San José on an approximately 64.5-acre site and will consist of two data center buildings totaling over approximately 479,000 square feet of space. The project will include 40 3.0-megawatt (MW) standby diesel generators (20 per building) to provide electrical power to support the information technology (IT) load during utility outages or certain onsite electrical equipment interruptions or failures, as well as the installation of 20 3-MW emergency diesel generators at each building. In addition to the 40 backup generators, the project will include two administrative generators, rated at 1.25 MW and 0.5 MW, to support administrative functions during an interruption in the normal delivery of electrical power from the utility. The facility design will not require more than approximately 99 MW of electrical power, which will be used only for backup power for onsite data center operations in the event of an electrical outage by Pacific Gas & Electric (PG&E), although the estimated load is 92 MW.

The land has been used historically for farming since the early 1920s but is not currently in agricultural use. There are two residences, a mobile home, and a storage shed/warehouse currently onsite, which will be demolished as part of the SJC02 project. To the north of the project site are the San José/Santa Clara Regional Wastewater Treatment Plant sludge drying beds, to the south is Highway 237, to the west is the Los Esteros Critical Energy Facility, a PG&E substation, and to the east is Coyote Creek. The project is anticipated to begin construction in the 3rd quarter of 2020, with operations beginning in the 1st quarter of 2022.

The project site is in an already heavily urbanized area, primarily surrounded by commercial, industrial, and transportation development and is located in the City of San José (City), with ready access to roadways in and utility infrastructure. The site is not located in a State Responsibility Area and is not located in lands classified as very high fire hazard severity zones. The City is not identified to be within a State of California Fire Hazard Severity Zone (Cal Fire 2019) at the wildland and urban interface, and is in the vicinity of wildlands.

3.20.2 Environmental Impacts and Mitigation Measures

Although the project is not located in either a State Responsibility Area or in lands classified as very high fire severity zones, a brief discussion of the Appendix G screening criteria relating to potential fire hazard impacts is provided in this section.

a) Would the project substantially impair an adopted emergency response plan or emergency evacuation plan?

No Impact. During project construction, traffic levels will experience a minimal increase that is not expected to degrade traffic performance significantly and a construction traffic plan will be implemented, as needed, to minimize traffic delays to the extent feasible Emergency response access during construction will not be significantly impeded. The project will not involve the development of structures that could potentially impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan. No streets will be closed or substantially altered during construction. The project does not involve the addition of large numbers of people to the local area who could increase demand during a potential evacuation. Thus, the project will not substantially interfere with the coordination of the City's emergency operations plan at the emergency operations center or alternate emergency operations center, nor will the project substantially interfere with any statewide emergency response, or with evacuation routes or plans. For the foregoing reasons, adequate emergency access to the project site and surrounding industrial area will be maintained, and the project will not substantially impair an adopted emergency response plan or evacuation plan. Thus, impacts in this regard will be less than significant.

b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risk, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?

No Impact. The topography of the project site is flat, and the project site and vicinity are developed with minimal open space areas, faces, or slopes. Therefore, the project will not exacerbate wildfire risk or expose occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildlife.

c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines, or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?

Less than Significant Impact. The project will have several offsite linear features that include three potable water lines, a reclaimed water line, a sanitary sewer line, an electrical supply line, and a stormwater drainage line, , the potential environmental impacts of which are evaluated in the relevant environmental topic areas, as appropriate, in this SPPE. The potable, reclaimed, stormwater, and sanitary lines will be underground utilities that travel mostly through undeveloped, fallow agricultural land or follow existing paved roadways (that is, Zanker Road or Ranch Drive). The electrical supply line will exit the northeastern side of the project's proposed substation, and head south to the existing PG&E substation located to the south of the project's proposed substation. The electrical supply line is approximately 0.2 mile (1,000 feet) long. The electrical supply line will be constructed as an overhead facility on transmission poles and will follow the fenceline of the proposed substation and the existing PG&E substation. Any large trees that would be crossed by the electrical supply line would be trimmed or removed consistent with electric reliability requirements. Therefore, the constructed electrical supply line and other project infrastructure will not constitute a possible ignition source for local vegetation, nor will it block access to any road or result in traffic congestion. Maintenance of this infrastructure will not physically block any access roads or result in traffic congestion that could significantly compromise timely access to this facility or any other location. For the foregoing reasons, installation of the project's infrastructure will not exacerbate fire risk or result in temporary or ongoing impacts to the environment. Therefore, impacts in this regard will be less than significant.

d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?

No Impact. The site is located within flood zone "X", which is defined as areas of reduced flood risk due to levees (FEMA 2014). The site is not within an area mapped as vulnerable to sea level rise (CalAdapt 2019) or tsunami risk (CEMA et al. 2009). Construction and operation of the project will not substantially alter the course of a drainage (stream or river) and will not substantially alter local drainage patterns. The proposed onsite storm drainage system will be sized adequately in accordance with all applicable laws and regulations to verify that post-development flows are not greater than the pre-development condition, and will be designed to convey water away from the site and to the City of San José storm drain system, which has sufficient capacity to accommodate these flows. Therefore, the project will not contribute to a flooding hazard onsite or offsite or create significant risks associated with drainage changes. As discussed in this section, the topography of the project site and surrounding area is virtually flat and already disturbed.

Therefore, the project will not expose people or structures to significant risks as a result of runoff, post-fire slope instability, or drainage changes, and no impacts would occur.

Proposed Mitigation Measures: None.

3.20.3 References

CalAdapt. 2019. *Inundation Depth Layer Mosaics for San Francisco Bay, Sacramento-San Joaquin Delta and California Coast*. Accessed May 28, 2019. https://cal-adapt.org/tools/slr-calflod-3d/.

California Emergency Management Agency, University of Southern California, and California Geological Survey (CEMA et al.). 2009. *Tsunami Inundation Map for Emergency Planning – Milpitas Quadrangle*. July 31.

Cal Fire. 2019. *Santa Clara County FHSZ Map in Local Responsibility Area*. Accessed May 28, 2019. http://www.fire.ca.gov/fire_prevention/fhsz_maps_santaclara.

3.21 Environmental Justice

The San José Data Center (SJC02) will be located within the City of San José on an approximately 64.5-acre site and will consist of two data center buildings totaling over approximately 479,000 square feet of space. The project will include 40 3.0-megawatt (MW) standby diesel generators (20 per building) to provide electrical power to support the information technology (IT) load during utility outages or certain onsite electrical equipment interruptions or failures, as well as the installation of 20 3-MW emergency diesel generators at each building. In addition to the 40 backup generators, the project will include two administrative generators, rated at 1.25 MW and 0.5 MW, to support administrative functions during an interruption in the normal delivery of electrical power from the utility. The facility design will not require more than approximately 99 MW of electrical power, which will be used only for backup power for onsite data center operations in the event of an electrical outage by Pacific Gas & Electric (PG&E), although the estimated load is 92 MW.

The land has been used historically for farming since the early 1920s but is not currently in agricultural use. There are two residences, a mobile home, and a storage shed/warehouse currently onsite, which will be demolished as part of the SJC02 project. To the north of the project site are the San José/Santa Clara Regional Wastewater Treatment Plant sludge drying beds, to the south is Highway 237, to the west is the Los Esteros Critical Energy Facility, a PG&E substation, and to the east is Coyote Creek. The project is anticipated to begin construction in the 3rd quarter of 2020, with operations beginning in the 1st quarter of 2022..

3.21.1 Setting

Figure 3.21-1 shows 2010 census blocks in a 6-mile radius of the SJC02, with a minority population greater than or equal to 50 percent (United States Census Bureau 2010) (study area). The population in these census blocks represents an environmental justice (EJ) population based on race and ethnicity, as defined in the U.S. Environmental Protection Agency's *Guidance on Considering Environmental Justice During the Development of Regulatory Actions* (EPA 2015).

Based on California Department of Education (CDE) data in Table 3.21-1 and presented on Figure 3.21-2, the percentage of those living in the school districts of East Side Union High, San José Unified, and Santa Clara Unified (in a 6-mile radius of the project site) and enrolled in the free or reduced-price meal program is larger than those in the reference geography. Therefore, those persons residing within these districts are considered an EJ population based on low income as defined in *Guidance on Considering Environmental Justice During the Development of Regulatory Actions* (EPA 2015).

Table 3.21-1. Low Income Data within the Study Area

School Districts in 6-mile Radius	Enrollment Used for Meals	Free or Reduced-price Meals	
East Side Union High	26,568	13,212	49.7%
Fremont Unified School District	35,544	5,708	16.1%
Fremont Union High	11,020	1,233	11.2%
Milpitas Unified	10,172	3,181	31.3%
Mountain View-Los Altos Union High	4,394	747	17.0%
San José Unified	31,114	13,281	42.7%
Santa Clara Unified	15,387	5,638	36.6%
Sunnyvale	6,664	2,215	33.2%
Sunol Glen Unified School District	297	24	8.1%
Reference Geography			
Santa Clara County	267,253	96,067	35.9%

Source: CDE 2019

3.21.2 Environmental Impacts and Mitigation Measures

The following technical areas discuss potential impacts to EJ populations: Aesthetics; Air Quality; Hazards and Hazardous Materials; Hydrology and Water Quality; Land Use and Planning; Noise; Population and Housing; Transportation and Traffic; Tribal Cultural Resources; Utilities and Service Systems; and Mandatory Findings of Significance.

3.21.2.1 Aesthetics

Less Than Significant Impact. EJ populations may experience disproportionate visual impacts if the siting of visually intrusive or degrading projects, particularly unmitigated industrial facilities, occurs within or near EJ communities to a greater extent than within the community at large.

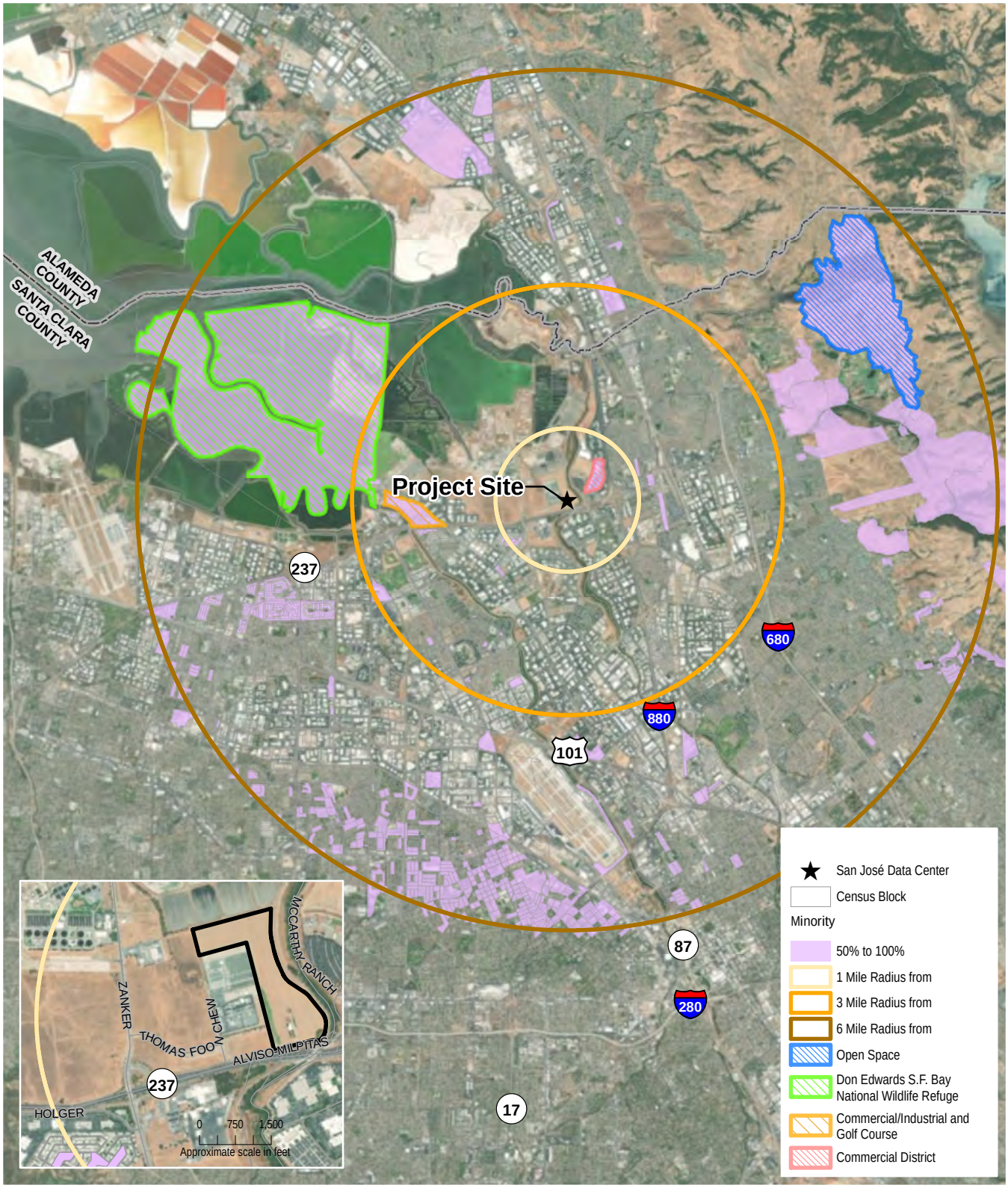
As depicted on Figure 3.21-1, the nearest high minority population to the project site is separated from the site by a major street (N. McCarthy Boulevard), Coyote Creek, and Coyote Creek Trail. This high minority population area would not have direct views of the project site.

As depicted on Figure 3.21-2, the project site is located in an area with a low-income population. However, the project would be consistent with City of San José (City) policies such that high standards of architectural and site design are implemented and that the structures would be consistent or complementary with the surrounding land uses. As discussed more fully in Aesthetics (Section 3.1), implementation of the project would not substantially degrade the existing visual quality or character of the site or its surroundings and, therefore, would not have the potential to adversely affect the low-income population in which the project site is located.

3.21.2.2 Air Quality

Less Than Significant Impact. As discussed more fully in Air Quality (Section 3.3), potential air quality and public health impacts (cancer and non-cancer health effects) were identified that could affect the EJ population represented on Figures 3.21-1 and 3.21-2. The project's air quality impacts were analyzed using the state and federally approved air dispersion models, which showed that the project would not cause a new violation or exacerbate an existing violation of any ambient air quality standards. Furthermore, the potential public health risks were evaluated quantitatively based on the most sensitive population, which includes the EJ population, by conducting a health risk assessment. The results were presented by level of risks. The potential construction and operation risks are associated with exposure to diesel particulate matter and hazardous air pollutants and toxic air contaminants in the diesel exhaust. It was determined that no one (including the public, offsite nonresidential workers, recreational users, and EJ populations) will be exposed to a significant cancer or non-cancer (acute or chronic) health risk during construction or operation of the project. Therefore, the project will not cause significant adverse direct or indirect public health impacts due to hazardous air pollutants or toxic air contaminant emissions, and no mitigation is needed. Likewise, the project would not cause disproportionate air quality or public health impacts on sensitive populations, such as the EJ population represented on Figures 3.21-1 and 3.21-2.

Less Than Significant Impact. As discussed more fully in Air Quality (Section 3.3), the analysis considers the most sensitive and most protected of the population, which includes the EJ population. An air quality analysis found that air quality impacts during the construction of the project would be less than significant and that air quality impacts for attainment criteria pollutants during SJC02 operation will be less than significant. Construction and operational emissions from the project will not conflict with applicable plans and programs to attain or maintain ambient air quality. Based on these conclusions, the project would not cause disproportionate air quality impacts for sensitive populations like the EJ population represented on Figures 3.21-1 and 3.21-2.



Source:
County of Santa Clara
Alameda County
U.S. Census Bureau, 2010 Census.

N

0 2 4
Approximate scale in miles

Figure 3.21-1
Minority Population Distribution by Census Blocks within 6 Miles of Proposed Project
San José Data Center (SJC02)
San José, California

JACOBS

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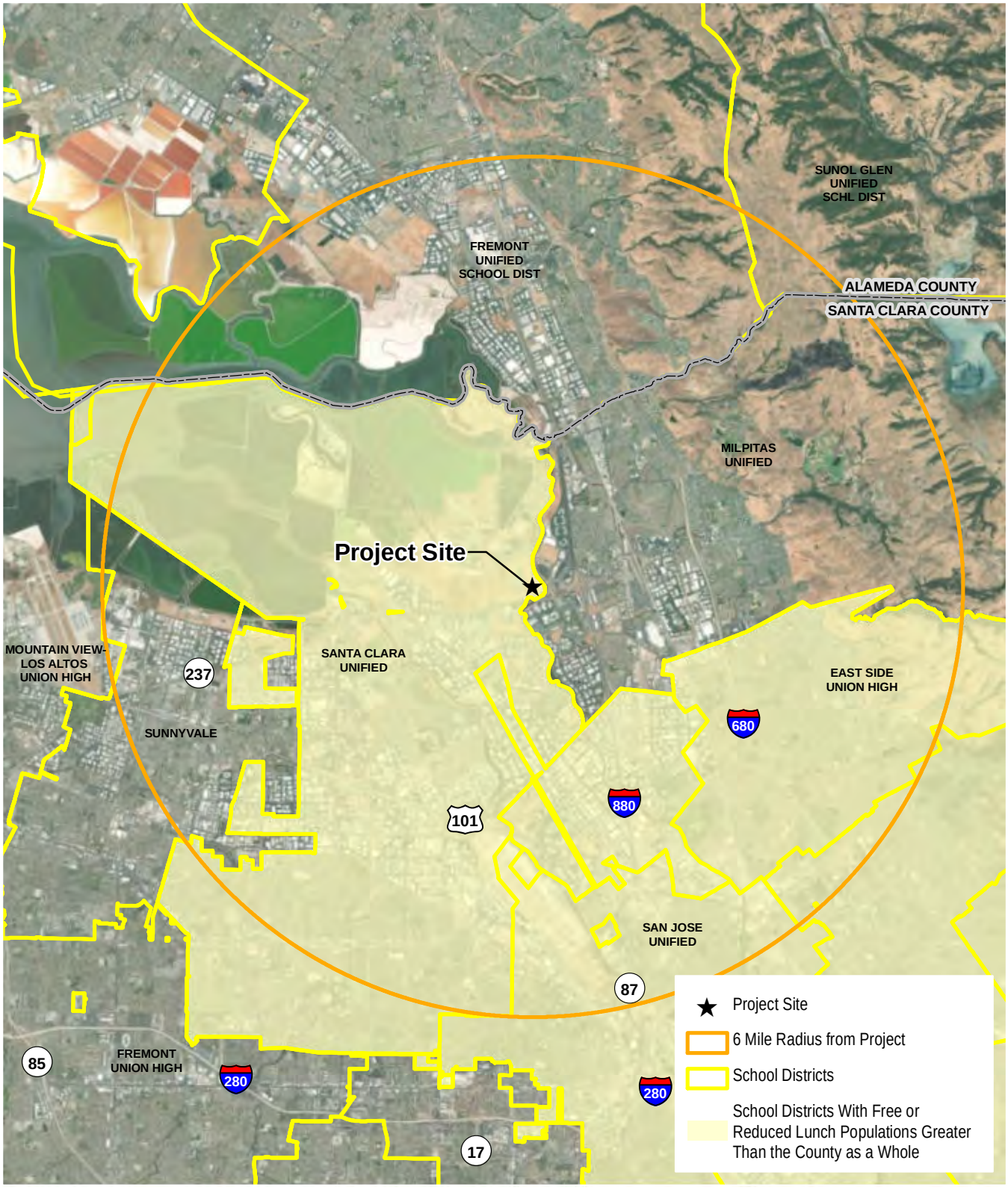

Source:
County of Santa Clara,
Alameda County,
U.S. Census Bureau, 2010 Census.

N

0 2 4

Approximate scale in miles

Figure 3.21-2
Low Income Population Distribution by Census Blocks within 6 Miles of Proposed Project
San José Data Center (SJC02)
San José, California

JACOBS

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3.21.2.3 Hazards and Hazardous Materials

Less Than Significant Impact. EJ populations may experience disproportionate hazards and hazardous materials impacts if the storage and use of hazardous materials within or near EJ communities occur to a greater extent than within the community at large. A disproportionate impact upon the EJ population resulting from the planned storage and use of hazardous materials on the site is extremely low. As discussed more fully in Hazards and Hazardous Materials (Section 3.9), diesel fuel to run the emergency generators is the hazardous material that the project site will store in greatest quantity. The total quantity will be stored in many separate double-walled fuel tanks (one for each generator) with proper spill controls. Furthermore, diesel fuel has a very low vapor pressure that limits the offsite migration of accidental spills. Finally, storage and use of diesel fuel along with other hazardous materials that may be onsite as a result of the project will be subject to compliance with a comprehensive set of laws and regulations. Therefore, the likelihood of a spill of sufficient quantity to impact the surrounding community and EJ population is very unlikely, and this impact is considered less than significant.

3.21.2.4 Hydrology and Water Quality

Less Than Significant Impact. A disproportionate hydrologic or water quality impact on an EJ population occurs if a project required substantial groundwater resources or contributed significantly to surface water or groundwater quality degradation.

As determined in the Hydrology and Water Quality section, the project will use adiabatic chillers for cooling and is expected to use approximately 29.1 acre-feet of water per year (combined potable and recycled) for process, sanitary, and landscaping purposes.

The project is not expected to contribute significantly to surface water quality or groundwater degradation. The project will be required to comply with applicable provisions of the Clean Water Act and other applicable laws and regulations, which will require, among other needs, that the project control the discharge of pollutants in stormwater during its construction and operation phases. The project will implement modern operational stormwater controls that will not significantly degrade surface water. Therefore, the project will not result in a disproportionate impact to the local EJ population. For the foregoing reasons and as otherwise discussed in Hydrology and Water Quality (Section 3.10), the project's hydrology and water quality impacts will be less than significant generally. Therefore, the project will not result in a disproportionate impact to the local EJ population. .

3.21.2.5 Land Use and Planning

No Impact. A disproportionate land use impact on an EJ population could occur if a project physically divides an established community of an EJ population or if a project near an EJ population conflicts with applicable land use plans, policies, or regulations adopted for the purpose of avoiding or mitigating environmental impacts on a population.

The project does not divide an existing community, as the site is on land already designated and zoned for light industrial uses such as a data center, with such uses being consistent with other nearby surrounding uses. The project is consistent with the City's General Plan land use designation (City 2011) and zoning, as the site was rezoned to Light Industrial as part of the Special Use Permit previously issued for the site. As discussed in more detail in Land Use and Planning (Section 3.11), no conflicts with plans, policies, or related land use regulations will occur as a result of the project.

For the foregoing reasons and as otherwise discussed in Section 3.11 Land Use and Planning, the project would not result in any significant impacts relating to land use and planning generally; therefore, no disproportionate impacts on the EJ population will occur.

3.21.2.6 Noise

Less Than Significant Impact. EJ populations may experience disproportionate noise impacts if the siting of unmitigated industrial facilities occurs within or near EJ communities to a greater extent than within the community at large. As depicted on Figures 3.21-1 and 3.21-2, the project site is within an area having an EJ population. Because the area surrounding the site is zoned primarily for industrial, commercial, and quasi-public uses, and since the nearest zoned residential uses are at least 0.6 mile to the southwest of the project site, potential noise impacts will not be disproportionate.

For the foregoing reasons and as otherwise discussed in Section 3.13 Noise , construction activities will increase existing noise levels at the adjacent light industrial and commercial land uses, but they will be temporary and intermittent, and will not exceed any applicable thresholds. There are no residential uses or other sensitive receptors located adjacent to the project site. Therefore, potential noise effects related to construction will not result in a significant noise impact on the area's population, including the EJ population.

The noise from operating the facility will not exceed the City's noise limits at the nearest land uses. Therefore, the operational noise impacts will comply with the City's applicable noise limits, and thus, the noise impacts would be less than significant for the area's population, including the EJ population.

3.21.2.7 Population and Housing

Less Than Significant Impact.

A population and housing impact could disproportionately affect an EJ population if the project were to displace minority or low-income residents from where they live, causing them to find housing elsewhere. If this occurs, an EJ population may have a more difficult time finding replacement housing due to racial biases and possible financial constraints. The project will remove two vacant residential structures but will not displace residents.

As explained more fully in Section 3.14 Population and Housing, the potential for population and housing construction-related impacts is predominantly driven by the temporary influx of non-local construction workers seeking lodging closer to a project site. Given the nature of the project (including its relatively short construction timeframe), it is anticipated that most of the construction workers will be drawn from the greater Bay Area; thus, they will not likely seek temporary lodging closer to the project site. The operations workers are also anticipated to be drawn from the greater Bay Area, and it is not anticipated that most will likely seek housing closer to the project site. Moreover, even if a nominal number of the proposed construction or operations workers were to relocate closer to the project site, there is sufficient housing in the project vicinity to accommodate these workers without disproportionately displacing the EJ population.

For the foregoing reasons, the project would not have any significant population and housing impacts generally, and would not have a disproportionate impact to EJ populations.

3.21.2.8 Transportation and Traffic

Less Than Significant Impact. Significant reductions in transportation levels of service may significantly impact EJ populations. In particular, an impact to bus transit, pedestrian facilities, or bicycle facilities could cause disproportionate impacts to low-income communities, as low-income residents more often use these modes of transportation. However, transportation and traffic impacts, including impacts to alternative transportation, will be less than significant as discussed more fully in Section 3.17 Transportation and Traffic; therefore, they will cause a less than significant impact to EJ populations. Likewise, transportation and traffic impacts will not be disproportionate.

3.21.2.9 Tribal Cultural Resources

No Impact. No Native American EJ populations were identified that either reside within 6 miles of the project or that rely on subsistence resources that could be impacted by the project.

3.21.2.10 Utilities and Service Systems.

Less Than Significant Impact. A disproportionate utility or service system impact on an EJ population could occur if a project required substantial water resources or significantly impacted wastewater treatment facility and landfill capacity.

The project will use potable water for process and sanitary uses and recycled water for landscaping purposes. As discussed more fully in Section 3.19 Utilities, sufficient water supplies are available to support the project, and the use of potable water by the project will not significantly impact local water supplies. Therefore, the use of potable water will not result in a disproportionate impact to the local EJ population.

As discussed more fully in Section 3.19 Utilities, there is also significant remaining capacity at the local landfill and wastewater treatment facilities, a very small portion of which will be used by the project. No changes or expansion to the landfill or wastewater treatment facility are needed to accommodate this project. The project will also be required to comply with applicable state and local regulations that apply to construction and operation waste. These regulations require that wastes are managed consistent with waste diversion goals and objectives to protect public health and safety.

For the foregoing reasons and as otherwise evaluated in Section 3.19 Utilities, the project's utilities and service systems impacts will be less than significant generally, and will not have a disproportionate impact on the EJ population.

3.21.2.11 Mandatory Findings of Significance

Less Than Significant. As discussed more fully in each environmental topic area in this SPPE, cumulative project impacts will be less than significant for both the general population and the EJ population.

3.21.3 References

California Department of Education (CDE). 2019. *Student Poverty FRPM Data, 2018-19*. Accessed July 31, 2019. https://www.cde.ca.gov/ds/sd/sd/filessp.asp.

City of San José (City). 2011. *Envision San José 2040 General Plan*. November.

United States Census Bureau. 2010. *American FactFinder.* QT-PL-Race, Hispanic or Latino, Age, and Housing Occupancy: 2010 – Census Redistricting Data (Public Law 94-171) Summary File, Tables P1, P2, P3, P4, H1. Accessed August 1, 2019. http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml.

U.S. Environmental Protection Agency (EPA). 2015. *Guidance on Considering Environmental Justice During the Development of Regulatory Actions*. May. Accessed July 31, 2019. https://www.epa.gov/environmentaljustice/guidance-considering-environmental-justice-during-development-action.

4. Persons Who Prepared the SPPE

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	SPPE Project Manager	Jerry Salamy	Jacobs
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2.0	Project Description	Jerry Salamy	Jacobs
3.0	Environmental Information		
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3.7	Geology and Soils	Megan Sebra, Levi Pratt	Jacobs
3.8	Greenhouse Gas	Elyse Engel	Jacobs
3.9	Hazards and Hazardous Materials	Steve Long	Jacobs
3.10	Hydrology and Water Quality	Matt Franck, Sam Schoevaars	Jacobs
3.11	Land Use and Planning	Brenda Eells	Jacobs
3.12	Mineral Resources	Megan Sebra	Jacobs
3.13	Noise	Mark Bastasch	Jacobs
3.14	Population and Housing	Jordan Grace	Jacobs
3.15	Public Services	Jordan Grace	Jacobs
3.16	Recreation	Maliheh Rostami	Jacobs
3.17	Transportation	Loren Bloomberg	Jacobs
3.18	Tribal Cultural Resources	Christina Alonso, Clint Helton	PaleoWest Archaeology
3.19	Utilities and Service Systems	Maliheh Rostami	Jacobs
3.20	Wildfire	Steve Long	Jacobs
3.21	Environmental Justice	Brenda Eells	Jacobs