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Small Power Plant Exemption Application

San José Data Center 04



September 2022

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SECTION 1.0 INTRODUCTION AND EXECUTIVE SUMMARY

Microsoft Corporation (Microsoft) proposes to build the San José Data Center campus (the Project or SJ04) to be located at the northwest corner of the intersection of Orchard Parkway and Component Drive in San José, California (Project Site). The Project will include two data center buildings¹; emergency backup generating facilities; recycled water storage, fire water storage, pipelines, and support buildings; building cooling equipment; an on-site substation and switchyard; two potential distribution transmission lines; and ancillary support facilities.

Each data center building will be four stories. Each building will encompass approximately 315,639 gross square feet. Each data center building will incorporate the emergency backup generating facilities within generator rooms dedicated to supporting the emergency electricity needs of the floor of the building in which the generator room is located. The total maximum electrical demand of the Project will be 97.8 MW. The backup generating facilities will consist of (32) 3,000 kW primary emergency generators; (2) 500 kW administrative emergency generators; and (2) 800 kW storage tank area emergency generators. The sole purpose of the foregoing backup generating facilities is to provide electrical power to support the data center campus operations in the event of loss of electrical service from the local electric utility provider, Pacific Gas & Electric Company (PG&E).

Section 2 of the SPPE Application provides project information such as the project title, lead agency contact, project applicant, project location, assessor's parcel number, and general plan and zoning designations.

Section 3 of the SPPE Application provides a detailed description of the construction and proposed operation of the Proposed Project

Section 4 through Section 7 of the SPPE Application includes environmental information and analyses in sufficient detail to allow the Commission to conduct an Environmental Impact Report (EIR) and consistent with Section 16063(d) of the California Environmental Quality Act (CEQA) Guidelines.

Section 8 of the SPPE Application includes a discussion of Alternative backup generation configurations, technology, and alternative fuels considered by Microsoft. Specifically, Section 8 describes how the Project Site cannot be supported by two independent high pressure natural gas pipelines (as was the case for Microsoft's SJ02 Data Center project), thereby rendering the use of natural gas backup generators for the Project infeasible due to reliability needs.

Section 9 of the SPPE Application includes applicable references.

Section 10 of the SPPE Application contains a list of applicable agencies and contact information that have jurisdiction over laws, ordinances, regulations, and standards (LORS) that may be applicable to the Project as required by Subsection (i) of Appendix F of the CEC SPPE Regulations.

¹ Building 1 is designated as SJ04 and Building 2 is designated as SJ06.

1.1 PROJECT OBJECTIVES

Microsoft's specific Project objectives are as follows:

- Meet the continuing need for a data center to support the San José region's growing business and work force population as well as its growth as a center of innovation consistent with San José's planned land use vision.
- Construct and operate a data center that maximizes the use of the Project Site to house computer servers, supporting equipment, and associated administrative office uses in an environmentally controlled structure with redundant subsystems (cooling, power, network links, storage, fire suppression, etc.) and can be built in two phases to accommodate customer growth.
- Locate the data center on property long-planned for industrial uses that is in proximity to existing circulation and utility infrastructure, emergency response access, and on a site capable of being protected, to the maximum extent feasible, from security threats, natural disasters, and similar events.
- Design the proposed data center such that it can be provided with operational electric power via a new electric 115-kilovolt (kV) substation, and efficiently extend, connect to or otherwise install other utility infrastructure to adequately serve the Project, including water, storm drainage, sanitary sewer, electric and telecommunications, as well as new roadway and bike trail improvements.
- Ensure the data center achieves reduced access latency (defined as the time it takes to access data across a network).
- To incorporate the most reliable and flexible form of backup electric generating technology into the data center considering the following evaluation criteria:
 - **Reliability.** The selected backup electric generation technology must be extremely reliable in the case of an emergency loss of electricity from the utility.
 - The backup generating facility must provide a higher reliability than 99.999 percent in order for the data center to achieve an overall reliability of equal to or greater than 99.999 percent.
 - The backup generating facility must provide reliability to the greatest extent feasible during natural disasters including earthquakes.
 - The selected backup electric generation technology must have a proven built-in resilience so if any of the backup unit(s) fail due to external or internal failure, the system will have redundancy to continue to operate without interruption.
 - The data center must have an on-site means to sustain power for 48-hours minimum in failure mode, inclusive of utility outage.
 - **Commercial Availability and Feasibility.** The selected backup electric generation technology must currently be in use and proven as an accepted industry standard for technology sufficient to receive commercial guarantees in a form and amount

acceptable to financing entities. It must be operational within a reasonable timeframe where permits, entitlements and approvals are required.

- **Technical Feasibility.** The selected backup electric generation technology must utilize systems that are compatible with one another.
- Incorporate use of renewable fuels where feasible as primary fuel for backup generators.
- Incorporate, as feasible, environmentally sustainable features into the Project, such as bird-friendly building design components.

1.2 PROJECT AND COMMUNITY BENEFITS

The Project provides much needed data center infrastructure for an increasingly more internet and data driven society in the heart of Silicon Valley. The Project has been designed to:

- Use renewable fuels where feasible as primary fuel for backup generators while providing data center reliability that meets or exceeds industry standards;
- Promote energy efficiency by using water cooling technology and by designing the building to meet or exceed LEED v4 BD+C Gold certification standards;
- Use of recycled water instead of potable water for cooling technology; promoting increased water conservation;
- Minimize the extension of new electrical lines by siting the Project near existing utility infrastructure;
- Include construction of a Class I bicycle and pedestrian pathway along the Project's southern frontage to contribute toward the City's long-term assemblage of a trail system connecting to the existing Guadalupe River trail; and
- Include building design measures to reduce bird collisions

SECTION 2.0 PROJECT INFORMATION

2.1 PROJECT TITLE

San José Data Center 04 (SJ04)

2.2 LEAD AGENCY CONTACT

Lisa Worrall
Project Manager
Siting, Transmission and Environmental Protection (STEP) Division
California Energy Commission
715 P Street
Sacramento, CA 95814
Phone: 916-661-8367
E-mail: Lisa.Worrall@energy.ca.gov

2.3 PROJECT APPLICANT

Microsoft Corporation
1 Microsoft Way
Redmond, Washington 98052

2.4 PROJECT LOCATION

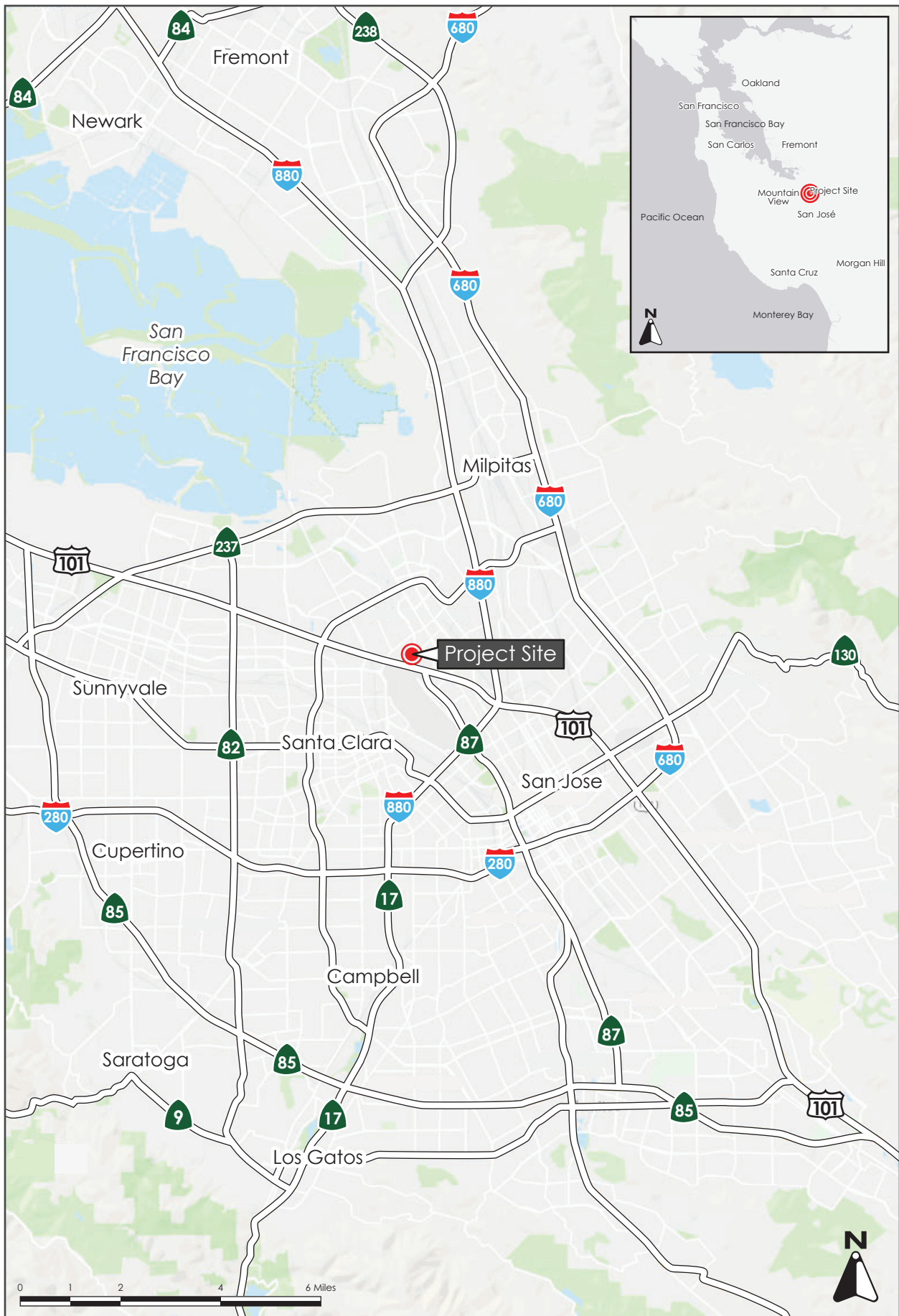
The proposed site encompasses approximately 22.29 acres located at the northwest corner of the intersection of Orchard Parkway and Component Drive in San José, California.

2.5 ASSESSOR'S PARCEL NUMBERS

101-02-020 and 101-02-019

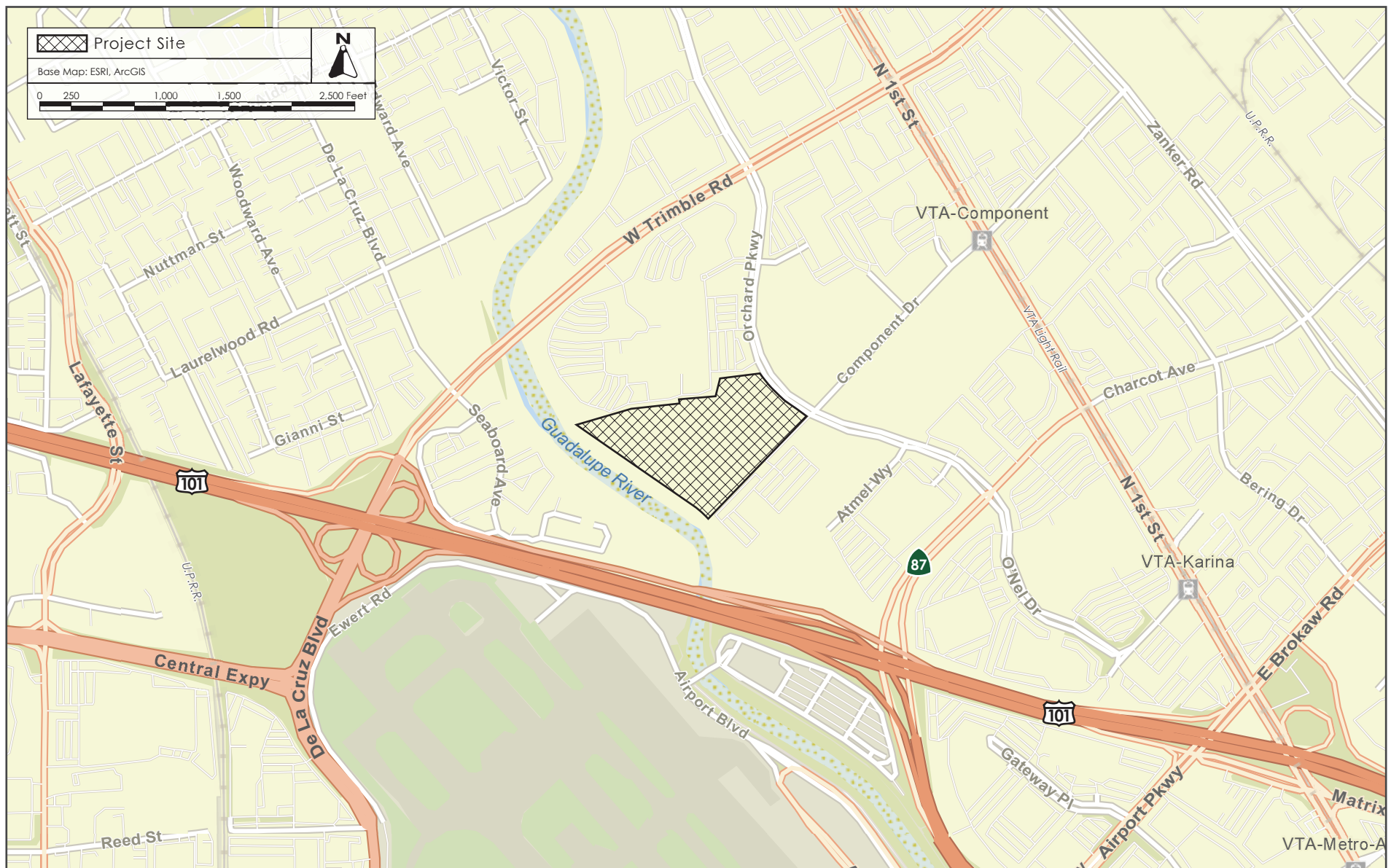
2.6 GENERAL PLAN DESIGNATION AND ZONING DISTRICT

General Plan Designation: CIC-Combined Industrial/Commercial and IP-Industrial Park
Zoning District: CIC-Combined Industrial/Commercial



REGIONAL MAP

FIGURE 2.0-1



VICINITY MAP

FIGURE 2.0-2



AERIAL PHOTOGRAPH AND SURROUNDING LAND USES

FIGURE 2.0-3

SECTION 3.0 PROJECT DESCRIPTION

3.1 OVERVIEW OF PROPOSED PROJECT

Microsoft Corporation (Microsoft) proposes to build the San José Data Center campus (the Project or SJ04) to be located at the northwest corner of the intersection of Orchard Parkway and Component Drive in San José, California. The Project will include two data center buildings; emergency backup generating facilities; recycled water storage, fire water storage, pipeline and support buildings; building cooling equipment; an on-site substation and switchyard; two potential distribution transmission lines; and ancillary support facilities.

Each data center building will be four stories. Each building will encompass approximately 315,639 gross square feet. Each data center building will incorporate the emergency backup generating facilities within generator rooms dedicated to supporting the emergency electricity needs of the floor of the building in which the generator room is located. The total maximum electrical demand of the Project will be 97.8 MW. The backup generating facilities will consist of (32) 3,000 kW primary emergency generators; (2) 500 kW administrative emergency generators; and (2) 800 kW storage tank area emergency generators. The sole purpose of the foregoing backup generating facilities is to provide electrical power to support the data center campus operations in the event of loss of electrical service from the local electric utility provider, Pacific Gas & Electric Company (PG&E).

3.2 PROJECT PURPOSE AND OBJECTIVES

Microsoft's specific Project objectives are as follows:

- Meet the continuing need for a data center to support the San José region's growing business and work force population as well as its growth as a center of innovation consistent with San José's planned land use vision.
- Construct and operate a data center that maximizes the use of the Project Site to house computer servers, supporting equipment, and associated administrative office uses in an environmentally controlled structure with redundant subsystems (cooling, power, network links, storage, fire suppression, etc.) and can be built in two phases to accommodate customer growth.
- Locate the data center on property long-planned for industrial uses that is in proximity to existing circulation and utility infrastructure, emergency response access, and on a site capable of being protected, to the maximum extent feasible, from security threats, natural disasters, and similar events.
- Design the proposed data center such that it can be provided with operational electric power via a new electric 115-kilovolt (kV) substation, and efficiently extend, connect to or otherwise install other utility infrastructure to adequately serve the Project, including water, storm drainage, sanitary sewer, electric and telecommunications, as well as new bike trail improvements.
- Ensure the data center achieves reduced access latency (defined as the time it takes to access data across a network).

- To incorporate the most reliable and flexible form of backup electric generating technology into the data center considering the following evaluation criteria:
 - **Reliability.** The selected backup electric generation technology must be extremely reliable in the case of an emergency loss of electricity from the utility.
 - The backup generating facility must provide a higher reliability than 99.999 percent in order for the data center to achieve an overall reliability of equal to or greater than 99.999 percent.
 - The backup generating facility must provide reliability to the greatest extent feasible during natural disasters including earthquakes.
 - The selected backup electric generation technology must have a proven built-in resilience so if any of the backup unit(s) fail due to external or internal failure, the system will have redundancy to continue to operate without interruption.
 - The data center must have an on-site means to sustain power for 48-hours minimum in failure mode, inclusive of utility outage.
 - **Commercial Availability and Feasibility.** The selected backup electric generation technology must currently be in use and proven as an accepted industry standard for technology sufficient to receive commercial guarantees in a form and amount acceptable to financing entities. It must be operational within a reasonable timeframe where permits, entitlements and approvals are required.
 - **Technical Feasibility.** The selected backup electric generation technology must utilize systems that are compatible with one another.
- Incorporate use of renewable fuels where feasible as primary fuel for backup generators.
- Incorporate, as feasible, environmentally sustainable features into the Project, such as bird-friendly building design components.

3.3 PROJECT FEATURES AND COMPONENTS

3.3.1 **Site Description**

The Project Site is located at the northwest corner of the intersection of Orchard Parkway and Component Drive in San José, California. The majority of the Project Site is located on APN 101-02-020. A portion of the PG&E Switching Station will be located on APN 101-02-019, which will be incorporated into the Project through a lot line adjustment/merger. The combination of the two foregoing areas encompasses approximately 22.29 acres of land and will be referred to herein as the ‘Project Site’. As described in Section 3.3.2, the Project also includes the installation of off-site utility infrastructure and may include offsite intersection improvements. These areas will be referred to as the “Off-Site Infrastructure Areas.”

The Project Site has a General Plan land use designation of CIC-Combined Industrial/Commercial and IP-Industrial Park and is zoned CIC Combined Industrial/Commercial. It is currently undeveloped with sparse grasses and a few trees along the western and northern boundaries. The Project Site is irregularly shaped and is generally bound to the north by an existing 2-story facility

with office and manufacturing uses, to the south by an existing 5-story office facility to the east by Orchard Parkway and undeveloped property and to the west by the Guadalupe Trail and Guadalupe River.

Parcels near the Project Site consist primarily of commercial and industrial land uses to the north, east and south. Uses to the west include the Bayshore Highway, approximately 500 feet west of the Project Site and the Norman Y Mineta San José International Airport, approximately 750 feet to the west of the closest property line. The nearest residential area and the closest school are each approximately 0.8 mile to the north of the Project Site.

Buildings in the vicinity of the Project Site to the north, south and east are similar in height and scale to the proposed data center buildings.

3.3.2 Project's Off-Site Infrastructure Improvements

As described more fully below, the Project involves the installation of off-site utility infrastructure and potential intersection improvements to serve the Project. These improvements are located within the Off-Site Infrastructure Areas (defined above), which are within existing public right of way. The total amount of off-site ground disturbance will be approximately 0.36 acre.

The Project will install potable water, recycled water, fire water, storm water and sanitary sewer pipelines within the existing rights of way immediately adjacent to the Project Site, for purposes of connecting the Project to necessary wet utilities.

In addition, the Project will install approximately 1.5 miles of new underground recycled water pipeline which will connect to the existing recycled water main at the intersection of Montague Expressway and Kruse Drive in the City of San José.

3.3.3 General Site Arrangement and Layout

The Project's general site arrangement and layout is shown on Figure 3.2-1. The two data center buildings will cover the majority of the Project Site. The primary access road will surround both buildings with parking located on the eastern side of the buildings. A new substation and PG&E-owned and operated switching station will be located in the northeast corner of the Project Site. The recycled water storage tanks, a fire water storage tank, tank support buildings and associated backup generators will be located in the northwest portion of the Project Site. Site potable water, recycled water, fire water, storm water and sanitary sewer pipelines will be interconnected to existing City of San José infrastructure located immediately adjacent to the Project Site within the existing right of way for Orchard Parkway. Recycled water will be provided from a new approximately 1.5-mile underground pipeline as described in Section 3.3.6.1.

3.3.3.1 *Site Access and Parking*

Primary access to the Project Site will be provided by a new entrance to the site at Orchard Parkway. The entrance will be secured and access to the facility will be monitored through a guardhouse and will provide the ability for a truck turn around. Pedestrian and bicycle turnstiles will be provided immediately adjacent to south side of the primary entrance. The secondary entrance is at the north

boundary near the onsite substation and will be through an easement with the property immediately north of the site. The secondary access will primarily be used for emergency access to the site.

The Project will provide approximately 148 parking spaces at full buildout. Approximately 74 parking spaces will be provided for the first building. Approximately 74 parking spaces will be provided for the second of two buildings.

The Project will provide approximately 17 parking spaces for Electric Vehicle, Clean Air and Vanpool parking spaces in compliance with applicable Cal Green requirements identified in Section 5.106.5 (Site Development – Non-Residential).

3.3.4 Data Center Buildings

The Project will include two four story data center buildings each encompassing approximately 315,639 gross square feet. Each building will include approximately 8,883 square feet of administrative space, including restrooms and shower facilities, storage areas, and loading docks. Figures 3.2-2 through 3.2-5 include the floor plans for each building, and Figure 3.2-6 shows the roof plan. Figures 3.2-7 and 3.2-8 provide building elevations. The proposed data center buildings will house computer servers for private clients in a secure and controlled structure. Each building will be designed for a maximum demand of 48.5 megawatts (MW) of electricity. In addition, the storage tank area will be designed for a maximum demand of 0.8 megawatts (MW) of electricity. The structures will be architecturally treated, as appropriate, to be compatible with the surrounding context of the Project Site and in coordination with the City of San José and consistent with applicable standards and guidelines. The buildings will be constructed of steel framing supporting concrete composite slab or mass timber with steel braced frames. Each building envelope will consist of a combination of Exterior Insulation Finishing System (EIFS), Insulated Metal Panels (IMP), and curtainwall glazing. The entries will include storefront glazing.

The southern building will be the first to be constructed and is designated SJ04. The northern building is designated SJC06 and is estimated to be constructed immediately following occupation of the first building.

3.3.4.1 *Building Heights and Setbacks*

The data center buildings will be approximately 101 feet at the roof's high point with parapet walls extending to a height of approximately 136 feet above the Level 1 slab height at the high point. The parapet/screen walls will extend to a height of approximately 40 feet above the roof level to conceal the rooftop mechanical and electrical equipment and provide sound attenuation.

Building SJ04 will be constructed on the southern portion of the Project Site and will be set back a minimum of approximately 380 feet from the northern property line (at the nearest point); approximately 88 feet from the southern property line; approximately 145 feet from the western property line; and approximately 565 feet from the eastern property line and Orchard Parkway.

Building SJC06 will be constructed on the northern portion of the Project Site and will be set back a minimum of approximately 122 feet from the northern property line; approximately 454 feet from the

southern property line; approximately 160 feet from the western property line; and approximately 644 feet from the eastern property line and Orchard Parkway.

3.3.4.2 *Building Cooling System*

Data Hall Cooling and Electrical Rooms

An indirect evaporative cooling (IDEC) system will be used to reject heat from the data center. Each data center room, called “Colos” (9.6 MW IT load) will be comprised of four cells or data halls (2.4 MW IT load per cell) and associated electrical rooms. The IDEC system will utilize hybrid closed-circuit fluid coolers mounted on the roof. Recycled water (makeup water) will be provided by the San José Municipal Water System (SJMWS). The fluid coolers will be capable of operating in dry mode to conserve water when the ambient conditions are conducive.

Cooling water from the fluid coolers will be pumped to indoor air handling units (AHUs) equipped with cooling coils. The units will be installed in dedicated mechanical galleries along the perimeter of the Colos. The AHUs will operate in 100% recirculation mode and conditioned air will be discharged directly into the room to cool the critical equipment (IT cabinets, UPS etc.). Warm air will be routed back to the AHUs using the suspended ceiling as a return air plenum.

The battery rooms will be conditioned using split-system DX water-cooled AC units connected to the cooling water loop. There will be two AC units per Battery Room. AC units will utilize R410A refrigerant.

Outside air for ventilation and pressurization of the Colos will be provided by water-cooled DX packaged Dedicated Outside Air Unit (DOAS) units connected to the cooling water loop. There will be four dedicated outside air units per 9.6 MW Colo that will utilize R410A refrigerant.

Administration Area

The Administration (Admin) area will be conditioned by variable refrigerant flow (VRF) DX system. It will be comprised of outdoor condensing units mounted on the roof and indoor fan coil units. The system will incorporate heat recovery to save energy by transferring heat from zones requiring cooling to zones requiring heating. There will be eight condensing units on the roof and they will utilize R410A refrigerant.

Ventilation will be provided by an air-cooled packaged DX DOAS unit mounted on the roof. The unit will incorporate an energy wheel to recover energy from the exhaust airstream and precondition the outdoor air.

3.3.4.3 *Energy Efficiency*

The data center industry utilizes a metric called Power Usage Effectiveness (PUE) to estimate the efficiency of its data centers. The PUE is calculated by dividing the total demand of the data center by the Critical IT load as shown in Section 2.3.3.4. A lower PUE signifies a more energy efficient design than a higher PUE. The Project is expected to achieve an average PUE of 1.20 and a peak PUE of 1.27 based on conformance with applicable local, state, and federal energy efficiency building codes and standards. The Project’s peak operation PUE estimate of 1.27 is based on design

assumptions relying on reasonably available information and represents conservative assumptions; that is, the hottest day with all server bays occupied and all servers operating at 100 percent capacity. The Project's more realistic PUE, based on annual average site temperatures and less than maximum power loads, will not exceed 1.20. This is significantly lower than the data center industry average PUE of approximately 1.6.

The Project will be built in accordance with applicable provisions of the current California Green Building Code and will include a number of green building measures to reduce energy consumption including:

1. limiting mechanical refrigeration needs and lowering the required refrigerant volume;
2. utilizing lighting control and energy-efficient lighting to reduce energy usage;
3. building insulation improvements; and
4. incorporating a cool roof design, using reflective surfaces to reduce heat gains.

In addition, the Project will pursue LEED v4 BD+C Gold certification for Data Centers.

3.3.4.4 *Generating Capacity*

Overview

In order to determine the generating capacity of the Project, it is important to consider and incorporate the following critical and determinative facts.

1. The backup generating facilities will use internal combustion engines and not turbines.
2. The backup generating facilities through software technology and electronic devices will be controlled exclusively by the data center buildings.
3. The backup generating facilities have been designed with a distributed redundant system with a 4 to make 3 redundancy. Each system of four generators will serve one of the building floors as described in Section 2.3.4.
4. There will be a total of 8 data center generators which are redundant.
5. There will be a total of 2 admin generators (one for each building) to provide electricity during emergencies to support portions of the admin building and features necessary for emergency response.
6. There will be a total of 2 generators in the water storage tank yard to provide electricity during emergencies to support recycled water treatment and delivery requirements of the cooling of the data center.
7. The backup generating facilities will only be operated for maintenance, testing and during emergency utility power outages.
8. The backup generating facilities will only operate at a load equal to the demand of the data center buildings during an emergency utility outage.

9. The backup generating facilities will only be interconnected to the data center buildings and will not be interconnected to the transmission or distribution grid.

Project Capacity and PUE

Based on the methodology recently adopted by the Commission's Final Decisions Granting SPPEs for the last five Data Center Backup Generating Facilities, the maximum generating capacity of the Project is determined by the maximum of capacity of the load being served.

The design demand of the Project, which the backup generating facilities have been designed to reliably supply with redundant components during an emergency, is based on the maximum critical IT load and maximum mechanical cooling electrical load occurring during the hottest hour in the last 20 years. Such conditions are possible but extremely unlikely to occur. The Project load on that worst-case day will be 97.8 MW.

It is important to understand that the Project will be designed to accommodate the full IT equipment load of the data center facilities. However, in Microsoft's experience it is rare that the total design load is reached. This typically results in data center demand loads of approximately 60 to 80 percent. Therefore, a fully utilized 97.8 MW data center would only be expected to reach a demand load around 59 to 78 MW.

PUE is calculated by dividing the total demand of the data center infrastructure serving the critical IT spaces (including IT load) by the Critical IT load itself. The theoretical peak PUE for the Worst Day Calculation would be 1.27 (Total 97.8 MW demand of Building² on Worst Case Day divided by 76.8 MW Total Critical IT Load). The average annual PUE would be 1.2 (Total 92.2 MW demand of Building average conditions divided by 76.8 MW Design Critical IT Load). These PUE estimates are based on design assumptions with the building at full capacity and historical weather data.

3.3.5 Backup Generating Facilities and Electrical System Design

3.3.5.1 *Overview*

The emergency backup generators system will include a redundant 4-to-make-3 design topology for the critical IT load. Each floor of each of the buildings will be supported by a set of four diesel fired emergency backup generators. The 4-to-make-3 topology means that the design demand of each floor can be met with only 3 of the 4 generators, essentially allowing for each floor to be fully served even if one of the 4 generators failed.

The emergency backup generators system for the water storage tank yard will include a redundant 2-to-make-1 design topology for the water storage tank yard mechanical loads. The 2-to-make-1 topology means the design demand for the water storage tank yard can be met with only 1 of the 2 generators, essentially allowing for the water storage tank equipment to be fully served even if 1 of the 2 generators failed.

² Includes electricity for servers, mechanical load, recycled water treatment facilities and cooling load, and ancillary building loads.

Main low-voltage (480 Volt) switchboards will be configured with a utility main circuit breaker and generator main circuit breaker. Automatic transfer controls will be provided to facilitate the transfer of the electrical power supply from utility to generator 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 of power quality). The utility main breaker and generator main breaker are electrically interlocked such that for each main switchboard, only the utility source or generator source can be connected. When the PG&E utility service is outside of pre-determined tolerances, the automatic transfer controls send a signal to start the generators and perform an open transition (break-before-make) between the utility main breaker and generator main breaker.

Each building's emergency backup generators will be supported by an uninterruptible power supply (UPS) system consisting of a rectifier, batteries, an inverter, and switches to facilitate the uninterrupted transfer during the open transition of electrical power supply from the utility to the 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 generators.

The UPS system will include lithium-ion battery banks, with each bank capable of providing up to 10 seconds of backup power at 133 percent load and 1 minute of backup power at 100 percent load. The administrative UPS system will include lithium-ion battery banks, with each bank capable of providing up to 10 minutes of backup power at 100 percent load.

When the electrical source input to the UPS 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 its associated battery source for uninterrupted power to the critical loads while the upstream transfer controls start the generator. The UPS load transfer from PG&E to UPS battery power occurs within 5 milliseconds. Load then transfers from the UPS battery system to the standby generators within 20 seconds of generator start. The UPS inverter conditions the power supply and 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.

3.3.5.2 Backup Generator System Description

The backup generating facilities will include a total of (36) emergency backup generators. Sixteen (16) 3,000 kW critical IT and one (1) 500 kW administrative generators will be located within each building. Two (2) 800 kW generators will be located at the water storage tank yard. The 3,000 kW data suite generators will be Caterpillar Model C175-16, the 500 kW administrative generators will be Caterpillar Model C15, and the 800 kW water storage tank yard generators will be Caterpillar Model C27. The generators proposed for installation are made by Caterpillar, with a certified Tier 4 rating. These engines would be equipped with diesel particulate filters (DPF) to reduce the diesel particulates to less than or equal to 0.02 grams/brake horse-power hour (g/bhp-hr), and catalyst systems for the control of NO_x, CO, and VOCs. The control systems result in engine emissions compliance with the EPA Tier 4 standards and with BAAQMD BACT.

The one (1) 500 kW generator located within each building may need to be increased to 800kW later in the Project as part of final design. If this refinement occurs, two (2) 800 kW generators will be reduced to 500 kW. To account for this change, the air quality and environmental noise studies conservatively used 800 kW for all of these generators.

Specification sheets for each manufacturer are provided in Appendix A-1.

Each individual generator will be provided with its own package system. Within that package, the prime mover and alternator will be automatically turned on and off by a utility-generator PLC transfer controller located in the 480-volt main switchboard located within the data center buildings. Each generator will be controlled by a separate, independent transfer controller. The generator will be turned on if the electrical utility power becomes unavailable and will be turned off after utility power has been restored and the transfer controller has returned the utility to the active source of power serving the computer and mechanical loads within the data center buildings.

As discussed above all of the critical IT emergency generators will be located in generator rooms located on each floor of the buildings (See Figures 3.2-2 through 3.2-5). The location of the generators in the water storage tank yard are shown on Figure 3.2-9. The administrative generators will be located on the second floor in the administrative area of each building.

3.3.5.3 *Fuel System*

The backup generators will use either renewable diesel as primary fuel when available or ultra-low sulfur diesel as a secondary backup fuel if renewable diesel is unavailable (<15 parts per million sulfur by weight). See Project Design Measure PDF GHG-1.2.

Each data center building will have four 50,000 gallon underground fuel storage tanks (USTs). Two storage tanks at plan north of each building will serve the generators on that side. Two storage tanks at plan south of each building will serve the generators on that side. See Figure 3.2-9.

Each 3,000 kW generator serving the Colo Cell (2,400 kW IT load) will have a 500 gallon ‘Day Tank’ that will receive fuel from the USTs to replenish its capacity. The 800 kW Admin generator will have a 250 gallon day tank that will also be served by the USTs. In addition to the fuel day-tanks, each generator will have diesel exhaust fluid (DEF) tanks for emissions aftertreatment.

The two 800 kW generators adjacent to the water storage tanks will be installed in pre-fabricated enclosures with dedicated sub-base ‘belly’ tanks. Each sub-base tank will have an approximate capacity of 3,500 gallons.

Each fuel tank will be of double-wall construction. The interstitial space will be continuously monitored for leaks. Underground piping will also be of double-wall construction with interstitial leak detection. Upon detection of a leak, the fuel transfer process will be disabled, and alarm generated at the building monitoring system to alert the operations team.

3.3.6 Utility Interconnections and Services

The Project will include new domestic water, recycled water, fire water, sanitary sewer and fiber interconnections. These services will be made via the installation of new underground pipes and conduit from the Project Site to existing City infrastructure systems. All of the existing City infrastructure is located within existing public roadways. Offsite Infrastructure areas are immediately adjacent to the Project Site in Orchard Parkway except for the recycled water pipeline proposed interconnection which is described below.

3.3.6.1 *Recycled Water Pipeline*

Recycled water will be used to serve the Project for landscaping and cooling purposes. There is no existing recycled water service to the Project Site.

The new underground recycled water pipeline will be connected to the existing recycled water main at the intersection of Montague Expressway and Kruse Drive in the City of San José. From there, the proposed main extension will continue south on Montague Expressway, turn southwest onto Trimble Road, and then turn south onto Orchard Parkway towards the Project Site. This route will require approximately 1.5 miles of new recycled water main all within public rights ways and/or existing paved roadways.

Please reference Figure 3.2-10 - Proposed Recycled Water Extension for a visual depiction of the proposed route.

3.3.6.2 *Electrical Distribution Facilities*

As part of the Project, Microsoft will construct a new on-site substation to be connected to PG&E's 115kV electrical distribution system. The on-site substation will be owned and operated by Microsoft. Interconnection of the on-site substation to the PG&E distribution system will be through a new PG&E owned and operated switching station. The new switching station will be located immediately adjacent to the onsite substation and will be designed and constructed to applicable PG&E standards.

The proposed switching station will interconnect the new PG&E distribution to the existing PG&E Trimble Substation and the existing PG&E Newark Substation.

The new switching station will be configured in the breaker-and-a-half arrangement with two bays of three breakers each. Two sets of overhead ACSR conductors will interconnect the PG&E switching station with the Microsoft substation. The switching station will have direct public access from Orchard Parkway.

PG&E metering equipment will be constructed in the Microsoft substation with manual disconnect on the line and load sides of the equipment. In addition, a PG&E meter and relay building will be constructed near the metering equipment. This building will be adjacent to the Microsoft substation and will have direct public access.

Microsoft substation will consist of two 115kV-34.5kV step-down transformers to provide fully redundant electrical distribution to the data center buildings. Each transformer will be protected by a primary breaker and a secondary main breaker in the 34.5kV switchgear located within the substation.

3.3.7 Landscaping

The Project proposes to remove (19) nineteen on-site trees, (11) eleven of them being ordinance size pursuant the City of San José Tree guidelines as defined by San José Ordinance Title 13 (Streets, Sidewalks and Public Places), Chapter 13.28 (Tree Removal Controls).

Additionally, three street trees will be removed to allow for site access along Orchard Parkway. As part of the right-of-way improvements along Orchard Parkway the city may require the remaining 10 street trees to be removed and replaced in new tree wells installed in the proposed sidewalk, for a potential total of 13 street trees. No trees would be removed in the Off-Site Infrastructure Areas, which are located within existing right of way.

The trees that are removed will be mitigated pursuant to applicable City standard mitigation requirements with new trees on site as part of the landscape design and as summarized in the table below.

Table 3.3-1: Tree Removal and Replacement				
Tree Removal				
	Circumference	Quantity Removed	Replacement Ratio – Size	Replacement Quantity Required
Total Native Trees to be Removed	<19 inches	2	1:1 – 15-gallon*	2
	19-38 inches	4	3:1 – 15-gallon	12
	>38 inches	10	5:1 – 15-gallon	50
Total Non-Native Trees to be Removed	<19 inches	1	1:1 – 15-gallon	1
	19-38 inches	1	2:1 – 15-gallon	2
	>38 inches	1	4:1 – 15-gallon	4
Tree Replacement				
Total Trees Required to Meet Replacement Requirements			71 (15-gallon)	
Total Proposed Trees (Not Including Street Trees)			155 (15-gallon)	
* A 24-inch box tree = two 15-gallon trees				

The removal and replacement of street trees will require coordination with the San José Department of Transportation and the City Arborist. Please see Section 5.2.1 for a discussion of the site trees and City of San Jose requirements. PDF BIO-4.1 has been proposed to ensure compliance with the City of San Jose requirements.

The landscape design will consist of climate adaptable trees, large and medium shrubs, and groundcovers that will be installed along the property boundaries, building perimeters and landscape beds distributed throughout the Project. Stormwater treatment facilities will be planted with vegetation recommended in the Appendix D section of the C.3 Stormwater Handbook. Trees will be planted pursuant to the City of San José recommended utility clearances, five feet away from underground utility lines, utility cabinets, fire hydrants, and ten feet away from sewer lines, storm drain lines and commercial driveways and twenty feet away from streetlights and stop signs.

3.3.8 Stormwater Controls

The San Francisco Bay Regional Water Quality Control Board (RWQCB) has issued the Municipal Regional Stormwater NPDES Permit (MRP) to regulate stormwater discharges from municipalities and local agencies. Under Provision C.3 of the MRP, new and redevelopment projects that create or replace 5,000 square feet or more of impervious surface area are required to implement site design, source control, and Low Impact Development (LID)-based stormwater treatment controls to treat post-construction stormwater runoff. LID-based treatment controls that will be incorporated as part of the Project are intended to maintain or restore the Project Site's natural hydrologic functions, maximizing opportunities for infiltration and evapotranspiration, and using stormwater as a resource (e.g. rainwater harvesting for non-potable uses). Examples of C.3 LID measures include bioretention areas, flow-through planters, and subsurface infiltration systems.

The Project proposes to construct stormwater treatment areas consisting of multiple LID (Low-Impact Development) bioretention areas totaling approximately 26,026 square feet, based on preliminary impervious calculations, sized according to the applicable requirements of the MRP. Other areas of the Project Site will be landscaped with self-treating or self-retaining areas. The stormwater treatment areas will be located adjacent to site roadways, in landscape areas adjacent to sidewalks, buildings, and other impervious surfaces, and around the perimeter of the Project Site.

In the existing condition, the Project Site is undeveloped and there do not appear to be any existing on-site drainage facilities. The Project Site is dirt and vegetation, so it is assumed that the majority of stormwater infiltrates into the soil. The lowest portion of the Project Site is along Orchard Parkway at the northern property line, so any runoff from larger storm events would release from the Project Site at this point.

The proposed Project will install a new 24" storm drain lateral near the center of the Orchard Parkway frontage. This proposed lateral will tie into an existing manhole on the existing 96" main that runs along Orchard Parkway. All runoff from the Project Site is anticipated to discharge into this lateral after passing through the appropriate C3 treatment measures (bioretention areas and self-retaining areas).

Downspouts for the roof drainage will discharge directly into bioretention areas, or indirectly into bioretention areas through the use of bubbler systems. In some cases, roof drainage will be piped

under sidewalks and discharged to the pavement surface where stormwater will then surface flow to at-grade bioretention planters located along the perimeter of the Project Site.

Proposed bioretention areas will not have impermeable liners separating the bioretention soils from the underlying native soils. Therefore, stormwater will have an opportunity to infiltrate into the ground once it enters the bioretention areas. Perforated underdrain systems will be included in the bioretention areas to allow water that does not infiltrate through the bottom of the bioretention a path to the public storm drain system. Overflow risers will also be included in bioretention areas to allow storm events larger than the C3 design storm to bypass the bioretention and enter the public storm drain system directly.

According to Appendix E-2, HMP Applicability Map, of the “C.3 Stormwater Handbook” published by the Santa Clara Valley Urban Runoff Pollution Prevention Program (SCVURPPP) the Project Site is located in a “red area”, defined as catchments and subwatersheds greater than or equal to 65% impervious. According to the MRP, hydromodification controls (HMC) are not required for projects located in red areas of the HMP Applicability Map. Therefore, the Project will not incorporate HMC into the Project’s development.

3.3.9 Flood Potential

Flood elevations and requirements for the Project Site are given by two separate entities, FEMA and the North San José Flood Management Policy (NSJFMP). NSJFMP flood elevations are more restrictive, so they will govern the site design.

Based on the FEMA Flood Insurance Rate Map (FIRM), most of the Project Site lies within flood zone “X” defined as an area with 0.2 percent annual chance flood hazard. A portion of the Project Site lies with flood zone “AH” with a given base flood elevation of 27’.

The Project Site is also within the boundaries of the North San José Floodplain Management Policy (NSJFMP). The flood elevations from this policy vary between 29’ and 31’ for the Project Site.

Since these flood elevations are higher than those given by the FIRM, they govern the building finish floor elevations which are to be set at least 1’ higher than the flood elevation. In addition, the NSJFMP requires that a minimum of 25% of the Project Site be at a lower elevation than the existing back of walk for any section through the Project Site taken perpendicular to the flood conveyance path (generally perpendicular to North 1st Street).

To comply with this requirement, the finished grades of approximately the westernmost third of the Project Site will be graded to not exceed the existing back of walk elevation, essentially maintaining existing topography. This means that the western portion of the site will act as a flood conveyance path extension of Orchard Parkway and will allow for shallow floodwaters to pass through the Project Site.

3.3.10 Bike Trail Extension

The Project will include the creation of a Class I bike path along the Project’s southern property line. This bike path will extend from the intersection of Orchard Parkway and Component Drive to edge

of the Project Site's southwestern property line near the existing Guadalupe Bike Trail on the existing levee as shown on Figure 3.2-11 – Bike Path Study. This Class I bike path will help facilitate achievement of the planned regional Guadalupe Bike Trail.

It is anticipated that the final interconnection of this regional trail (which is not on land owned by Microsoft) from the Project Site's southwest property line to the Guadalupe Bike Trail will be made in the future by those with the authority over the levee property between the Guadalupe Bike Trail and Project Site in adherence with all applicable laws and regulations.

As an additional community benefit, the Project anticipates working collaboratively with the San José Department of Public Works to confirm Microsoft's willingness to make a financial contribution towards the planned Class IV separated bike path within the existing right of way along the Project Site's frontage on Orchard Parkway.

3.3.11 Trimble and Orchard Intersection Improvement

In preliminary discussions with staff from the Development Services Division of the City of San José Public Works Department, staff anticipates that the City will seek to impose a Condition of Approval as part of the Project's Special Use Permit requiring the Project to improve both the southwest and southeast corners of the Trimble Road and Orchard Parkway intersection. Given the foregoing, the Project has incorporated this improvement as part of the project.³

The improvement to the intersection corners will consist of removal of the existing pedestrian refuge (pork-chop) islands at the southwest and southeast corners. Removal of these islands will require a modification of the existing traffic signal to relocate the existing poles from the pedestrian refuge islands.

It is important to recognize these improvements will not be required as a mitigation pursuant to CEQA to offset design elements of the Project. Rather, the City often conditions development projects outside of the CEQA process to make improvements to the City street network to provide what the City views as operational improvements to vehicular and pedestrian safety in the area of a project.

3.4 CONSTRUCTION AND OPERATION

3.4.1 Site Grading, Excavation, and Construction Phasing

Site grading, excavation and construction will take place in two phases. Phase I will include grading of the entire Project Site; installation of all on-site utility services including interim power; construction of the on-site substation, PG&E switchyard, and off-site transmission lines; construction of the recycled water pipeline, storage tanks and treatment facilities; construction of potable and sewer interconnections; paving the roadways and parking for the SJ04 building; and construction of

³ However, it is important to note the City is also including this same Condition of Approval on the Site Development Permit (file H22-021) associated with the property at the southwest corner of West Trimble Road and Orchard Parkway (the property immediately north of the Project). The City has stated that construction of these intersection improvements will be the responsibility of whichever project's building permit is approved first, subject to a pro rata fair share apportionment of costs. Therefore, for purposes of a conservative analysis, the Project's CEQA document will incorporate these improvements as a Project Design Feature.

the SJ04 Building. Phase II will include completing the paving for the parking for the SJ06 building and construction of the SJ06 Building.

Phase I activities are anticipated to begin in April 2024 and take approximately 25 months to complete. Phase I will include a construction workforce with a peak number of workers of approximately 84 per month and an average of approximately 51.1 per month. Phase II construction will begin as soon as commercially feasible, likely in 2026 and take approximately 25 months to complete. Phase II construction workforce is estimated to have a peak number of workers of approximately 50 per month with an average of approximately 30.8 per month.

Construction worker parking and staging areas will be off-site at an existing commercial property parking lot located at 2825 Lafayette Street, approximately 1.9 miles from the Project Site. Bus transportation between the Project and the off-site parking will be provided by the Project.

For purposes of this analysis, it is assumed that up to 90,000 cubic yards of soil and undocumented fill will be removed from the Project Site. Grading of the Project Site is not expected to require the import of fill material. Offsite infrastructure improvements are anticipated to not require exportation of fill material.

On-site utility trenching is expected to vary between 4 and 15 feet deep. The buildings will use a deep foundation system with piles. The piles are anticipated to extend 80 feet below the existing grade surface. Off-site trenching for the recycled water pipeline is expected to be approximately 5 feet deep.

3.4.2 Site Water Supply and Use

Site Grading and Construction. Grading and construction of the Project is estimated to utilize approximately 1.75 acre-feet of water over the 25-month construction period for Phase I for the SJ04 building and related improvements and a similar approximately 1.75 acre-feet of water over the 25-month construction period for Phase II for the SJ06 building and related improvements.

Operation. The Project will require recycled water during most of the year to cool the buildings via the adiabatic cooling system. The data center will be designed to use up to 680 acre-feet per year (AFY) of recycled water for mechanical cooling and approximately 10.2 acre-feet per year (AFY) of recycled water for site irrigation from South Bay Water Recycling (SBWR). On-site recycled water storage tanks will be installed as a back-up water source when recycled water is not available from the utility. The project is estimated to use approximately 1.35 AFY of potable water.

A Water Supply Assessment (WSA) pursuant to SB 610 requirements was completed for the Project in August 2022 (refer to Appendix J). The WSA determined that sufficient potable and recycled water supplies are available to serve the Project.

3.4.3 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 laws and

regulations, as described in Sections 4.9 and 4.19. Given the data center nature of the proposed uses, significant quantities of waste materials would not be generated during operation of the Project.

The primary waste from the Project will be clear water discharge from indirect evaporative heat rejection equipment on the roof (fluid coolers). Recycled water will be used for evaporative heat rejection when the ambient conditions are not conducive for sensible heat rejection.

The recycled water will be recirculated and sprayed on the wet coils of fluid coolers. A portion of the spray water will continuously evaporate as the data center heat is rejected at the fluid coolers. This evaporation process increases the mineral content in the recirculated spray water. Excessive mineral content can have a negative impact such as scaling of the fluid cooler heat transfer surfaces. A portion of the spray water will be continuously discharged to the sanitary system (blowdown) and replaced with recycled water to alleviate this condition.

Makeup water = Evaporation + Blowdown (neglecting drift). The ratio of makeup water to blowdown is called cycles of concentration (CoC). CoC can also be defined as the ratio of total dissolved solids (TDS) concentration or conductivity of recirculated spray water to the TDS or conductivity of recycled water. Based on quality of recycled water, the Project design will be based on CoC of 4.

The San José Public Works Department has evaluated the calculated clear water discharge and has confirmed that the existing sanitary pipe that will serve the Project and the overall sanitary system has the capacity to serve the calculated load. See City Correspondence in Appendix K.

3.4.4 Hazardous Materials Management

The Project will prepare a Spill Prevention, Control and Countermeasure (SPCC) Plan pursuant to applicable laws and regulations to address the storage, use and delivery of renewable diesel and diesel fuel for the generators.

Diesel fuel will be delivered on an as-needed basis in a compartmentalized tanker truck with maximum capacity of 8,500 gallons.

For the bulk fuel storage tanks serving the buildings, the tanker truck will park on the access road located just above the underground fuel storage tank along the northwest and southeast sides of the buildings and will connect a fuel fill hose to a fill port located in the ground just above the underground fuel storage tank.

For the fuel storage tanks located in the base of the two generators located in the tank area, the tanker truck will park near the generators and will extend a fuel fill hose through a hinged openings in the security fence surrounding the tank area.

There are no loading/unloading racks or containment for re-fueling events; however, a spill catch basin will be located at each fill port at the bulk underground diesel storage tanks and for the base mounted diesel storage tanks. To prevent a release from entering the storm drain system, storm drains will be temporarily blocked off by the truck driver and/or facility staff during fueling events. Rubber

pads or similar devices will be kept in the generation yard to allow quick blockage of the storm sewer drains during fueling events.

To further minimize the potential of diesel fuel coming in contact with stormwater, to the extent feasible, fueling operations will be scheduled at times when storm events are improbable.

Warning signs and/or wheel chocks will be used in the loading and/or unloading areas to prevent vehicles from departing before complete disconnection of flexible or fixed transfer lines. 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 loading and unloading areas.

Urea or Diesel Exhaust Fluid (DEF) is used as part of the diesel engine combustion process to meet the emissions requirements. Urea will be stored in two (2) 55 gallon drums located within the outdoor generator enclosures and within the interior generator rooms. These drums will be filled in place from other drums, totes, or bulk tanker truck at the tank top or swapped out for new using quick connection fittings at the tank top.

3.4.5 Backup Generating Facilities Operation

The backup generators will be run for short periods for testing and maintenance purposes and otherwise will not operate unless there is a disturbance or interruption of the utility supply. BAAQMD's Authority to Construct and the California Air Resources Board's Airborne Toxic Control Measures (ATCM) limits each engine to no more than 50 hours annually for reliability purposes (i.e., testing and maintenance), and the Project will adhere to the foregoing requirements.

3.4.5.1 *Routine Maintenance and Testing Schedule*

Annual, quarterly and monthly functional tests will be performed on each generator to verify that the generators are functioning properly. For the annual test (performed once per calendar year), each generator will be run at 100% load on a load bank test unit for approximately 2 hours. For the quarterly test (performed three times a year), each generator will be run at 100% load on a load bank test unit for approximately 30 minutes. For the monthly test (performed eight times a year), each generator will be run unloaded for less than 30 minutes. Routine maintenance will be performed during the annual and quarterly test events.

3.4.5.2 *Emergency Operations*

In addition to running the generators for routine maintenance and periodic testing, as described in the previous section, the generators will run when power is interrupted from PG&E.

The Project will derive power from PG&E Trimble Substation and the PG&E Newark-Lawrence Substation. The Project will not experience an interruption of power as long as one of the two substation sources is available.

Over the last 10 years, the PG&E Trimble Substation has recorded the following power outages:

Outage Date	Start of Outage	Duration of Outage
02/04/18	01:42PM	103 Minutes
04/04/18	02:43PM	60 Minutes

Source of Information: PG&E internal records.

Over the last 6 years, the PG&E Newark-Lawrence Substation has recorded the following power outages:

Outage Date	Start of Outage	Duration of Outage
03/11/16	12:14PM	19 Minutes
12/22/16	05:11PM	24 Hours 21 Minutes
04/15/17	12:11PM	108 Minutes
07/08/17	09:01AM	1 Minute
09/27/17	09:06AM	75 Minutes
01/18/20	04:11PM	81 Minutes
08/16/20	07:29AM	1 Minute
06/13/21	12:19AM	31 Minutes

Source of Information: PG&E internal records.

Based on this information, the Project would not have experienced a utility power interruption over the last 10 years because one of the two substation sources of power have been available during this time. If this pattern were to hold true for first 10 years of the Project's operation, it is not expected that the backup generating facilities would be required to run due to a utility power outage. Therefore, emergency operation of the emergency generator facilities is anticipated to be infrequent and is not foreseeable.

3.5 PROJECT DESIGN FEATURES

The Project will incorporate specified features into the design of the Project, referenced herein as “Project Design Features” (or PDFs), which will ensure all Project impacts are less than significant. The PDFs are included here in summary form as part of the project description. During the CEC’s CEQA review, it is anticipated that these PDFs will be incorporated as either enforceable mitigation measures via the Project’s MMRP or as conditions of approval. Consistent with this understanding, some of the PDFs described below are identified as mitigation measures in the supporting technical reports that are included with this SPPE Application.

Air Quality:

PDF AIR-1: To ensure that fugitive dust impacts are less than significant, the Project shall implement the BAAQMD’s recommended BMPs during the construction phase. These BMPs shall be incorporated into the design of the Project and shall consist of:

- All exposed surfaces (soil piles, graded areas, and unpaved access roads) shall be watered at least two times per day or stabilized using other BMPs for erosion control.
- All haul trucks transporting material offsite shall be covered.
- All track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day.
- All vehicle speeds on onsite unpaved surfaces shall be limited to less than or equal to 15 miles per hour. In addition, no unpaved offsite roadways will be used to service the Project during construction (or operation).
- All roadways, driveways, and sidewalks shall be paved as soon as possible. Building pads shall be completed as soon as possible after grading unless seeding or soil binders are used.
- Equipment idling times shall be minimized to 5 minutes per the Air Toxics Control Measure (ATCM). Idling time signage shall be provided for construction workers at all access points.
- All construction equipment shall be maintained and properly tuned in accordance with manufacturer specifications. All equipment shall be checked by a certified visible emissions evaluator.
- Information on who to contact, contact phone number, and how to initiate complaints about fugitive dust problems will be posted at the site.

Biological Resources:

PDF BIO-1.1: Nesting Season Avoidance. To the extent feasible, commencement of construction activities should be scheduled to avoid the nesting season. If construction activities are scheduled to commence outside the nesting season, all impacts to nesting birds protected under the MBTA and California Fish and Game Code would be avoided. The nesting season for most birds in Santa Clara County extends from February 1 through August 31, inclusive.

PDF BIO-1.2: Preconstruction/Pre-disturbance Surveys and Buffers. If it is not possible to schedule commencement of construction activities and/or tree removal between September 1 and January 31, preconstruction surveys for nesting birds shall be conducted by a qualified ornithologist to ensure that no nests shall be disturbed during project implementation. These surveys shall be conducted no more than seven days prior to the initiation of demolition or construction activities, including tree removal and pruning. During this survey, the ornithologist shall inspect all trees and other potential nesting habitats (e.g., trees, shrubs, ruderal grasslands, buildings) in and immediately adjacent to the impact areas for nests. If an active nest is found sufficiently close to work areas to be disturbed by these activities, the ornithologist shall determine the extent of a construction free buffer zone to be established around the nest (typically 300 feet for raptors and 100 feet for other species), to ensure that no nests of species protected by the MBTA and California Fish and Game Code shall be disturbed during project implementation.

PDF BIO-2.1: Due to the potential for bird collisions with the SJ04 and SJ06 buildings, the project shall implement the following bird-safe building design considerations for these facades:

- Reduce the extent of glass on building facades to the extent feasible (as determined in consultation with the City building design standards and California Building Code requirements).
- Reduce or eliminate the visibility of plants behind glass.
- All glazing used on the building facades shall have a reflectivity index of no more than 20 percent.
- No more than 10 percent of the surface area of the combined façades for the SJ04 and SJ06 buildings shall have untreated glazing between the ground and 60 feet above ground. Bird-safe glazing treatments may include fritting, netting, permanent stencils, frosted glass, exterior screens, physical grids placed on the exterior of glazing or ultraviolet patterns visible to birds. Vertical elements of the window patterns should be at least 0.25 inch wide at a maximum spacing of four inches or have horizontal elements at least 0.125 inch wide at a maximum spacing of two inches.

- Avoid free-standing clear glass walls, skywalks, transparent building corners, glass enclosures (e.g., greenhouses) on rooftops, and free-standing clear glass railings where feasible. If any such features are included in the project design, all glazing used in any such features shall be 100 percent treated as specified above. These features shall be treated to a height of 60 feet above grade. Features located more than 60 feet above grade are not required to be treated. For transparent glass corners, the required treatment area extends horizontally from a building corner as far the corner as it is possible to see through the corner to the other side of the building.
- Landscaping, including planted vegetation and water features, shall be designed to minimize the potential for collisions adjacent to glazed building facades. For example, vegetation providing particularly valuable resources to birds (such as fruits) shall be planted away from glass facades, and vegetation in general shall be planted in such a way that it is not clearly reflected in windows. Water features shall be located away from building exteriors to reduce the attraction of birds toward glazed facades.

Due to the potential for night lighting to disorient birds, the Project shall implement the following bird-safe design considerations for all new interior and exterior lighting on the Project Site:

- Minimize exterior lighting to the extent feasible, except as needed for safety/security. All exterior lights shall be shielded and directed toward facilities on the Project Site to ensure that light is not directed upward or outward toward the Guadalupe River.
- Occupancy sensors or other switch control devices shall be installed on interior lights, with the exception of emergency lights or lights needed for safety/security purposes. If occupancy sensors are not active, these lights shall be programmed to shut off during non-work hours and between 10:00 p.m. and sunrise.
- To the extent consistent with the normal and expected operations of commercial uses under the project, take appropriate measures to avoid use of unnecessary lighting at night. Such measures may include the installation of motion-sensor lighting, automatic light shut-off mechanisms, downward-facing exterior light fixtures, the use of Dark-Sky-compliant lighting⁴, and others.

⁴ Exterior lighting fixtures that meet the International Dark-Sky Association's standards for artificial lighting minimize glare while reducing light trespass and skyglow, and are required to be fully shielded and minimize the amount of blue light in the nighttime environment (International Dark-Sky Association 2020).

PDF BIO-3.1:

A tree removal permit would be required from the City of San José for the removal of potential ordinance-sized trees. The removed trees would be replaced according to tree replacement ratios required by the City, as provided in Table 4.4-2 below.

Table 3.5-1: Tree Replacement Ratios				
Circumference of Tree to be Removed	Type of Tree to be Removed			Minimum Size of Each Replacement Tree
	Native	Non-Native	Orchard	
38 inches or greater	5:1	4:1	3:1	15-gallon container
19 up to 38 inches	3:1	2:1	none	15-gallon container
Less than 19 inches	1:1	1:1	none	15-gallon container
x:x = tree replacement to tree loss ratio Note: Trees greater than or equal to 38-inch circumference shall not be removed unless a Tree Removal Permit, or equivalent, has been approved for the removal of such trees. For Multi-Family residential, Commercial and Industrial properties, a permit is required for removal of trees of any size. A 38-inch tree equals 12.1 inches in diameter. A 24-inch box tree = two 15-gallon trees Single Family and Two-dwelling properties may be mitigated at a 1:1 ratio.				

A total of 19 trees onsite would be removed. Three trees would be replaced at a 1:1 ratio, one tree would be replaced at a ratio of 2:1, four trees would be replaced at a 3:1 ratio, one tree would be replaced at a ratio of 4:1, and 10 trees would be replaced at a 5:1 ratio. The total number and size of replacement trees required to be planted on-site is 71 trees.

In the event the Project Site does not have sufficient area to accommodate the required tree mitigation, one or more of the following measures will be implemented, to the satisfaction of the Director of Planning, Building and Code Enforcement, at the development permit stage:

- The size of a 15-gallon replacement tree may be increased to 24-inch box and count as two replacement trees to be planted on the Project Site, at the development permit stage.
- The Project may pay Off-Site Tree Replacement Fee(s) to the City, prior to the issuance of Public Works grading permit(s), in accordance with the City Council approved Fee Resolution. The City will use the off-site tree replacement fee(s) to plant trees at alternative sites.

PDF BIO-4.1: The Project will pay applicable Santa Clara Valley Habitat Plan fees (including the nitrogen deposition fee) prior to issuance of any grading permits, as applicable. The Project applicant shall submit the Santa Clara Valley Habitat Plan Coverage Screening Form to the Director of Planning, Building and Code Enforcement (PBCE) or the Director's designee for approval and payment of all applicable fees prior to the issuance of a grading permit.

PDF BIO-5.1: Payment of Burrowing Owl Fees for Permanent Impacts on California Annual Grassland. The project will pay Santa Clara Valley Habitat Plan burrowing owl fees for the permanent loss of 18.6 acres of California annual grassland that provides ostensibly suitable, but currently unoccupied, burrowing owl foraging habitat. These fees shall be paid to the Santa Clara Valley Habitat Agency prior to issuance of a grading permit.

Cultural Resources:

PDF CUL-1.1: Treatment Plan: A Cultural Resources Treatment Plan shall be prepared by a qualified archaeologist, in consultation with a qualified Native American monitor, registered with the Native American Heritage Commission (NAHC) for the City of San José and that is traditionally and culturally affiliated with the geographic area. The Cultural Resources Treatment Plan shall reflect permit-level detail pertaining to depths and locations of all ground disturbing activities. The Cultural Resources Treatment Plan shall be prepared and submitted to the Supervising Environmental Planner of the City of San José Department of Planning, Building, and Code Enforcement prior to approval of a grading permit. The Treatment Plan shall contain, at a minimum:

- Identification of the scope of work and range of subsurface activities (including location map and development plan), including requirements for preliminary field investigations.
- Description of the environmental setting (past and present) and the historic/prehistoric background of the parcel (potential range of what might be found).
- Development of research questions and goals to be addressed by the investigation (what is significant vs. what is redundant information).
- Detailed field strategy used to record, recover, or avoid finds and address research goals.
- Analytical methods.
- Report structure and outline of document contents.
- Disposition of artifacts.
- Appendices: all site records, correspondence, and consultation with Native Americans, etc.

PDF CUL-1.2: Investigation: The Project applicant shall complete a preliminary field investigation program on the Project Site in conformance with the Cultural Resources Treatment Plan required under Project Design Feature PDF CUL-1.1. The locations of subsurface testing and exploratory trenching shall be determined prior to issuance of any grading permit based on the Cultural Resources Treatment Plan recommendations. A qualified archaeologist and a qualified Native American monitor, registered with the Native American Heritage Commission (NAHC) for the City of San José and that is traditionally and culturally affiliated with the geographic area, shall complete a presence/absence exploration.

If any finds are discovered during the preliminary field investigation, the Project shall implement PDF CUL-1.4 for evaluation and recovery methodologies. The results of the preliminary field investigation shall be submitted to the Supervising Environmental Planner of the City of San José Department of Planning, Building, and Code Enforcement for review and approval prior to issuance of any grading permit.

PDF CUL-1.3: Construction Monitoring and Protection Measures: Although the data recovery and treatment program performed in accordance with CUL 1.2 would be expected to recover potentially significant materials and information from the areas impacted prior to grading, it is possible that additional resources could remain. Therefore, ground-disturbing activities in native soil (e.g., grading and excavation) shall be completed under the observation of a qualified archaeologist and a qualified Native American monitor, registered with the Native American Heritage Commission (NAHC) for the City of San José and that is traditionally and culturally affiliated with the geographic area.

The qualified archaeologist or a qualified Native American monitor, registered with the Native American Heritage Commission (NAHC) for the City of San José and that is traditionally and culturally affiliated with the geographic area, shall have authority to halt construction activities temporarily in the immediate vicinity of an unanticipated find. If, for any reasons, the qualified archaeologist or a qualified Native American monitor, registered with the Native American Heritage Commission (NAHC) for the City of San José and that is traditionally and culturally affiliated with the geographic area, is not present, but construction crews encounter a cultural resource, all work shall stop temporarily within 50 feet of the find until a qualified archaeologist in consultation with a qualified Native American monitor, registered with the Native American Heritage Commission (NAHC) for the City of San José and that is traditionally and culturally affiliated with the geographic area, has been contacted to determine the proper course of action. The Supervising Environmental Planner and Historic Preservation Officer of the City of San José Department of Planning, Building, and Code Enforcement shall be notified of any finds during the grading or other

construction activities. Any human remains encountered during construction shall be treated according to the protocol identified in PDF CUL-2.5.

PDF CUL-1.4: Evaluation and Data Recovery: The Supervising Environmental Planner and Historic Preservation Officer of the City of San José Department of Planning, Building, and Code Enforcement shall be notified of any finds during the preliminary field investigation, grading, or other construction activities. construction activities shall be evaluated for eligibility for listing as a Candidate City Landmark and/or in the California Register of Historic Resources. Data recovery methods may include, but are not limited to, backhoe trenching, shovel test units, hand auguring, and hand-excavation.

The techniques used for data recovery shall follow the protocols identified in the Cultural Resources Treatment Plan required in PDF CUL-1.1. Data recovery shall include excavation and exposure of features, field documentation, and recordation.

PDF CUL-1.5: Human Remains: Native American coordination shall follow the protocols established under Assembly Bill 52, State of California Code, and applicable City of San José procedures.

If any human remains are found during any field investigations, grading, or other construction activities, all provisions of California Health and Safety Code Sections 7054 and 7050.5 and Public Resources Code Sections 5097.9 through 5097.99, as amended per Assembly Bill 2641, shall be followed. In the event of the discovery of human remains during construction, there shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains. The project applicant or qualified archaeologist in consultation with a Native American representative registered with the Native American Heritage Commission from the City of San José and that is traditionally and culturally affiliated with the geographic area shall immediately notify the Supervising Environmental Planner of the City of San José Department of Planning, Building, and Code Enforcement, who will then notify the Santa Clara County Coroner. The Coroner shall make a determination as to whether the remains are Native American.

If the remains are believed to be Native American, the Coroner shall contact the Native American Heritage Commission (NAHC) within 24 hours. The NAHC shall then designate a Most Likely Descendant (MLD). The MLD shall inspect the remains and make a recommendation on the treatment of the remains and associated artifacts.

If one of the following conditions occurs, the Project applicant or his authorized representative shall work with the Coroner, in consultation with a qualified Native American monitor, registered with the Native American Heritage Commission (NAHC) for the City of San José and that is traditionally and culturally affiliated with the geographic area, to reinter the

Native American human remains and associated grave goods with appropriate dignity in a location not subject to further subsurface disturbance:

- The Native American Heritage Commission is unable to identify a most likely descendent or the most likely descendent failed to make a recommendation within 48 hours after being notified by the commission.
- The descendant identified fails to make a recommendation; or
- The landowner or his authorized representative rejects the recommendation of the descendant, and the mediation by the Native American Heritage Commission fails to provide measures acceptable to the landowner.

PDF CUL-1.6: Site Security: At the discretion of the Supervising Environmental Planner and Historic Preservation Officer of the City of San José Department of Planning, Building, and Code Enforcement, site fencing shall be installed on-site during the investigation, grading, building, or other construction activities on the Project Site to avoid destruction and/or theft of potential cultural resources. The responsible qualified archaeologist, in consultation with a qualified Native American monitor, registered with the Native American Heritage Commission (NAHC) for the City of San José and that is traditionally and culturally affiliated with the geographic area, shall advise the Supervising Environmental Planner and Historic Preservation Officer of the City of San José Department of Planning, Building, and Code Enforcement as to the necessity for a guard. The purpose of the security guard shall be to ensure the safety of any potential cultural resources (including human remains) that are left exposed overnight on the Project Site. The Director of PBCE shall have the final discretion to authorize the use of a security guard at the project site.

PDF CUL-1.7: Final Reporting: Once all analyses and studies required been completed, the project applicant, or representative, shall prepare a final report summarizing the results of the field investigation, data recovery activities and results, and compliance with the Cultural Resources Treatment Plan. The report shall document the results of field and laboratory investigations and shall meet the Secretary of the Interior’s Standards for Archaeological Documentation. The contents of the report shall be consistent with the protocol included in the Cultural Resources Treatment Plan. The report shall be submitted to the Director of Planning, Building, and Code Enforcement for review and approval prior to issuance of any Certificates of Occupancy (temporary or final). Once approved, the final documentation shall be submitted to the Northwest Information Center at Sonoma State University, as appropriate.

PDF CUL-1.8: Curation: Upon completion of the final report required by the Cultural Resources Treatment Plan, all recovered archaeological materials not identified as tribal cultural resources by the Native American monitor, shall be transferred to a long-term curation facility. Any curation facility used shall

meet the standards outlined in the National Park Services' Curation of Federally Owned and Administered Archaeological Collections (36 CFR 79). The Project applicant shall notify the Supervising Environmental Planner of the City of San José Department of Planning, Building, and Code Enforcement of the selected curation facility prior to the issuance of any Certificates of Occupancy (temporary or final). To the extent feasible, and in consultation with the Native American representative, all recovered Native American/tribal cultural resources and artifacts shall be reburied on-site in an area that is unlikely to be disturbed again. Treatment of materials to be curated shall be consistent with the protocols included in the c Cultural Resources Treatment Plan.

All archaeological materials recovered during the data recovery efforts shall be cleaned, sorted, catalogued, and analyzed following standard archaeological procedures, and shall be documented in a report submitted to the Director of Planning, Building and Code Enforcement and the NWIC.

PDF CUL-1.9:

Dignified and Respectful Treatment – Cultural Sensitivity Training Prior to Construction: An important aspect of the consultation process is a dignified and respectful treatment of Tribal Cultural Resources. Prior to issuance of the grading permit, the Project shall be required to submit evidence that an Archaeological Monitoring Contractor Awareness Training was held prior to ground disturbance. The training shall be facilitated by the Project archaeologist in coordination with a Native American representative registered with the Native American Heritage Commissions for the City of San José and that is traditionally and culturally affiliated with the geographic area as described in Public Resources Code Section 21080.3.

Geology and Soils:

PDF GEO-1:

The Project shall implement the following City of San José Standard Permit Conditions related to geological hazards:

- To avoid or minimize potential damage from seismic shaking, the Project shall be constructed using standard engineering and seismic safety design techniques. Building design and construction at the Project Site shall be completed in conformance with the recommendations of an approved geotechnical investigation. The report shall be reviewed and approved by the City of San José Department of Public Works as part of the building permit review and issuance process. The buildings shall meet the requirements of applicable Building and Fire Codes as adopted or updated by the City. The Project shall be designed to withstand soil hazards identified (if any) on the Project Site (as well as the Off-Site Infrastructure Areas) and the Project shall be designed to reduce the risk to life or property on-site and off-site to the extent feasible and in compliance with applicable provisions of the Building Code.

- All excavation and grading work shall be scheduled in dry weather months or, in the alternative, construction sites shall be weatherized.
- Stockpiles and excavated soils shall be covered with secured tarps or plastic sheeting when not in use.
- Ditches shall be installed to divert runoff around excavations and graded areas if necessary.
- The Project shall be constructed in accordance with the standard engineering practices in the California Building Code, as adopted by the City of San José. These standard practices would ensure that the future buildings on the Project Site are designed to properly account for soils-related hazards on the Project Site.

PDF GEO-2:

The Project shall implement the following City of San José Standard Permit Condition related to paleontological resources:

- If vertebrate fossils are discovered during construction, all work on the Project Site or within the Off-Site Infrastructure Areas , as relevant) within 50 feet of any potential fossil find shall stop immediately, Director of Planning or Director's designee of the Department of Planning, Building and Code Enforcement (PBCE) shall be notified, and a qualified professional paleontologist shall assess the nature and importance of the find and recommend appropriate treatment, to the extent the find is considered significant. Treatment may include, but is not limited to, preparation and recovery of fossil materials so that they can be housed in an appropriate museum or university collection and may also include preparation of a report for publication describing the finds. The Project applicant shall be responsible for implementing the recommendations of the qualified paleontologist. A report of all findings shall be submitted to the Director of Planning or Director's designee of the PBCE.

Greenhouse Gas Emissions:

PDF GHG-1.1:

The Project owner shall participate in the San José Clean Energy (SJCE) at the Total Green level (i.e., 100% carbon-free electricity) for electricity accounts associated with the Project, or enter into an electricity contract with SJCE or participate in a clean energy program that accomplishes the same goals of 100% carbon-free electricity as the SJCE Total Green Level.

PDF GHG-1.2:

The Project applicant shall use renewable diesel fuel for the diesel-fired generators to the extent feasible. During an emergency where renewable diesel fuel supplies may be limited, the project owner will document their efforts to secure other vendors of renewable diesel fuel prior to refueling with non-renewable diesel. The Project applicant shall provide such documentation to the Director or Director's designee with the City of San Jose Planning, Building and Code Enforcement (PBCE).

Hazards and Hazardous Materials:

PDF HAZ-1.1: A Site Management Plan (SMP) shall be prepared for the Project Site 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.

If there are no contaminants identified in areas of the Project Site to be disturbed that exceed applicable screening levels for construction workers published by the Regional Water Quality Control Board, Department of Toxic Substances Control, and/or Environmental Protection Agency, the Project applicant shall not be required to submit the Site Management Plan to an oversight agency and instead shall only submit to the City prior to construction earthwork activities.

In addition, all contractors and subcontractors shall develop a Health and Safety Plan (HSP) specific to their scope of work and based upon the known environmental conditions. The HSP shall be approved by the Director or Director's designee with the City of San Jose Department of Planning, Building and Code Enforcement (PBCE) and the City of San Jose Environmental Services Department (ESD) and implemented under the direction of a Site Safety and Health Officer.

Components of the SMP shall include, but shall not be limited to:

- A detailed discussion of the site background;
- 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.

Components of 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 and HSP shall be submitted to HMCD, DTSC, or equivalent regulatory agency for review and/or approval (if required). Copies of the approved SMP and HSP shall be provided to the PBCE Supervising Environmental Planner and Environmental Services Department (ESD) prior to issuance of grading permits.

PDF HAZ-1.2

The discharge of any water from construction dewatering activities shall be required to comply with National Pollutant Discharge Elimination System (NPDES) permit requirements or wastewater discharge permit conditions to the sanitary sewer, which may involve installation of a treatment system(s) at the dewatering location. For short-term discharge (less than 1-year), a discharge permit shall be obtained from the City of San José's Watershed Protection Division and the water discharged to the sanitary sewer. For long term discharge (greater than 1-year), the Project applicant shall obtain a NPDES permit from the California Regional Water Quality Control Board for discharge to the storm system.

Both discharge permits require pre-testing of the water to determine if the water meets the respective City or Regional Water Quality Control Board (RWQCB) pollutant discharge limits. The water shall be analyzed by a State-certified laboratory for the suspected pollutants prior to discharge. Water that exceeds discharge limits (if any) shall be treated to reduce pollutant concentrations to acceptable levels prior to discharge. Based on the results of the analytical testing, the Project applicant shall work with the RWQCB and the local wastewater treatment plant to determine appropriate disposal options and then implement same. A copy of the discharge permit or NPDES permit, whichever is applicable, shall be submitted to the Director of Planning or Director's designee prior to the start of construction.

Hydrology and Water Quality:

- PDF HYD-1.1:** Consistent with applicable provisions of the General Plan, standard permit conditions that shall be implemented to prevent stormwater pollution and minimize potential sedimentation during construction include, but are not limited to, the following:
- Burlap bags filled with drain rock shall be installed around storm drains to route sediment and other debris away from the drains.
 - Earthmoving or other dust-producing activities shall be suspended during periods of high winds and when other dust reducing measures are ineffective.
 - All exposed or disturbed soil surfaces shall be watered at least twice daily to control dust as necessary.
 - Stockpiles of soil or other materials that can be blown by the wind shall be watered or covered.
 - All trucks hauling soil, sand, and other loose materials shall be covered and all trucks shall maintain at least two feet of freeboard.
 - All paved access roads, parking areas, staging areas and residential streets adjacent to the construction sites shall be swept daily (with water sweepers).
 - Vegetation in disturbed areas shall be replanted as quickly as possible.
 - All unpaved entrances to the Project Site shall be filled with rock to remove mud from tires prior to entering City streets. A tire wash system shall be installed if requested by the City.
 - The Project applicant shall comply with the City of San José Grading Ordinance, including implementing erosion and dust control during site preparation and with the applicable City of San José Zoning Ordinance requirements for keeping adjacent streets free of dirt and mud during construction.

Noise:

- PDF NOI-1:** The Project shall implement the following City of San José Standard Permit Conditions related to construction noise:
- Limit construction hours to between 7:00 AM and 7:00 PM, Monday through Friday, unless permission is granted with a development permit or other planning approval. No construction activities are permitted on the weekends at sites within 500 feet of a residence. Construction outside of these hours may be approved through a development permit based on a site-specific “construction noise mitigation plan” and a finding by the Director of PBCE that the construction noise mitigation plan is adequate to prevent noise disturbance of affected residential uses.

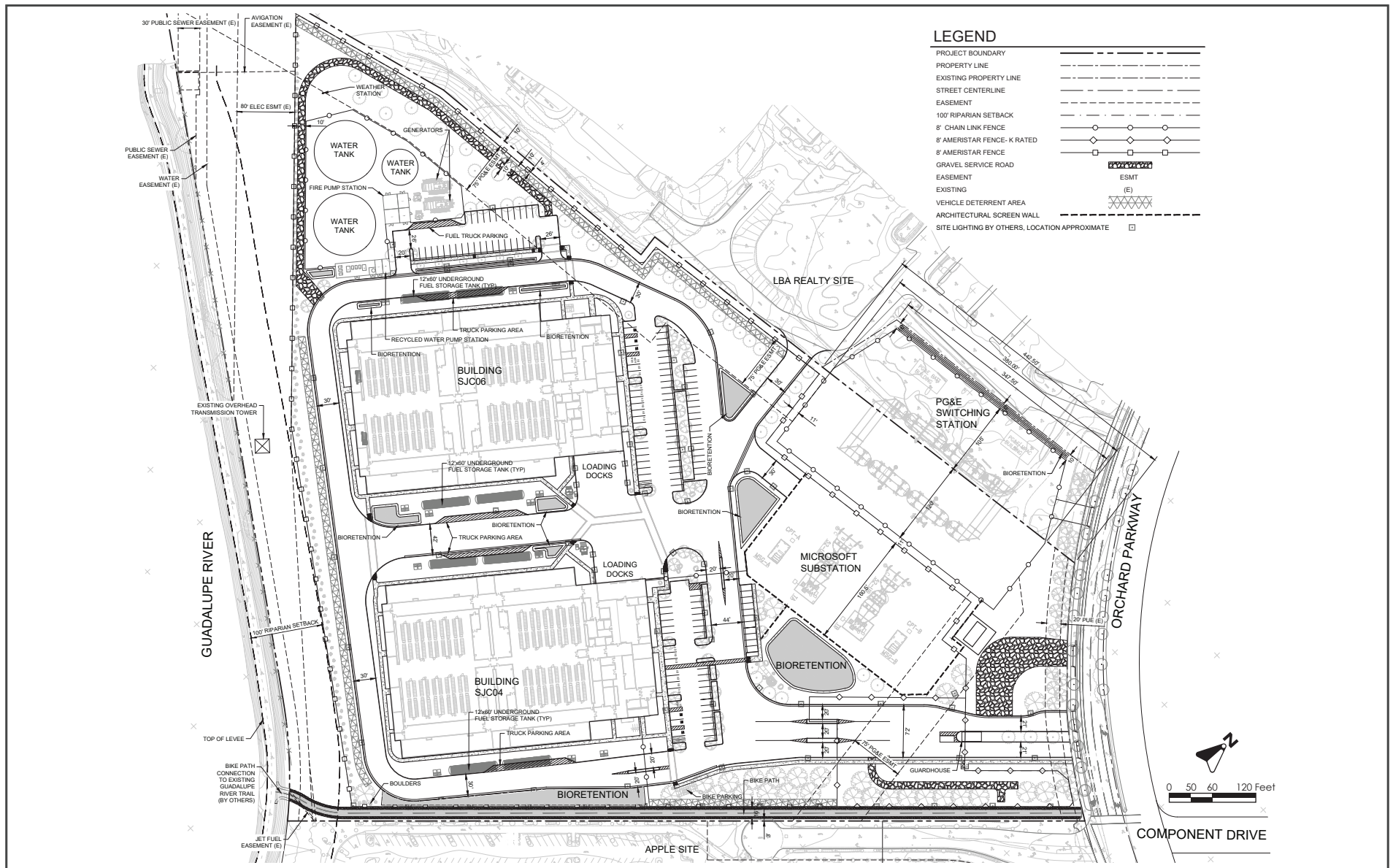
- Construct solid plywood fences around construction sites adjacent to operational business, residences, or other noise-sensitive land uses.
- Equip all internal combustion engine-driven equipment with intake and exhaust mufflers that are in good condition and appropriate for the equipment.
- Prohibit unnecessary idling of internal combustion engines.
- Locate stationary noise-generating equipment such as air compressors or portable power generators as far as possible from sensitive receptors (if any). Construct temporary noise barriers to screen stationary noise-generating equipment when located near adjoining sensitive land uses (if any).
- Utilize “quiet” air compressors and other stationary noise sources where technology exists.
- Control noise from construction workers’ radios to a point where they are not audible at existing residences bordering the Off-Site Infrastructure Areas.
- Notify all adjacent business, residences, and other noise-sensitive land uses of the construction schedule, in writing, and provide a written schedule of “noisy” construction activities to adjacent land uses and nearby residences.
- If complaints are received or excessive noise levels cannot be reduced using the measures above, erect a temporary noise control blanket barrier along surrounding building facades that face the construction sites.
- Designate a “disturbance coordinator” who shall be responsible for responding to any complaints about construction noise. The disturbance coordinator shall determine the cause of the noise complaint (e.g., bad muffler, etc.) and shall require that reasonable measures be implemented to correct the problem. Conspicuously post a telephone number for the disturbance coordinator at the construction site and include it in the notice sent to neighbors regarding the construction schedule.

Transportation:

PDF TRN-1:

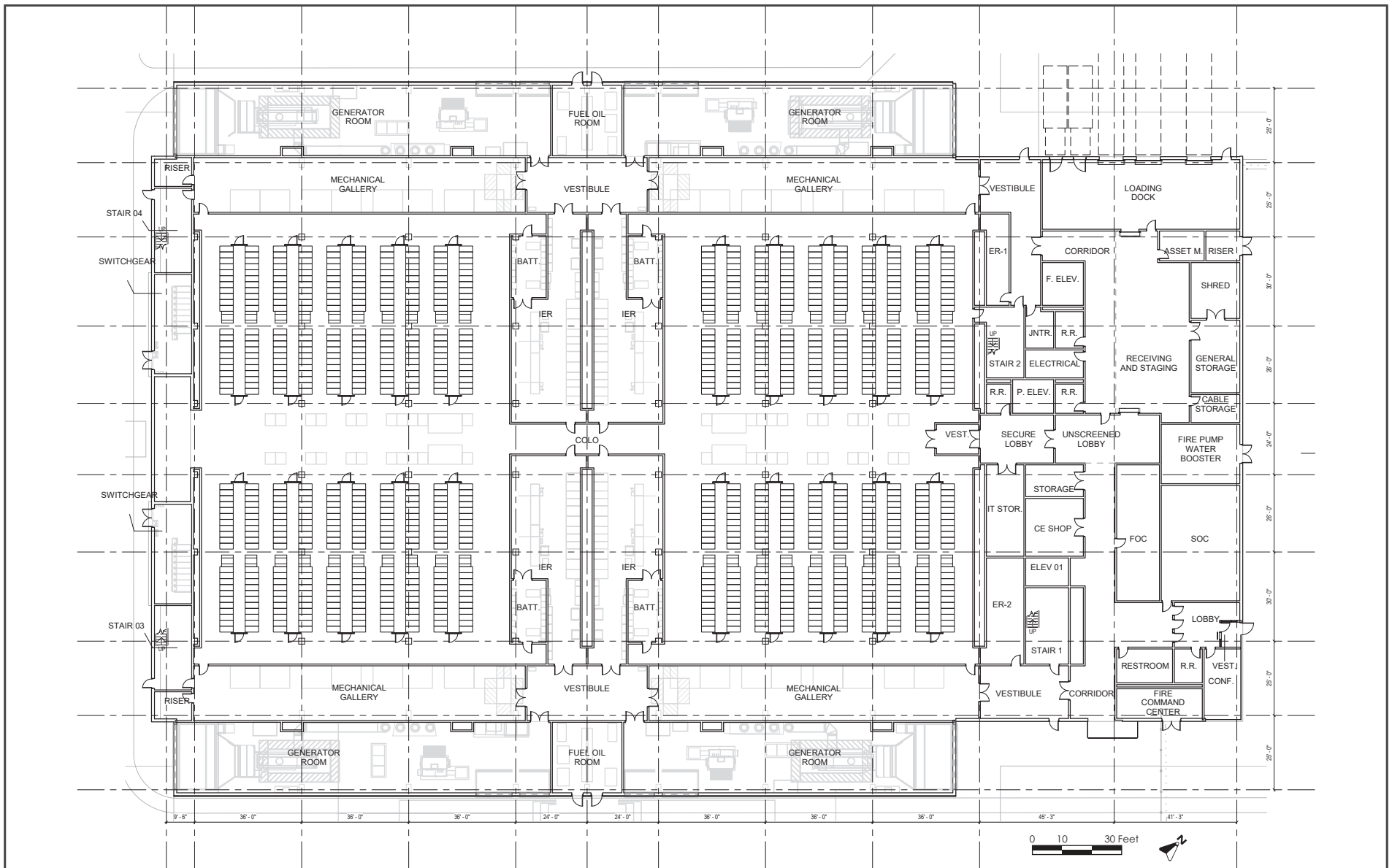
The Project shall implement the following VMT reduction measure.

- The Project shall limit the on-site parking supply (a Tier 3 VMT reduction measure) to mitigate the VMT impact. The Project shall provide a total of 148 vehicle parking spaces, which is 25 fewer spaces than what the City of San José Municipal Code requires. The Project shall request and obtain a parking exception from the City of San José Department of Planning, Building & Code Enforcement in order to qualify for the parking reduction.



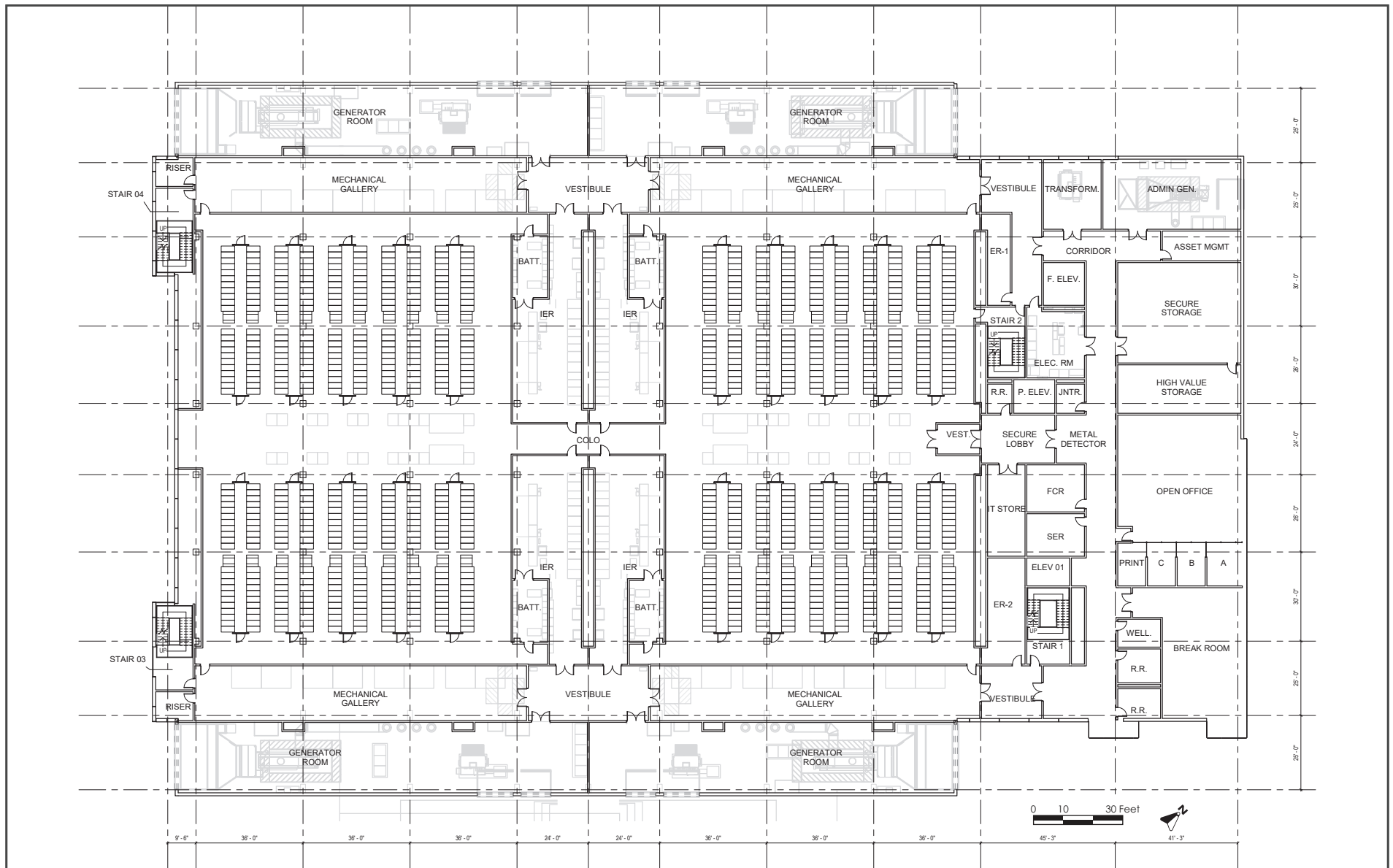
SITE PLAN

FIGURE 3.3-1



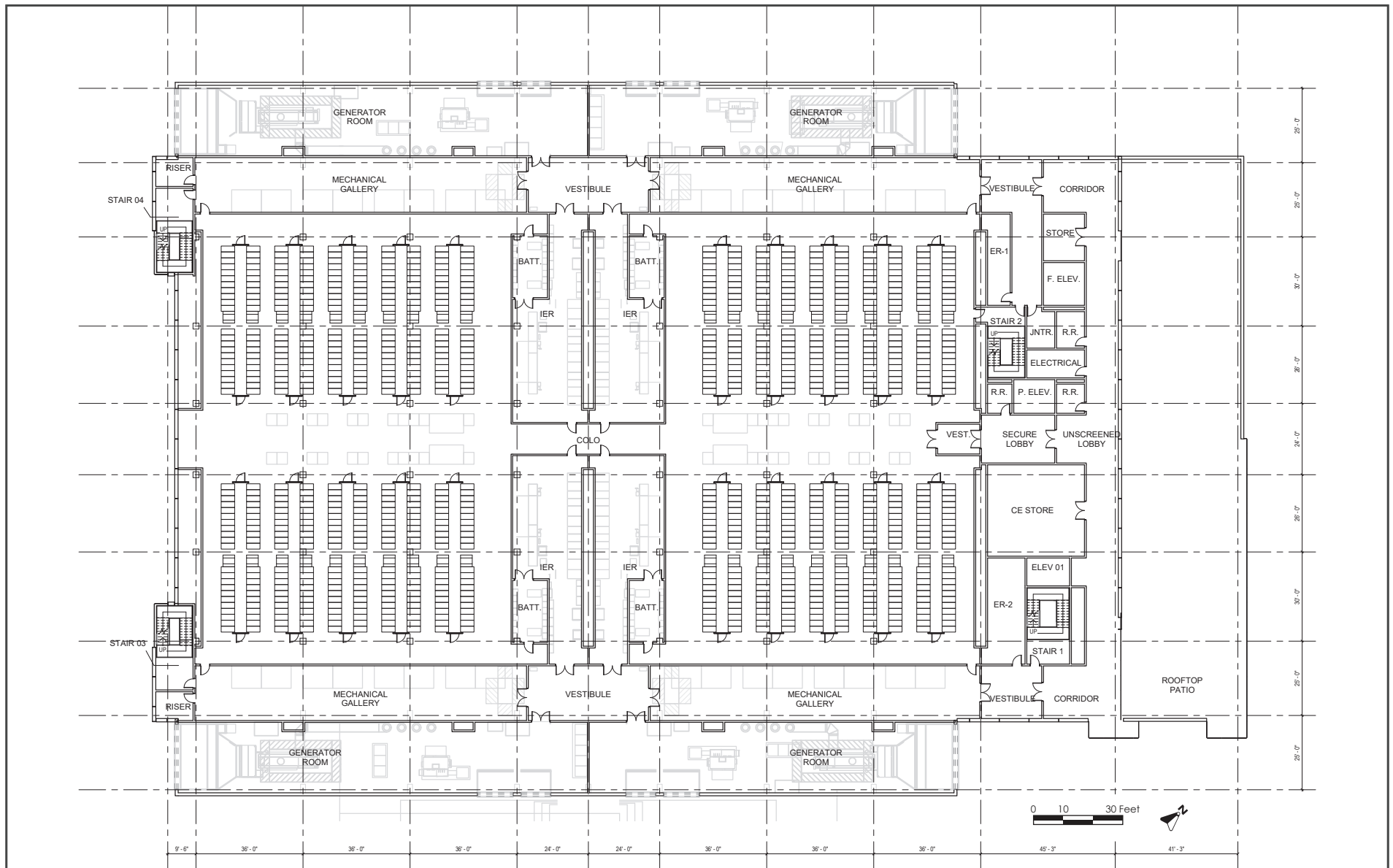
DATA CENTER BUILDING FIRST LEVEL FLOOR PLAN

FIGURE 3.3-2



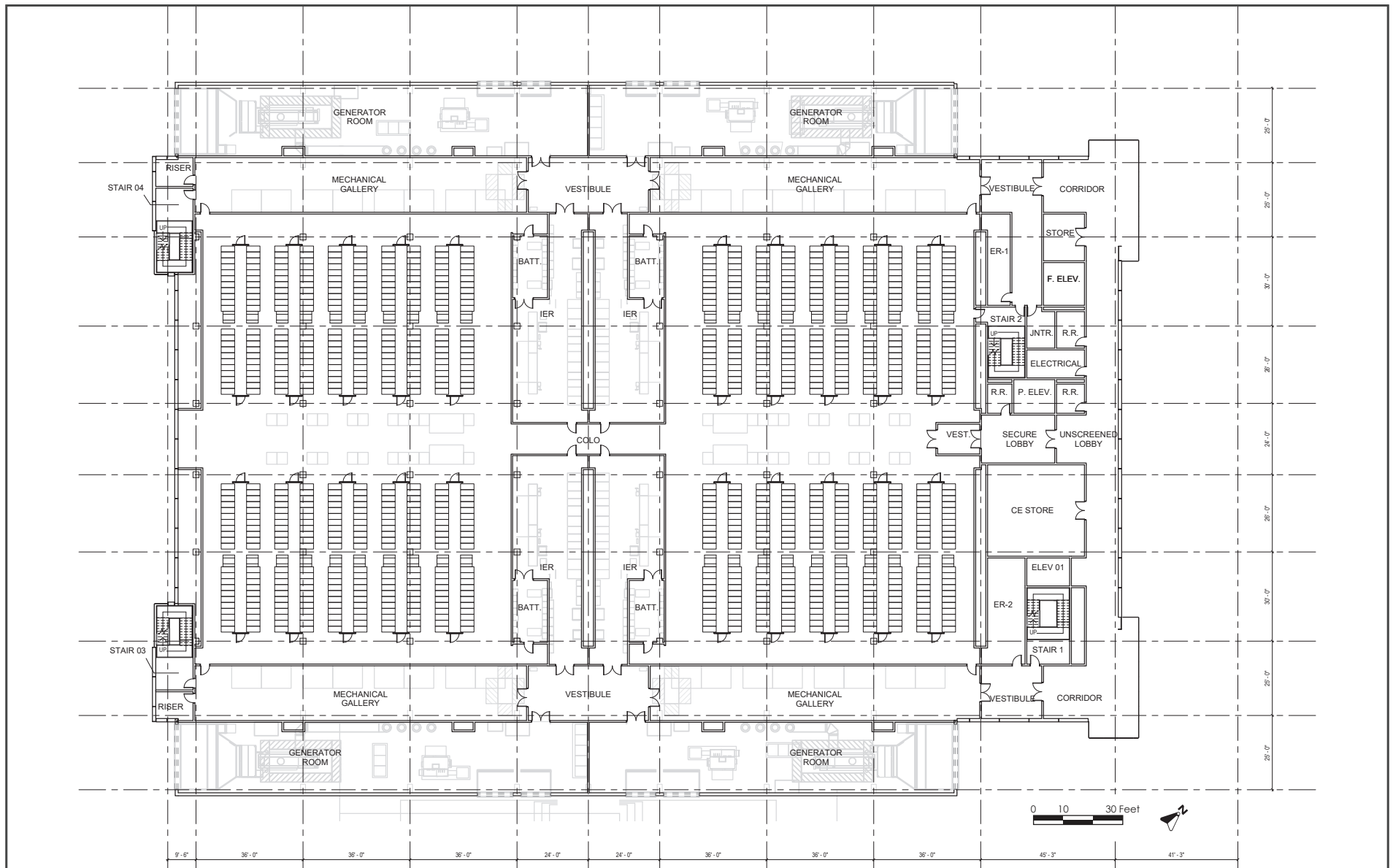
DATA CENTER BUILDING SECOND LEVEL FLOOR PLAN

FIGURE 3.3-3



DATA CENTER BUILDING THIRD LEVEL FLOOR PLAN

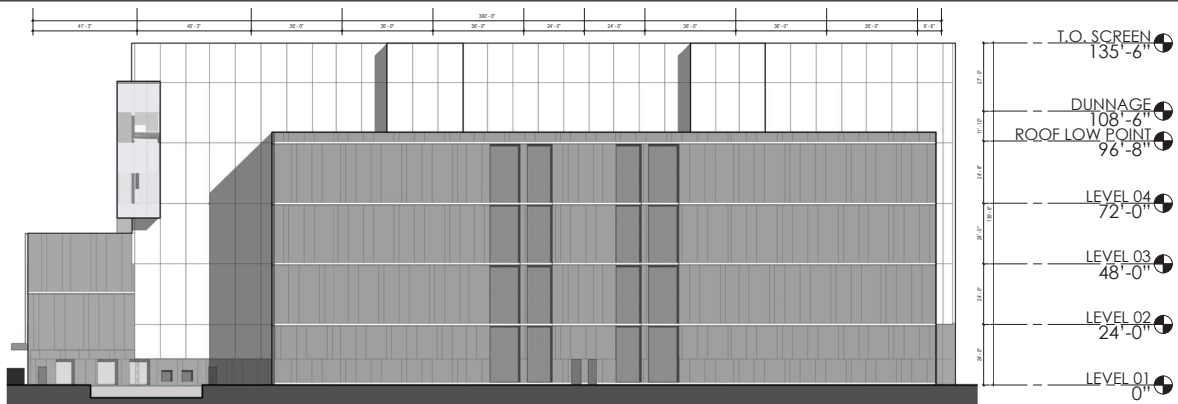
FIGURE 3.3-4



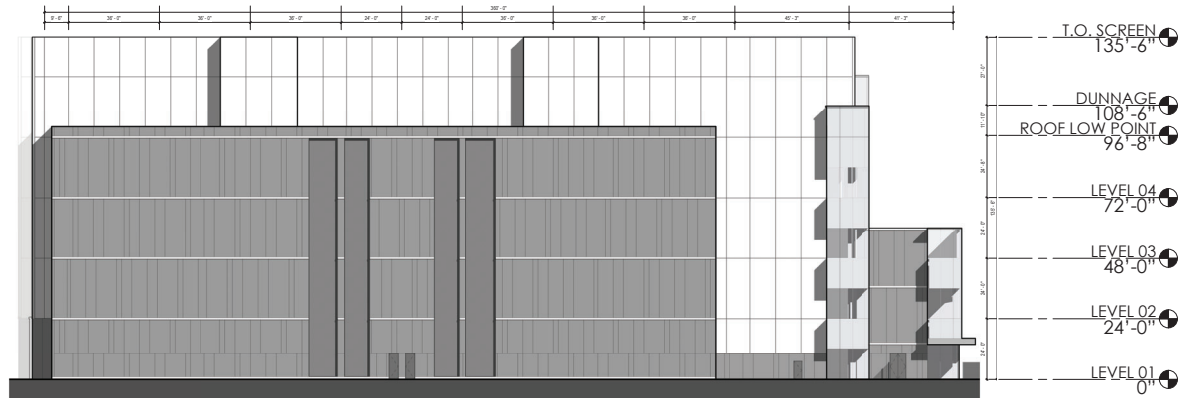
DATA CENTER BUILDING FOURTH LEVEL FLOOR PLAN

FIGURE 3.3-5

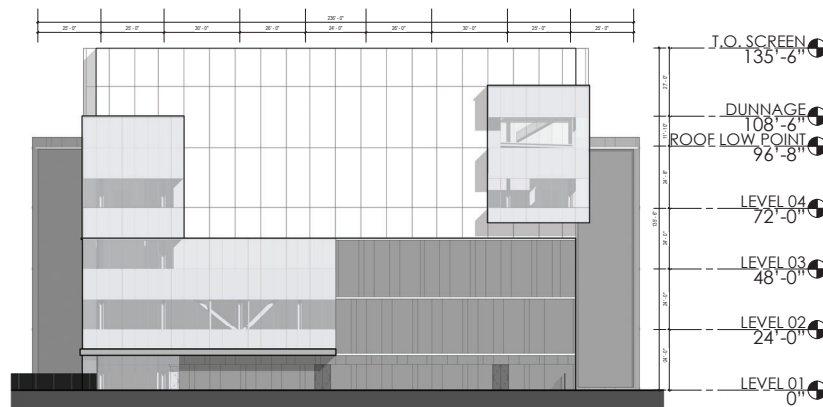




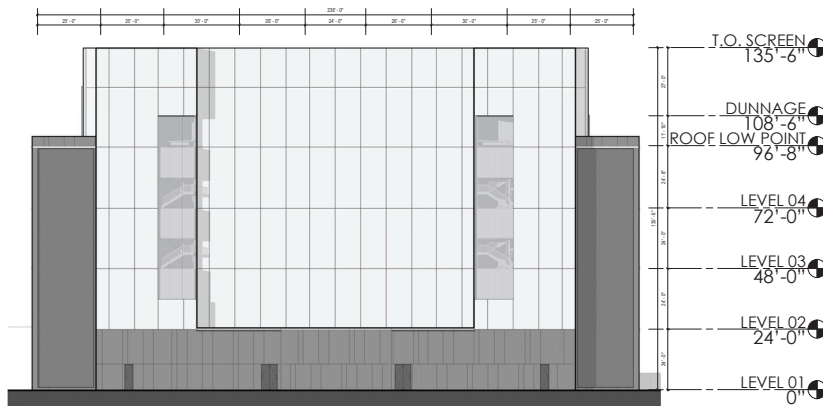
NORTH ELEVATION



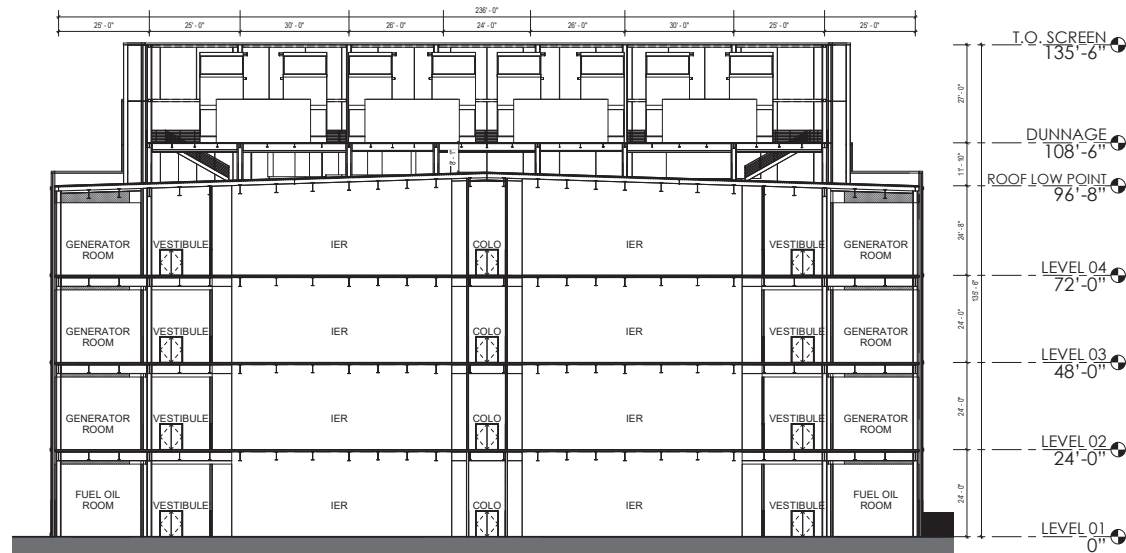
SOUTH ELEVATION



EAST ELEVATION



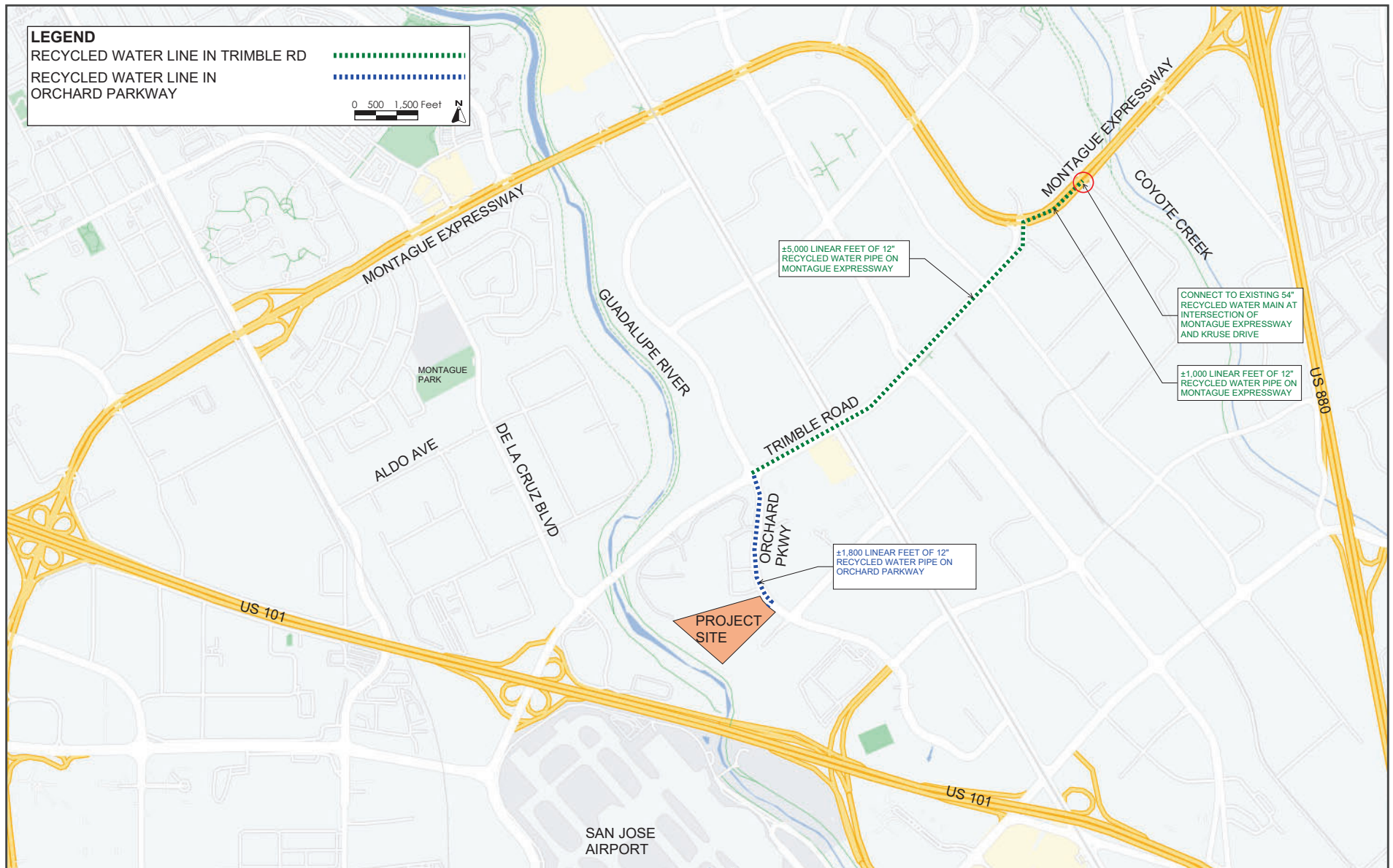
WEST ELEVATION



LONGITUDINAL AND TRANSVERSE SECTION BUILDING ELEVATIONS

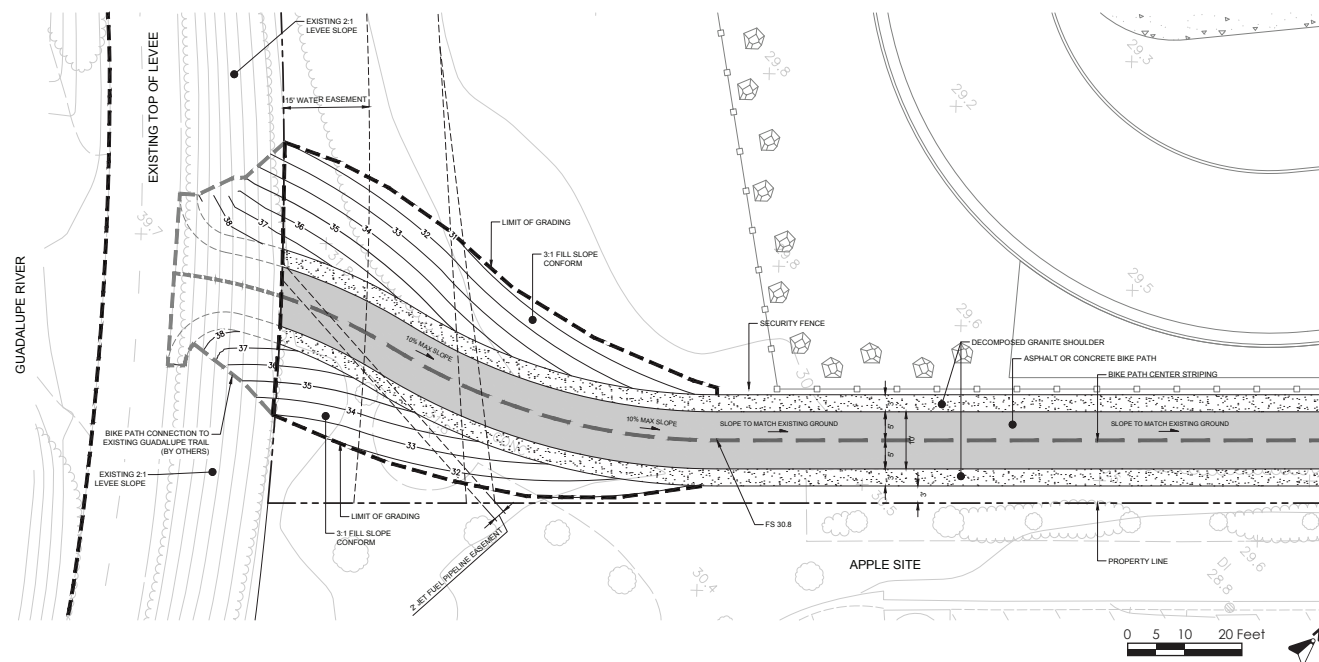
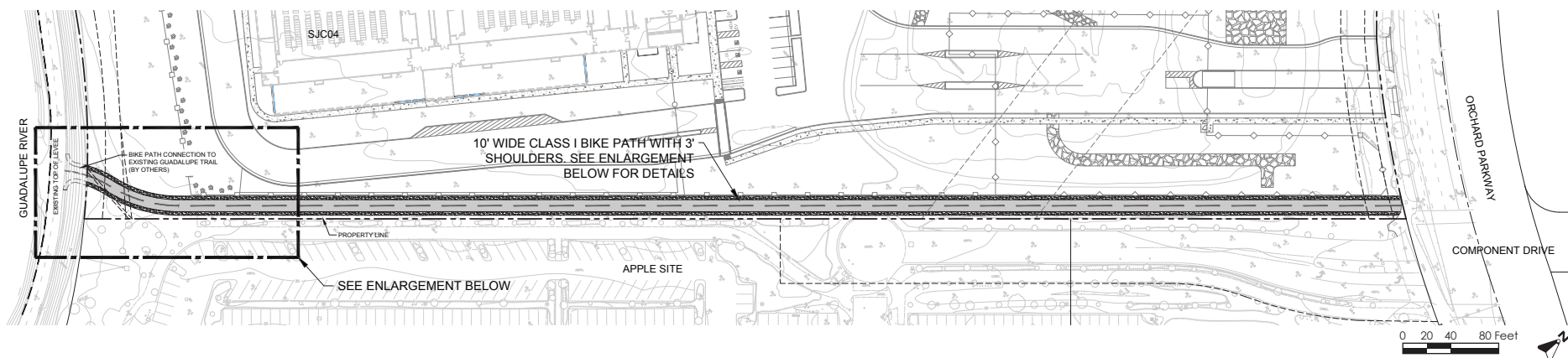
FIGURE 3.3-8





PROPOSED RECYCLED WATER LINE EXTENSION

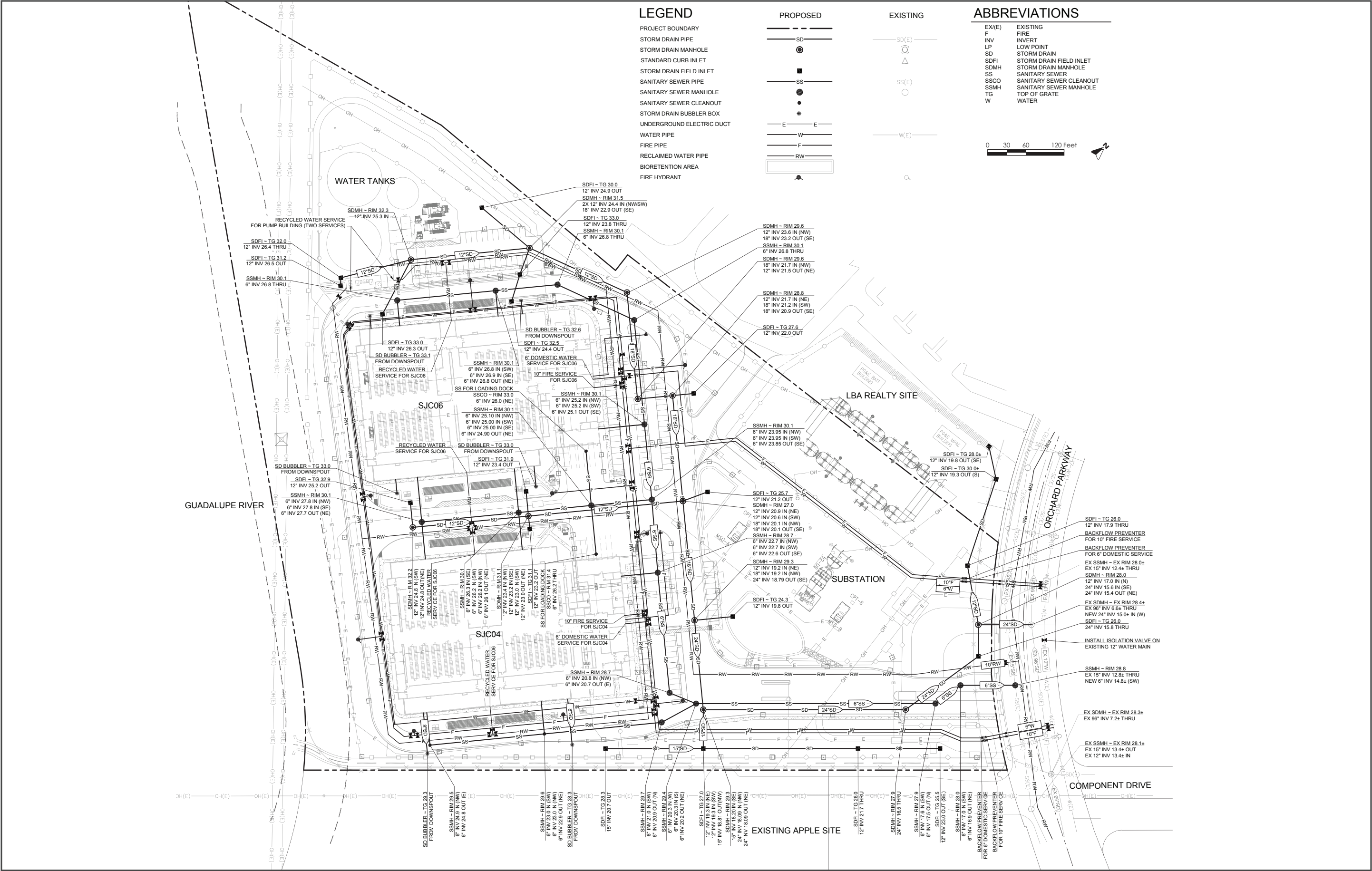
FIGURE 3.3-10



Source: HMM Engineers, August 19, 2022.

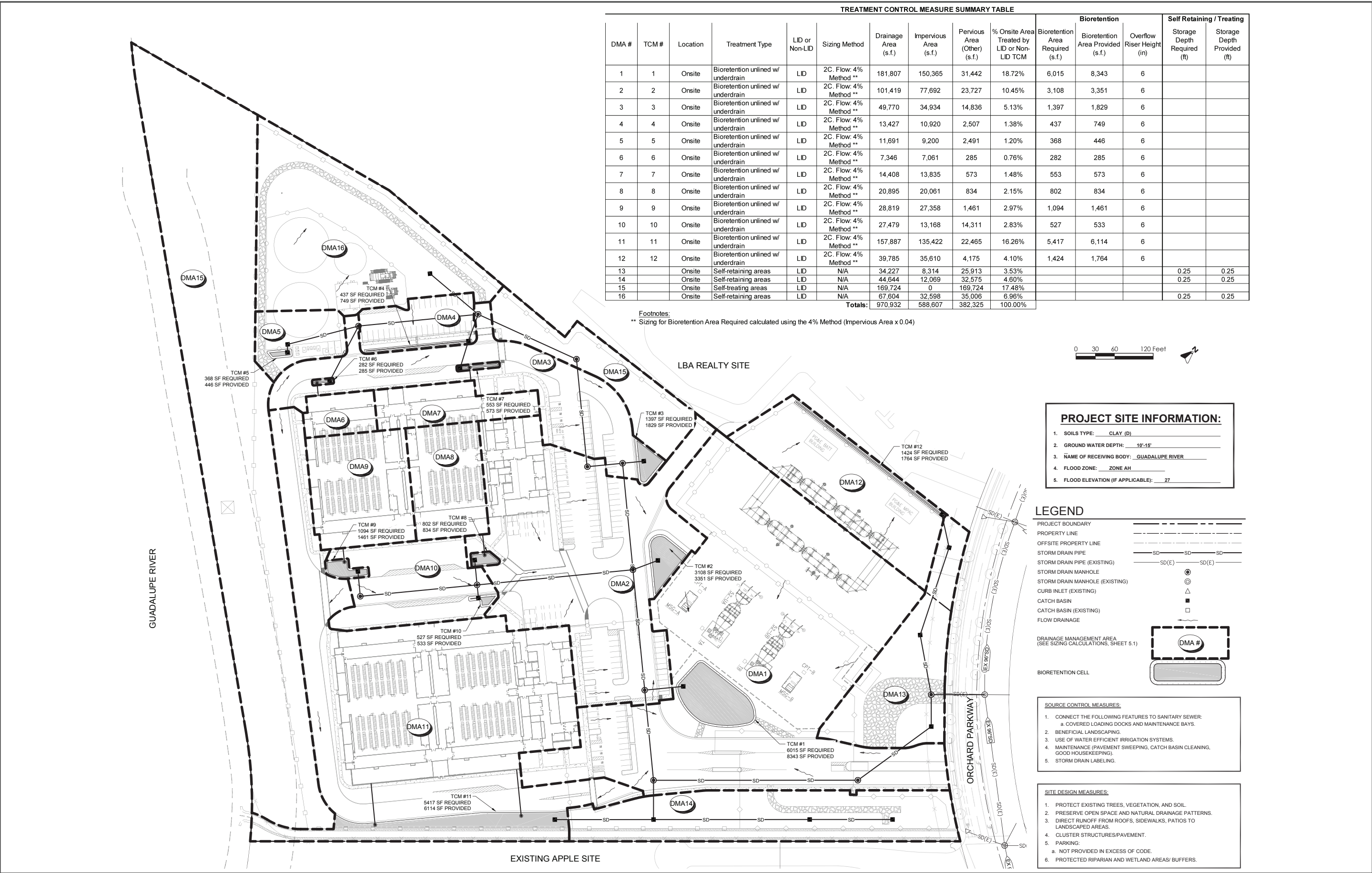
PROPOSED BIKE PATH

FIGURE 3.3-11



UTILITY PLAN

FIGURE 3.3-12



STORMWATER CONTROL PLAN

FIGURE 3.3-14

SECTION 4.0 ENVIRONMENTAL SETTING, IMPACTS, AND MITIGATION

This section presents the discussion of impacts related to the following environmental subjects in their respective subsections:

4.1	Aesthetics	4.11	Land Use and Planning
4.2	Agriculture and Forestry Resources	4.12	Mineral Resources
4.3	Air Quality	4.13	Noise
4.4	Biological Resources	4.14	Population and Housing
4.5	Cultural Resources	4.15	Public Services
4.6	Energy	4.16	Recreation
4.7	Geology and Soils	4.17	Transportation
4.8	Greenhouse Gas Emissions	4.18	Tribal Cultural Resources
4.9	Hazards and Hazardous Materials	4.19	Utilities and Service Systems
4.10	Hydrology and Water Quality	4.20	Wildfire
		4.21	Environmental Justice

The discussion for each environmental subject includes the following subsections:

Environmental Setting – This subsection 1) provides a brief overview of relevant plans, policies, and regulations that compose the regulatory framework for the Project and 2) describes the existing, physical environmental conditions at the Project Site, the Off-Site Infrastructure Areas, and in the surrounding area, as relevant.

Impact Discussion – This subsection includes the recommended checklist questions from Appendix G of the CEQA Guidelines to assess impacts.

- **Project Impacts** – This subsection discusses the Project’s impact on the environmental subject as related to the checklist questions. As described in Section 3.5, the Project will incorporate specified features into the design of the Project, referenced as “Project Design Features” (or PDFs). The analysis of potential impacts in this Section 4.0 incorporates the PDFs within the analysis to ensure that impacts are less than significant. The Project applicant understands that during the CEC’s CEQA review, these PDFs will be incorporated as either enforceable mitigation measures via the Project’s Mitigation, Monitoring and Reporting Plan (MMRP) or imposed as conditions of approval. Therefore, where the PDFs reduce an impact to less than significant, the analysis identifies the impacts as “less than significant”. Consistent with this understanding, some of the PDFs are identified as mitigation measures in the supporting technical reports that are included with this SPPE Application.
- **Cumulative Impacts** – This subsection discusses the Project’s cumulative impact on the environmental subject. Cumulative impacts, as defined by CEQA, refer to two or more individual effects, which when combined, compound or increase other environmental impacts. Cumulative impacts may result from individually minor, but collectively significant effects taking place over a period of time. CEQA Guideline Section 15130 states that an EIR

should discuss cumulative impacts “when the project’s incremental effect is cumulatively considerable.” The discussion does not need to be in as great detail as is necessary for project impacts, but is to be “guided by the standards of practicality and reasonableness.” The purpose of the cumulative analysis is to allow decision makers to better understand the impacts that might result from approval of past, present, and reasonably foreseeable future projects, in conjunction with the proposed Project addressed in this EIR.

The CEQA Guidelines advise that a discussion of cumulative impacts should reflect both their severity and the likelihood of their occurrence (CEQA Guidelines Section 15130(b)). To accomplish these two objectives, the analysis should include either a list of past, present, and probable future projects or a summary of projections from an adopted general plan or similar document (CEQA Guidelines Section 15130(b)(1)).

The analysis must determine whether the Project’s contribution to any cumulatively significant impact is cumulatively considerable, as defined by CEQA Guideline Section 15065(a)(3). The cumulative impacts discussion for each environmental subject accordingly addresses the following issues: 1) would the effects of all of past, present, and probable future development result in a significant cumulative impact on the resource in question; and, if that cumulative impact is likely to be significant, 2) would the contribution from the proposed project to that significant cumulative impact be cumulatively considerable?

For each resource area, cumulative impacts may occur over different geographic areas. For example, the Project’s effects on air quality would combine with the effects of projects in the entire air basin, whereas noise impacts would primarily be localized to the surrounding area. The geographic area that could be affected by the proposed Project varies depending upon the type of environmental subject being considered. Section 15130(b)(3) of the CEQA Guidelines states that lead agencies should define the geographic scope of the area affected by the cumulative effect. Table 4.0-2 provides a summary of the different geographic areas used to evaluate cumulative impacts.

Table 4.0-2: Geographic Considerations in Cumulative Analysis	
Resource Area	Geographic Area
Aesthetics	Project Site, Off-Site Infrastructure Areas , and adjacent parcels
Agriculture and Forestry Resources	Countywide
Air Quality	San Francisco Bay Area Air Basin
Biological Resources	Project Site, Off-Site Infrastructure Areas, and adjacent parcels
Cultural Resources	Project Site, Off-Site Infrastructure Areas, and adjacent parcels
Energy	Energy provider’s territory
Geology and Soils	Project Site, Off-Site Infrastructure Areas, and adjacent parcels
GHGs	Planet-wide

Table 4.0-2: Geographic Considerations in Cumulative Analysis	
Resource Area	Geographic Area
Hazards and Hazardous Materials	Project Site, Off-Site Infrastructure Areas, and adjacent parcels
Hydrology and Water Quality	Guadalupe River watershed
Land Use and Planning/Population and Housing	Citywide
Minerals	Identified mineral recovery or resource area
Noise and Vibration	Project Site, Off-Site Infrastructure Areas, and adjacent parcels
Public Services and Recreation	Citywide
Transportation/Traffic	Citywide
Tribal Cultural Resources	Project Site, Off-Site Infrastructure Areas, and adjacent parcels
Utilities and Service Systems	Citywide
Wildfire	Within or adjacent to the wildfire hazard zone

4.1 AESTHETICS

4.1.1 Environmental Setting

4.1.1.1 *Regulatory Framework*

State

Senate Bill 743

Senate Bill (SB) 743 was adopted in 2013 and requires lead agencies to use alternatives to level of service (LOS) for evaluating transportation impacts, specifically vehicle miles traveled (VMT). SB 743 also included changes to CEQA that apply to transit-oriented developments, as related to aesthetics and parking impacts. Under SB 743, a project's aesthetic impacts will no longer be considered significant impacts on the environment if:

- The project is a residential or mixed-use residential project, and
- The project is located on an infill site within a transit priority area.⁵

SB 743 also clarifies that even for qualifying projects, local governments retain their ability to regulate a project's aesthetics impacts outside of the CEQA process.

Streets and Highway Code Sections 260 through 263

The California Scenic Highway Program (Streets and Highway Code, Sections 260 through 263) is managed by the California Department of Transportation (Caltrans). The program is intended to protect and enhance the natural scenic beauty of California highways and adjacent corridors through special conservation treatment. There are no state-designated scenic highways in San José. Interstate 280 from the San Mateo County line to State Route (SR) 17, which includes segments in San José, is an eligible, but not officially designated, State Scenic Highway.⁶

In Santa Clara County, the one state-designated scenic highway is SR 9 from the Santa Cruz County line to the Los Gatos City Limit. Eligible State Scenic Highways (not officially designated) include SR 17 from the Santa Cruz County line to SR 9, SR 35 from Santa Cruz County line to SR 9, Interstate 280 from the San Mateo County line to SR 17, and the entire length of SR 152 within the County.

⁵ An "infill site" is defined as "a lot located within an urban area that has been previously developed, or on a vacant site where at least 75 percent of the perimeter of the site adjoins, or is separated only by an improved public right-of-way from, parcels that are developed with qualified urban uses." A "transit priority area" is defined as "an area within 0.5 mile of a major transit stop that is existing or planned, if the planned stop is scheduled to be completed within the planning horizon included in a Transportation Improvement Program or applicable regional transportation plan." A "major transit stop" means "a site containing an existing rail transit station, a ferry terminal served by either a bus or rail transit service, or the intersection of two or more major bus routes with a frequency of service interval of 15 minutes or less during the morning and afternoon peak commute periods." Source: Office of Planning and Research. "CEQA Review of Housing Projects Technical Advisory." January 2020. Accessed July 13, 2022. https://opr.ca.gov/docs/20190208-TechAdvisory-Review_of_Housing_Exemptions.pdf

⁶ California Department of Transportation. "Scenic Highways." Accessed July 13, 2022. <https://dot.ca.gov/programs/design/lap-landscape-architecture-and-community-livability/lap-liv-i-scenic-highways>.

Local

Envision San José 2040 General Plan

The General Plan includes the following policies that are specific to aesthetic resources and relevant to this analysis:

Envision San José 2040 General Plan Relevant Aesthetics Policies

Policy	Description
CD-1.1	Require the highest standards of architecture 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.
CD-1.8	Create an attractive street presence with pedestrian-scaled building and landscaping elements that provide an engaging, safe, and diverse walking environment. Encourage compact, urban design, including use of smaller building footprints, to promote pedestrian activity throughout the City.
CD-1.12	Use building design to reflect both the unique character of a specific site and the context of surrounding development and to support pedestrian movement throughout the building site by providing convenient means of entry from public streets and transit facilities where applicable, and by designing ground level building frontages to create an attractive pedestrian environment along building frontages. Unless it is appropriate to the site and context, franchise-style architecture is strongly discouraged.
CD-1.13	Use design review to encourage creative, high-quality, innovative, and distinctive architecture that helps to create unique, vibrant places that are both desirable urban places to live, work, and play and that lead to competitive advantages over other regions.
CD-1.17	Minimize the footprint and visibility of parking areas. Where parking areas are necessary, provide aesthetically pleasing and visually interesting parking garages with clearly identified pedestrian entrances and walkways. Encourage designs that encapsulate parking facilities behind active building space or screen parked vehicles from view from the public realm. Ensure that garage lighting does not impact adjacent uses, and to the extent feasible, avoid impacts of headlights on adjacent land uses.
CD-1.23	Further the Community Forest Goals and Policies in this Plan by requiring new development to plant and maintain trees at appropriate locations on private property and along public street frontages. Use trees to help soften the appearance of the built environment, help provide transitions between land uses, and shade pedestrian and bicycle areas.

Envision San José 2040 General Plan Relevant Aesthetics Policies

Policy	Description
CD-10.2	Require that new public and private development adjacent to Gateways and freeways (including 101, 880, 680, 280, 17, 85, 237, and 87), and Grand Boulevards consist of high-quality materials, and contribute to a positive image of San José.
CD-10.3	Require that development visible from freeways (including 101, 880, 680, 280, 17, 85, 237, and 87) is designed to preserve and enhance attractive natural and man-made vistas.

City Design Guidelines and Design Review Process

Nearly all new private development is subject to a design review process (architecture and site planning). The design review process is used to evaluate projects for consistency with adopted design guidelines to assist those involved with the design, construction, review and approval of development in San José. Adopted design guidelines include Residential, Industrial, Commercial, Downtown/Historic, and Downtown Design Guidelines.

City Council Private Outdoor Lighting Policy 4-3

On March 1, 1983, the City of San José implemented the Outdoor Lighting on Private Development policy. The purpose of the policy is to promote energy-efficient outdoor lighting on private development in the City of San José that provides adequate light for nighttime activities, while benefiting from the continued enjoyment of the night sky and continuing operation of the Lick Observatory by reducing light pollution and sky glow.

4.1.1.2 Existing Conditions

Project Site and Off-site Infrastructure Areas

The approximately 22.29-acre Project Site is a vacant parcel located at the northwest corner of the intersection of Orchard Parkway and Component Drive, in an industrial area of North San José. The site is predominantly covered by ruderal vegetation, non-native grasses and intermittent trees and shrubs. Chain-link fences border the Project Site on the east, south, and west sides. Rows of street trees are planted along Orchard Parkway at the eastern boundary of the site. The Project Site is visible from US 101, Orchard Parkway, and the Guadalupe River trail.

The Off-Site Infrastructure Areas consist of public right of way along Orchard Parkway and Trimble Road and the public rights of way along the proposed new recycled water pipeline route described in Section 3.3.6.1.

Surrounding Uses

The Project Site is directly adjacent to an occupied light industrial campus to the north. This campus consists of five main buildings composed of manufacturing facilities, chemical storage areas, wastewater treatment areas, offices, a cafeteria, surface parking lots, recreational facilities, outdoor

seating areas, and landscaping. The existing buildings are one- to three-stories in height and exhibit contemporary architectural forms, patterns and building materials.

The Project Site is located north of a vacant office building and surface parking lot, east and north of the Guadalupe River and river trail, and west of a vacant lot (across Orchard Parkway). Development in the vicinity of the Project Site consists predominantly of industrial/office campuses with large surface parking lots and perimeter landscaping, and smaller locally serving commercial uses interspersed throughout. The Norman Y. Mineta San José International Airport is located approximately 0.2-mile southwest of the Project Site, on the south side of US 101.

Scenic Views

The General Plan defines scenic vistas or resources in the City of San José as broad views of the Santa Clara Valley, the hills and mountains surrounding the valley, the urban skyline, and the baylands. Panoramic views of hillside areas, including the foothills of the Diablo Range, Silver Creek Hills, Santa Teresa Hills, and foothills of the Santa Cruz Mountains, are identified as key scenic features in the City. The Project Site and vicinity have minimal to no scenic views of the Diablo foothills to the northeast, Santa Cruz Mountains to the southwest, and Santa Teresa Hills to the south. No natural scenic resources, such as rock outcroppings, are present on-site, within the Off-Site Infrastructure Areas, or in the vicinity of the Project Site.

Scenic Corridors

The City's General Plan identifies Gateways and Urban Throughways (urban corridors) where preservation and enhancement of views of the natural and man-made environment are crucial.⁷ The nearest Gateway segment to the Project Site (as well as the Off-Site Infrastructure Areas) is North First Street from Brokaw Road to Trimble Road, approximately 0.4-mile east of the Project Site. Urban Throughways include Interstate 680, Interstate 880, US 101, SR 237, and SR 87. The nearest Urban Throughway to the Project Site (as well as the Off-Site Infrastructure Areas) is US 101, located approximately 0.4-mile south of the Project Site.

Neither the Project Site nor the Off-Site Infrastructure Areas are located near the eastern part of the City; therefore, these are not visible from any Rural Scenic Corridor.⁸ There are no state-designated scenic highways in San José. The nearest officially designated state scenic highway to the Project Site is SR 9, located approximately 10 miles southwest of the Project Site.⁹ Interstate 280 from the San Mateo County line to SR 17, which includes segments of San José, is an eligible, but not officially designated, State Scenic Highway.¹⁰ The Project Site is approximately four miles northeast of that segment.

⁷ City of San José. *Envision San José 2040 General Plan Draft Program Environmental Impact Report*. June 2011. Page 717. <https://www.sanjoseca.gov/home/showpublisheddocument/22041/636688304350830000>

⁸ City of San José. "Scenic Corridors Diagram". June 6, 2016. Accessed July 13, 2022.

<https://www.sanjoseca.gov/home/showpublisheddocument/22565/636688980487230000>

⁹ California Department of Transportation. "Scenic Highways." Accessed July 13, 2022.

<https://dot.ca.gov/programs/design/lap-landscape-architecture-and-community-livability/lap-liv-i-scenic-highways>.

¹⁰ The segment at SR 17 is the same segment identified as the City's Urban Throughways.

Light and Glare

The existing Project Site is vacant and does not contribute to ambient lighting in the area. The main source of light in the vicinity of the Project Site is parking lot lighting in the light industrial campus to the north. Streetlights and other lighting sources are found throughout the vicinity of the Project Site.

The Off-Site Infrastructure Areas consist of public right of way along Orchard Parkway and Trimble Road. Sources of light and glare along the offsite infrastructure improvement areas and in the area surrounding the Project Site are those typical of developed urban areas, including headlights, streetlights, parking lot lights, security lights, and reflective surfaces such as windows.

4.1.2 Impact Discussion

For the purpose of determining the significance of the Project's impact on aesthetics, except as provided in Public Resources Code Section 21099, would the Project:

- 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?¹¹ 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?

4.1.2.1 *Project Impacts*

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

The Project would be located in an area of North San José primarily developed with industrial and office uses. It would not be located within or adjacent to a scenic viewshed. As discussed in Section 4.1.1.2 Existing Conditions, the closest designated state scenic highway is SR 9, located approximately 10 miles southwest of the Project Site, which is not visible from SR 9 and scenic vistas within this highway would be unaffected by the proposed Project.

The Project would be visible from surrounding roadways, including West Trimble Road and Orchard Parkway, US 101, nearby properties, and the Guadalupe River Trail. The proposed Project would construct data center buildings up to approximately 136 feet tall. The taller buildings would be situated adjacent to the nearby industrial campus to the north. While the proposed development may partially block views from existing adjacent businesses and the Guadalupe River Trail, the existing views in the project area, which is located in a flat, developed urban area, are not considered scenic vistas. Therefore, the Project would not significantly impact any scenic vistas. **(Less than Significant Impact)**

¹¹ Public views are those that are experienced from publicly accessible vantage points.

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

The Project would not be located along a state scenic highway. The nearest state scenic highway is SR 9, located approximately 10 miles southwest of the Project Site, which consists primarily of ruderal vegetation, non-native grasses, and trees along the western and northern boundaries. No scenic resources such as heritage trees, rock outcroppings or historic buildings are present on the Project Site.^{12,13} The offsite infrastructure improvements would include underground pipelines in the rights of way of existing roads and therefore would not damage scenic resources. The Project would mitigate for the removal of all protected trees removed in accordance with the City's tree replacement ratios (refer to Section 4.4 Biological Resources). Therefore, the proposed Project would not significantly impact scenic resources. **(Less than Significant Impact)**

c) In non-urbanized areas, would the Project substantially degrade the existing visual character or quality of public views of the site and its surroundings? If the Project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?

The Project Site is within an urbanized area. The proposed Project would be required to conform to the applicable design criteria set forth in the North San José Area Development Policy, as well as the applicable policies and actions set forth in the Envision San José 2040 General Plan. The proposed Project would be subject to the applicable setback, massing, height, and material requirements included in the North San José Design Guidelines and the applicable development standards set forth in the San José Municipal Code. Consistent with the conclusions set forth in the 2040 General Plan EIR, the Project (which is consistent with the industrial uses contemplated by the General Plan) would be required to implement applicable policies and regulations (including the City's Design Guidelines), which would avoid substantial degradation of the visual character of the City. The proposed Project would be reviewed in accordance with the North San José Design Guidelines and Industrial Design Guidelines during the Planning Permit stage as part of the City's planning and design review. Implementation of the proposed Project, consistent with existing policies, regulations, and adopted plans would not result in a substantial degradation of the visual character of the area and would not conflict with applicable regulations governing scenic quality. **(Less than Significant Impact)**

¹² City of San José. "Heritage Trees." Map. Accessed July 13, 2022.

<https://csj.maps.arcgis.com/apps/webappviewer/index.html?id=5d556fc20dad4a8b88eb9ee813f95ee9>.

¹³ City of San José. "Historic Resource Inventory." Accessed April 20, 2020. <https://www.sanjoseca.gov/your-government/departments/planning-building-code-enforcement/planning-division/historic-preservation/historic-resources-inventory>

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

The proposed Project would include new lighting for security purposes, including outdoor lighting of driveways and walkways, as well as light from vehicles. However, the increase in night lighting from this new development would not significantly increase the ambient light levels in the area, which are already dominated by existing light sources from surrounding industrial/office uses and roadways. Pole-mounted lighting and fixtures included in the Project would meet the applicable design and height standards of City Lighting Policy 4-3 and would be directed away from the Guadalupe River. The design of the proposed Project would be subject to the City's design review process and would be required to utilize exterior materials that do not result in daytime glare, consistent with relevant General Plan policies and the City's Design Guidelines. Therefore, the proposed Project would have a less than significant light and glare impact. **(Less than Significant Impact)**

4.1.2.2 Cumulative Impacts

Would the Project result in a cumulatively considerable contribution to a significant cumulative aesthetics impact?

The geographic area for cumulative aesthetic impacts is limited, given the flat topography of the Project Site (as well as the Off-Site Infrastructure Areas) and adjacent properties in which the Project Site would be visible. As discussed above, the Project Site is not located along or visible from a designated state scenic highway or a scenic vista. As discussed previously, the Envision San José 2040 General Plan includes standards, policies, and guidelines to reduce impacts to scenic views and resources.

All cumulative projects occurring in the vicinity of the Project are urban in nature (primarily industrial and office uses) and would be subject to applicable General Plan policies, development standards under the Zoning Code, the design review process to ensure consistency with applicable design guidelines (depending on the proposed use and location), as well as adherence to applicable lighting standards, and signage regulations. By requiring all cumulative projects to adhere to the aforementioned measures, guidelines, and requirements, aesthetic impacts would be minimized or reduced. All cumulative projects would undergo individual review to ensure that site selection, building materials, heights, and lighting is implemented in a manner that does not result in significant visual impacts. For these reasons, there would not be a significant cumulative aesthetic or visual impact. Furthermore, the proposed Project's contribution to this already less than significant cumulative impact would not be cumulatively considerable. **(Less than Significant Cumulative Impact)**

4.2 AGRICULTURE AND FORESTRY RESOURCES

4.2.1 Environmental Setting

4.2.1.1 *Regulatory Framework*

State

Farmland Mapping and Monitoring Program

The California Department of Conservation's Farmland Mapping and Monitoring Program (FMMP) assesses the location, quality, and quantity of agricultural land and conversion of these lands over time. Agricultural land is rated according to soil quality and irrigation status. The best quality land is identified as Prime Farmland. In CEQA analyses, the FMMP classifications and published county maps are used, in part, to identify whether agricultural resources that could be affected are present on-site or in the vicinity of the project.¹⁴

California Land Conservation Act

The California Land Conservation Act (Williamson Act) enables local governments to enter into contracts with private landowners to restrict parcels of land to agricultural or related open space uses. In return, landowners receive lower property tax assessments. In CEQA analyses, identification of properties that are under a Williamson Act contract is used to also identify sites that may contain agricultural resources or are zoned for agricultural uses.¹⁵

Fire and Resource Assessment Program

The California Department of Forestry and Fire Protection (CAL FIRE) identifies forest land, timberland, and lands zoned for timberland production that can (or do) support forestry resources.¹⁶ Programs such as CAL FIRE's Fire and Resource Assessment Program are used to identify whether forest land, timberland, or timberland production areas that could be affected are located on or adjacent to a Project Site.¹⁷

4.2.1.2 *Existing Conditions*

According to Santa Clara County Office of the Assessor, the Project Site (as well as the Off-Site Infrastructure Areas) are not subject to a Williamson Act contract.¹⁸ According to the Santa Clara County Important Farmlands 2018 Map, the majority of the Project Site is designated as *Other Land*,

¹⁴ California Department of Conservation. "Farmland Mapping and Monitoring Program." July 14, 2022 <http://www.conservation.ca.gov/dlrp/fmmp/Pages/Index.aspx>.

¹⁵ California Department of Conservation. "Williamson Act." <http://www.conservation.ca.gov/dlrp/lca>.

¹⁶ Forest Land is land that can support 10 percent native tree cover and allows for management of forest resources (California Public Resources Code Section 12220(g)); Timberland is land not owned by the federal government or designated as experimental forest land that is available for, and capable of, growing trees to produce lumber and other products, including Christmas trees (California Public Resources Code Section 4526); and Timberland Production is land used for growing and harvesting timber and compatible uses (Government Code Section 51104(g)).

¹⁷ California Department of Forestry and Fire Protection. "Fire and Resource Assessment Program." Accessed July 14, 2022. <http://frap.fire.ca.gov/>.

¹⁸ Agricultural lands in California can be protected from development and reserved for agricultural purposes or open-space conservation under the California Land Conservation Act, commonly known as the Williamson Act.

while the northern most section of the Project Site and the Off-Site Infrastructure Areas are designated as *Urban and Built-Up Land*.¹⁹ *Other Land* is defined as land not included in any other mapping category. Common examples include low density rural developments; brush, timber, wetland, and riparian areas not suitable for livestock grazing; confined livestock, poultry or aquaculture facilities; strip mines, borrow pits; and water bodies smaller than 40 acres. *Urban and Built-Up Land* is defined as land with at least six structures per 10 acres and utilized for residential, institutional, industrial, commercial, landfill, golf course, and other urban-related purposes.

The Project Site (as well as the Off-Site Infrastructure Areas) and surrounding properties are designated for and developed (or planned to be developed) with urban uses. The Project Site has been designated under the General Plan as CIC Combined Industrial/Commercial and Industrial Park and the City's Zoning Code as CIC Combined Industrial/Commercial, and the Off-Site Infrastructure Areas are all within existing roadways. There are no agricultural or forest lands in the vicinity of the Project Site.

4.2.2 **Impact Discussion**

For the purpose of determining the significance of the Project's impact on agriculture and forestry resources, would the Project:

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

4.2.2.1 ***Project Impacts***

-
- a) **Would the Project convert Farmland, as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?**
-

According to the Santa Clara County Important Farmland 2018 Map, the Project Site (as well as the Off-Site Infrastructure Areas) are designated as *Other Land* and *Urban and Built-Up Land*. The Project, therefore, would not convert Farmland to non-agricultural use. **(No Impact)**

¹⁹ California Department of Conservation. *Santa Clara County Important Farmland 2018 Map*. <https://maps.conservation.ca.gov/DLRP/CIFF/>. Accessed July 14, 2022.

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

The site is currently zoned CIC Combined Industrial/Commercial. According to Santa Clara County Office of the Assessor, the Project Site (as well as the Off-Site Infrastructure Areas) are not subject to a Williamson Act contract. The Project, therefore, would not conflict with existing zoning for agricultural use, or a Williamson Act contract. **(No Impact)**

c) Would the Project conflict with existing zoning for, or cause rezoning of, forest land, timberland, or timberland zoned Timberland Production?

The Project Site is currently zoned CIC Combined Industrial/Commercial, and the Project is not seeking to rezone any lands. The Off-Site Infrastructure Areas are within existing roadways. The Project, therefore, would not conflict with existing zoning for, or cause rezoning of, forest land, timberland, or timberland zoned Timberland Production. **(No Impact)**

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

No forest land is located on or adjacent to the Project Site (including the Off-Site Infrastructure Areas). The Project, therefore, would not result in a loss of forest land or conversion of forest land to non-forest use. **(No Impact)**

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?

As described above, no Farmland or forest land is located on or near the Project Site. The Project, therefore, would not involve other changes in the existing environment which could result in conversion of farmland to non-agricultural use or conversion of forest land to non-forest use. **(No Impact)**

4.2.2.2 Cumulative Impacts

Would the Project result in a cumulatively considerable contribution to a significant cumulative agricultural and forestry resources impact?

The geographic area for cumulative agricultural and forestry resource impacts is the County of Santa Clara. The project would have no impact on agricultural and forestry resources and, therefore, the project has no potential to combine with other projects to result in cumulative impacts to these resources. **(No Cumulative Impact)**

4.3 AIR QUALITY

This section was prepared by Atmospheric Dynamics, Inc. and presents the evaluation of emissions and impacts resulting from the construction and operation of the Project. The Project involves the construction of data center uses (as described more fully above, Project Description), including the backup generating facilities to support the data center uses to provide emergency backup power, which would be comprised of 36 diesel engines. This section also presents the proposed Project Design Features (PDFs) to be used in order to minimize emissions and limit impacts to below established significance thresholds. This section is based upon an analysis prepared by Atmospheric Dynamics, Inc. in accordance with the California Energy Commission (CEC) application requirements for a Small Power Plant Exemption (SPPE) pursuant to the power plant siting regulations, and the rules and regulations of the Bay Area Air Quality Management District (BAAQMD or District). The Air Quality Impact Assessment proposes certain mitigation measures that Microsoft has incorporated herein as PDFs.

The following Appendices contain support data for the Air Quality and Public Health analyses.

Appendix AQ-1 – Emissions Data for Criteria and Toxic Pollutants

Appendix AQ-2 – Equipment Specifications and Emissions Control System Information

Appendix AQ-3 – Air Quality Impact Modeling Support Data

Appendix AQ-4 – Construction and Miscellaneous Emissions Evaluation and Support Data

Appendix AQ-5 – Risk Assessment Support Data

4.3.1 Environmental Setting

Air quality in the San Francisco Bay Area Air Basin (SFBAAB) is typically better than most other areas of the state, due to its proximity to the Pacific Ocean and the weather patterns that dominate the region. The summer climate of the west coast and the Bay Area region is dominated by a semi-permanent high pressure centered over the northeastern Pacific Ocean. Because this high-pressure cell is quite persistent, storms rarely affect the California coast during the summer. Thus, the conditions that persist along the coast of California during summer are a northwest air flow and negligible precipitation. A thermal low-pressure area from the Sonoran-Mojave Desert also causes air to flow onshore over the San Francisco Bay Area much of the summer.

The steady northwesterly flow around the eastern edge of the Pacific high-pressure cell exerts a stress on the ocean surface along the west coast. This induces upwelling of cold water from below. Upwelling produces a band of cold water that is approximately 80 miles wide off San Francisco. During July the surface waters off San Francisco are 30°F cooler than those off Vancouver, more than 700 miles farther north.

Air approaching the California coast, already cool and moisture-laden from its long trajectory over the Pacific, is further cooled as it flows across this cold bank of water near the coast, thus accentuating the temperature contrast across the coastline. This cooling is often sufficient to produce a high incidence of fog and stratus clouds along the Northern California coast in summer.

In winter, the Pacific High weakens and shifts southward, upwelling ceases, and winter storms become frequent. Almost all of the Bay Area's annual precipitation takes place in the November through April period. During the winter rainy periods, inversions are weak or nonexistent, winds

are often moderate and air pollution potential is very low. During winter periods when the Pacific high becomes dominant, inversions become strong and often are surface-based; winds are light and pollution potential is high. These periods are characterized by winds that flow out of the Central Valley into the Bay Area and often include Tule fog.

Air quality is determined by measuring ambient concentrations of criteria pollutants at various locations through a defined region. Degradation, or lack thereof, of air quality is determined by comparing past air concentrations to the current ambient air quality standards and establishing trends for the area in question. Toxic air contaminants (TACs) have no ambient air quality standards, and a health risk assessment (HRA) is typically conducted to evaluate whether risks of exposure to TACs will create an adverse impact.

4.3.1.1 *Existing Air Quality*

In 1970, the United States Congress instructed the US EPA to establish standards for air pollutants, which were of nationwide concern. This directive resulted from the concern of the effects of air pollutants on the health and welfare of the public. The resulting Clean Air Act (CAA) set forth air quality standards to protect the health and welfare of the public. Two levels of standards were promulgated – primary standards and secondary standards. Primary national ambient air quality standards (NAAQS) are “those which, in the judgment of the administrator [of the US EPA], based on air quality criteria and allowing an adequate margin of safety, are requisite to protect the public health (state of general health of community or population).” The secondary NAAQS are “those which in the judgment of the administrator [of the US EPA], based on air quality criteria, are requisite to protect the public welfare and ecosystems associated with the presence of air pollutants in the ambient air.” To date, NAAQS have been established for seven criteria pollutants as follows: sulfur dioxide (SO₂), carbon monoxide (CO), ozone (O₃), nitrogen dioxide (NO₂), sub 10-micron particulate matter (PM₁₀), sub 2.5-micron particulate matter (PM_{2.5}), and lead (Pb).

The criteria pollutants are those that have been demonstrated historically to be widespread and have a potential for adverse health impacts. US EPA developed comprehensive documents detailing the basis of, or criteria for, the standards that limit the ambient concentrations of these pollutants. The State of California has also established ambient air quality standards (AAQS) that further limit the allowable concentrations of certain criteria pollutants. Review of the established air quality standards are undertaken by both US EPA and the State of California on a periodic basis. As a result of the periodic reviews, the standards have been updated, i.e., amended, additions, and deletions, over the ensuing years to the present.

Each federal or state ambient air quality standard is comprised of two basic elements: (1) a numerical limit expressed as an allowable concentration, and (2) an averaging time which specifies the period over which the concentration value is to be measured. Table 4.3-1 presents the current federal and state ambient quality standards.

Table 4.3-1: California and National Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards Concentration	National Standards Concentration
Ozone	1 hour	0.09 ppm (180 µg/m ³)	-
	8 hours	0.070 ppm (137 µg/m ³)	0.070 ppm (137 µg/m ³)
Carbon monoxide (CO)	8 hours	9.0 ppm (10,000 µg/m ³)	9 ppm (10,000 µg/m ³)
	1 hour	20 ppm (23,000 µg/m ³)	35 ppm (40,000 µg/m ³)
Nitrogen dioxide (NO ₂)	Annual Arithmetic Mean	0.030 ppm (57 µg/m ³)	0.053 ppm (100 µg/m ³)
	1 hour	0.18 ppm (339 µg/m ³)	100 ppb (188 µg/m ³)
Sulfur dioxide (SO ₂)	Annual Arithmetic Mean	-	0.030 ppm (80 µg/m ³)
	24 hours	0.04 ppm (105 µg/m ³)	0.14 ppm (365 µg/m ³)
	3 hours	-	0.5 ppm (1300 µg/m ³)
	1 hour	0.25 ppm (655 µg/m ³)	75 ppb (196 µg/m ³)
Suspended particulate matter or PM ₁₀ (10 micron)	24 hours	50 µg/m ³	150 µg/m ³
	Annual Arithmetic Mean	20 µg/m ³	-
Suspended particulate matter or PM _{2.5} (2.5 micron)	Annual Arithmetic Mean	12 µg/m ³	12.0 µg/m ³ (3-year average)
	24 hours	-	35 µg/m ³
Sulfates	24 hours	25 µg/m ³	-
Lead (Pb)	30 days	1.5 µg/m ³	-
	Calendar Quarter	-	1.5 µg/m ³
	Rolling 3-month Average	-	0.15 µg/m ³

ppm = parts per million, ppb=parts per billion, µg/m³ = micrograms per cubic meter (CARB 2016)

Brief descriptions of health effects for the main criteria pollutants are as follows.

Ozone

Ozone is a reactive pollutant, which is not emitted directly into the atmosphere, but is a secondary air pollutant produced in the atmosphere through a complex series of photochemical reactions involving precursor organic compounds (POC) and oxides of nitrogen (NO_x). POC and NO_x are known as precursor compounds for ozone. Significant ozone production generally requires ozone precursors to be present in a stable atmosphere with strong sunlight for approximately three hours. Ozone is a regional air pollutant because it is not emitted directly by sources but is formed downwind of sources of POC and NO_x under the influence of wind and sunlight. Short-term exposure to ozone can irritate the eyes and cause constriction of the airways. Besides causing shortness of breath, ozone can aggravate existing respiratory diseases such as asthma, bronchitis, and emphysema.

Carbon Monoxide

Carbon monoxide is a non-reactive pollutant that is a product of incomplete combustion. Ambient carbon monoxide concentrations generally follow the spatial and temporal distributions of vehicular traffic and are also influenced by meteorological factors such as wind speed and atmospheric mixing. Under inversion conditions, carbon monoxide concentrations may be distributed more uniformly over an area out to some distance from vehicular sources. When inhaled at high concentrations, carbon monoxide combines with hemoglobin in the blood and reduces the oxygen-carrying capacity of the blood. This results in reduced oxygen reaching the brain, heart, and other body tissues. This condition is especially critical for people with cardiovascular diseases, chronic lung disease or anemia, as well as fetuses.

Particulate Matter (PM10 and PM2.5)

PM10 consists of particulate matter that is 10 microns or less in diameter (a micron is one- millionth of a meter), and fine particulate matter, PM2.5, which consists of particulate matter 2.5 microns or less in diameter. Both PM10 and PM2.5 represent fractions of particulate matter, which can be inhaled into the air passages and the lungs and can cause adverse health effects. Particulate matter in the atmosphere results from many kinds of dust- and fume-producing industrial and agricultural operations, combustion, and atmospheric photochemical reactions. Some of these operations, such as demolition and construction activities, contribute to increases in local PM10 and PM2.5 concentrations, while others, such as stationary source emissions, vehicular traffic, etc. affect regional PM10 and PM2.5 concentrations.

Nitrogen Dioxide and Sulfur Dioxide

Nitrogen dioxide (NO₂) and sulfur dioxide (SO₂) are two gaseous compounds within a larger group of compounds, NO_x and sulfur oxides (SO_x), respectively, which are products of the combustion of fuel. NO_x and SO_x emission sources can elevate local NO₂ and SO₂ concentrations, and both are regional precursor compounds to particulate matter. As described above, NO_x is also an ozone precursor compound and can affect regional visibility. (Nitrogen dioxide is the “whiskey brown” colored gas readily visible during periods of heavy air pollution.) Elevated concentrations of these compounds are associated with increased risk of acute and chronic respiratory disease. Additionally, sulfur dioxide and nitrogen oxides emissions can be oxidized in the atmosphere to eventually form sulfates and nitrates, which contribute to acid rain.

Lead

Gasoline-powered automobile engines used to be the major source of airborne lead in urban areas. Excessive exposure to lead concentrations can result in gastrointestinal disturbances, anemia, kidney disease, and in severe cases of neuromuscular and neurological dysfunction. The use of lead additives in motor vehicle fuel has been eliminated in California, and lead concentrations have declined substantially as a result.

Hydrogen Sulfide

Hydrogen sulfide (H₂S) is a naturally occurring gas contained, as a for-instance, in geothermal steam from the Geysers. H₂S has a “rotten egg” odor at concentration levels as low as 0.005 parts per million (ppm). The state 1-hour standard of 0.03 ppm is set to reduce the potential for substantial

odor complaints. At concentrations of approximately 10 ppm, exposure to H₂S can lead to health effects such as eye irritation.

Toxic/Hazardous Air Contaminants

“Toxic air contaminants” (TACs) are air pollutants that are believed to have carcinogenic or adverse non-carcinogenic effects but do not have a corresponding ambient air quality standard. There are hundreds of different types of toxic air contaminants, with varying degrees of toxicity. Sources of toxic air contaminants include industrial processes such as petroleum refining, electric utility and chrome plating operations, commercial operations such as gasoline stations and dry cleaners, and motor vehicle exhaust.

Toxic air contaminants are regulated under both state and federal laws. Federal laws use the term “Hazardous Air Pollutants” (HAPs) to refer to the same types of compounds referred to as TACs under state law. Both terms generally encompass the same compounds, although the California TAC listing is considerably more extensive than the federal HAPs list. For the sake of consistency, this analysis will use TACs when referring to these compounds rather than HAPs. Under the Clean Air Act Amendments of 1990, approximately 190 substances are designated as TACs. Appendix AQ-1 presents the annual emissions of the TACs.

Attainment Status. The EPA designates the attainment status of regional areas with respect to federal air quality standards, while the California Air Resources Board (CARB) designates the attainment status of regional areas of California with respect to state air quality standards. Local air districts in California play a vital role in such designations at both levels. These classifications depend on whether the monitored ambient air quality data shows compliance, or non-compliance with the ambient air quality standards, respectively. Unclassified means the area is in attainment or there is insufficient data to determine the classification. The Project site is located within Santa Clara County, under the jurisdiction of the BAAQMD. Table 4.3-2 summarizes the attainment status for each of the criteria pollutants in the BAAQMD with regards to both the federal and state standards.

Table 4.3-2: Attainment Status for the San Francisco Bay Area Air Basin

Pollutant	Averaging Time	Federal Designation	State Designation
Ozone	1 Hour 8 Hour	Marginal Non Attainment Non Attainment	Non Attainment Non Attainment
CO	1 Hour 8 Hour	Maintenance Maintenance	Attainment Attainment
NO ₂	1 Hour Annual AM	Attainment Attainment	Attainment Attainment
SO ₂	1 Hour 3 Hour 24 Hour Annual AM	Attainment Attainment Attainment Attainment	Attainment Attainment - -
PM ₁₀	24 Hour Annual AM	Attainment -	Non Attainment Non Attainment
PM _{2.5}	24 Hour Annual AM	Attainment Attainment	- Non Attainment
Lead	30 day Avg Calendar Qtr. Rolling 3 Month Avg	Attainment Attainment -	Attainment - -
Visibility Reducing PM (VRP)	8 Hour	-	Unclassified
Sulfates	24 Hour	-	Attainment
H ₂ S	1 Hour	-	Unclassified
Vinyl Chloride	24 Hour	-	No info
Source: BAAQMD website, 2022. (BAAQMD, 2017a)			

Existing Conditions. The existing air quality conditions in the project area are summarized in Tables 4.3-3. Table 4.3-4 provides the background ambient air concentrations of criteria pollutants for the previous three (3) years as measured at certified monitoring stations near the Project Site. To evaluate the potential for air quality degradation as a result of the project, modeled project air concentrations are combined with the respective background concentrations as presented in Table 4.3-4 and used for comparison to the NAAQS and CAAQS.

Table 4.3-3: Measured Ambient Air Quality Concentrations by Year

Pollutant	Units	AvgTime	Concentration Value Type	2019	2020	2021
Ozone	Ppb	1-Hr	CAAQS-1 st Highs/3-yr Max	0.095	0.106	0.098
Ozone	Ppb	8-Hr	CAAQS-1 st Highs/3-yr Max	0.081	0.085	0.084
Ozone	Ppb	8-Hr	NAAQS-4 th Highs/3-yr Avg	0.06	0.068	0.072
NO ₂	Ppb	1-Hr	CAAQS-1 st Highs/3-yr Max	60	52	47
NO ₂	Ppb	1-Hr	NAAQS-98 th %s/3-yr Avg	52	45	39
NO ₂	Ppb	Annual	CAAQS/NAAQS-AAM/3-yr Max	10.63	9.65	8.73
CO	Ppm	1-Hr	CAAQS-1 st Highs/3-yr Max	1.7	1.8	1.7
			NAAQS-2 nd Highs/3-yr Max	1.6	1.8	1.6
CO	Ppm	8-Hr	CAAQS-1 st Highs/3-yr Max	1.3	1.5	1.5
			NAAQS-2 nd Highs/3-yr Max	1.3	1.5	1.3
SO ₂	Ppb	1-Hr	CAAQS-1 st Highs/3-yr Max	14.5	2.9	1.8
			NAAQS-99 th %s/3-yr Avg	2	2	2
		24-Hr	CAAQS-1 st Highs/3-yr Max	1.5	0.8	0.7
			NAAQS-2 nd Highs/3-yr Max	0.6	0.8	0.5
		Annual	CAAQS/NAAQS-AAM/3-yr Max	0.14	0.17	0.17
PM10	µg/m ³	24-Hr	CAAQS-1 st Highs/3-yr Max	75	134	41
			NAAQS-2 nd Highs/3-yr 4 th High	74.8	52.2	58
		Annual	CAAQS-AAM/3-yr Max	19.1	24.8	nd
PM2.5	µg/m ³	24-Hr	NAAQS-98 th %/3-yr Avg	21	56	23
		Annual	CAAQS –AAM/3-yr Max	9.1	11.5	8.9
			NAAQS-AAM/3-yr Avg	9.1	11.5	8.9
Notes: Values for 158 East Jackson Street, San Jose, CA, the nearest BAAQMD monitoring site (all applicable pollutants measured) Data sources: EPA AIRS website and CARB ADAM (5/2022). No data for 2021 was available from CARB or the BAAQMD.						

Tables are provided in Appendix AQ-3 that presents a detailed summary of the air quality monitoring data derived from the EPA AIRS and CARB ADAM systems. The values presented in Table 4.3-4 represent the highest concentrations from both sets of data, by pollutant for similar averaging times.

Table 4.3-4: Background Air Quality Data Summary

Pollutant and Averaging Time	Background Value (µg/m³)
Ozone – 1-hour Maximum CAAQS	208.1
Ozone – 8-hour Maximum CAAQS/ 3-year average 4 th High NAAQS	166.9/130.9
PM10 – 24-hour Maximum CAAQS/ 24-hour 3-year 4 th High NAAQS	134/74.8
PM10 – Annual Maximum CAAQS	24.8
PM2.5 – 3-Year Average of Annual 24-hour 98 th Percentiles NAAQS	33.3
PM2.5 – Annual Maximum CAAQS/ 3-Year Average of Annual Values NAAQS	120.5/9.8
CO – 1-hour Maximum CAAQS/ 1-hour High, 2 nd High NAAQS	2061/2061
CO – 8-hour Maximum CAAQS/ 8-hour High, 2 nd High NAAQS	1680/1680
NO ₂ – 1-hour Maximum CAAQS/ 3-Year Average of Annual 98 th Percentile 1-hour Daily Maxima NAAQS	112.9/85.3
NO ₂ – Annual Maximum CAAQS/NAAQS	20
SO ₂ – 1-hour Maximum CAAQS/ 3-Year Average of Annual 99 th Percentile 1-hour Daily Maxima NAAQS	38/5.2
SO ₂ – 3-hour Maximum NAAQS (Not Available - Used 1-hour Maxima)	38
SO ₂ – 24-hour Maximum CAAQS 24-hour High, 2 nd High NAAQS	3.9//2.1
SO ₂ – Annual Maximum NAAQS	0.44
Values for 158 East Jackson Street, San Jose, CA, the nearest BAAQMD monitoring site (all applicable pollutants measured) Conversion of ppm/ppb measurements to µg/m ³ concentrations based on: $\mu\text{g}/\text{m}^3 = \text{ppm} \times 40.9 \times \text{MW}$, where MW = 48, 28, 46, and 64 for ozone, CO, NO ₂ , and SO ₂ , respectively.	

4.3.1.2 Regulatory Background

Federal, state, and regional agencies regulate air quality within the BAAQMD, where the Project Site is located.

Federal. At the federal level, EPA is responsible for overseeing implementation of the federal Clean Air Act and its subsequent amendments (CAA). As required by the federal CAA, NAAQS have been established for the criteria pollutants described above.

New Source Performance Standards

The backup generating facilities will be subject to the applicable New Source Performance Standards (NSPS) standards that are identified below. A description of the applicant's compliance plan to meet each standard is included.

40 CFR Part 60, Subpart IIII

Standards of Performance for Stationary Compression Ignition Internal Combustion Engines became effective July 11, 2006. The diesel engines are subject to Subpart IIII. The proposed engines are EPA Tier 4 rated and will be equipped with Best Available Control Technology (BACT) to meet Tier 4 emissions standards.

Compression Ignition (CI) Diesel Engines Emission Standards

Based on 40 CFR 60.4202, emergency CI engines rated at > 560 kW are subject to the emissions standards in 40 CFR 89.112, Table 1, as follows:

- | | |
|----------------------------|---------------|
| • Tier 4 – NO _x | 0.5 g/bhp-hr |
| • Tier 4 – NMHC | 0.14 g/bhp-hr |
| • Tier 4 – CO | 2.6 g/bhp-hr |
| • Tier 4 – PM | 0.02 g/bhp-hr |

The proposed diesel-fired engines will be equipped with the “ecoCube” catalyst systems and diesel particulate filters (DPF) which will result in the engines meeting the EPA/CARB Tier 4 emissions standards, as well as the BACT requirements of the BAAQMD for engines rated at greater than 1000 bhp.

40 CFR Part 60 Subpart ZZZZ

The proposed CI engines are exempt from the requirements of Subpart ZZZZ (63.6590 (c)(1)) if the engines comply with the emissions limitations specified in 40 CFR 60 Subpart IIII. See discussion above.

BAAQMD Air Quality Standards and Regulations

The section briefly describes the regulations which would apply to the Project as set forth in the BAAQMD Rules and Regulations. The project will require a New Source Review permit with the BAAQMD.

BAAQMD Regulation 2, Rule 2 – New Source Review (NSR)

This rule applies to all new or modified sources requiring a Permit to Operate for any new source with actual or potential emissions above the rule trigger limit. The rule also specifies when BACT is required, when offsets are required and the offset ratios, as well the requirements for the required impact analyses, etc.

BACT Requirements (BAAQMD Policy)

A review of BACT for CI-Stationary Emergency Standby engines rated at greater than 1000 BHP (BAAQMD Policy Memo, BACT Determination for Diesel Back-Up Engines Greater than or equal to 1,000 Brake Horsepower, 12/21/2020) indicates that BACT for engines in the stated size range would be compliance with the EPA Tier 4-Final standards as follows:

- | | |
|-------------------|---------------|
| • PM | 0.02 g/bhp-hr |
| • NO _x | 0.5 g/bhp-hr |

- NMHC 0.14 g/bhp-hr
- CO 2.6 g/bhp-hr
- SO₂ fuel sulfur content not to exceed 15 ppmw (~0.005 g/bhp-hr)

The engines proposed for the backup generating facilities, which are all rated at greater than 1,000 BHP meet these requirements, so BACT is satisfied.

Additionally, the use of diesel particulate filters on both engine types will reduce the PM emissions to less than or equal to 0.02 g/bhp-hr (below the Tier 4 compliance level).

NSR Offset Requirements

Required emissions offsets as identified in this application will be obtained in compliance with the Regulation 2 Rule 2 NSR rule provisions in Section 302. These provisions are discussed as follows:

- Pursuant to the BAAQMD NSR Rule (Regulation 2 Rule 2), section 2-2-302, offsets must be provided for NO_x or POC (VOC is used in this application), for any source with potential emissions greater than 10 tons/yr. For sources which emit NO_x or VOC in excess of 10 tpy but less than 35 tpy, these offsets can be provided by either of the two methods outlined in subsections 302.1.1 or 302.1.2 as follows; (1) the APCO must provide the required offsets from the Small Facility Bank Account, or (2) if the Small Facility Bank Account is exhausted then it is the responsibility of the Applicant to provide the required offsets to mitigate the proposed emissions net increase. VOC emissions from the proposed facility are less than 10 tpy, so VOC offsets are not required under the District NSR rule. NO_x emissions for the proposed facility are greater than 35 tpy, and as such, NO_x offsets must be secured at a ratio of 1.15:1 for any un-offset cumulative increase in emissions. The NO_x offsets cannot be acquired from the Small Facility Offset Bank so the applicant, as required by BAAQMD rule, will supply the offsets through the purchase of emission reduction credits.
- Offset mitigation for PM₁₀, PM_{2.5}, and sulfur dioxide emissions is addressed in Section 2-2-303. This section specifies that offsets are only required if the source has the potential to emit any of these pollutants in excess of 100 tons per year. Based on the emission calculations, the worst case PM₁₀, PM_{2.5}, and SO₂ emissions from the backup generating facilities are 0.161, 0.161, and 0.05 tons per year respectively. Therefore, mitigation for emissions at these low emissions levels is not warranted, and such mitigation is not required under Regulation 2 Rule 2.

BAAQMD Regulation 9 Rule 8 – NO_x and CO from Stationary Internal Combustion Engines

- Section 9-8-304 requires that emergency CI engines rated at greater than 175 bhp meet the following limits (at 15% O₂ dry basis): NO_x 110 ppm and CO 310 ppm. But, Section 9-8-110.5 exempts “emergency standby engines” from this requirement. Therefore, the proposed facility generators will be exempt from this requirement.
- Section 9-8-330 requires that emergency CI engines be limited to non-emergency operations of less than or equal to 50 hours per year. Based on Section 9-8-330, the engines will be limited to no more than 50 hours per year.
- Section 9-8-530 requires that each engine be equipped with a non-resettable totalizing

meter, and the following must be logged and reported to the AQMD:

- a. Total hours run each year
- b. Total hours of emergency operation per year
- c. Specify the nature of each emergency operation

Each of the facility generators will be equipped with a non-resettable totalizing meter and the total hours of emergency operation per year and the nature of emergency operations will be documented.

Except as noted for the requirements of Section 9-8-304 above, the proposed engine models will comply with the applicable requirements.

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 exposure and health risk. The rule also specifies when toxics-BACT is required, trigger limits for further analysis based on substance specific emissions levels (both short and long term), risk assessment procedures, etc.

State. CARB is the state agency that retains authority to regulate mobile sources throughout the state and oversees implementation of the state air quality laws and regulations, including the California Clean Air Act. The CARB also establishes and revises the CAAQS.

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. In the BAAQMD, the two most prominent TAC regulatory programs are the Toxics New Source Review (Regulation 2, Rule 5) rules and the AB2588 Air Toxics Hot Spots Program.

Regional. The 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. Examples of the BAAQMD's primary air plans and regulations are described below.

BAAQMD 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 protect the climate. The 2017 Bay Area 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) ozone and the primary ozone precursor pollutants (VOCs and NO_x)
- 2) Particulate matter (PM₁₀ and PM_{2.5}), as well as their precursors
- 3) TACs/HAPs
- 4) Greenhouse gases

4.3.2 Impact Discussion

4.3.2.1 *Significance Criteria*

The project analysis is based upon the general methodologies in the most recent BAAQMD CEQA Guidelines (BAAQMD,2017c) and significance thresholds for the SFBAAB, including the criteria pollutant thresholds listed in Table 4.3-5.

Table 4.3-5: BAAQMD CEQA Thresholds of Significance

Pollutant	Construction Thresholds	Operational Thresholds	
	Average Daily Emissions (lbs/day)	Average Daily Emissions (lbs/day)	Annual Average Emissions (tons/year)
Criteria Air Pollutants			
ROG	54	54	10
NO _x	54	54	10
PM ₁₀	82 (exhaust only)	82	15
PM _{2.5}	54 (exhaust only)	54	10
CO	None	9.0 ppm (8-hour average) or 20.0 ppm (1-hour average)	
Fugitive Dust	Construction Dust Ordinance or other Best Management Practices	Not Applicable	
Health Risks and Hazards for New Sources			
Excess Cancer Risk	10 per one million	10 per one million	
Chronic or Acute Hazard Index	1.0	1.0	
Incremental annual average PM _{2.5}	0.3 µg/m ³	0.3 µg/m ³	
GHGs – Stationary Source Projects			
CO ₂ e	None	10,000 MT/yr (11,023 short tons)	
Health Risks and Hazards for Sensitive Receptors (Cumulative from All Sources within 1,000-Foot Zone of Influence) and Cumulative Thresholds for New Sources			
Excess Cancer Risk	100 per 1 million		
Chronic Hazard Index	10.0		
Annual Average PM _{2.5}	0.8 µg/m ³		

Source: BAAQMD CEQA Guidelines, May 2017.

4.3.2.2 *Impact Summary*

The conclusions of the air quality analysis are summarized below as responses to the CEQA checklist items. A full discussion of the air quality analysis underlying these conclusions is presented in the following section.

Impact AIR-1: The Project would not conflict with or obstruct implementation of the applicable air quality plan. (Less than Significant Impact)]

The Project would not conflict with or obstruct the implementation of the applicable air quality plan due to the following:

- The Project would comply with all applicable rules and regulations of the BAAQMD regarding emissions of criteria pollutants.
- The Project would comply with all applicable rules and regulations of the BAAQMD regarding emissions of toxic pollutants.
- The proposed engines at the Project would be certified with or comply with the applicable federal Tier 4 emissions standards for emergency standby electrical generation CI engines.
- The Project would comply with all applicable provisions of the applicable 2017 BAAQMD Air Quality Implementation Plan.
- The Project would obtain and maintain all required air quality related permits from the BAAQMD, and requirements imposed by the California Energy Commission.

Impact AIR-2: The Project would not result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is non-attainment under an applicable federal or state ambient air quality standard. (Less Than Significant Impact)

The Project would not result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is non-attainment under an applicable federal or state ambient air quality standard, due to the following:

- The use of best management practices during the construction phase would ensure that the emissions do not result in a cumulative considerable net increase of any non-attainment pollutants. These emissions are generally short term in nature and vary widely from day to day.
- See offset mitigation requirements under the NSR discussion above.

Impact AIR-3: The Project would not expose sensitive receptors to substantial pollutant concentrations. (Less than Significant Impact)

The Project would not expose sensitive receptors to substantial pollutant concentrations due to the following:

- The air quality impact analysis presented herein shows that the Project would not cause or contribute to a violation of any state or federal ambient air quality standard.
- The construction and operational health risk assessments presented herein indicate that the emissions of toxic air contaminants from backup generating facility processes or other onsite Project components would not cause a significant risk to any sensitive or non-sensitive receptor with respect to cancer or chronic impacts.²⁰

Impact AIR-4: The Project would not result in substantial emissions (such as odors) adversely affecting a substantial number of people. (Less than Significant Impact)

The Project would not result in other emissions or odors that would adversely affect a substantial number of people due to the following:

- Similar facilities, both larger and smaller in scale, have not been identified as sources of odors that would adversely affect off-site receptors.
- The Project is not one of the project types listed in the BAAQMD CEQA Guidelines as producing odors that may affect off-site receptors.
- The applicant has not identified any operational or construction practices, that are planned for use at the Project Site, that would generate substantial amounts of odors that would affect off-site receptors.

4.3.2.3 Project Emissions, Air Quality Impact Analysis, and Health Risk Assessment

Project Emissions

Construction. Project construction emissions of CO, VOCs, NO_x, SO₂, PM₁₀, PM_{2.5}, and CO₂e were evaluated. Detailed construction emission calculations are presented in Appendix AQ-4. On-site construction emissions from construction of the Project would result from site preparation and grading activities, building erection and parking lot construction activities, “finish” construction activities, and the use of on-site construction equipment. Construction emissions from the Project include emissions from the backup generating facilities and the SJ04/SJ06 buildings as well as other proposed improvements and infrastructure. Off-site construction emissions would be derived primarily from materials transport to and from the site, worker travel, and construction of the off-site reclaimed water line and other off-site improvements. Assuming construction of Phase 1 to be followed immediately by construction of Phase 2, emissions from the continuous approximate 50-month construction period (25 months for the SJ04 building/related improvements and 25 months for the SJ06 building/related improvements) were

²⁰ Emissions of criteria pollutants and toxics (DPM) were calculated for the offsite linear construction activities but were not modeled for determining the impacts to air quality or public health, as per CEC recommended guidelines.

estimated using the CalEEMod program. Estimated criteria pollutant construction emissions for the Project are summarized in Table 4.3-6. Construction of the SJC06 building and related improvements would commence immediately after the conclusion of construction of SJ04. Current construction scheduling assumptions indicate that there would be an overlap period where the engines associated with the SJ04 building would operate for the 25-month period while the SJ06 building and related improvements are being constructed. The anticipated construction start date for the SJ04 building and related improvements is March 2024 (ending April 2026), and for the SJ06 building and related improvements is April 2026 (ending June 2028). Construction support data and the CalEEMod analysis output are presented in Appendix AQ-4.

The BAAQMD CEQA Air Quality Guidelines considers exposure of sensitive receptors to air pollutant levels that result in an unacceptable cancer risk or hazard to be significant. BAAQMD recommends a 1,000-foot zone of influence around project boundaries. Since construction activities are typically temporary and the PDFs as delineated below are proposed to be implemented, and since there are no identified sensitive receptors within 1,000 ft. of the Project Site boundary (as well as the Off-Site Infrastructure Areas), community risk impacts from construction activities would be *less than significant*.

Table 4.3-6: Mitigated Criteria Pollutant Emissions from Construction Activities

Scenario/Year	NO _x	CO	VOC	SO _x	PM ₁₀	PM _{2.5}	CO _{2e} Metric Tons
	Tons						
SJ04 2024	0.59	1.69	0.06	0.0047	Exhaust 0.0069 Fugitive 0.27	Exhaust 0.0067 Fugitive 0.10	447
SJ04 2025	0.84	1.89	0.09	0.006	Exhaust 0.008 Fugitive 0.27	Exhaust 0.008 Fugitive 0.07	584
SJ04 2026	0.16	0.63	3.1	0.0015	Exhaust 0.002 Fugitive 0.05	Exhaust 0.002 Fugitive 0.014	138
SJ04 Period, tons	1.57	4.22	3.24	0.012	Exhaust 0.017 Fugitive 0.59	Exhaust 0.016 Fugitive 0.18	1169
SJ04 Max Year, avg Lbs/day	6.36	14.32	23.48	0.045	Exhaust 0.06 Fugitive 2.0	Exhaust 0.06 Fugitive 0.76	584
SJC06 2026	0.177	1.336	0.035	0.0024	Exhaust 0.0037 Fugitive 0.152	Exhaust 0.0036 Fugitive 0.07	218

Scenario/Year	NO _x	CO	VOC	SO _x	PM ₁₀	PM _{2.5}	CO _{2e} Metric Tons
	Tons						
SJC06 2027	0.31	1.39	0.05	0.0031	Exhaust 0.0043 Fugitive 0.122	Exhaust 0.0042 Fugitive 0.033	280
SJC06 2028	0.122	0.7	1.97	0.0013	Exhaust 0.0019 Fugitive 0.04	Exhaust 0.0018 Fugitive 0.01	116
SJC06 Period, tons	0.61	3.42	2.05	0.0068	Exhaust 0.0098 Fugitive 0.31	Exhaust 0.0096 Fugitive 0.11	614
SJC06 Max Year, avg Lbs/day	2.35	10.53	14.92	0.023	Exhaust 0.033 Fugitive 1.15	Exhaust 0.032 Fugitive 0.53	280
Max Year Emissions, tons/yr	0.84 (2025)	1.97 (2026)*	3.13 (2026)*	0.0062 (2025)	Exhaust 0.008 (2025) Fugitive 0.27 (2024)	Exhaust 0.008 (2025) Fugitive 0.097 (2024)	584 (2025)
Average Daily Emission, lbs (for the Max Year)	6.36	14.32	23.41	0.047	Exhaust 0.061 Fugitive 2.05	Exhaust 0.061 Fugitive 0.73	NA
Offsite Reclaim Water Line, tons	0.034	0.36	0.009	0.0007	Exhaust 0.001	Exhaust 0.001	58
Offsite Reclaim Water Line, avg Lbs/day	0.76	8.0	0.2	0.016	0.022	0.022	NA
BAAQMD CEQA Thresholds Lbs/day	54	NA	54	NA	Exhaust 82	Exhaust 54	NA
Exceeds Thresholds	No	NA	No	NA	No	No	NA

Construction schedule for the SJ04 building and related improvements is approximately 25 months, 22 days per avg month, CalEEMod calculates 564 days.

Construction schedule for the SJC06 building are related improvements is approximately 25 months, 22 days per avg month, CalEEMod calculates 564 days

Annual work period is 12 months, 22 days/month, or ~264 days.

The off-site reclaimed water line and other off-site improvements would be constructed concurrent with the SJ04 “building” phase in 2025 (90 day period).

Source: ADI CalEEMod analysis, June 2022.

As shown in Table 4.3-6, construction of the Project would not generate VOCs, NO_x, SO_x, PM10 and PM2.5 emissions in excess of BAAQMD's numeric significance thresholds. The BAAQMD's CEQA Guidelines consider fugitive dust impacts to be less than significant through the application of best management practices (BMPs). These measures are included in the Project as Applicant Proposed Project Design Features (see Section 3.5 of the Project Description).

PDF AIR-1: To ensure that fugitive dust impacts are less than significant, the Project shall implement the BAAQMD's recommended BMPs during the construction phase. These BMPs shall be incorporated into the design of the Project and shall consist of:

- All exposed surfaces (soil piles, graded areas, and unpaved access roads) shall be watered at least two times per day or stabilized using other BMPs for erosion control.
- All haul trucks transporting material offsite shall be covered.
- All track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day.
- All vehicle speeds on onsite unpaved surfaces shall be limited to less than or equal to 15 miles per hour. In addition, no unpaved offsite roadways will be used to service the Project during construction (or operation).
- All roadways, driveways, and sidewalks shall be paved as soon as possible. Building pads shall be completed as soon as possible after grading unless seeding or soil binders are used.
- Equipment idling times shall be minimized to 5 minutes per the Air Toxics Control Measure (ATCM). Idling time signage shall be provided for construction workers at all access points.
- All construction equipment shall be maintained and properly tuned in accordance with manufacturer specifications. All equipment shall be checked by a certified visible emissions evaluator.
- Information on who to contact, contact phone number, and how to initiate complaints about fugitive dust problems will be posted at the site.

Operation. Operational emissions of NO_x, VOCs, CO, SO₂, PM10, PM2.5, and GHGs were evaluated. Diesel particulate matter (DPM) was the only TAC considered to result from operation of the Project. Detailed operation emission calculations are presented in Appendix AQ-1. Primary operation emissions are a result of diesel fuel combustion from the standby diesel generators, off-site vehicle trips for worker commutes and material deliveries. Secondary operational emissions from facility upkeep, such as architectural coatings, consumer product use, landscaping, water use, waste generation, and electricity use, were considered de minimus given the nature of the

proposed uses. Notwithstanding the foregoing, drift emissions from the SJ04 and SJ06 buildings' indirect cooling systems were also evaluated and included in the air quality and health risk analyses. Each of the primary emission sources are described in more detail below.

Stationary Sources. The Project's 36 Caterpillar standby diesel generators would be comprised of the following equipment:

- 32 – C175 diesel-fired engines, each rated at 4,376 HP (~3100 kWe) at 100% Load
- 4 – C27 diesel-fired engines, each rated at 1,214 HP (~800 kWe) at 100% Load

The generators proposed for installation are made by Caterpillar, with a certified Tier 4 rating. These engines would be equipped with diesel particulate filters (DPF) to reduce the diesel particulates to less than or equal to 0.02 grams/brake horse-power hour (g/bhp-hr), and catalyst systems for the control of NO_x, CO, and VOCs. The control systems result in engine emissions compliance with the EPA Tier 4 standards and with BAAQMD BACT. All generators would be operated routinely, i.e., readiness and maintenance testing, to ensure that they would function normally during an emergency event.

Each of the data center buildings (SJ04 and SJC06) would be equipped with thirty-two (32) roof-mounted indirect cooling units. Each unit would contain two (2) cells with two (2) fans per cell. These units would be equipped with drift eliminators rated at 0.0005% efficiency. The Applicant's design staff notes that indirect cooling would only be required for 7807 hours/yr (emissions would be based on 8760 hrs/yr herein for purposes of a conservative analysis). Emissions from the indirect cooling systems were based on Applicant data that showed 4 cycles of concentration using the recycled water analysis data supplied by the San José/Santa Clara Water Pollution Control Plant for calendar year 2021. The building cooling systems are exempt from the BAAQMD permitting regulations.

Appendix AQ-1 presents the detailed emissions calculations for the proposed engines, fuel storage tanks, and indirect cooling systems. Appendix AQ-2 contains the manufacturers specification sheets for the engines and the air pollution control systems.

During routine readiness testing, criteria pollutants and TACs (as DPM) would be emitted directly from the generators. Criteria pollutant emissions from generator testing were quantified using information provided by the manufacturer, as specified in Appendix AQ-1. SO₂ emissions were based on the maximum sulfur content allowed in California diesel (15 parts per million by weight), and an assumed 100 percent conversion of fuel sulfur to SO₂. DPM emissions resulting from diesel stationary combustion were assumed equal to PM_{10/2.5} emissions. For conservative evaluation purposes, it was assumed that testing would occur for no more than 50 hours per year. 50 hours per year per engine is the limit specified by the Airborne Toxic Control Measure for Stationary Toxic Compression Ignition Engines (Title 17, Section 93115, CCR). The Applicant is not proposing a test schedule, i.e., hours versus load points. Testing would be done based upon the Applicant's judgment, taking into account the manufacturer's recommendations, staff availability, and need. Maintenance and readiness testing may occur at loads ranging from 10 to 100% load. For purposes of this analysis, emissions were conservatively assumed to occur at 100% load. Tables AQ1-1 and AQ1-2 in Appendix AQ-1 present the engine emissions based upon the 100% load point, number of engines tested, etc. The engines were evaluated for the following emissions scenarios:

- CAT C175 Engines:
 - Each large engine running for 100 hours per year for Declared Emergency operations, at 100% load, at the guaranteed emissions levels from the Tier 4 control systems.
 - Each large engine running for 50 hours per year for Maintenance and Readiness operations, at 100% load, using composite emissions factors to address both uncontrolled and controlled emissions during such testing.
- CAT C27 Engines:
 - Each small engine running for 100 hours per year for Declared Emergency operations, at 100% load, at the guaranteed emissions levels from the Tier 4 control systems.
 - Each small engine running for 50 hours per year for Maintenance and Readiness operations, at 100% load, using composite emissions factors to address both uncontrolled and controlled emissions during such testing.

The tables which follow present emissions summaries for the two engines for each of the scenarios noted above in terms of the worst case hourly, daily, and annual emissions. Maximum daily emissions are based on the assumption that only eight (8) of the engines would be tested on any day (and the eight (8) engines would not be run concurrently). The eight (8) engine test day would most likely be comprised of seven (7) of the C175 engines and one (1) of the C27 engines, but for purposes of defining worst case daily emissions and impacts a test day consisting of 8 - C175 engines was evaluated.

**Table 4.3-7: Emergency Operations Emissions Summary for CAT C175
and CAT C27 Engines**

Period	NO _x	CO	VOC	SO ₂	PM10/2.5	CO ₂ e
CAT C175						
Max Hourly, lbs	154.4	802.7	43.2	1.54	6.17	-
Max Daily, lbs	3704.6	19264.1	1037.3	37.05	148.2	-
Max Annual, tons	7.72	40.1	2.2	0.08	0.31	7579
C175 as defined above. 100 hrs/yr emergency Ops. All engines in operation.						
CAT C27						
Max Hourly, lbs	5.35	27.8	1.5	0.05	0.21	-
Max Daily, lbs	128.5	668.0	36.0	1.3	5.1	-
Max Annual, tons	0.27	1.39	0.07	0.003	0.011	256
C27 as defined above. 100 hrs/yr emergency Ops. All engines in operation.						

Table 4.3-8: M&R Testing Emissions Summary for CAT C175 and C27 Engines

Period	NO _x	CO	VOC	SO ₂	PM10/2.5	CO _{2e}
CAT C175						
Single Engine Max Hourly, lbs	14.47	25.1	1.74	0.05	0.193	-
8 Engines Max Daily, lbs	115.8	200.7	13.9	0.39	1.54	-
All Engines Max Annual, tons	11.6	20.1	1.4	0.04	0.154	3789
Maintenance/Readiness operations, 50 hrs/yr, as defined above.						
CAT C27						
Single Engine Max Hourly, lbs	4.02	6.96	0.48	0.013	0.054	-
Single Engine Max Daily, lbs	4.02	6.96	0.48	0.013	0.054	-
All Engines Max Annual, tons	0.4	0.7	0.05	0.001	0.005	128
Maintenance/Readiness operations, 50 hrs/yr, as defined above.						

**Table 4.3-9: Emergency Operations Emissions Summary for CAT C175
and CAT C27 Engines**

Period	NO _x	CO	VOC	SO ₂	PM10/2.5	CO _{2e}
CAT C175						
Max Annual, tons	7.72	40.13	2.16	0.077	0.309	7579
Emergency Ops.						
CAT C27						
Max Annual, tons	0.27	1.39	0.07	0.003	0.011	256
Emergency Ops.						

**Table 4.3-10: M&R Testing Emissions Summary for CAT C175
and CAT C27 Engines**

Period	NO _x	CO	VOC	SO ₂	PM10/2.5	CO _{2e}
CAT C175						
Max Annual, tons	11.58	20.07	1.39	0.039	0.154	3789
M&R Testing,						
CAT C27						
Max Annual, tons	0.40	0.70	0.05	0.001	0.005	128
M&R Testing,						

Table 4.3-11 presents maximum daily and annual emissions data for the various testing scenarios in comparison to the BAAQMD CEQA significance thresholds.

Table 4.3-11: Facility Scenario Emissions and BAAQMD CEQA Significance Levels (M&R Testing)

Scenario	Lbs/Day					
	NO _x	CO	VOC	SO ₂	PM10	PM2.5
BAAQMD CEQA Thresholds	54	NA	54	NA	82	54
Worst Case Daily Engine Emissions ¹	115.77	200.67	13.89	0.386	1.544	1.544
Fuel VOC Losses	-	-	0.053	-	-	-
Indirect Cooling based on Max Demand	-	-	-	-	13.54	13.54
Daily Emissions	115.77	200.67	13.94	0.386	15.08	15.08
Significance Threshold Exceeded	Yes	NA	No	NA	No	No
Scenario	Tons/Yr					
	NO _x	CO	VOC	SO ₂	PM10	PM2.5
BAAQMD CEQA Thresholds	10	NA	10	NA	15	10
Fuel VOC Losses	-	-	0.01	-	-	-
Indirect Cooling based on Peak Demand	-	-	-	-	1.87	1.87
Worst Case Annual Engine Emissions ²	11.98	20.77	1.44	0.04	0.159	0.159
Annual Emissions	11.98	20.77	1.45	0.04	2.03	2.03
Significance Threshold Exceeded	Yes	NA	No	NA	No	No
¹ Based on the emissions for a 8 engine test day (8 - C175 engines).						
² Based on the summation of the CAT C175 and CAT C27 engines.						
² Worst case CO _{2e} emissions are 3918 tpy (3554 Mtons/yr) from M&R Testing.						

Fuel Storage (Working and Breathing) VOC Emissions

Each of the data center buildings would be equipped with four (4) 50,000-gallon diesel fuel storage tanks, for a total of eight (8) tanks and 400,000 gallons of onsite storage. In addition, the four (4) 800 kWe engines located in the water storage and admin areas would each have its own dedicated 4,000-gallon diesel fuel storage tank. VOC working and breathing losses (for the 10 proposed tanks) are presented in Appendix AQ-1, and summarized as follows:

- Total VOC losses = 0.01 tpy or 0.0531 lbs/day.

Indirect Cooling Systems

Emission of PM10/2.5 from the indirect cooling systems were calculated as follows:

- PM10/2.5 losses = 1.753 tpy = 10.78 lbs/day (based on Max water demand)
- PM10/2.5 losses = 1.653 tpy = 10.17 lbs/day (based on Peak water demand)

These values are included in Table 4.3-11 above.

The following should be noted with respect to Table 4.3-11 above.

1. NO_x emissions exceed the BAAQMD CEQA significance levels on the days when the 8 engine M&R tests occur, and on a TPY basis (total emissions from all engines).
2. The emissions of NO_x would be mitigated through the participation in the BAAQMD ERC Bank, or other alternative methods as negotiated with and approved by the BAAQMD.

Table 4.3-12 presents the summation of emissions for all engines for the maximum of the scenarios noted above, i.e., the 150 hours per year criteria per the BAAQMD permitting policy criteria.

**Table 4.3-12 BAAQMD 150 Hours per Year Emissions Summation
(Tons per year)**

Engines	NO _x	CO	VOC	SO ₂	PM10/2.5	CO ₂ e
CAT C175 + CAT C27	19.96	62.3	3.67	0.12	0.48	11753
Summation for both engines types. <i>These values are NOT the NSR applicability values.</i>						

Table 4.3-13 presents data on the DPM emissions levels (worst case) for both models of engines.

**Table 4.3-13: Toxic Air Contaminant (DPM) Emissions from the Proposed Engines
(Per engine basis)**

Scenario	CAT C175	CAT C27
	DPM Emissions	
Maximum Annual, lbs/yr	723.5	201.0
Maximum Hourly, lbs	14.47	4.02

Notes: DPM is the approved surrogate compound for diesel fuel combustion for purposes of health risk assessment. Annual emissions for each engine are based on the max allowed runtime of 50 hours per year, M&R testing as defined.

Table 4.3-14 presents the hourly and annual fuel use values for the maximum operational scenario as outlined above.

Table 4.3-14 Engine Fuel Use Values

Scenario	CAT C175	CAT C27
	Fuel Use, gallons (per engine basis)	
Maximum Annual, gals/yr	10450	2825
Maximum Hourly, gals/hr	209	56.5
Total Annual Fuel Use (All Engines)		
Annual Fuel Use, gals/yr	334,400	11300

Miscellaneous Operational Emissions

Miscellaneous emissions from the Project's operational activities (subsequent to full buildout) such as worker travel, deliveries, energy and fuel use for facility electrical, heating and cooling needs, periodic use of architectural coatings, landscaping, etc. were evaluated by CalEEMod. These emissions are presented in Table 4.3-15.

Table 4.3-15: Miscellaneous Operational Emissions

Scenario	Lbs/Day					
	NO _x	CO	VOC	SO ₂	PM10 Exhaust	PM2.5 Exhaust
BAAQMD CEQA Thresholds	54	NA	54	NA	82	54
SJ04/06 Lbs/avg day	3.72	4.02	21.15	0.022	0.274	0.264
Exceeds Thresholds	No	NA	No	NA	No	No
TPY						
BAAQMD CEQA Thresholds	10	NA	10	NA	15	10
SJ04/06 Tons/yr	0.679	0.734	3.86	0.004	0.05	0.05
Exceeds Thresholds	No	NA	No	NA	No	No
Note: Assumes the full buildout data center is manned 365 days/yr. This table does NOT include the emissions from the emergency engines. All source category includes mobile worker travel, deliveries, energy use, fuel use, waste disposal, water use, and miscellaneous area sources. Source: ADI CalEEMod analysis, June 2022.						

GHG Operations Emissions

A summary of GHG emissions for Project operations is as follows:

- Miscellaneous Operations (Area, energy, mobile, waste, water) = 2,065 Mtons CO₂e/yr
- Emergency Engines (M&R Testing only) = 3,554 Mtons CO₂e/yr
- 96 MW of energy use, 8760 hrs/yr, PG&E Carbon Intensity Factor 204 lbs CO₂/Mw-hr = 77,803 Mtons CO₂e/yr (see note which follows)

(Note: The emissions noted above, i.e., 77,803 Mtons CO₂e/yr are not emitted at the Project's facility. These emissions result from power generation across the PG&E system, and as such they are reported by PG&E on a specific generating facility basis. These emissions are not part of the Project facility inventory. In addition, it should not be implied that "new" generation capacity would be required to be added to the PG&E system to supply the data center needs.)

Total CO₂e emissions from facility operations are: 5,619 Mtons CO₂e/Yr. This value is below the BAAQMD significance level of 10,000 Mtons/yr for operations.

Air Quality Impact Analysis

The approximately 22.29-acre Project Site, located at 2515 Orchard Parkway. in the City of San José (Santa Clara County), is currently vacant and undeveloped. The Project proposes to construct the following elements:

- An approximately 315,639 sq.ft. data center building (SJ04) with indirect cooling technology,
- An approximately 315,639 sq.ft. data center building (SJC06) with indirect cooling technology,
- On-site water storage tanks,
- An on-site electrical substation,
- Ground level parking and internal access roadways,
- The backup generating facilities comprised of 36 diesel-fired backup electrical generators (as described above), and
- Off-site improvements consisting of potable water, recycled water, fire water, storm water and sanitary sewer pipelines within the existing right of way for Orchard Parkway; secondary access road primarily for emergency use; installation of approximately 1.5 miles of new underground recycled water infrastructure (connecting to the existing recycled water main at the intersection of Montague Expressway and Kruse Drive); and bike trail improvements along the Project's southern property line (extending from the intersection of Orchard Parkway and Component Drive to southwestern property line of the Project Site near the existing Guadalupe Bike Trail).

There are no existing structures on the Project Site (or within the Off-Site Infrastructure Areas), therefore no demolition of structures is required to be undertaken for the Project.

The SJ04/06 buildings would house computer servers for private clients in a secure and environmentally controlled structure. The backup generating facilities would be designed to provide

approximately 97.8 megawatts (MW) of electrical load and Information Technology (IT) power, i.e., 48.5 MW per data center building.

Modeling Overview

The evaluation of the potential air quality impacts and health risks were based on the estimate of the ambient air concentrations that could result from the Project, including the backup generating facilities air emission sources. This section discusses the selection of the dispersion model, the data that was used in the dispersion model (pollutants modeled with appropriate averaging times, source characterization, building downwash, terrain, and meteorology), etc.

Assessments of ambient concentrations resulting from pollutant emissions (called air quality impacts) are typically conducted using USEPA-approved air quality dispersion models. These models are based on mathematical descriptions of atmospheric diffusion and dispersion processes in which a pollutant source impact can be calculated over a given area and for a specific period of time (called averaging period). By using mathematical models, the assessment of emissions can be determined for both existing sources as well as future sources not yet in operation. Inputs required by most dispersion models, which must be specified by the user, include the following:

- Model options, such as averaging time to be calculated;
- Meteorological data, used by the model to estimate the dispersion conditions experience by the source emissions;
- Source data, such as source location and characteristics – stack emissions like those considered here are modeled as “point” sources, which require user inputs of the release height, exit temperature and velocity, and stack diameter (used by the dispersion model to estimate the mechanical and buoyant plume rise that will occur due to the release of emissions from a stack); and
- Receptor data, which are the location(s) of the given area where ambient concentrations are to be calculated by the dispersion model.

Model Selection

To estimate ambient air concentrations, the latest version of the AERMOD (Version 21112) dispersion model was used. AERMOD is appropriate for use in estimating ground-level short-term ambient air concentrations resulting from non-reactive buoyant emissions from sources located in simple, intermediate, and complex terrain. AERMOD is the preferred guideline model recommended by USEPA for these types of assessments and is based on conservative assumptions (i.e., the model tends to over-predict actual impacts by assuming steady state conditions, no pollutant loss through conservation of mass, no chemical reactions, etc.). AERMOD is capable of assessing impacts from a variety of source types such as point, area, line, and volume sources (as noted above, point source types are used to model stack sources like the backup generating facilities engine emissions); downwash effects; gradual plume rise as a function of downwind distance; time-dependent exponential decay of pollutants; and can account for settling and dry deposition of particulates (all backup generating facilities emissions were conservatively modeled as non-reactive gaseous emissions). The model is capable of estimating concentrations for a wide range of averaging times (from one hour to the entire period of meteorological data provided).

AERMOD calculates ambient concentrations in areas of simple terrain (receptor base elevations below the stack release heights), intermediate terrain (receptor base elevations between stack release and final plume height), and complex terrain (receptor base elevations above final plume height). AERMOD assesses these impacts for all meteorological conditions, including those that would limit the amount of final plume rise. Plume impaction on elevated terrain, such as on the slope of a nearby hill, can cause high ground level concentrations, especially under stable atmospheric conditions. Due to the relatively flat nature of the backup generating facilities project terrain area, including the surrounding properties, plume impaction effects would not be expected to occur. AERMOD also considers receptors located above the receptor base elevation, called flagpole receptors.

Another dispersion condition that can cause high ground level pollutant concentrations is caused by building downwash. Building downwash can occur during high wind speeds or a building or structure is in close proximity to the emission source. This can result in building wake effects where the plume is drawn down toward the ground by the lower pressure region that exists in the lee side (downwind) of the building or structure. This AERMOD feature was also used in modeling the backup generating facilities emission sources as described later.

Model Input Options

Model options refer to user selections that account for conditions specific to the area being modeled or to the emissions source that needs to be examined. Examples of model options selected for this analysis includes the use of multiple flagpole heights for each receptor modeled and the urban dispersion option (using a Santa Clara County population of ~1.94 million). Land use in the immediate area surrounding the Project Site (including the Off-Site Infrastructure Areas) is characterized as “urban”. This is based on the land uses within the area circumscribed by a three (3) km radius around the Project Site, which is greater than 50 percent urban. Therefore, in the modeling analyses, the urban dispersion option was selected.

AERMOD also supplies recommended defaults for the user for other model options. This analysis was conducted using AERMOD in the regulatory default mode, which includes the following additional modeling control options:

- adjusting stack heights for stack-tip downwash,
- using upper-bound concentration estimates for sources influenced by building downwash from super-squat buildings,
- incorporating the effects of elevated terrain,
- employing the USEPA-recommended calms processing routine, and
- employing the USEPA-recommended missing data processing routine.

Calculation of chemical concentrations for use in the impact and exposure analysis requires the selection of appropriate concentration averaging times. Average pollutant concentrations ranging from one (1) hour to annual based on the meteorological data were calculated for each backup generating facility source and the facility in total.

According to the Auer land use classification scheme, a 3 km radius boundary around the proposed site yields a predominately “urban” classification. This is consistent with the current land use and

zoning designation for the Project Site and surrounding area as “commercial, and light and heavy industrial”.

Meteorological Data - Modeling Inputs

AERMOD requires a meteorological input file to characterize the transport and dispersion of pollutants in the atmosphere. Surface and upper air meteorological data inputs, along with surface parameter data describing the land use and surface characteristics near a site, are first processed using AERMET, the meteorological preprocessor to AERMOD. The output files generated by AERMET are the surface and upper air meteorological input files required by AERMOD.

AERMOD uses hourly meteorological data to characterize plume dispersion. AERMOD calculates the dispersion conditions for each hour of meteorological data for the emission sources modeled at the user-specific receptor locations. The resulting 1-hour impacts are then averaged by AERMOD for the averaging time(s) specified by the user (accounting for calm winds and missing meteorological data as specified in the model options). Meteorological data from the San José International Airport were provided by the BAAQMD for the five years of 2013 through 2017, inclusive. The representativeness of the meteorological data is dependent on the proximity of the meteorological monitoring site to the area under consideration; the complexity of the terrain, the exposure of the meteorological monitoring site, and the period of time during which the data are collected. The data was collected approximately three (3) kilometers from the eastern edge of the Project Site boundary and were provided by BAAQMD as the most appropriate meteorological data for this modeling analysis. The data were processed by BAAQMD with AERMET (version 18081), AERMOD’s meteorological data preprocessor module.

The BAAQMD backup generating facilities meteorological data consists of surface measurements including wind speed, wind direction, temperature, and solar radiation, which were combined with National Weather Service upper air data from the Oakland International Airport. The USEPA-recommended 90% completeness criteria are met for all modeled parameters in the BAAQMD meteorological data.

Building and Receptors – Modeling Inputs

The effects of building downwash on facility emissions were included in the modeling assessment. The **Plume Rise Model Enhancements** to the USEPA **Building Profile Input Program** (BPIP-PRIME, version 04274) was used to determine the direction-specific building downwash parameters. The PRIME enhancements in AERMOD calculate fields of turbulence intensity, wind speed, and slopes of the mean streamlines as a function of projected building shape. Using a numerical plume rise model, the PRIME enhancements in AERMOD determine the change in plume centerline location and the rate of plume dispersion with downwind distance. Concentrations are then predicted by AERMOD in both the near and far wake regions, with the plume mass captured by the near wake treated separately from the uncaptured primary plume and re-emitted to the far wake as a volume source. Figure AQ3-1 in Appendix AQ-3 presents the building data used in the downwash analysis.

Receptor grids were generated along the fence line (≤ 10 meter spacing), from the fence line to 300 meters (20 meter spacing), from 300 meters to one kilometer (km) (50-meter spacing), from 1.0 to 5.0 km (200-meter spacing). If any of the maximum impacts occurred on receptors with spacing greater than 20 meters, a refined grid with 20-meter resolution would be created and extended outwards by 500 meters in all directions. All receptor and source locations are referenced in meters

using the Universal Transverse Mercator (UTM) Cartesian coordinate system based on the North American Datum of 1983 (NAD83) for Zone 10.

The latest version of AERMAP (version 18081) was used to determine receptor elevations and hill-slope factors utilizing USGS's 1-degree square National Elevation Dataset (NED). NED spacings were 1/3" (~10 meters) for the fence line, 20-meter, 50-meter, and 100-meter spaced receptor grids and 1" (~30 meters) for 200-meter and 500-meter spaced receptor grids and sensitive receptors. Flagpole receptors were generated for the two- and three-story residential areas just north of the project area. Electronic copies of the BPIP-PRIME and AERMAP input and output files, including the NED data, are included with the application will be submitted to Staff electronically. Figure AQ3-2 in Appendix AQ-3 presents the receptor grids used in the modeling analyses.

Source Data – Modeling Inputs

Emissions and stack parameters for the 36 Caterpillar diesel engines are presented in Appendix AQ-1 and AQ-3 and were used to develop the modeling inputs. Stack parameters (e.g., stack height, exit temperature, stack diameter, and stack exit velocity) were based on the parameters given by the engine manufacturer and the Applicant. Stack locations for the proposed sources were matched to show their actual location based on the proposed facility plot plan. Appendix AQ-3 presents the locations of the backup generating facility sources, and the building outlines considered in the downwash analysis. Stack base elevations were given a common base elevation based on the range of elevations calculated with AERMAP for the stack locations.

Impact Analysis Summary

Operational characteristics of the diesel engines, such as emission rate, exit velocity, and exit temperature, vary by operating loads. The engines could be operated over a range of load conditions from one (1) to 100 percent. Based on similar projects, the 100% load case always produces the maximum ground-based concentrations. Thus, an air quality screening analysis was not performed. The engines were assumed to be tested anytime from 7 AM to 5 PM (controlled using the EMISFACT/HROFDY model option). Although the engines will typically only be tested individually for up to one hour at any one time, each engine was assumed to operate up to 8 hours/day (7AM-5PM) to conservatively represent 8 different engines operating one hour each in any one day for 3-hour, 8-hour, and 24-hour averaging times. Thus, the worst-case stack condition and the worst-case engine location could be determined from the screening analysis. All 36 engines were assumed to be tested for annual averages, with emissions proportioned accordingly. The screening results are presented in Appendix AQ-3.

Based on the results of the screening analyses, all backup generating facilities sources were modeled in the refined analyses for comparisons with the annual CAAQS and NAAQS and the short-term NAAQS with multi-year statistical forms (1-hour NO₂ and SO₂ and 24-hour PM_{2.5} and PM₁₀). Impacts during normal testing operations were based on the worst-case screening condition. Since the engines would each be tested far less than 100 hours/year, the annual average emission rate was included in 1-hour NO₂ and SO₂ NAAQS modeling analyses at the annual average emission rates per EPA guidance due to the statistical nature of these standards (it was the engines were modeled at the maximum 1-hour emission rate for the CAAQS).

For the 1-hour NO₂ modeling assessments, the Ambient Ratio Method Version 2 (ARM2) was used in the modeling analyses with an in-stack NO₂/NO_x ratio of 0.5 (50%) based on EPA Guideline

requirements. This is conservative as the NO₂/NO_x ratios for these types of engines are on the order of 10%, as per the EPA's ISR database.

The highest NO₂ background data over the last three (3) years from the 158 East Jackson Street monitoring site was used to assess the CAAQS, which was then added to the modeled NO₂ concentration for the 1-hour CAAQS assessment. The three-year average of the second-highest hourly value for the same three (3) year period were added to the modeled NO₂ concentration for the NAAQS assessment. Assessment with the CAAQS is based on the maximum 1-hour NO₂ concentration (with and without background). NO₂ NAAQS compliance based on the five-year average of the 98th percentile daily maximum annual 1-hour impacts with background concentration (NO₂ SIL for NAAQS compliance based on 5-year average of the annual 1-hour maximum impacts without background concentrations).

Based on the results of the modeling analyses, the modeled concentrations are presented in Table 4.3-16.

Table 4.3-16: Modeled Operational Concentrations and Ambient Air Quality Standards

Pollutant	Averaging Period	Maximum Concentration (µg/m³)	Background (µg/m³)	Total (µg/m³)	Ambient Air Quality Standards (µg/m³)	
					CAAQS	NAAQS
3-/8-/24-Hour Maxima shown for one engine operating up to 10 hours/day (7AM-5PM)						
NO ₂ *	1-hour maximum (CAAQS)	119.33	112.9	232.2	339	-
	3-year average of 1-hour yearly 98th % (NAAQS)**	1.82	85.3	87.1	-	188
	Annual maximum	2.17	20.0	22.2	57	100
CO	1-hour maximum	344.55	2,061	2405.6	23,000	40,000
	8-hour maximum	176.21	1,680	1856.2	10,000	10,000
SO ₂	1-hour maximum (CAAQS)	0.663	38.0	38.7	655	-
	3-year average of 1-hour yearly 99th % (NAAQS)**	0.0079	5.2	5.208	-	196
	24-hour maximum	0.105	3.9	4.01	105	365
	Annual maximum	0.075	0.44	0.52	-	80
PM10	24-hour maximum (CAAQS)	1.62	134	135.6	50	-
	24-hour 6 th highest over 5 years (NAAQS)	2.46	74.8	77.3	-	150
	Annual maximum (CAAQS)	0.75	24.8	25.6	20	-
PM2.5	3-year average of 24-hour yearly 98th %	1.12	33.3	34.4	-	35
	Annual maximum (CAAQS)	0.75	11.5	12.3	12	-
	3-year average of annual concentrations (NAAQS)	0.71	9.8	10.5	-	12.0

*1-hour NO₂ impacts evaluated with Ambien Ratio Method #2 (ARM2), with the maximum hourly background added in separately. Annual NO₂ impacts evaluated with ARM2. Modeling utilized USEPA-default minimum/maximum NO₂/NO_x ambient ratios of 0.5/0.9.

** Impacts for the 1-hour statistical-based NO₂ and SO₂ NAAQS are based on the annual average emissions per USEPA guidance documents for intermittent sources like emergency generators. Impacts for the 1-hour NO₂ and SO₂ CAAQS are based on the 1-hour emission rate since these CAAQS are “values that are not to be exceeded”.

Construction equipment and associated heavy-duty truck traffic generates diesel exhaust, which is a known TAC. These exhaust air pollutant emissions would not be considered to contribute substantially to existing or projected air quality violations. Construction exhaust emissions may still pose health risks for sensitive receptors such as nearby residents. The primary community risk impact issues associated with construction emissions are cancer risk and exposure to PM_{2.5}. Diesel exhaust poses both a potential health and nuisance impact to nearby receptors. A health risk assessment of the Project construction activities was conducted that evaluated potential health effects of sensitive receptors at these nearby residences from construction emissions of DPM and PM_{2.5}.¹¹ The closest sensitive receptors to the Project Site are residences located north-northwest of the Project Site boundary. Emissions and dispersion modeling were conducted to predict the off-site concentrations resulting from Project construction, so that lifetime cancer risks and non-cancer health effects could be evaluated.

In addition, during excavation, grading, and some building construction activities, substantial amounts of dust could be generated. Most of the dust would result during grading activities. The amount of dust generated would be highly variable and would be dependent on the size of the area disturbed at any given time, amount of activity, soil conditions, and meteorological conditions. To address fugitive dust emissions that lead to elevated PM₁₀ and PM_{2.5} levels near construction sites, the BAAQMD CEQA Air Quality Guidelines identify best management practices. Once included in construction projects, these impacts would be considered less than significant. In addition, diesel emissions from construction related equipment would temporarily result in an increase in health risk to nearby off-site receptors.

For modeling fugitive PM₁₀ and PM_{2.5} emissions, a near-ground level release height of 0.5 meters (1.6 feet) was used for the area source. Emissions from the construction equipment and on-road vehicle travel were distributed throughout the modeled area source. To represent the construction equipment exhaust emissions, 103 equally spaced (25 meter) point sources were placed within the area of construction activity. Each point source had an emission release height of 3.05 meters (10 feet). The exit temperature and stack velocity were based on an average sized construction engine that could be used for the project. Construction emissions were modeled as occurring daily between 7 a.m. to 5 p.m., when the majority of construction activity would occur.

Table 4.3-17: Modeled Construction Concentrations and Ambient Air Quality Standards

Pollutant	Averaging Period	Maximum Concentration (µg/m³)	Background (µg/m³)	Total (µg/m³)	Ambient Air Quality Standards (µg/m³)	
					CAAQS	NAAQS
Construction occurs for up to 10 hours/day (7AM-5PM)						
NO ₂ *	1-hour maximum (CAAQS)	4.00	112.9	116.9	339	-
	3-year average of 1-hour yearly 98th % (NAAQS)	2.75	85.3	88.1	-	188
	Annual maximum	0.41	20.0	20.4	57	100
CO	1-hour maximum	10.49	2,061	2071.5	23,000	40,000
	8-hour maximum	4.55	1,680	1684.6	10,000	10,000
SO ₂	1-hour maximum (CAAQS)	0.033	38	38.0	655	-
	3-year average of 1-hour yearly 99th % (NAAQS)	0.025	5.2	5.2	-	196
	24-hour maximum	0.007	3.9	3.9	105	365
	Annual maximum	0.003	0.55	0.55	-	80
PM10	24-hour maximum (CAAQS)	2.43	134	136.4	50	-
	Annual maximum (CAAQS)	1.02	24.8	25.8	20	-
PM2.5	3-year average of 24-hour yearly 98th %	0.59	33.3	33.9	-	35
	3-year average of annual concentrations (NAAQS)	0.33	9.8	10.1	-	12.0

*1-hour NO₂ impacts evaluated with Ambien Ratio Method #2 (ARM2), with the maximum hourly background added in separately. Annual NO₂ impacts evaluated with ARM2. Modeling utilized USEPA-default minimum/maximum NO₂/NO_x ambient ratios of 0.5/0.9.

The air quality modeling support data will be submitted to Staff electronically.

Based on the modeling results in Table 4.3-16 and 4.3-17, the only combined modeled impacts and background concentrations greater than the standards are for the 24-hour and annual PM₁₀ CAAQS and the 24-hour PM_{2.5} NAAQS and annual PM_{2.5} CAAQS. These exceedances are only because the background concentrations already exceed the standards. Modeled project impacts in these instances are less than the USEPA and/or BAAQMD significance levels and thus, the Project would not cause or contribute to an exceedance of any air quality standard for any averaging time period. The Project would therefore comply with the CAAQS and NAAQS.

Public Health and Health Risk Assessment

This section presents the methodology and results of a human health risk assessment performed to assess potential impacts and public exposure associated with airborne emissions from the routine operation of the Project.

Air will be the dominant pathway for public exposure to chemical substances released by the Project. Emissions to the air would consist primarily of combustion by-products produced by the diesel-fired emergency standby engines. Potential health risks from combustion emissions would occur almost entirely by direct inhalation. To be conservative, additional pathways were included in the health risk modeling; however, direct inhalation is considered the most likely exposure pathway. The risk

assessment was conducted in accordance with guidance established by the California Office of Environmental Health Hazard Assessment (OEHHA 2015) and the California Air Resources Board.

Combustion byproducts with established CAAQS or NAAQS, including oxides of nitrogen (NO_x), carbon monoxide, sulfur dioxide, and fine particulate matter were addressed in the previous Air Quality section.

Affected Environment

Sensitive receptors are defined as groups of individuals that may be more susceptible to health risks due to chemical exposure. Schools (public and private), day care facilities, convalescent homes, and hospitals are of particular concern. The nearest sensitive receptors, by type, are listed in Table 4.3-18. There are no sensitive receptors within 1,000 ft. of the facility boundary. Appendix AQ-5 contains support materials for the facility health risk assessment, including a listing of sensitive receptors within the facility regional area. HAPs emissions evaluations are presented in Appendix AQ-1.

Table 4.3-18: Sensitive Receptors Nearfield of the Project Site

Receptor Type	UTM Coordinates	~ Distance from Site, ft.	~ Elevation, AMSL ft.
Nearest Residence	593272, 4138238	4,885	26
Nearest Hospital	595840, 4135820	6,700	44
Nearest School	593427, 4138428	4,904	22
Nearest Daycare	*	*	*
Nearest Convalescent Home	*	*	*
Nearest College/Univ.	590092, 4138749	15,091	27
Source: Google Earth Image 9/2020. All coordinates are approximate. Nearest school is the Montague Elementary School *none within 1 mile of site.			

The receptors noted above should not be assumed to represent the maximum impact locations based on receptor type. For example, the nearest residence noted in the table may not be the maximum impacted residence on the modeling grid.

The nearest residences are located to the north-northwest of the Project Site at a distance of approximately 0.93 mile. Another set of residences are located to the west of the Project Site, also at a distance of approximately 0.93 mile.

Air quality and health risk data presented by CARB in the 2013 Almanac of Emissions and Air Quality (latest version available, CARB 2013) for the state shows that over the period from the mid-1990s through 2013, the average concentrations for DPM have been substantially reduced, and the associated health risks for the state are showing a steady downward trend as well. This same trend has occurred in the BAAQMD.

Environmental Consequences

Significance Criteria

Cancer Risk

Cancer risk is the probability or chance of contracting cancer over a period of time normally defined as either 30 or 70-years depending on the project type and agency risk procedures. Carcinogens are not assumed to have a threshold below which there would be no human health impact. In other words, any exposure to a carcinogen is assumed to have some probability of causing cancer; the lower the exposure, the lower the cancer risk (i.e., a linear, no-threshold model). Under various state and local regulations, an incremental cancer risk greater than 10-in-one million due to a project is considered to be a significant impact on public health. For example, the 10-in-one-million risk level is used by the Air Toxics Hot Spots (AB 2588) program and California's Proposition 65 as the public notification level for air toxic emissions from existing sources.

Non-Cancer Risk

Non-cancer health effects can be either chronic or acute. In determining potential non-cancer health risks (chronic and acute) from air toxics, it is assumed there is a dose of the chemical of concern below which there would be no impact on human health. The air concentration corresponding to this dose is called the Reference Exposure Level (REL). Non-cancer health risks are measured in terms of a hazard quotient, which is the calculated exposure of each contaminant divided by its REL. Hazard quotients for pollutants affecting the same target organ are typically summed with the resulting totals expressed as hazard indices for each organ system. A hazard index of less than 1.0 is considered to be an insignificant health risk. For this health risk assessment, all hazard quotients were summed regardless of target organ. This method leads to a conservative (upper bound) assessment. RELs used in the hazard index calculations were those published in the CARB/OEHHA listings dated October 2020.

Chronic toxicity is defined as adverse health effects from prolonged chemical exposure, caused by chemicals accumulating in the body. Because chemical accumulation to toxic levels typically occurs slowly, symptoms of chronic effects usually do not appear until long after exposure commences. The lowest no-effect chronic exposure level for a non-carcinogenic air toxic is the chronic REL. Below this threshold, the body is capable of eliminating or detoxifying the chemical rapidly enough to prevent its accumulation. The chronic hazard index was calculated using the hazard quotients calculated with annual concentrations.

Acute toxicity is defined as adverse health effects caused by a brief chemical exposure of no more than 24 hours. For most chemicals, the air concentration required to produce acute effects is higher than the level required to produce chronic effects because the duration of exposure is shorter. Because acute toxicity is predominantly manifested in the upper respiratory system at threshold exposures, all hazard quotients are typically summed to calculate the acute hazard index. One-hour average concentrations are divided by acute RELs to obtain a hazard index for health effects caused by relatively high, short-term exposure to air toxics. Since this assessment considers only DPM, and DPM has no acute REL, acute HI values were not calculated. The following receptor descriptors are used herein:

- PMI – Point of maximum impact – this receptor represents the highest concentration and risk point on the receptor grid for the analysis under consideration.
- MEIR – Maximum exposed individual residential receptor – this receptor represents the maximum impacted actual residential location on the grid for the analysis under consideration.
- MEIW - Maximum exposed individual worker receptor – this receptor represents the maximum impacted actual worker location on the grid for the analysis under consideration.
- MEIS - Maximum exposed individual sensitive receptor – this receptor represents the maximum impacted actual sensitive location on the grid for the analysis under consideration. This location is a non-residential sensitive receptor, i.e., school, hospital, daycare center, convalescent home, etc.

Construction and Operational Phase Impacts

Environmental consequences potentially associated with the Project are potential human exposure to chemical substances emitted into the air. The human health risks potentially associated with these chemical substances were evaluated in a health risk assessment. The chemical substance potentially emitted to the air from the proposed facility is DPM. DPM is the approved surrogate compound for diesel fuel combustion pursuant to CARB and EPA.

Project emissions of criteria pollutants would adhere to NAAQS or CAAQS as discussed in the Ambient Air Quality section. The proposed facility emergency electrical backup engines would be either certified or compliant Tier 4 units and as such, they meet the BACT requirements of the BAAQMD. These engines are equipped with DPFs. Finally, air dispersion modeling results show that Project emissions would not result in concentrations of criteria pollutants in air that exceed ambient air quality standards (either NAAQS or CAAQS). These standards are intended to protect the general public with a wide margin of safety. Therefore, the Project is not anticipated to have a significant impact on public health from emissions of criteria pollutants.

Potential impacts associated with emissions of toxic pollutants to the air from the proposed Project were addressed in a health risk assessment, with support data presented in Appendix AQ-5. The risk assessment was prepared using guidelines developed by OEHHA and CARB, as implemented in the latest version of the HARP model (ADMRT 22118). The BAAQMD risk assessment options in HARP were used for all analyses (BAAQMD 2016).

Public Health Impact Study Methods

Emissions of toxic pollutants potentially associated with the Project were estimated using emission factors for PM10 derived from the following:

- Caterpillar C175 Engines:
 - Each large engine running for 100 hours per year for Declared Emergency operations, at 100% load, at the guaranteed emissions levels from the Tier 4 control systems.
 - Each large engine running for 50 hours per year for Maintenance and Readiness operations, at 100% load, using composite emissions factors to address both uncontrolled and controlled emissions during such testing.
- Caterpillar C27 Engines:
 - Each small engine running for 100 hours per year for Declared Emergency operations, at

- 100% load, at the guaranteed emissions levels from the Tier 4 control systems.
- Each small engine running for 50 hours per year for Maintenance and Readiness operations, at 100% load, using composite emissions factors to address both uncontrolled and controlled emissions during such testing.

Concentrations of these pollutants in air potentially associated with the emissions were estimated using dispersion modeling as discussed in the Air Quality section. Modeling allows the estimation of both short-term and long-term average concentrations in air for use in a risk assessment, accounting for site-specific terrain and meteorological conditions. Health risks potentially associated with the estimated concentrations of pollutants in air were characterized in terms of excess lifetime cancer risks, or comparison with reference exposure levels for non-cancer health effects.

Health risks potentially associated with concentrations of carcinogenic pollutants in air were calculated as estimated excess lifetime cancer risks. The excess lifetime cancer risk for a pollutant is estimated as the product of the concentration in air and a unit risk value. The unit risk value is defined as the estimated probability of a person contracting cancer as a result of constant exposure to an ambient concentration of 1 $\mu\text{g}/\text{m}^3$ over a 30-year lifetime. In other words, it represents the increased cancer risk associated with continuous exposure to a concentration in air over a pre-defined period, i.e., usually a 30 or 70-year lifetime. Evaluation of potential non-cancer health effects from exposure to short-term and long-term concentrations in air was performed by comparing modeled concentrations in air with the RELs. An REL is a concentration in air at or below which no adverse health effects are anticipated. RELs are based on the most sensitive adverse effects reported in the medical and toxicological literature. Potential non-cancer effects were evaluated by calculating a ratio of the modeled concentration in air and the REL. This ratio is referred to as a hazard quotient. The unit risk values and RELs used to characterize health risks associated with modeled concentrations in air were obtained from the *Consolidated Table of OEHHA/ARB Approved Risk Assessment Health Values* (CARB 10/2020) and are presented in Table 4.3-19.

Table 4.3-19: Toxicity Values Used to Characterize Health Risks

TAC	Unit Risk Factor ($\mu\text{g}/\text{m}^3$)-1	Chronic Reference Exposure Level ($\mu\text{g}/\text{m}^3$)	Acute Reference Exposure Level ($\mu\text{g}/\text{m}^3$)
DPM	.0003	5	--
Source: CARB/OEHHA, 8/2018.			

Table 4.3-20 delineates the maximum hourly and annual emissions of the identified air toxic pollutants (DPM) from the emergency backup engines.

Table 4.3-20: Maximum Backup Generating Facility Hourly, Daily, and Annual Air Toxic Emissions

Emergency Standby Engines (per engine basis)				
Engine Model	Toxic	Max Hour Emissions, Lbs	Max Daily Emissions, Lbs	Max Annual Emissions Lbs
CAT C175	DPM	14.47	-	723.5
CAR C27	DPM	4.02	-	201.0
Note: Engines are equipped with diesel particulate filters at ≤ 0.02 g/bhp-hr				

Construction Phase Impacts

The proposed Project would be a source of air pollutant emissions during Project construction. The BAAQMD CEQA Air Quality Guidelines considers exposure of sensitive receptors to air pollutant levels that result in an unacceptable cancer risk or hazard to be significant. BAAQMD recommends a 1,000-foot zone of influence around Project boundaries. Results of the construction related health risk assessment indicate that the risk values from construction would be as follows in Table 4.3-21:

Table 4.3-21: Project Construction Health Risk Assessment Summary

Location	Receptor #	UTM (meters)	Cancer Risk	Chronic HI	Acute HI	Cancer Burden
PMI	8867	594600, 4137300	1.81E-06	7.88E-04	-	NA
MEIR	6741	593240, 4138220	4.13E-08	1.8E-05	-	NA
MEIS	6545	593440, 4138420	3.67E-08	1.60E-05	-	NA
MEIW	8869	594560, 4137740	1.99E-07	7.32E-04	-	NA
Notes: See acronym definitions above. The PMI noted above is located the southeast fence line. DPM is the surrogate compound for construction equipment diesel exhaust. No acute REL has been established for DPM. 50-month construction period (HRA used 5 years as a conservative exposure period.) FAH=1 for all age groups from 3rd trimester to 16 years, for MEIR and MEIS. FAH not used for MEIW. MEIS – Montague Elementary School						

These values are well below the significance thresholds for construction health risk impacts, and as such the community risk impacts from construction activities would be *less than significant*.

Characterization Of Risks from Operations Toxic Air Pollutants

The excess lifetime cancer risk associated with operational concentrations in air estimated for the backup generating facilities PMI location is calculated to be 2.74E-05 or 27.4 per million which is located on the southeast Project fence line. Excess lifetime cancer risks less than 10×10^{-6} , for sources with T-BACT, are unlikely to represent significant public health impacts that require additional controls of facility emissions. Risks higher than 1×10^{-6} may or may not be of concern, depending upon several factors. These include the conservatism of assumptions used in risk estimation, size of the potentially exposed population and toxicity of the risk-driving chemicals. Health effects risk thresholds are listed on Table 4.3-22. Risks associated with pollutants potentially emitted from the Project are presented in Tables 4.3-23 and 4.3-24. The chronic hazard indices for all scenarios are well below 1.0. It should be noted that DPM does not currently have an acute hazard index value, and as such, acute health effects were not evaluated in the HRA. Further description of the methodology used to calculate health risks associated with emissions to the air can be found in the HARP User's Manual dated 12/2003 and the ADMRT Manual dated 3/2015 (CARB 2015). As described previously, human health risks associated with emissions from the proposed Project are unlikely to be higher at any other location than at the location of the PMI. However, the location of the PMI is on the Project fence line, adjacent to an existing parking lot and does not reflect the

potential impact at any of the sensitive receptors, all of which have risks less than 10E-06 or 10 in a million.

Table 4.3-22: Health Risk Significance Thresholds

Risk Category	Significance Thresholds		
	BAAQMD Project Risk	BAAQMD Net Project Risk	State of California
Cancer Risk	10 in one million	10 in one million	<= 1 in a million w/o TBACT <=10 in a million w/TBACT
Chronic Hazard Index	1.0	1.0	1.0
Acute Hazard Index	1.0	1.0	1.0
Cancer (T-BACT required)	>1 in a million Chronic HI > 0.20		See above.
Cancer Burden	NA		1.0
Source: Regulation 2 Rule 5, NSR for Toxic Air Contaminants			

Table 4.3-23: Project Residential/Sensitive Health Risk Assessment Summary

Location	Receptor #	UTM (meters)	Cancer Risk	Chronic HI	Acute HI	Cancer Burden
PMI	8981	594560, 4137280	2.74E-05	6.33E-03	-	NA
MEIR	6741	593240, 4138220	7.09E-07	1.64E-04	-	NA
MEIS	6545	593440, 4138420	6.32E-07	1.46E-04	-	NA
Notes: See acronym definitions above. The PMI noted above is located at the southeast fence line. The maximum chiller contribution to the HRA is 1.43E-09 at Receptor #4. This has no appreciable contribution to the total risk. MEIS – Montague Elementary School						

Table 4.3-24: Project Worker Health Risk Assessment Summary

Location	Receptor #	UTM	Cancer Risk	Chronic HI	Acute HI	Cancer Burden
PMI	8981	594560, 4137280	8.22E-06	6.33E-03	-	NA
MEIW	8869	594560, 4137740	6.31E-06	4.85E-03	-	NA
Notes: See acronym definitions above. The PMI noted above is located at the southeast fence line. The maximum chiller contribution to the HRA is 1.36E-10 at Receptor #4. This has no appreciable contribution to the total risk.						

Cancer risks potentially associated with Project emissions also were not assessed in terms of cancer burden. Cancer burden is a hypothetical upper-bound estimate of the additional number of cancer cases that could be associated with emissions from the Project. Cancer burden is calculated as the

worst-case product of excess lifetime cancer risk, at the 1×10^{-6} isopleth and the number of individuals at that risk level. Cancer burden evaluations are not required by the BAAQMD.

The chronic non-cancer hazard quotient associated with concentrations in air are shown in Table 4.3-23. The chronic non-cancer hazard quotient for all target organs falls below 1.0. As described previously, a hazard quotient less than 1.0 is unlikely to represent significant impact to public health. Since DPM does not have an acute REL, no acute hazard index or quotient was calculated. As described previously, human health risks associated with emissions from the proposed Project are unlikely to be higher at any other location than at the location of the PMI. If there is no significant impact associated with concentrations in air at the PMI location, it is unlikely that there would be significant impacts in any other location in the vicinity of the Project.

Detailed risk and hazard values are provided in the HARP output which will be submitted to Staff electronically.

The estimates of excess lifetime cancer risks and non-cancer risks associated with chronic or acute exposures fall below thresholds used for regulating emissions of toxic pollutants to the air. Historically, exposure to any level of a carcinogen has been considered to have a finite risk of inducing cancer. In other words, there is no threshold for carcinogenicity. Since risks at low levels of exposure cannot be quantified directly by either animal or epidemiological studies, mathematical models have estimated such risks by extrapolation from high to low doses. This modeling procedure is designed to provide a highly conservative estimate of cancer risks based on the most sensitive species of laboratory animal for extrapolation to humans (i.e., the assumption being that humans are as sensitive as the most sensitive animal species). Therefore, the true risk is not likely to be higher than risks estimated using unit risk factors and is most likely lower, and could even be zero (USEPA, 1986; USEPA, 1996).

An excess lifetime cancer risk of 1×10^{-6} is typically used as a screening threshold of significance for potential exposure to carcinogenic substances in air. The excess cancer risk level of 1×10^{-6} , which has historically been judged to be an acceptable risk, originates from efforts by the Food and Drug Administration (FDA) to use quantitative risk assessment for regulating carcinogens in food additives in light of the zero-tolerance provision of the Delany Amendment (Hutt, 1985). The associated dose, known as a “virtually safe dose” (VSD) has become a standard used by many policy makers and the lay public for evaluating cancer risks. However, a study of regulatory actions pertaining to carcinogens found that an acceptable risk level can often be determined on a case-by-case basis. This analysis of 132 regulatory decisions, found that regulatory action was not taken to control estimated risks below 1×10^{-6} (one-in-one million), which are called de minimis risks. De minimis risks are historically considered risks of no regulatory concern. Chemical exposures with risks above 4×10^{-3} (four-in-ten thousand), called de manifestis risks, were consistently regulated. De manifestis risks are typically risks of regulatory concern. The risks falling between these two extremes were regulated in some cases, but not in others (Travis et al, 1987).

The estimated lifetime cancer risks to the maximally exposed individual located at the Project PMI, MEIR, MEIW, and MEIS do not exceed the 10×10^{-6} significance level for T-BACT sources. These engines are EPA Tier 4 units equipped with diesel particulate filters, and are used only for emergency power backup, therefore BACT or T-BACT for DPM is satisfied. The chronic hazard index value is also well below the significance threshold of 1.0. These risk estimates were calculated using assumptions that are highly health conservative. Evaluation of the risks associated with the Project

emissions should consider that the conservatism in the assumptions and methods used in risk estimation considerably over-state the risks from Project emissions. Based on the results of this risk assessment, there are no significant public health impacts anticipated from emissions of toxic pollutants to the air from the Project.

Operation Odors

The Project is not expected to produce any contaminants at concentrations that could produce objectionable odors, for the reasons discussed above.

Summary of Impacts

The health risk assessment for the Project indicates that the maximum cancer risk would be approximately 7.09E^{-07} (versus a significance threshold of 10×10^{-6} with T-BACT) at the MEIR to air toxics from Project emissions. This risk level is considered to be not significant. Non-cancer chronic effects for all scenarios are well below the chronic hazard index significance value.

Results from an air toxics risk assessment based on emissions modeling indicate that there will be no significant incremental public health risks from the construction and operation of the Project. Results from criteria pollutant modeling for routine operations indicate that potential ambient concentrations of NO₂, CO, SO₂, and PM₁₀ would not significantly impact air quality. Potential concentrations are below the federal and California standards established to protect public health, including the more sensitive members of the population.

Construction and Operation Overlap Assessment

The following analysis addresses the emissions overlap period in which the engines from the SJ04 building would be readiness and maintenance tested during the construction of the SJC06 building and related improvements. The overlap data is summarized as follows:

- The overlap period, based upon the current construction schedule, will commence at the end of construction of the SJ04 building and related improvements (start of construction of the SJC06 building and related improvements). The overlap period would be approximately 25 months (2.1 years).
- The SJ04 building would involve 16 large engines (CAT C175) and 2 small engines (CAT C27).
- All of the large engines and the two small engines would be readiness and maintenance tested during the 25-month period.
- Annual emissions (readiness/maintenance testing only) for the engines are based on 50 hours/yr each over the scheduled 2.1-year period.
- Emissions from construction of the SJC06 building and related improvements were derived from CalEEMod.

Table 4.3-25 below shows the emissions summary for the overlap period.

Table 4.3-25: Overlap Emissions Table

Parameter	NO _x	CO	VOC	SO _x	PM10	PM2.5
SJ04 Large Engine Emissions (16), tpy	5.8	10.03	0.69	0.019	0.077	0.077
SJ04 Small Engine Emissions (2), tpy	0.2	0.35	0.02	0.0005	0.009	0.009
Total Engine Emissions, tpy	6.0	10.38	0.71	0.02	0.08	0.08
SJC06 Construction Emissions, tpy (2.1 years or 25 months)	0.61	3.42	2.05	0.0068	0.0098	0.0096
SJC06 Worst Case Construction Year and Emissions (tpy)	0.31 (2027)	1.39 (2027)	1.97 (2028)	0.0031 (2027)	0.0043 (2027)	0.0042 (2027)
Total Worst Case Annual Emissions (tpy)	6.31	11.77	2.68	0.023	0.084	0.084
Notes: 1. Engines would be M&R tested for no more than 50 hours/yr. Engines would not be tested concurrently. 2. Construction would occur 5 days/wk for an average of 10 hours/day. PM10/2.5 emissions are shown as “exhaust only”.						

Criteria Pollutant Impacts for Overlap Scenario

Daily and hourly emissions for the backup generator engines were derived from the emissions calculations presented in Appendix AQ-1, while daily and hourly emissions from construction were derived from the annualized construction emissions presented in Table 4.3-25 above. Table 4.3-26 presents the daily and hourly emissions for the overlap period.

Table 4.3-26: Daily and Hourly Emissions for the Overlap Period

Parameter	NO _x	CO	VOC	SO _x	PM10	PM2.5
M&R Testing						
1 Large Engine, lbs/hr	14.47	25.08	1.74	0.05	0.193	0.193
8 Large Engines, lbs/day	115.8	200.7	13.9	0.39	1.54	1.54
SJC06 Worst Case Construction Year and Emissions (tons)	0.31 (2027)	1.39 (2027)	1.97 (2028)	0.0031 (2027)	0.0043 (2027)	0.0042 (2027)
SJC06 Worst Case Construction Year Emissions (lbs/hr)	0.233	1.054	1.49	0.0023	0.0032	0.0031
SJC06 Worst Case Construction Year Emissions (lbs/day)	2.33	10.54	14.9	0.023	0.032	0.031
Notes: 1. Max hourly engine emissions are based on 1 large engine (readiness/maintenance testing) for 1 hour/day. 2. Max daily engine emissions are based on 8 large engines tested for 1 hour each per day. 3. Construction for 12 months at 22 days/month = 264 days. 10 hours/day. 4. PM emissions are shown as “exhaust only”. All of the other pollutants are exhaust emissions.						

The same background ambient air quality levels and modeling techniques from the modeling analyses of Project operating impacts were used in the construction analysis. The applicable background concentrations of NO₂, SO₂, CO, PM2.5, and PM10 from the operational modeling analyses used in the construction impact analysis are shown in the following table. As with the previous modeling assessment, the USEPA-approved model AERMOD (version 21112) was used to

estimate ambient impacts from construction activities, consistent with the Project operational impact analyses and the version of AERMET (version 18081) used by BAAQMD to process the meteorological data from the San José (surface data) and Oakland Airport (upper air data).

The emission sources for the Project's construction were grouped into two categories: exhaust emissions and dust emissions. Combustion equipment exhaust emissions for the overlap analysis were modeled as 23-3.048-meter-high point sources (exhaust parameters of 750 Kelvins, 64.681 m/s exit velocity, and 0.1524-meter stack diameter) placed at regular 25-meter intervals around the construction area of the SJ06 building and related onsite improvements. Construction fugitive dust emissions were modeled as an area source covering the construction area with an effective plume height of two (2) meters (6.6 feet). Combustion and fugitive emissions were assumed to occur for 10 hours/day (7 AM to 5 PM) consistent with the expected period of on-site construction activities generating both exhaust emissions and fugitive dust. The construction impacts modeling analysis used the same receptor locations and meteorological data as used for the Project operating impact analysis. A detailed discussion of the receptor locations and meteorological data is included with the discussion of the modeling analyses of Project operating impacts.

Modeling Results

Based on the emission rates of the routine testing of the engines at the SJ04 building plus the construction emissions for the SJC06 building and related onsite improvements of NO_x, SO₂, CO, PM_{2.5}, and PM₁₀, the modeling options, receptor grids, and meteorological data, AERMOD calculated the short-term and annual ambient impacts for each pollutant. As mentioned above, the modeled 1-hour, 3-hour 8-hour, and 24-hour ambient impacts are based on the worst-case daily emission rates of NO_x, SO₂, CO, PM_{2.5}, and PM₁₀ spread over the estimated daily hours of operation. The annual impacts are based on the annual emission rates of these pollutants. The 1-hour and annual average concentrations of NO₂ were computed using ARM2 method with a NO₂/NO_x ratio of 0.5. Background concentrations were added to the modeled results.

The modeling analysis results are shown in Table 4.3-27 below, including the appropriate background levels and the resulting total ambient impacts. Modeled crossover impacts are expected to be below the most stringent state and Federal standards for all pollutants except PM₁₀ and PM_{2.5}, where the background already exceeds the standards (annual PM_{2.5} demonstrates compliance). The modeled PM₁₀ and PM_{2.5} impacts are primarily due to the fugitive construction emissions.

Table 4.3-27: Modeled Overlap (Construction + Operation) Concentrations and Ambient Air Quality Standards

Pollutant	Averaging Period	Maximum Concentration (µg/m³)	Background (µg/m³)	Total (µg/m³)	Ambient Air Quality Standards (µg/m³)	
					CAAQS	NAAQS
Construction occurs for up to 10 hours/day (7AM-5PM)						
NO ₂ *	1-hour maximum (CAAQS)	96.69	112.9	209.6	339	-
	3-year average of 1-hour yearly 98th % (NAAQS)	2.37	85.3	87.7	-	188
	Annual maximum	2.07	20.0	22.1	57	100
CO	1-hour maximum	276.63	2,061	2337.6	23,000	40,000
	8-hour maximum	179.98	1,680	1860	10,000	10,000
SO ₂	1-hour maximum (CAAQS)	0.53	38	38.5	655	-
	3-year average of 1-hour yearly 99th % (NAAQS)	0.022	5.2	5.2	-	196
	24-hour maximum	0.12	3.9	4.0	105	365
	Annual maximum	0.009	0.55	0.56	-	80
PM10	24-hour maximum (CAAQS)	2.68	134	136.7	50	-
	Annual maximum (CAAQS)	0.89	24.8	25.7	20	-
PM2.5	3-year average of 24-hour yearly 98th %	1.22	33.3	34.54	-	35
	3-year average of annual concentrations (NAAQS)	0.69	9.8	10.5	-	12.0

*1-hour NO₂ impacts evaluated with Ambien Ratio Method #2 (ARM2), with the maximum hourly background added in separately. Annual NO₂ impacts evaluated with ARM2. Modeling utilized USEPA-default minimum/maximum NO₂/NO_x ambient ratios of 0.5/0.9.

HRA Impacts for Overlap Scenario

An HRA was performed using HARP (ADMRT Version 21081). The HRA was performed for diesel particulate matter (DPM) only, as DPM is the accepted surrogate compound for whole diesel exhaust. The necessary output files from AERMOD were imported into HARP. Detailed descriptions of the risk assessment methods and support data are contained in the SPPE application document and are not repeated here. Assumptions used in the HRA analysis are as follows:

- The standard project receptor file was used. This file contained an extensive cartesian grid of receptors as well as the identified sensitive receptors included in the other project modeling analyses.
- The BAAQMD health tables were used (enabled in HARP)
- Two separate analyses were run as follows:
 - a. Residential run, FAH=1, 2-year exposure period (see note below)
 - b. Worker run, FAH=off, 2-year exposure period (see note below)

Note: HARP does not allow fractions of years as exposure values, therefore a 2-year period was used to represent the 24-month emissions overlap.
- The PMI, MEIR, MEIW, and MEIS values were derived from the HRA output files.

Table 4.3-28: Project Overlap (Construction + Operation) Health Risk Assessment Summary

Location	Receptor #	UTM (meters)	Cancer Risk	Chronic HI	Acute HI	Cancer Burden
PMI	4	594551.8, 4137276	1.19E-05	6.25E-03	-	NA
MEIR	4007	596140, 4135720	1.56E-07	8.2E-05	-	NA
MEIS	3917	596340, 4135720	1.56E-07	8.2E-05	-	NA
MEIW	8927	594580, 4137240	6.08E-07	3.73E-03	-	NA

Notes: See acronym definitions above.

The PMI noted above is located on the southeast fenceline.

Testing hours for the overlap of construction and operation was set to 50 hours per engine.

DPM is the surrogate compound for construction equipment diesel exhaust. No acute REL has been established for DPM.

SJC06 construction period is 24 months (HRA used 2-year exposure period.)

FAH=1 for all age groups from 3rd trimester to 16 years, for MEIR and MEIS.

FAH not used for MEIW.

* MEIS – Bachrodt Elementary School

CalEnviroScreen 4.0 Survey

Pursuant to recent amendments to BAAQMD Regulation 2 Rules 1 and 5, which address a lower risk threshold value for sources located in or within 1000 ft of an Overburdened Community (OBC) (an area with a percentile rating of greater than or equal to 70), the maximum allowed risk from such facilities is six (6)-in-one-million. There is no change to the cumulative risk value threshold of 100-in-a-million. Appendix AQ-5 contains the CalEnviroScreen figure for the region surrounding the Project Site. Table AQ-5-2 presents the data on the various screening areas and the percentile rating and distance of each of these areas from the Project Site. This data indicates that there is no OBC with a percentile rating of 70% or higher within 1,000 ft. of the proposed Project.

Cumulative Impacts

BAAQMD's Role in Air Quality

The Bay Area Air Quality Management District (BAAQMD) is the primary agency responsible for assuring that the National and California Ambient Air Quality Standards (NAAQS and CAAQS, respectively) are attained and maintained in the Bay Area. BAAQMD's jurisdiction includes all of Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo and Santa Clara counties, and the southern portions of Solano and Sonoma counties. The Air District's responsibilities in improving air quality in the region include: preparing plans for attaining and maintaining air quality standards; adopting and enforcing rules and regulations; issuing permits for stationary sources of air pollutants; inspecting stationary sources and responding to citizen complaints; monitoring air quality and

meteorological conditions; awarding grants to reduce mobile emissions; implementing public outreach campaigns; and assisting local governments in addressing climate change.

Under the Small Power Plant Exemption process with the California Energy Commission (CEC), the BAAQMD acts as a Responsible Agency when it has limited discretionary authority over a portion of a project but does not have the primary discretionary authority of a Lead Agency. As a Responsible Agency, BAAQMD may coordinate the environmental review process with the lead agency regarding BAAQMD's permitting process, provide comments to the Lead Agency regarding potential impacts, and recommend mitigation measures.

Cumulative Thresholds of Significance

In accordance with BAAQMD CEQA Guidelines, a Project impact would be considered significant if the Project would:

- Conflict with or obstruct implementation of the applicable air quality plan;
- Violate any air quality standard or contribute substantially to an existing or projected air quality violation;
- Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors);
- Expose sensitive receptors to substantial pollutant concentrations; or
- Create objectionable odors affecting a substantial number of people.

In May 2017, the BAAQMD updated the significance thresholds for agencies to use with environmental review of projects. These thresholds were designed to establish the level at which BAAQMD believed air pollutant emissions would cause significant impacts under CEQA.

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 radius from the fence line of a source plus the contribution from the project, exceeds the following recommended significance thresholds in Table 4.3-29 below.

Table 4.3-29: Cumulative Significance Thresholds

Health Risks and Hazards for Sensitive Receptors (Cumulative from All Sources within 1,000-Foot Zone of Influence) and Cumulative Thresholds for New Sources	
Excess Cancer Risk	100 per 1 million
Chronic Hazard Index	10.0
Annual Average PM _{2.5}	0.8 µg/m ³
PM _{2.5} = fine particulate matter or particulates with an aerodynamic diameter of 2.5µm or less. Source: BAAQMD, 2018.	

Cumulative Impacts Assessment

Cumulative stationary and mobile source impacts were not assessed for the proposed Project as the nearest sensitive receptor is approximately 4,900 feet from the Project fence line, well in excess of the 1,000 foot radius established by the BAAQMD for cumulative assessments. However, for summary purposes, cumulative risks from permitted stationary sources of TACs near the Project Site were identified using BAAQMD's *Stationary Source Risk and Hazard Analysis Tool*. This mapping tool uses Google Earth to identify the location of stationary sources and their estimated screening level cancer risk and hazard impacts. This tool identified eight (8) sources within 1,000 feet of the Project boundaries and the distance adjusted impacts are summarized in Table 4.3-30.

Table 4.3-30 Combined Source Listing (Post-BAAQMD Distance Adjustments)

Source	Maximum Cancer Risk (per million)	Hazard Index	PM _{2.5} concentration (µg/m ³)
17437 Lumileds LLC	13.402	1.479E-01	3.310E-01
18923 City of San José MWTP	0.010	2.728E-06	2.597E-05
19141 SJC Fuel Co. LLC	0.380	7.611E-04	4.801E-04
23091 Steel Wave	0.048	9.740E-05	6.174E-05
200515 Apple Inc.	0.032	8.524E-06	3.993E-05
13367-10 San José Int'l Airport	0.352	5.454E-04	4.493E-04
13367-11 San José Int'l Airport	7.504	1.161E-02	9.568E-03
104171-Conoco Phillips	0.312	1.372E-03	0
<i>Combined Sources</i> ¹	22.040	0.162	0.342
BAAQMD Threshold – Combined Sources	100	10.0	0.8
* The BAAQMD Distance Adjustment Multiplier Tool was used to adjust the risk from these sources using the maximum distance of 984 feet. Based on actual distances to the sensitive receptors, the summarized impacts would be much smaller than the listed results. Note: ¹The combined source level is an overestimate because the maximum impact from each source is assumed to occur at the same location.			

The previously summarized cancer risk and hazard indexes for the Project were well below BAAQMD CEQA significance criteria of one in a million risk (1E-06) for cancer and 1.0 for the hazard index at all sensitive receptors. Additionally, PM_{2.5} concentrations at all sensitive receptors are well below the BAAQMD annual significance criteria of 0.3 µg/m³. Thus, regardless of the background cumulative impacts, the Project's contributions would always be less than the BAAQMD CEQA significance levels and represent an immeasurable impact.

4.4 BIOLOGICAL RESOURCES

The following discussion is based on a Biological Resources Report prepared for the Project Site by H. T. Harvey & Associates in September 2022, and an Arborist Report prepared for the Project Site by HMM in August 2022. These reports are attached as Appendices B and C, respectively. The Biological Resources Report recommends certain mitigation measures and Project Design Features that the Applicant has incorporated as Project Design Features (PDFs) herein.

4.4.1 Environmental Setting

4.4.1.1 *Regulatory Framework*

Federal and State

Endangered Species Act

Individual plant and animal species listed as rare, threatened, or endangered under state and federal Endangered Species Acts are considered special-status species. Federal and state endangered species legislation has provided the United States Fish and Wildlife Service (USFWS) and the California Department of Fish and Wildlife (CDFW) with a mechanism for conserving and protecting plant and animal species of limited distribution and/or low or declining populations. Permits may be required from both the USFWS and CDFW if activities associated with a proposed project would result in the take of a species listed as threatened or endangered. To “take” a listed species, as defined by the State of California, is “to hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill” these species. Take is more broadly defined by the federal Endangered Species Act to include harm of a listed species.

In addition to species listed under state and federal Endangered Species Acts, Sections 15380(b) and (c) of the CEQA Guidelines provide that all potential rare or sensitive species, or habitats capable of supporting rare species, must be considered as part of the environmental review process. These may include plant species listed by the California Native Plant Society and CDFW-listed Species of Special Concern.

Migratory Bird Treaty Act

The federal Migratory Bird Treaty Act (MBTA) prohibits killing, capture, possession, or trade of migratory birds except in accordance with regulations prescribed by the Secretary of the Interior. Hunting and poaching are also prohibited. This includes direct and indirect acts, except for harassment and habitat modification, which are not included unless they result in direct loss of birds, nests, or eggs. The CDFW also protects migratory and nesting birds under California Fish and Game Code Sections 3503, 3503.5, and 3800. The CDFW defines taking as causing abandonment and/or loss of reproductive efforts through disturbance.

Sensitive Habitat Regulations

Wetland and riparian habitats are considered sensitive habitats under CEQA. They are also afforded protection under applicable federal, state, and local regulations, and are generally subject to regulation by the United States Army Corps of Engineers (USACE), Regional Water Quality Control

Board (RWQCB), CDFW, and/or the USFWS under provisions of the federal Clean Water Act (e.g., Sections 303, 304, 404) and State of California Porter-Cologne Water Quality Control Act.

Fish and Game Code Section 1602

Streambeds and banks, as well as associated riparian habitat, are regulated by the CDFW per Section 1602 of the Fish and Game Code. Work within the bed or banks of a stream or the adjacent riparian habitat requires a Streambed Alteration Agreement from the CDFW.

Regional and Local

Santa Clara Valley Habitat Plan/Natural Community Conservation Plan

The Santa Clara Valley Habitat Plan/Natural Community Conservation Plan (VHP) covers approximately 520,000 acres, or approximately 62 percent of Santa Clara County. It was developed and adopted through a partnership between Santa Clara County, the Cities of San José, Morgan Hill, and Gilroy, Valley Water, Santa Clara Valley Transportation Authority (VTA), USFWS, and CDFW. The Habitat Plan is intended to promote the recovery of endangered species and enhance ecological diversity and function, while accommodating planned growth in southern Santa Clara County. The Santa Clara Valley Habitat Agency is responsible for implementing the plan.

San José Tree Ordinance

The City of San José maintains the urban landscape by controlling the removal of ordinance trees on private property (San José Municipal Code Section 13.32). Ordinance trees are defined as trees 38 inches in circumference, or approximately 12 inches in diameter, at a height of 4.5 feet above the ground. Ordinance trees are generally mature trees that help beautify the City, slow the erosion of topsoil, minimize flood hazards, minimize the risk of landslides, increase property values, and improve local air quality. A tree removal permit is required from the City of San José for the removal of ordinance trees.

Envision San José 2040 General Plan

The General Plan includes the following biological resource policies applicable to the proposed project.

Policies	Description
ER-5.1	Avoid implementing activities that result in the loss of active native birds' nests, including both direct loss and indirect loss through abandonment, of native birds. Avoidance of activities that could result in impacts to nests during the breeding season or maintenance of buffers between such activities and active nests would avoid such impacts.
ER-5.2	Require that development projects incorporate measures to avoid impacts to nesting migratory birds.
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.

Policies	Description
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.
MS-21.6	As a condition of new development, require 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.
CD-1.25	Within new development projects, include preservation of ordinance-sized and other significant trees, particularly natives. Any adverse effect on the health and longevity of such trees should be avoided through design measures, construction, and best maintenance practices. When tree preservation is not feasible include replacements or alternative mitigation measures in the project to maintain and enhance our Community Forest.

4.4.1.2 *Existing Conditions*

Project Site

The Project Site consists of a vacant field covered by ruderal vegetation, non-native grasses, and a few trees and shrubs. The biological resources report prepared for the project by H. T. Harvey & Associates was based on site reconnaissance surveys conducted during June, August and September of 2020 and in July 2022.

Habitat Plan Land Covers

The VHP land covers identified within the Project Site include the following: 20.9-acres of California Annual Grassland and 1.4-acres of Urban-Suburban (i.e., developed/landscaped), as described below.

California Annual Grassland - California annual grassland (20.9 acres) is the dominant land cover type on the Project Site, and extends from the Guadalupe River Trail to Orchard Parkway. This habitat has been regularly mown for decades. During the biologist's surveys, vegetation in the California annual grassland was 10–40 inches tall and dense with a very thick thatch layer from accumulated vegetation debris. This habitat type is dominated by nonnative grasses such as wild oat (*Avena fatua*) and ripgut brome (*Bromus diandrus*), as well as weedy forbs such as Russian thistle (*Salsola tragus*), wild radish (*Raphanus sativus*), broadleaved pepperweed (*Lepidium latifolium*), and salsify (*Tragopogon* sp.). Large patches of Italian thistle (*Carduus pycnocephalus*) and milk thistle (*Silybum marianum*) were observed throughout the grassland. Large clusters of coyote brush (*Baccharis pilularis*) individuals were on non-native fill within the project area. A line of red willow (*Salix laevigata*), black walnut (*Juglans hindsii*), and Fremont cottonwood (*Populus fremontii*) grows along a small dirt road that extends partway from the northern project boundary southwest towards the Guadalupe River Trail. Herbaceous vegetation in the understory of these trees was similar to that of the annual grassland elsewhere on the Project Site. The grassland contained a number of species ranked by the California Invasive Plant Council (Cal-IPC) as being moderately or highly invasive.

Burrows of California ground squirrels were observed in small numbers (one burrow was observed during the June 2020 survey, three burrows were observed during the September 2020 survey, and four burrows were observed during the July 2022 survey) on the Project Site during the site visits. This fossorial mammal species is an important component of grassland communities, providing a prey base for diurnal raptors and terrestrial predators and providing burrows that can be used by burrowing owls. Other rodent species that can potentially occur in the grassland habitat on the Project Site include the Botta's pocket gopher (*Thomomys bottae*), California vole (*Microtus californicus*) and deer mouse (*Peromyscus maniculatus*). Diurnal raptors such as red-tailed hawks (*Buteo jamaicensis*) and red-shouldered hawks (*Buteo lineatus*) forage for these small mammals over grasslands during the day, and at night nocturnal raptors, such as barn owls (*Tyto alba*), will forage for nocturnal rodents, such as deer mice.

Several reptile species regularly occur in grassland habitats, including the western fence lizard (*Sceloporus occidentalis*), gopher snake (*Pituophis catenifer*), and southern alligator lizard (*Elgaria multicarinata*).

Urban-Suburban - Urban-Suburban land, as described in the VHP, is comprised of areas where native vegetation has been cleared for residential, commercial, industrial, transportation, or recreational structures, and is defined as areas with one or more structures per 2.5 acres. Vegetation found in Urban-Suburban land is usually in the form of landscaping, planted street trees, and parklands. There is no land cover fee for lands with this designation. Urban-Suburban areas on the site include paved areas such as the recently installed asphalt parking lots, sidewalks, and roadways and associated landscaping. The landscaped areas have been planted with ornamental trees, shrubs and groundcovers common to the region, including weeping willow, Chinese elm, juniper bushes, coast redwood and London plane.

The Urban-Suburban areas with the project boundary provide wildlife habitat in only a very limited capacity, with most wildlife species occurring in these areas being tolerant of frequent human disturbances. Species that use these areas include the nonnative European starling, rock pigeon, house mouse, and Norway rat, as well as the native raccoon and striped skunk. Western fence lizards commonly occur in Urban-Suburban areas and may bask on road or parking lot surfaces in order to raise their body temperature. Bird species including the American crow, California scrub jay, Anna's hummingbird, California towhee, bushtit, and dark-eyed junco will nest and forage in landscape vegetation. Large trees adjacent to the Project Site provide potential nesting sites for raptors, such as red-shouldered hawks and Cooper's hawks, although no existing raptor nests were observed within or adjacent to the Project Site during the H. T. Harvey & Associates site reconnaissance.

Adjacent Habitat Areas

The Project Site is adjacent to the Guadalupe River, which supports mixed riparian forest and woodland habitat. The eastern top of bank of the Guadalupe River adjacent to the project boundary is well-defined by the Guadalupe River Trail, which runs along the top of a levee. Within the banks of the Guadalupe River, the mixed riparian forest and woodland habitat is characterized by a moderately dense canopy, including a mix of native and nonnative mature trees, and an understory of smaller trees, saplings, shrubs, herbaceous species, and grasses. Riparian trees present within this habitat are mostly native and include red willow, Fremont cottonwood, black walnut, and coast live oak, as well as nonnative London planes. The majority of the tree cover is composed of black walnut and willow,

with minor canopy branch die back, including a few standing snags of dead individual trees. Understory shrubs include poison oak and Himalayan blackberry. Herbaceous species observed in the understory include common annual grassland species such as ripgut brome, wild oats, prickly lettuce and Cornish mallow. Along the edge of the channel bed of the Guadalupe River, herbaceous wetland vegetation is present, characterized by species such as bristly ox-tongue, floating primrose willow, fiddleleaf dock, water mint, and rough cocklebur.

Riparian habitats in California generally support exceptionally rich animal communities and contribute disproportionately to landscape-level species diversity. The presence of perennial flow and abundant invertebrate fauna provide foraging opportunities and the diverse habitat structure provides cover and breeding opportunities for many species along this reach of the Guadalupe River. Many bird species that are attracted to herbaceous vegetation and aquatic habitats along the river are expected to move past the Project Site when flying to, from, or along the Guadalupe River. The numbers of these birds moving through the site will vary by time of year and by species. Many birds, such as waterfowl, tend to move in large groups, while other species, such as migrating landbirds, will move through individually or in smaller flocks. Local bird numbers also vary by time of year, as many birds form small to large flocks during winter and migration, and occur in more widely spaced pairs during the breeding season.

The riparian habitat along this reach of the Guadalupe River is considered to be of moderately high quality for birds. The large numbers of mature trees, native trees and presence of dense understory vegetation in some areas contribute positively to the value of this habitat for birds. However, the relatively narrow width of the riparian canopy, regularly disturbed nature of the stream channel (for stream maintenance/flood prevention purposes), and disturbance of this habitat from homeless encampments negatively affect the quality of this habitat for birds. This riparian habitat is also somewhat fragmented due to the surrounding high-density urban development and the presence of bridges, road crossings, and channelization along nearby portions of the river, and therefore lacks connectivity to higher-quality riparian habitats in the region. In addition, many feral cats that prey upon native birds are present along this reach of the river. Nevertheless, songbirds that migrate along the Pacific Flyway and travel through the site vicinity are expected to be attracted to this reach of the river, and this habitat is used fairly heavily by migrating birds. This reach of the river is also used regularly by resident birds that are present in the vicinity year-round and are attracted to the riparian habitat for foraging and nesting opportunities. More than 130 bird species have been recorded in the segment immediately downstream (between West Trimble Road and Montague Expressway), demonstrating the high bird diversity associated with habitats along this general region of the river.

Reptiles such as the gopher snake, western fence lizard, and southern alligator lizard also are present in the riparian habitat along the Guadalupe River. Amphibians such as the arboreal salamander (*Aneides lugubris*) occur in the leaf litter in this habitat and the native Pacific tree frog is also known to be present. Urban-adapted mammals, such as the native raccoon and striped skunk, as well as the nonnative Virginia opossum, Norway rat, black rat, feral cat, and eastern gray squirrel (*Sciurus carolinensis*), reside in riparian habitat and adjacent habitats along the Guadalupe River.

Wildlife Movement

Wildlife movement in the vicinity of and within the Project Site is different for the various species of animals associated with these lands. Bird and bat species move readily over the landscape in the

project vicinity, foraging over and within both natural lands and landscaped areas. Mammals of different species move within their home ranges, but also disperse between patches of habitat. Reptiles and amphibians tend to settle within home ranges, sometimes moving to central breeding areas, upland areas, or hibernation spots in a predictable manner, but also dispersing to new areas. Some species are migratory, especially birds and bats, and move into or through the project vicinity during specific seasons. Aside from bats, there are no other mammal species in the vicinity of the site that are truly migratory. However, the young of many mammal species disperse from the home ranges of their birth, sometimes moving over relatively long distances in search of new areas to occupy.

Movement corridors are segments of habitat that provide linkage for wildlife through the mosaic of suitable and unsuitable habitat types found within a landscape while also providing cover. On a broader level, corridors also function as paths along which wide-ranging animals can travel, populations can move in response to environmental changes and natural disasters, and genetic interchange can occur. In California, movement corridors often consist of riparian areas along streams, rivers, or other natural features. Due to the density of development in the project region and the lack of continuous, well-vegetated pathways through the City, there are currently no well-defined movement corridors for mammals or reptiles within or through the Project Site itself. Wildlife species may move through the area using cover and refugia as they find them available. However, most dispersal by wildlife species in the region likely occurs along higher-quality habitats, such as the Guadalupe River corridor to the southwest, and along the fringes of the San Francisco Bay to the north.

The Guadalupe River, which eventually drains to the open waters of the San Francisco Bay, and its associated riparian corridor adjacent to the site serves as a movement corridor for several common and special-status species of birds, fish, mammals, reptiles, and amphibians in the project vicinity, as it provides sufficient vegetative cover preferred by these species when navigating across the landscape. Specifically, migratory birds, rabbits, striped skunks, raccoons, Pacific treefrogs, and alligator lizards, amongst other species, are expected to move along this corridor adjacent to the Project Site.

In summary, the Project Site is not a particularly important area for movement by non-flying wildlife, and it does not contain any high-quality corridors allowing dispersal of such animals through the City. However, the Guadalupe River located immediately east of the site provides a corridor for wildlife species to disperse north and south through San José.

Special-Status Species

Under CEQA, special-status species are considered to be those that are protected by state, federal, or local governments as “threatened, rare, or endangered”, as described in further detail below.

Special-status plants are considered plant species that are:

- Listed under FESA as threatened, endangered, proposed threatened, proposed endangered, or a candidate species;
- Listed under CESA as threatened, endangered, rare, or a candidate species;

- Listed by the California Native Plant Society (CNPS) as California Rare Plant Rank (CRPR) 1A, 1B, 2, 3, or 4.

Special-status animals are considered animal species that are:

- Listed under FESA as threatened, endangered, proposed threatened, proposed endangered, or a candidate species;
- Listed under CESA as threatened, endangered, or a candidate threatened or endangered species;
- Designated by the CDFW as a California species of special concern;
- Listed in the California Fish and Game Code as fully protected species.

Special-Status Plants

The CNPS and CNDDDB identify 73 special-status plant species as potentially occurring in at least one of the nine USGS 7.5-minute quadrangles containing or surrounding the Project Site for species in CRPR 1 and 2, or in Santa Clara County for CRPR 3 and 4 species. Of the 73 potentially occurring special-status plant species, all but one were determined to be absent from the Project Site for at least one of the following reasons: (1) absence of suitable habitat types; (2) lack of specific microhabitat or edaphic requirements, such as serpentine soils; (3) the elevation range of the species is outside of the range of the Project Site; and/or (4) the species is presumed extirpated from the project region. Many species are known to occur in marsh habitat associated with the San Francisco Bay to the northwest, or serpentine and alkaline soils associated with the Diablo Range to the northeast where outcrops of serpentine geology and soils are present. Serpentine soils do not occur within or adjacent the Project Site. Project activities will be largely be restricted to previously developed areas and California annual grassland that has been previously disturbed by regular mowing. Suitable habitat, edaphic requirements, and elevation range are present on the Project Site for only one special status plant species, Congdon's tarplant (*Centromadia parryi* ssp. *congdonii*).

Congdon's Tarplant - Congdon's tarplant has been documented by the CNDDDB in the project vicinity and can persist in disturbed grasslands. The California annual grassland habitat located within the Project Site provides some suitable habitat for Congdon's tarplant, though the soils here are not alkaline, which Congdon's tarplant prefers. Due to the lack of alkaline soils, high herbaceous vegetation cover, and regular disturbance from mowing, the habitat on the Project Site is considered only marginally suitable for this species. Because of the potential for this species' occurrence on the Project Site, a targeted survey for Congdon's tarplant was conducted on August 19, 2020 and on July 21, 2022 by H. T. Harvey & Associates . Prior to conducting the survey, *H. T. Harvey & Associates* ecologists visited a reference population at Sunnyvale Baylands Park in Sunnyvale, California (CNDDDB Occurrence #18) to confirm that the species was blooming and identifiable, thereby documenting that this survey was conducted during the appropriate time of year. The focused survey area included all areas of California annual grassland within the Project Site. No Congdon's tarplant was observed in this area. Therefore, Congdon's tarplant is determined to be absent from the Project Site.

Special-Status Animals

There are 32 special-status animal (insect, bird, mammal, fish) species that are either known to occur, or potentially occur in the area surrounding the Project Site. Most of these species are not expected to occur within the Project Site, however, because it either lacks suitable habitat, is outside the known range of the species, and/or is isolated from the nearest known extant populations by development or otherwise unsuitable habitat. Among these are several species that are present in less urbanized settings or specialized habitats in the South Bay Area, including Bay checkerspot butterfly, Crotch bumble bee, western bumble bee, California tiger salamander, California yellow-legged frog, foothill yellow-legged frog, bald eagle, riffle sculpin,, least Bell's vireo, San Francisco dusky-footed woodrat, American badger, San Joaquin kit fox, and mountain lion.

No aquatic habitats to support special-status fish species are present within the Project Site; however, the site is located adjacent to the Guadalupe River, which provides habitat for the Central California Coast steelhead, Central Valley fall-run Chinook salmon, Pacific lamprey, Sacramento hitch, and Central California roach. These special-status species would not be directly or indirectly affected by project activities due to the presence of an approximately eight-foot tall levee located between the Project Site and the Guadalupe River.

A number of special-status bird species could occasionally occur within the Project Site as nonbreeding foragers (i.e., they do not nest on the site). These include Bryant's savannah sparrow, tricolored blackbird, golden eagle and peregrine falcon. The pallid bat, which has a status of California Species of Special Concern, may also forage aerially over habitats within the Project Site. These species are not expected to nest, roost, or breed in or immediately adjacent to the Project Site due to a lack of suitable nesting, roosting, or breeding habitat, and would be affected very little, if at all, by the proposed project. The grasshopper sparrow, a bird species that is considered a California Species of Special Concern only when it is nesting, may occur occasionally in grasslands within the Project Site as a nonbreeding transient, forager, or migrant, but no suitable nesting habitat for this species is present within the Project Site. Because the Bryant's savannah sparrow and grasshopper sparrow are only considered species of special concern when nesting, they are not "special-status species" when they occur as a nonbreeding visitor to the site. Similarly, the monarch butterfly could occur on the Project Site as a nonbreeder, especially during spring and fall migration. However, no milkweed plants, which provide this species' larval host plant, were detected on the site during reconnaissance surveys. No monarch butterflies are therefore expected to breed on the site. Similarly, this species is not known to form wintering roosts anywhere in Santa Clara County, so this species would only occur as an occasional nonbreeding visitor, in low numbers.

The yellow warbler and San Francisco common yellowthroat could potentially nest in riparian habitat along the Guadalupe River adjacent to the Project Site. Although these species would not be directly affected by project activities, there is some potential for project activities to result in indirect effects on nesting individuals due to their close proximity to the project. Individuals of either species would also occasionally occur within the Project Site as nonbreeding foragers. Additionally, the burrowing owl, southwestern pond turtle, loggerhead shrike, and white-tailed kite could potentially breed or occur on or immediately adjacent to the Project Site. These species are discussed in further detail below.

Yellow Warbler - No suitable nesting habitat for yellow warblers is present on the Project Site. However, suitable riparian nesting habitat for this species is present adjacent to the site along the Guadalupe River. Yellow warblers forage along the Guadalupe River in large numbers during migration, and up to one or two pairs of yellow warblers can potentially nest adjacent to the Project Site.

San Francisco Common Yellowthroat - No suitable nesting habitat for common yellowthroats is present on the Project Site. Suitable nesting and foraging habitat for common yellowthroats is present in the herbaceous vegetation and floodplain riparian habitat along the Guadalupe River adjacent to the site, and one to two pairs of this species may nest and forage within this habitat.

Burrowing Owl - No records of burrowing owls are known from the Project Site, but burrowing owls have been known to occur on the undeveloped properties adjacent to the site. The closest known record of a burrowing owl to the Project Site was a wintering owl detected approximately 215 feet to the southeast (in an area that is now developed) by H. T. Harvey & Associates on January 14, 2013. The most recent record of a wintering owl near the Project Site was a single owl detected on the undeveloped property to the northeast by a Santa Clara Valley Habitat Agency biologist on December 4, 2015. The most recent record of a pair of nesting burrowing owls near the Project Site was detected at the Pacific Gas & Electric substation on Component Drive approximately 1,415 feet to the northeast on June 2, 2015. In addition, owls have been known to nest, roost, and forage approximately southwest of the Project Site on the Airport airfield for decades and continue to be present in these areas year-round. At the time of the June 2020, September 2020, and July 2022 site visits, the grassland habitat on the Project Site provided suitable foraging habitat for owls, but only very marginal nesting and roosting habitat due to the small numbers of California ground squirrel burrows present (one burrow was observed during the June 2020 survey, three burrows were observed during the September 2020 survey, and four burrows were observed during the July 2022 survey) and the approximately 10–40-inch tall grassland vegetation. No owls were detected on the Project Site or surrounding areas within 250 feet during the 2020 or 2022 surveys. In addition, no owls have been detected within 0.5 mile of the site during comprehensive surveys for this species in recent years, and due to the distance between the site and the nearest owl locations, the site is not considered to provide foraging habitat for any known breeding pairs of this species. If burrowing owls occur on the site at all, they are expected to occur as occasional migrants or dispersants rather than breeders or regular foragers.

Southwestern Pond Turtle - No suitable aquatic habitat is present on the Project Site, and breeding populations of southwestern pond turtles have been extirpated from most urbanized areas in the region. However, individuals of this long-lived species still occur in urban streams and ponds in the Santa Clara Valley, including the Guadalupe River immediately adjacent to the Project Site, where one was observed in 1997, although none were observed during the 2020 or 2022 site visits. Potentially suitable nesting habitat for southwestern pond turtles is present in grassland areas on the Project Site.

Loggerhead Shrike - Nests (or at least formerly nested) in a number of locations around the South Bay where open grassland, ruderal, or agricultural habitat with scattered brush, chaparral, or trees provides perches and nesting sites, though populations have declined in recent years as suitable habitat has been increasingly developed. Potentially suitable nesting habitat for loggerhead shrikes is present in dense shrubs and trees on the Project Site, although no loggerhead shrikes or active shrike

nests were detected during the June 2020 or July 2022 site visits. Up to one pair of loggerhead shrikes could potentially nest on the Project Site. Nonbreeding individuals may forage in low numbers in grasslands throughout the Project Site year-round.

White-Tailed Kite - Potentially suitable nesting habitat for this species is present immediately adjacent to the Project Site in trees along the Guadalupe River, with suitable foraging habitat present in grasslands on the Project Site. However, no kites were observed during the June 2020 or July 2022 site visits. White-tailed kites may occur on the Project Site as occasional foragers year-round.

Sensitive Natural Communities and Habitats

Two sensitive natural communities were identified in the CNDDB as occurring within the vicinity the Project Site: 1) sycamore alluvial woodland and 2) northern coastal salt marsh. No riparian habitat occurs within the Project Site boundary. The neighboring mixed riparian woodland and forest habitat occurring along the Guadalupe River adjacent to the Project Site does not meet the definition of sycamore alluvial woodland, which is dominated by western sycamore trees, and occurs within braided, depositional channels of intermittent streams, usually with cobble or boulder substrate. No marsh habitat was mapped during the site reconnaissance; therefore, no northern coastal salt marsh was determined to occur within the Project Site boundary.

Due to its rarity and disproportionately high habitat values and functions to wildlife, the CDFW considers riparian habitat to be sensitive. The CDFW would likely claim jurisdiction over areas at, and below, the top of bank lines on either side of the Guadalupe River, regardless of the vegetative composition of these areas. Riparian habitat associated with the Guadalupe River corridor does not occur within the Project Site boundary, however, and would not be directly or indirectly impacted by project activities.

No waters or wetlands of the U.S. or state occur within the Project Site.

Nonnative and Invasive Species

Several nonnative, invasive plant species occur on the Project Site. Of these, the following have a rating of “limited” invasiveness (considered invasive but their ecological impacts are minor on a statewide level and their reproductive biology and other attributes result in low to moderate rates of invasiveness) according to the Cal-IPC (2022): curly dock (*Rumex pulcher*), bristly ox-tongue, milk thistle, Russian thistle (*Salsola* sp.), California burclover (*Medicago polymorpha*), wild radish, smilo grass (*Stipa miliacea*), ribwort plantain (*Plantago lanceolata*), redstem filaree (*Erodium cicutarium*), and charlock mustard (*Sinapis arvensis*). The following species have a “moderate” rating, indicating that they have substantial and apparent-but generally not severe ecological impacts on physical processes, plant and animal communities, and vegetation structure, and that their reproductive biology and other attributes are conducive to moderate to high rates of dispersal, though establishment would be generally dependent upon ecological disturbance: wild oats, ripgut brome, Italian thistle, fennel (*Foeniculum vulgare*), Mexican fan palm (*Washingtonia robusta*), black mustard (*Brassica nigra*), Harding grass (*Phalaris aquatica*), summer mustard (*Hirschfeldia incana*), and blue gum (*Eucalyptus globulus*). Species with a “high” invasive rating by the Cal-IPC have the potential to cause severe ecological impacts on physical processes, plant and animal communities, and vegetation structure. Their reproductive biology and other attributes are conducive to moderate

to high rates of dispersal and establishment, and most are widely distributed ecologically. On the Project Site, the following species with a “high” rating were observed: English ivy (*Hedera helix*), broadleaved pepperweed, yellow starthistle (*Centaurea solstitialis*), Himalayan blackberry, and red brome (*Bromus rubens*). Broadleaved pepperweed, and yellow starthistle were observed commonly throughout the northwest portion of the California annual grassland land cover and on the northeastern side of the Guadalupe River levee on the Project Site. English ivy was observed adjacent to and within the urban-suburban land cover type on the Project Site, where it is maintained as a landscaping ground cover. Due to their ubiquity in the region, and the fact that proposed project activities are expected to clear and develop all areas where populations of invasive species are located, project activities are not expected to result in the spread of nonnative and invasive plant species.

Landscape Trees

A total of 65 trees were identified on-site. The species and quantities of each tree are listed in Table 4.4-1.

Table 4.4-1: Summary of Existing Trees On-Site			
Species	Common Name	Number of Trees Present	Number of Ordinance Size Trees
<i>Acacia melanoxydon</i>	Blackwood Acacia	1	0
<i>Acer rubrum</i> 'Armstrong'	Armstrong Maple	6	0
<i>Juglans hindsii</i>	California Walnut	14	7
<i>Pinus radiata</i> (1)	Monterey Pine	1	1
<i>Platanus acerifolia</i>)	London Plane	8	0
<i>Populus fremontii</i>	Fremont Cottonwood	3	1
<i>Pyrus calleryana</i>	Callery Pear	5	0
<i>Quercus agrifolia</i>	Coast Live Oak	15	14
<i>Quercus suber</i>	Cork Bark Oak	2	2
<i>Ulmus parvifolia</i>)	Chinese Elm	2	0
<i>Salix lasiolepis</i>)	Arroyo Willow	8	8
		65	33
Source: HMM. Arborist Report. August 2, 2022.			

4.4.2 Impact Discussion

For the purpose of determining the significance of the project's impact on biological resources, would the project:

- a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife (CDFW) or United States Fish and Wildlife Service (USFWS)?
- 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 CDFW or USFWS?
- 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?

4.4.2.1 *Project 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 CDFW or USFWS?**
-

Impacts on Water Quality and Special-Status Fish

No development is proposed within the bed and banks of the Guadalupe River, which flows adjacent to the Project Site, and no direct or indirect impacts on the Guadalupe River, water quality within the channel, or fish species inhabiting the river are expected to occur as a result of Project activities. The Project Site is separated from the river by an approximately eight-foot tall levee, and any fuel leaks or spills within site would be well contained by that levee. No outfalls from the Project Site to the Guadalupe River are proposed as part of the project. Additionally, the Off-Site Infrastructure Areas are not located adjacent to the Guadalupe River. Therefore, the Project would have no impact on water quality within the Guadalupe River or special-status fish species within the river channel. Additionally, the Project would be required to comply with all VHP conditions, including Condition 3, which requires conformance with state, regional and local construction and post-construction stormwater management regulations to reduce stormwater runoff pollution that would impact the river. **(Less than Significant Impact)**

Impacts on Nonbreeding Special-Status Invertebrates, Birds, and Mammals

Several special-status invertebrate, bird, and mammal species could occur within the Project Site as nonbreeding migrants, transients, or foragers, but they are not known or expected to breed or occur in large numbers within or near the proposed development area. The special-status species that may use the site for foraging include monarch butterfly, tricolored blackbird, Bryant's savannah sparrow, grasshopper sparrow, American peregrine falcon, golden eagle, and pallid bat. The Off-Site Infrastructure Areas are located in paved portions of public right-of-way. As a result, special status species are not expected to utilize the Off-Site Infrastructure Areas.

Activities under the proposed project would have some potential to impact foraging habitats and/or disturb individuals of these species. Construction activities might result in a temporary direct impact through the alteration of foraging patterns (e.g., result in avoidance of work sites by these species because of increased noise and activity levels during maintenance activities) but would not result in the loss of individuals, as individuals of these species would fly away from any construction areas or equipment before they could be injured or killed. Further, the Project Site does not provide important foraging habitat used regularly or by large numbers of individuals of any of these species. As a result, the project would have minimal impact on these species' foraging habitat and no substantive impact on regional populations of these species. Therefore, this impact would be less than significant. **(Less than Significant Impact)**

Impacts on Nesting Birds (Yellow Warbler, San Francisco Common Yellowthroat, Loggerhead Shrike, and White-Tailed Kite)

The yellow warbler and San Francisco common yellowthroat (California species of special concern) could potentially nest immediately adjacent to the proposed development areas on the site; the yellow warbler could nest in riparian trees along the Guadalupe River, and the San Francisco common yellowthroat could nest in herbaceous riparian vegetation along the Guadalupe River. The white-tailed kite (a state fully protected species) could nest in trees along the Guadalupe River or in landscape areas adjacent to the Project Site. The loggerhead shrike (a California species of special concern) could nest in trees or shrubs within or adjacent to the Project Site. These four species are assessed together because the potential impacts of the project on these species would be similar.

The project would not result in the loss of suitable nesting or foraging habitat for the yellow warbler and San Francisco common yellowthroat, as no activities are proposed within the bed and banks of the Guadalupe River. However, the project would result in the permanent loss of suitable nesting and foraging habitat for the loggerhead shrike, and suitable foraging habitat for the white-tailed kite. In addition, activities that occur during the nesting season and cause a substantial increase in noise or human activity near active nests could result in the abandonment of active nests (i.e., nests with eggs or young). Heavy ground disturbance, noise, and vibrations caused by project activities could potentially disturb nesting and foraging individuals and cause them to move away from work areas.

The project is also expected to increase the amount of human use of the Guadalupe River Trail, potentially subjecting nesting special-status birds within the riparian corridor to increased human disturbance. However, this trail is already traveled on frequently by pedestrian and cyclists. The increase in human disturbance generated by the project is not expected to substantially disturb special-status birds that nest within the Guadalupe River corridor.

Given the abundance of these species in the region, project impacts on one or two pairs of yellow warblers, San Francisco common yellowthroats, loggerhead shrikes, and white-tailed kites would represent a marginal impact on their regional populations. Therefore, neither the potential loss of individual yellow warblers, San Francisco common yellowthroats, loggerhead shrikes, or white-tailed kites, nor the disturbance of nesting and foraging habitat, would have a substantial adverse effect, and these impacts would thus not constitute a significant impact on these species or their habitat. All native bird species, including loggerhead shrikes, are protected from direct take by federal and state statutes. The Project includes project design features (refer to PDFs BIO-1.1 and BIO-1.2, below) that would require the project to either restrict work to the non-nesting season (September 1 through January 31) or conduct preconstruction surveys prior to project activities and maintaining appropriate buffers around active nests of protected birds. **(Less than Significant Impact)**

Impacts on the Burrowing Owl

Existing Burrowing Owl Mitigation Agreement on the Site

Agilent Technologies, Inc., a former owner of the project property, entered into a mitigation agreement with the CDFW in 2001 that provided for the purchase of off-site burrowing owl habitat in other, less developed and protected areas in the region to offset the loss of habitat on the property (inclusive of all 26.7 acres on the Project Site). A copy of the mitigation agreement is included as an appendix to the biological resources assessment (Appendix C1). Although burrowing owls have not been recorded with certainty on the Project Site, the larger area covered by Agilent's mitigation agreement was formerly occupied by two pairs of nesting burrowing owls and one resident adult burrowing owl. Portions of this larger area have since been developed, and portions remain undeveloped. The purpose of the mitigation agreement was to offset the loss of burrowing owl habitat and provide for survival of the species in other areas outside of the South Bay. Agilent Technologies, Inc. provided mitigation at a ratio of 6.5 acres of burrowing owl habitat for each pair and single burrowing owl displaced from the area, in conformance with CDFW (then the California Department of Fish and Game) mitigation requirements at that time, for a total of 19.5 acres.

Provisions within Chapters 6 and 9 of the VHP exempt a project proponent from its conditions and/or fees provided the proponent provides to the Implementing Agency (the City of San José in this case) written confirmation from the CDFW and USFWS, as applicable, that specifically refers to the activity and states that such activity is not likely to result in the take of any state or federally listed species, and will not preclude the successful implementation of the conservation strategy of all covered species. In a letter dated November 15, 2012 to the City of San José, the CDFW confirmed that the terms of the mitigation agreement have been fulfilled and, per the terms of the agreement, that CDFW requires no additional mitigation for impacts on burrowing owls on the property (inclusive of the Project Site). According to the CDFW, "...any determination by the City regarding the property that was formerly the Agilent project area will not affect the City's ability to successfully implement the conservation strategy for the western burrowing owl described in the VHP and will not change the strategy." A copy of the letter is also provided in the Biological Resources Assessment. The applicant for the proposed project would not be required to provide a letter from the USFWS, as the burrowing owl is not a federally listed species.

The VHP contains a section known as Exhibit A: Corrections, Clarifications, and Updates to the Santa Clara Valley Habitat Plan (HCP/NCCP), dated April 4, 2013. In Section 1.2 Errata, 1.2.3, it

states that the implementation of the VHP will not add or remove any of the rights and obligations to any development agreement between the Implementing Agency (in this case, the City of San José) and a private applicant. The provision applies to any development agreement that was entered into and adopted prior to the operative date of the VHP and remains consistent with the City of San José's land use approvals for the project. There is a valid Development Agreement for the subject property that was adopted in 2004, prior to the 2013 operative date of the VHP. Because of this, the SCVHA does not map the Project Site within a Burrowing Owl Fee Zone. Both the mitigation agreement and the letter from CDFW provide sufficient documentation to the City of San José that the proposed development the Project Site, in conformance with the mitigation agreement, would not preclude the successful implementation of the conservation strategy for the burrowing owl. Therefore, the project is not subject to the fees or requirements of Condition 15 of the VHP.

The mitigation agreement states that the take of individual owls is prohibited per the California Fish and Game Code (Section 3503.3), and that no burrowing owls would be evicted from burrows during the nesting season (defined as February 1 to August 31). The eviction of burrowing owls outside the nesting season may be permitted as a means to avoid take, pending the evaluation of eviction plans and receipt of formal written approval from the CDFW authorizing the eviction. The project would be required to adhere to these requirements to avoid and minimize impacts on burrowing owls during project construction.

Project-Related Impacts to Burrowing Owls

The project may impact burrowing owls as a result of the temporary and permanent removal of nesting and foraging habitat, as well as disturbance to or direct impacts on individuals during construction.

Impacts to Nesting and Foraging Habitat

H. T. Harvey & Associates completed burrowing owl habitat surveys in June 2020, September 2020, and July 2022. No burrowing owls or signs of burrowing owl presence on or within 250 feet of the Project Site was detected during the surveys. No records of burrowing owls are known from the Project Site, but burrowing owls have historically occupied the larger undeveloped area formed by the site and adjacent parcels (area covered by the mitigation agreement). There is no evidence that burrowing owls currently occupy the Project Site or adjacent undeveloped properties; however, they occupy nearby areas at the Norman Y. Mineta International Airport airfield, and it is possible that occasional dispersants or migrants from the airfield could occur on the Project Site.

The project will result in the permanent loss of 18.6 acres of unoccupied but ostensibly suitable nesting, roosting, and foraging habitat for burrowing owls on the Project Site. Currently, the grasslands on the Project Site provide potential foraging habitat for owls, as well as suitable nesting and roosting habitat where burrows of California ground squirrels are present. However, these grasslands likely have limited value to burrowing owls as nesting, roosting, or foraging habitat due to the tall height of the vegetation (approximately 10–40 inches), the limited numbers of burrows present (only one burrow was observed during the June 2020 survey, three burrows were observed during the September 2020 survey, and four burrows were observed during the July 2022 survey), and the lack of burrowing owl occupancy of areas close enough to the site (i.e., within 0.5 mile) to regularly forage within these areas. Nevertheless, as the availability of grassland habitat used for

nesting in the South San Francisco Bay area continues to dwindle because of development, the South Bay nesting population of burrowing owls faces extirpation caused by lack of sufficient suitable nesting habitat and nesting-season foraging habitat, isolation from other populations and habitat areas, and demographic effects (such as difficulty in finding mates and inbreeding) resulting from low population sizes.

The loss of burrowing owl habitat on the Project Site has been mitigated previously via the purchase of off-site burrowing owl habitat in other, less developed and protected areas in the region, as discussed above and documented in a mitigation agreement with the CDFW. Because the existing grassland habitat on the Project Site and on adjacent properties (i.e., within the mitigation agreement area) is unoccupied by nesting burrowing owls, yet the loss of this habitat has been mitigated previously, it is biologist's opinion that the loss of this habitat would not rise to a level of significance under CEQA on a project-specific basis because mitigation to reduce the project-specific impact has already been provided. However, the mitigation that was provided per the CDFW mitigation agreement consisted of the purchase of credits in a conservation bank outside the South Bay, so that the mitigation did not directly benefit the South Bay burrowing owl population. As a result, this loss of habitat was previously disclosed as a significant and unavoidable impact due to the cumulative loss of burrowing owl habitat in the South Bay region in the original North San José Development Policies Update Draft Program Environmental Impact Report as well as the Agilent Final EIR. Section 4.4.2.2 of this SPPE Application discusses this cumulative impact and describes a Project Design Feature to reduce the project's contribution to cumulative impacts to a less-than-significant level under CEQA. To offset cumulative impacts under CEQA, the project will pay VHP burrowing owl fees, consistent with the SCVHA's Voluntary Fee Payments Policy, as mitigation for the permanent loss of ostensibly suitable, but currently unoccupied, burrowing owl foraging habitat (this is discussed in greater detail in Section 4.4.2.2 Cumulative Impacts below).

Some of the burrowing owls that occur in the project vicinity during the nonbreeding season likely represent migrants or wintering owls from nesting populations outside the San Francisco Bay area. Project activities will also result in a reduction in available habitat for these birds. However, burrowing owls are known to occur more widely in the South San Francisco Bay region in winter than they do during the nesting season, using habitats within Coyote Valley and adjacent foothills that are not used for nesting by birds within the South Bay nesting population. Given the vast extent of grassland and ruderal habitat within the foothills of the Diablo Range and Santa Cruz Mountains (and to some extent on the valley floor in southern Santa Clara County) that provide suitable wintering habitat for owls, the loss of habitat on the Project Site is not expected to have a substantial impact on populations of burrowing owls that winter in the South Bay but nest outside the region.

Impacts to Individuals During Construction

Individual burrowing owls could be affected during construction activities, if present on or very close to the site. Because they roost underground, burrowing owls could be killed or injured during development activities from trampling or compaction of burrows by construction personnel or equipment if appropriate protective measures (which are incorporated into the project as required by the project's mitigation agreement and the VHP) are not implemented. Construction activities that occur in close proximity to active burrows could disturb owls to the point of burrow abandonment.

The project would adhere to the requirements of the mitigation agreement described above, which will help to reduce project impacts on burrowing owls and their habitat. Applicable measures from the mitigation agreement are as follows.

- No burrowing owls shall be evicted from burrows during the nesting season (February 1 through August 31). Eviction outside the nesting season may be permitted as a means to avoid take, pending evaluation of eviction plans and receipt of formal written approval from the CDFW authorizing the eviction.
- A protected area 250 feet in radius, within which no new activity shall be permissible, shall be maintained between project activities and nesting burrowing owls or individual resident burrowing owls. This protected area shall remain in effect between February 1 and August 31, or, at CDFW's discretion and based upon monitoring evidence, until any young owls are foraging independently. In the non-nesting season (September 1 through January 31), a protected area 165 feet in radius, within which no new activity shall be permissible, shall be maintained between project activities and burrows occupied by burrowing owls. Any development within these protected radii shall be approved beforehand in a Memorandum of Understanding or Mitigation agreement with the CDFW. Notwithstanding anything to the contrary in this paragraph, the CDFW has the discretion to shorten the nesting season period based on evidence the CDFW deems satisfactory.
- If accidental take occurs, the applicant shall contact the CDFW immediately.

To support compliance with these measures, and per the requirements of the City of San José, the project shall conduct preconstruction surveys for burrowing owls per the methodology provided in Condition 15 of the VHP as follows:

- Prior to any ground disturbance related to covered activities between February 1 and August 31, a qualified biologist shall conduct preconstruction surveys in all suitable habitat areas as identified during habitat surveys. The purpose of the preconstruction survey is to document the presence or absence of burrowing owls on the Project Site, particularly in areas within 250 feet of construction activity.
- To maximize the likelihood of detecting owls, the preconstruction survey shall last a minimum of three hours. The survey shall begin 1 hour before sunrise and continue until two hours after sunrise (for three hours total) or begin two hours before sunset and continue until one hour after sunset. Additional time may be required for large Project Sites. A minimum of two surveys shall be conducted (if owls are detected on the first survey, a second survey is not needed). All owls observed shall be counted and their locations shall be mapped.
- Surveys shall conclude no more than two calendar days prior to construction. Therefore, the project proponent must begin surveys no more than four days prior to construction (two days of surveying plus up to two days between surveys and construction). To avoid last-minute changes in schedule or contracting that may occur if burrowing owls are found, the project proponent may also conduct a preliminary survey up to 14 days before construction. This

preliminary survey may count as the first of the two required surveys as long as the second survey concludes no more than two calendar days in advance of construction.

With implementation of the mitigation measures contained in the mitigation agreement and the VHP, development of the Project Site would not conflict with local policies or regional plans or ordinances protecting burrowing owls. **(Less than Significant Impact)**

Impacts on the Southwestern Pond Turtle

Southwestern pond turtles occurring along the Guadalupe River may nest in adjacent grasslands within the Project Site or disperse across these areas. Project construction activities may disturb upland habitat used for nesting. Individual turtles or their eggs that are present in the work areas may be harmed or killed due to crushing by construction personnel or equipment, or as a result of desiccation or burying (e.g., during grading). Although pond turtles are widespread in the project region, the species is not particularly abundant, and the loss of individuals could reduce the viability of a population to the extent that it would be extirpated.

The VHP does not provide species-level avoidance and minimization measures for the southwestern pond turtle. Nevertheless, the project would be required to adhere to the general conditions of the VHP, which would help to reduce proposed project impacts on the southwestern pond turtle and its habitats. For example, Conditions 3 and 11 of the VHP (refer to the discussion under Checklist Question “f”, below) are applicable to the project and would minimize potential project impacts on the western pond turtle. Because the project would comply with all relevant VHP conditions, impacts on the southwestern pond turtle would be less than significant. **(Less than Significant Impact)**

Impacts on Nesting Birds

Development of the project would result in the removal of 19 trees on-site. An additional 13 street trees may be removed by the Project if required by the City due to right-of-way improvements on Orchard Parkway. Additional trees located on and adjacent to the site are close enough in proximity to proposed development to potentially be impacted by project activities.

Trees could provide nesting habitat for birds, including migratory birds. Nesting birds are protected under provisions of the MBTA and CDFW code. Construction disturbance during the breeding season could result in the incidental loss of fertile eggs or nestlings, or otherwise lead to nest abandonment. Disturbance that causes abandonment and/or removal and site grading that disturb a nesting bird on-site or immediately adjacent to the construction zone would constitute a significant impact. The project includes the following Project Design Features to reduce impacts to nesting birds to a less than significant level.

PDF BIO-1.1: Nesting Season Avoidance. To the extent feasible, commencement of construction activities should be scheduled to avoid the nesting season. If construction activities are scheduled to commence outside the nesting season, all impacts to nesting birds protected under the MBTA and California Fish and Game Code would be avoided. The nesting season for most birds in Santa Clara County extends from February 1 through August 31, inclusive.

PDF BIO-1.2: Preconstruction/Pre-disturbance Surveys and Buffers. If it is not possible to schedule commencement of construction activities and/or tree removal between September 1 and January 31, preconstruction surveys for nesting birds shall be conducted by a qualified ornithologist to ensure that no nests shall be disturbed during project implementation. These surveys shall be conducted no more than seven days prior to the initiation of demolition or construction activities, including tree removal and pruning. During this survey, the ornithologist shall inspect all trees and other potential nesting habitats (e.g., trees, shrubs, ruderal grasslands, buildings) in and immediately adjacent to the impact areas for nests. If an active nest is found sufficiently close to work areas to be disturbed by these activities, the ornithologist shall determine the extent of a construction free buffer zone to be established around the nest (typically 300 feet for raptors and 100 feet for other species), to ensure that no nests of species protected by the MBTA and California Fish and Game Code shall be disturbed during project implementation.

Impacts due to Bird Collisions

The Project Site upon development and installation of new trees and landscaping may provide greater habitat opportunities for birds compared to existing conditions, due to the addition of landscape trees. Based on the proposed landscape plan for the project, proposed vegetation includes approximately 155 (15 gallon sized) trees on-site. The future landscape vegetation that will be planted on the site would be expected to provide somewhat greater habitat structure and foraging opportunities for birds compared to the existing grassland vegetation, primarily due to the presence of trees on the site.

Additionally, riparian habitats along the Guadalupe River adjacent to the Project Site support relatively high bird diversity and abundance, and songbirds that migrate along the Pacific Flyway disperse and forage along the Guadalupe River in relatively large number. Birds on the Project Site would be expected to move between the riparian habitat along the Guadalupe River and planted landscape vegetation on-site to look for feeding and resting opportunities in landscape vegetation of the project. Due to the movement of the birds between the riparian habitat and Project Site there is potential for collisions of moderate numbers of birds with glazed areas of all building facades. No glazing is included on the proposed substation, and birds are not expected to collide with this structure. The highest potential of collision is on the southwestern facades of Buildings SJ04 and SJ06. Considering the close proximity of the Guadalupe River, relatively large numbers of birds could potentially be attracted to the site over the long term, compared to other areas of San José and the surrounding areas. Construction of the project could potentially result in the mortality of large numbers of birds relative to the size of regional populations, and enough individuals of common bird species could potentially strike the proposed buildings over the long term to result in a significant impact. The following measures are included in the project as Project Design Features to reduce the potential for bird strikes to a less than significant level.

PDF BIO-2.1: Due to the potential for bird collisions with the SJ04 and SJ06 buildings, the project shall implement the following bird-safe building design considerations for these facades:

- Reduce the extent of glass on building facades to the extent feasible (as determined in consultation with the City building design standards and California Building Code requirements).
- Reduce or eliminate the visibility of plants behind glass.
- All glazing used on the building facades shall have a reflectivity index of no more than 20 percent.
- No more than 10 percent of the surface area of the combined façades for the SJ04 and SJ06 buildings shall have untreated glazing between the ground and 60 feet above ground. Bird-safe glazing treatments may include fritting, netting, permanent stencils, frosted glass, exterior screens, physical grids placed on the exterior of glazing or ultraviolet patterns visible to birds. Vertical elements of the window patterns should be at least 0.25 inch wide at a maximum spacing of four inches or have horizontal elements at least 0.125 inch wide at a maximum spacing of two inches.
- Avoid free-standing clear glass walls, skywalks, transparent building corners, glass enclosures (e.g., greenhouses) on rooftops, and free-standing clear glass railings where feasible. If any such features are included in the project design, all glazing used in any such features shall be 100 percent treated as specified above. These features shall be treated to a height of 60 feet above grade. Features located more than 60 feet above grade are not required to be treated. For transparent glass corners, the required treatment area extends horizontally from a building corner as far the corner as it is possible to see through the corner to the other side of the building.
- Landscaping, including planted vegetation and water features, shall be designed to minimize the potential for collisions adjacent to glazed building facades. For example, vegetation providing particularly valuable resources to birds (such as fruits) shall be planted away from glass facades, and vegetation in general shall be planted in such a way that it is not clearly reflected in windows. Water features shall be located away from building exteriors to reduce the attraction of birds toward glazed facades.

Due to the potential for night lighting to disorient birds, the Project shall implement the following bird-safe design considerations for all new interior and exterior lighting on the Project Site:

- Minimize exterior lighting to the extent feasible, except as needed for safety/security. All exterior lights shall be shielded and directed toward facilities on the Project Site to ensure that light is not directed upward or outward toward the Guadalupe River.
- Occupancy sensors or other switch control devices shall be installed on interior lights, with the exception of emergency lights or lights needed for safety/security purposes. If occupancy sensors are not

active, these lights shall be programmed to shut off during non-work hours and between 10:00 p.m. and sunrise.

- To the extent consistent with the normal and expected operations of commercial uses under the project, take appropriate measures to avoid use of unnecessary lighting at night. Such measures may include the installation of motion-sensor lighting, automatic light shut-off mechanisms, downward-facing exterior light fixtures, the use of Dark-Sky-compliant lighting²¹, and others.

The implementation of Project Design Features BIO-2.1 would incorporate bird-safe design elements into the project design, reducing bird collision impacts to a less-than-significant level and support project compliance with the bird-safe design guidance provided in the City's Riparian Corridor Protection and Bird-Safe Design Policy. **(Less than Significant Impact)**

Impacts Due to Increased Lighting

The project would result in the construction of buildings and other features (e.g., pedestrian walkways and open space areas) that would increase the amount of lighting within and around the Project Site. Lighting from the project would be generated by light fixtures illuminating buildings, building architectural lighting, and parking lot and pedestrian lighting. Depending on the location, direction, and intensity of exterior lighting, this lighting could potentially spill into adjacent natural areas, thereby resulting in an increase in lighting compared to existing conditions. Areas to the northwest, northeast, and southeast are primarily developed urban habitats that do not support sensitive species that might be significantly impacted by illuminance from the project. However, the riparian and wetland habitats along the Guadalupe River adjacent to the site provide suitable habitat for a variety of wildlife species, including sensitive species such as the San Francisco common yellowthroat, and are close enough to the Project Site to be affected by an increase in lighting.

Wildlife species using the Guadalupe River may be subject to increased predation, decreased habitat availability (for species that show aversions to increased lighting), and alterations of physiological processes if the proposed development produces appreciably greater illuminance than the existing conditions. This impact on local wildlife populations is potentially significant due to the high ecological value of the adjacent habitat area along the Guadalupe River.

Implementation of PDF BIO-2.2, above, would minimize the spillover of lighting as part of the project and would therefore reduce this impact to a less-than-significant level. **(Less than Significant Impact)**

Impacts Due to Increased Noise

There is some potential for wildlife inhabiting the riparian habitat along the Guadalupe River to vacate areas closer the Project Site due to increased noise levels from the 36 proposed diesel-fired emergency generators to be constructed on the site. These wildlife individuals may be exposed to increased competition from conspecifics already occupying the area to which they are displaced

²¹ Exterior lighting fixtures that meet the International Dark-Sky Association's standards for artificial lighting minimize glare while reducing light trespass and skyglow, and are required to be fully shielded and minimize the amount of blue light in the nighttime environment (International Dark-Sky Association 2020).

and/or increased levels of predation because of unfamiliarity with the new area or lack of sufficient cover.

According to the project's noise study, measured ambient noise levels on the Project Site are 51–59 decibels (dBA) throughout the day; however, these levels likely rise to 65 dBA along the Guadalupe River and within adjacent areas of the Project Site due to the site's close proximity to the Airport. Following construction, generator noise levels as measured from the southwestern property line (adjacent to the Guadalupe River Trail) are anticipated to be 57.3 dBA during normal operating conditions (i.e., when no generators are operating), and as high as 62.7 dBA when the generators are operating.

The backup generators will run for short periods for testing and maintenance, and otherwise will not operate unless there is a disturbance or interruption of the utility supply. The frequency and duration of power interruptions are unknown, but are expected to be infrequent and of limited duration.

Measured existing ambient noise levels on the Project Site (51–59 dBA) are expected to be similar to existing ambient noise levels following construction (57.3 dBA for the southwestern property line along the Guadalupe River) when the generators are not operating. When the generators are operating, the noise level along the southwestern property line is expected to increase to 62.7 dBA. However, this is similar to (and less than) the expected maximum ambient noise level for this location due to its close proximity to the Airport (65 dBA). Wildlife that occur along the Guadalupe River are acclimated to the existing noise levels within this habitat, including periodic increases to an estimated 65 dBA due to aircraft. Also, as noted in the discussion for lighting above, the presence of the levee in between the Project Site and the Guadalupe River will block some noise from detection by wildlife that use the riparian corridor. Thus, given the limited anticipated duration of generator operation on an annual basis, as well as the expected 62.7 dBA noise level when the generators are operating, wildlife inhabiting areas along the Guadalupe River adjacent to the site are not expected to be substantially affected by increased noise levels following project construction, and this impact is less than significant under CEQA. **(Less than Significant Impact)**

Nitrogen Deposition Impacts

Construction of the project will result in an estimated 532 new vehicle trips per day associated with the Project Site. These new vehicle trips will result in an increase in NO_x emissions, which in turn will contribute to the effects of nitrogen deposition on the serpentine grassland ecosystem. To mitigate this impact, a conservation strategy in the VHP includes collection of fees within the VHP area based upon the generation of new vehicle trips to fund acquisition and management of serpentine grasslands in the Coyote Ridge area and elsewhere in the foothills along the Santa Clara Valley. The goal of this strategy is to improve the viability of existing populations of the Bay checkerspot butterfly and rare plants, increase the number of populations, and expand the geographic distribution to ensure the long-term persistence of serpentine-associated species in the VHP area.

A nexus study was completed for the VHP to assist with identifying appropriate fees to fund measures in the VHP. The nitrogen deposition fee was calculated and adopted based on VHP costs related to mitigating the impacts of airborne nitrogen deposition from covered activities in the VHP area. The amount of the fee is based on the number of new daily vehicle trips generated by a covered activity. The fee-per-vehicle-trip is a surrogate that captures the overall effects of a project,

recognizing that vehicle trips are not the only source of a project's NOx emissions. Due to an increase in NOx emissions under CEQA, the project will be required to pay the nitrogen deposition fees, which will then be used to fund the acquisition and management of habitat for the serpentine-associated species potentially impacted by nitrogen deposition. As a result, the project's nitrogen deposition impacts will be less than significant. **(Less than Significant Impact)**

Impacts Related to Offsite Infrastructure Improvement

All improvements within the Off-Site Infrastructure Areas would occur within existing public right of way. No sensitive habitats or special status species are located within the public right of way. Nesting birds may be present in trees along the roadways. Potential impacts to nesting birds from construction of offsite infrastructure improvements would be avoided through implementation of PDFs BIO-1.1 and BIO-1.2. **(Less than Significant Impact)**

-
- 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 CDFW or USFWS?**
-

Impacts on Riparian Habitat or Other Sensitive Natural Communities

The Guadalupe River is west of the Project Site but it does not flow through the Project Site. The ground-disturbing impacts of the Project and in the Off-Site Infrastructure Areas would occur outside of the riparian corridors and northeast of Guadalupe River Trail, on the far side of the levee from the riparian habitat. Therefore, the proposed project would not have direct permanent or temporary impacts on riparian habitat.

Impacts Due to Encroachment into the Stream/Riparian Buffer

Construction on the Project Site and Off-Site Infrastructure Areas would not occur in the City's or VHP's riparian setbacks. The only proposed modification within the riparian setbacks would be the construction of a bike trail (less than 0.1 acre). No new structures, hardscape, nor landscape would be constructed within the setbacks. The construction of a bike trail within the setbacks is allowed under the VHP and City of San José's General Plan and the Riparian Corridor Protection and Bird-Safe Design Policy. Therefore, impacts due to encroachment along the riparian corridor along the Guadalupe River would be less than significant. **(Less than Significant Impact)**

-
- c) Would the project have a substantial adverse effect on state or federally protected wetlands through direct removal, filling, hydrological interruption, or other means?**
-

Wetlands and other waters of the U.S./state are present adjacent to the Project Site within the Guadalupe River corridor. The Project would avoid all impacts to state or federally protected wetlands and aquatic habitats by limiting development and construction activities to the northeastern side of the Guadalupe River Trail, on the far side of the levee from wetland habitats. Therefore, no wetland habitat will be impacted directly or indirectly by the Project or off-site infrastructure improvements. **(No Impact)**

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?

Migratory movements of animal species are most often associated with riparian corridors. The Guadalupe River and the associated riparian corridor provide an important movement pathway for both aquatic and terrestrial wildlife species, connecting the associated wetlands to the San Francisco Bay. Although the proposed Project and off-site infrastructure improvements will not result in any loss of aquatic, wetland, or riparian habitat along the Guadalupe River or in any substantial reduction in the value of the Guadalupe River corridor for wildlife movement, it is expected to increase the number of human users of the Guadalupe River Trail, potentially subjecting animals within the riparian corridor to increased human disturbance. However, this trail is already heavily used by pedestrians and cyclists, and use of the riparian habitat along the river by homeless already introduces human disturbance within the riparian habitat. The increase in users of the Guadalupe River Trail as a result of this project is not expected to contribute substantially to human disturbance of animals using the Guadalupe River corridor. Aquatic and terrestrial species would continue to be able to move north to south along the Guadalupe River following project development. Therefore, the project would not 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)**

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

The proposed Project would remove approximately 19 trees on-site, including 11 ordinance-sized trees. Additionally, three street trees will be removed to allow for site access along Orchard Parkway. As part of the right-of-way improvements along Orchard Parkway the city may require the remaining 10 street trees to be removed and replaced in new tree wells installed in the proposed sidewalk, for a potential total of 13 street trees. No trees would be removed in the Off-Site Infrastructure Areas, which are all within existing public right of way.

The removal and replacement of street trees requires coordination with the San José Department of Transportation and the City Arborist. The size and number of replacement trees will be determined by the type and size of trees proposed for removal and the City's tree replacement ratios. The species of trees to be planted would be determined in consultation with the City Arborist and the Department of Planning, Building and Code Enforcement. The proposed project would be required to conform to the replacement requirements as identified in the Municipal Code Section 13.28.300, General Plan Policies MS-21.4, MS-21.5, MS-21.6 and CD-1.24 and City of San José Tree Removal Ordinance (Municipal Code Section 13.31.010 to 13.32.100). These standard permit conditions are included in this SPPE Application as the following Project Design Feature.

PDF BIO-3.1: A tree removal permit would be required from the City of San José for the removal of potential ordinance-sized trees. The removed trees would be replaced according to tree replacement ratios required by the City, as provided in Table 4.4-2 below.

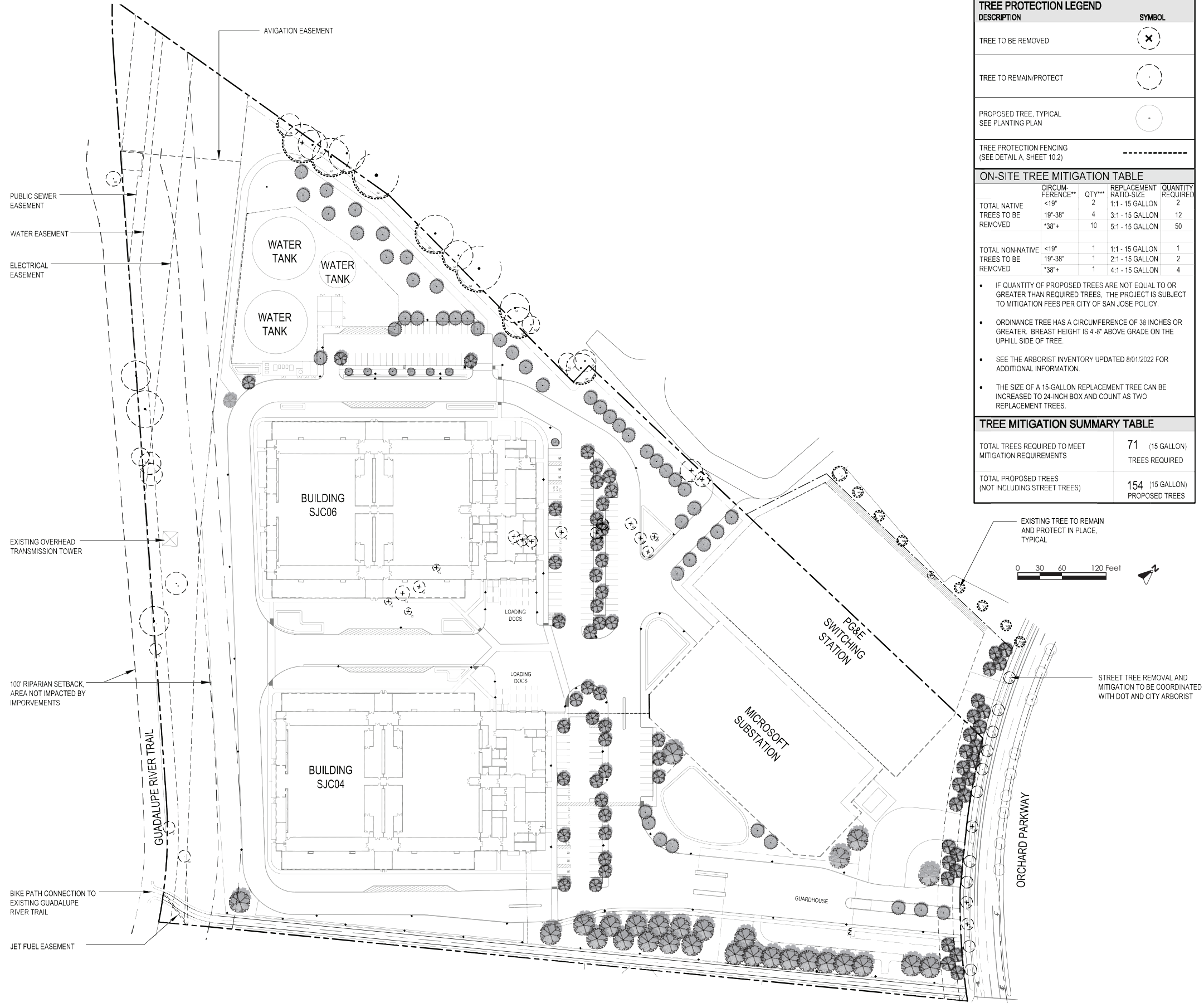
Table 4.4-2: Tree Replacement Ratios				
Circumference of Tree to be Removed	Type of Tree to be Removed			Minimum Size of Each Replacement Tree
	Native	Non-Native	Orchard	
38 inches or greater	5:1	4:1	3:1	15-gallon container
19 up to 38 inches	3:1	2:1	none	15-gallon container
Less than 19 inches	1:1	1:1	none	15-gallon container
x:x = tree replacement to tree loss ratio Note: Trees greater than or equal to 38-inch circumference shall not be removed unless a Tree Removal Permit, or equivalent, has been approved for the removal of such trees. For Multi-Family residential, Commercial and Industrial properties, a permit is required for removal of trees of any size. A 38-inch tree equals 12.1 inches in diameter. A 24-inch box tree = two 15-gallon trees Single Family and Two-dwelling properties may be mitigated at a 1:1 ratio.				

A total of 19 trees onsite would be removed. Three trees would be replaced at a 1:1 ratio, one tree would be replaced at a ratio of 2:1, four trees would be replaced at a 3:1 ratio, one tree would be replaced at a ratio of 4:1, and 10 trees would be replaced at a 5:1 ratio. The total number and size of replacement trees required to be planted on-site is 71 trees.

In the event the Project Site does not have sufficient area to accommodate the required tree mitigation, one or more of the following measures will be implemented, to the satisfaction of the Director of Planning, Building and Code Enforcement, at the development permit stage:

- The size of a 15-gallon replacement tree may be increased to 24-inch box and count as two replacement trees to be planted on the Project Site, at the development permit stage.
- The Project may pay Off-Site Tree Replacement Fee(s) to the City, prior to the issuance of Public Works grading permit(s), in accordance with the City Council approved Fee Resolution. The City will use the off-site tree replacement fee(s) to plant trees at alternative sites.

By conforming to the standard permit conditions, the proposed project would meet all applicable tree removal and tree protection guidelines set forth by the City of San José. Therefore, the proposed project would not conflict with any ordinance protecting biological resources and would not result in a significant impact to trees and the community forest. **(Less than Significant Impact)**



TREE REPLACEMENT PLAN

FIGURE 4.4-1

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

The proposed project is classified as an “Urban Development” project under the VHP, which is a “covered project”. Urban Development projects include private development projects within the planning limits of urban growth in San José. The SCVHA leads the implementation of the VHP, which is both a habitat conservation plan and natural community conservation plan, or HCP/NCCP. It helps private and public entities plan and conduct projects and activities in ways that lessen impacts on natural resources, including specific threatened and endangered species. The VHP identifies regional lands (called reserves) to be preserved or restored to the benefit of at-risk species, and describes how reserves will be managed and monitored to ensure that they benefit those species. In providing a long-term, coordinated planning for habitat restoration and conservation, the VHP aims to enhance the viability of threatened and endangered species throughout the Santa Clara Valley.

In conformance with the VHP, project applicants are required to pay impact fees in accordance with the types and acreage of habitat or “land cover” impacted, and to implement conservation measures specified by the VHP. Land cover impacts are used because it is the best predictor of potential species habitat, and is applicable to all of the covered species (with the exception of the burrowing owl). The SCVHA has mapped the following three fee zones in the VHP area: 1) ranchland and natural lands; 2) agricultural and valley floor lands; and 3) small vacant sites. The following areas are exempt from land cover fees:

- all development that occurs on land mapped by the VHP as urban-suburban, landfill, reservoir (excluding dams), or agriculture developed land cover types;
- urban development in Fee Zones A–C on parcels less than 0.5 acre;
- additions to structures within 50 feet of an existing structure that result in less than 5,000 feet of impervious surface so long as there is no effect on wetland or serpentine land cover types; and
- construction of recreational facilities within the reserve system.

Additional fees in-lieu of providing compensatory mitigation are imposed for projects that impact serpentine habitat, wetlands, and burrowing owls, and for certain projects that result in atmospheric nitrogen emissions, although in some cases, project proponents may provide land to restore or create habitats protected by the VHP in lieu of payment of fees.

The project is located within the VHP Urban Service Area for the City of San José. The Project Site and Off-Site Infrastructure Areas fall entirely within Urban Areas (No Land Cover Fee). The Project Site also does not include lands mapped as occupied burrowing owl nesting habitat, and no burrowing owl fee applies. Nevertheless, the project will pay VHP burrowing owl fees, consistent with the SCVHA’s Voluntary Fee Payments Policy, for the permanent loss of ostensibly suitable, but currently unoccupied, burrowing owl foraging habitat to offset cumulative impacts (this is discussed in greater detail in Section 4.4.2.2 Cumulative Impacts below). The project will also generate an anticipated 532 vehicle trips per day and may therefore be required to pay fees for nitrogen emissions.

The following paragraphs summarize the applicable fees and conservation measures required by the VHP that would apply to the proposed project.

Condition 1. Avoid Direct Impacts on Legally Protected Plant and Wildlife Species - Several wildlife species that occur in the project vicinity are protected under state and federal laws. Some of these animal species are listed as fully protected under the California Fish and Game Code (e.g., the white-tailed kite), and eagles are protected under the Bald and Golden Eagle Protection Act. Further, all native bird species and their nests are protected under the MBTA and California Fish and Game Code. Actions conducted under the VHP must comply with the provisions of the MBTA and California Fish and Game Code.

Condition 3. Maintain Hydrologic Conditions and Protect Water Quality - Condition 3 applies to all projects and identifies a set of programmatic Best Management Practices (BMPs), performance standards, and control measures to minimize increases of peak discharge of storm water and to reduce runoff of pollutants to protect water quality, including during project construction. These requirements include preconstruction, construction site, and post-construction actions. They include hydrologic source control measures that focus on the reduction of pollutant exposure to stormwater runoff. Construction site BMPs include source and treatment control measure to prevent pollutants from leaving the construction site and minimizing site erosion and local stream sedimentation during construction. Post-construction controls include permanent measures for stormwater treatment and flow control. The project's conformance with state, regional and local requirements for construction and post-construction stormwater management is further discussed in Section **Error! Reference source not found.** of this EIR.

Condition 11. Stream and Riparian Setbacks - Condition 11 applies to covered projects that may affect streams and associated riparian vegetation within the VHP plan area. This condition requires new covered projects to adhere to setbacks from creeks and streams and associated riparian vegetation to minimize and avoid impacts on aquatic and riparian land cover types, covered species, and wildlife corridors. The standard required setback for the reach of the Guadalupe River adjacent to the Project Site is 100 feet from the top of bank because the slope of the Project Site is less than 30 percent, no areas 35 feet from the edge of riparian vegetation extend past the 100-foot buffer, and the Project Site is located inside of VHP-designated urban service areas. However, some exemptions may be applicable depending on the nature of the channel. City Council Policy 6-34 provides guidance on the implementation of riparian corridor protection consistent with all City policies and requirements that may provide for riparian protection, including those contained in the VHP, and calls for a setback of 100 feet from the edge of riparian canopy rather than from top of bank (or 35 feet from edge of canopy) in accordance with VHP Condition 11. Because the riparian canopy does not extend beyond the top of bank of the Guadalupe River adjacent to the project site, the City and VHP riparian setbacks are the same.

As described previously, project construction would not occur in the City's or VHP's riparian setbacks. The only proposed modification within the riparian setbacks would be the construction of a bike trail (less than 0.1 acre). No new structures, hardscape, nor landscape would be constructed within the setbacks. The construction of a bike trail is within the setbacks is allowed under the VHP and City of San José's Riparian Corridor Protection and Bird-Safe Design Policy. The project, therefore, is consistent with this condition.

Condition 15. Western Burrowing Owl / Burrowing Owl Mitigation Agreement - Condition 15 requires the implementation of measures to avoid and minimize direct impacts on burrowing owls, including pre-construction surveys, establishment of 250-foot non-disturbance buffers around active nests during the breeding season (February 1 through August 31), establishment of 250-foot non-disturbance buffers around occupied burrows during the nonbreeding season, and construction monitoring. Preconstruction surveys for burrowing owls are required by the VHP in areas mapped as breeding habitat. As previously mentioned, additional fees in-lieu of providing compensatory mitigation are imposed for VHP covered projects that impact burrowing owls.

As described previously, due to an existing burrowing owl mitigation agreement on the site, the project is not subject to the fees or requirements of Condition 15. Nevertheless, the project will pay VHP burrowing owl fees, consistent with the SCVHA's Voluntary Fee Payments Policy, as mitigation for the permanent loss of ostensibly suitable, but currently unoccupied, burrowing owl foraging habitat to offset cumulative impacts under CEQA (this is discussed in greater detail in Section 4.4.2.2 Cumulative Impacts below).

Condition 17. Tricolored Blackbird - This condition applies to projects that are located within 250 feet of any riparian, coastal, and valley freshwater marsh, and helps to protect tricolored blackbirds by prescribing preconstruction surveys, construction buffer zones, biological monitoring, and other requirements. If a project is located within 250 feet of habitat mapped as "Pond" by the VHP, a qualified biologist must confirm that the pond land cover type is present. If a qualified biologist verifies that the project area is within 250 feet of pond habitat, a qualified biologist must conduct a field investigation to identify and map potential nesting substrate. If suitable nesting substrate is identified, avoidance and minimization measures must be implemented. Although tricolored blackbirds have never been recorded nesting on or near the Project Site, the proposed project is located within 250 feet of an area (i.e., the Guadalupe River) mapped by the VHP as suitable nesting habitat for the tricolored blackbird. Therefore, per Condition 17 of the VHP, *H. T. Harvey & Associates* conducted a field investigation to identify and map potential nesting substrate for tricolored blackbirds on June 2, 2020 or July 21, 2022. No suitable vegetation for nesting by tricolored blackbirds was present along the Guadalupe River within 250 feet of the Project Site due to predominance by woody riparian vegetation and shorter ruderal vegetation, and the absence of large stands of emergent vegetation or other tall, dense herbaceous vegetation. Thus, no tricolored blackbird nesting colonies are expected to occur on or within 250 feet of the site, and no additional surveys or avoidance and minimization measures pertaining to this species are required.

The following City of San José standard permit condition, which is included in the project as an Project Design Feature, would ensure compliance with the VHP.

PDF BIO-4.1: The Project will pay applicable Santa Clara Valley Habitat Plan fees (including the nitrogen deposition fee) prior to issuance of any grading permits, as applicable. The Project applicant shall submit the Santa Clara Valley Habitat Plan Coverage Screening Form to the Director of Planning, Building and Code Enforcement (PBCE) or the Director's designee for approval and payment of all applicable fees prior to the issuance of a grading permit.

With implementation of the standard permit condition listed above, the project would not conflict with the provisions of an adopted Habitat Conservation Plan. **(Less than Significant Impact)**

4.4.2.2 *Cumulative Impacts*

Would the project result in a cumulatively considerable contribution to a significant cumulative biological resources impact?

Cumulative impacts arise due to the linking of impacts from past, current, and reasonably foreseeable future projects in the region. Future development activities in the City of San José and development activities covered by the VHP will result in impacts on the same habitat types and species that will be affected by the proposed project. The proposed project, in combination with other projects in the area and other activities that impact the species that are affected under the project, could contribute to cumulative effects on special-status species. Other projects in the area include both development and maintenance projects that could adversely affect these species and restoration projects that will benefit these species.

The cumulative impact on biological resources resulting from the project in combination with other projects in the region would be dependent on the relative magnitude of adverse effects of these projects on biological resources compared to the relative benefit of impact avoidance and minimization efforts prescribed by planning documents, CEQA mitigation measures, and permit requirements for each project; compensatory mitigation and proactive conservation measures associated with each project, and the benefits to biological resources accruing from the VHP. In the absence of such avoidance, minimization, compensatory mitigation, and conservation measures, cumulatively significant impacts on biological resources would occur.

However, the San José General Plan contains conservation measures that would benefit biological resources, as well as measures to avoid, minimize, and mitigate impacts on these resources and the VHP includes numerous conservation measures to offset adverse effects on covered activities. Many projects in the region that impact resources similar to those impacted by the proposed project will be covered activities under the VHP and will mitigate impacts on sensitive habitats and many special-status species through that program, which will require payment of fees for habitat restoration. Further, the project would implement a number of BMPs and Project Design Features to reduce impacts on both common and special-status species, as described above. Thus, with the exception of the burrowing owl (for which mitigation is provided via a mitigation agreement instead of through the VHP) the project will not contribute to substantial cumulative effects on biological resources.

As discussed above, the project will result in the permanent loss of 18.6 acres of unoccupied suitable nesting, roosting, and foraging habitat for burrowing owls on the Project Site. Impacts on burrowing owls resulting from development of the property were previously analyzed in the original North San José Development Policies Update Draft Program EIR as well as the Agilent Final EIR. Although compensatory mitigation was provided in accordance with a CDFW mitigation agreement, that mitigation consisted of the purchase of credits in a conservation bank outside the South Bay, so that the mitigation did not directly benefit the South Bay burrowing owl population. As a result, these impacts were determined to be significant and unavoidable due to the absence of sufficient replacement habitat in the South Bay region to offset the cumulative loss of remaining burrowing owl

habitat in the north San José area in combination with other projects in the region. Thus, when viewed in the context of the original Project Site as part of the North San José Development Policies Update Draft Program EIR and Agilent Final EIR, the loss of 18.6 acres of burrowing owl habitat on the Project Site would remain significant under CEQA, as disclosed in those EIRs, due to the absence of sufficient replacement habitat to offset the cumulative loss of remaining burrowing owl habitat in the north San José area in combination with other projects in the region.

However, feasible mitigation for this impact that will directly benefit the South Bay burrowing owl population has been made available since the preparation of the previous EIRs for the Project Site due to the adoption of the VHP, to which the City of San José is signatory. The implementation of the Project Design Feature below will reduce the project's contribution to cumulative impacts on burrowing owls to less-than-significant levels under CEQA.

PDF BIO-5.1: Payment of Burrowing Owl Fees for Permanent Impacts on California Annual Grassland. The project will pay Santa Clara Valley Habitat Plan burrowing owl fees for the permanent loss of 18.6 acres of California annual grassland that provides ostensibly suitable, but currently unoccupied, burrowing owl foraging habitat. These fees shall be paid to the Santa Clara Valley Habitat Agency prior to issuance of a grading permit.

Even though the project is not subject to compliance with VHP Condition 15 due to the project's inclusion in the Agilent mitigation agreement with CDFW, payment of VHP burrowing owl fees would be appropriate to reduce the project's contribution to cumulative impacts on burrowing owls to less-than-significant levels under CEQA because these fees would directly benefit burrowing owls in the South Bay region. This mitigation approach is consistent with the SCVHA's Voluntary Fee Payments Policy, which states that such voluntary burrowing owl fees paid as mitigation "will be applied toward burrowing owl management agreements, burrowing owl habitat management and monitoring, as well as burrowing owl habitat restoration and land acquisition." The SCVHA will be able to use these voluntary fees, in conjunction with fees from other projects, to successfully conserve South Bay burrowing owl populations. Thus, VHP fees are appropriate to compensate for direct, indirect, and cumulative impacts on burrowing owls as a result of the project.

The Voluntary Fee Payments Policy does not require non-covered projects that pay voluntary fees to the SCVHA to comply with VHP Conditions. Thus, the project is not required to adopt the requirements of VHP Condition 15 related to the passive relocation of burrowing owls in order to compensate for its contribution to cumulative impacts via the payment of burrowing owl impact fees.

Implementation PDF BIO-5.1 would reduce the project's contribution to cumulative impacts on burrowing owls to a less than significant level. **(Less than Significant Cumulative Impact)**

4.5 CULTURAL RESOURCES

The discussion in this section is based in part on a Literature Review prepared for the project by PaleoWest, LLC in August 2022. A copy of the report will be docketed with the Commission under a Request for Confidentiality. In this report mitigation measures are recommended to reduce impacts. The Applicant has incorporated these recommendations into Project Design Features (PDFs) as discussed below.

4.5.1 **Environmental Setting**

4.5.1.1 ***Regulatory Framework***

Federal and State

National Historic Preservation Act

Federal protection is legislated by the National Historic Preservation Act of 1966 (NHPA) and the Archaeological Resource Protection Act of 1979. These laws maintain processes for determination of the effects on historical properties eligible for listing in the National Register of Historic Places (NRHP). Section 106 of the NHPA and related regulations (36 Code of Federal Regulations [CFR] Part 800) constitute the primary federal regulatory framework guiding cultural resources investigations and require consideration of effects on properties that are listed or eligible for listing in the NRHP. Impacts to properties listed in the NRHP must be evaluated under CEQA.

California Register of Historical Resources

The California Register of Historical Resources (CRHR) is administered by the State Office of Historic Preservation and encourages protection of resources of architectural, historical, archeological, and cultural significance. The CRHR identifies historic resources for state and local planning purposes and affords protections under CEQA. Under Public Resources Code Section 5024.1(c), a resource may be eligible for listing in the CRHR if it meets any of the NRHP criteria.²²

Historical resources eligible for listing in the CRHR must meet the significance criteria described previously and retain enough of their historic character or appearance to be recognizable as historical resources and to convey the reasons for their significance. A resource that has lost its historic character or appearance may still have sufficient integrity for the CRHR if it maintains the potential to yield significant scientific or historical information or specific data.

The concept of integrity is essential to identifying the important physical characteristics of historical resources and, therefore, in evaluating adverse changes to them. Integrity is defined as “the authenticity of a historical resource’s physical identity evidenced by the survival of characteristics that existed during the resource’s period of significance.” The processes of determining integrity are similar for both the CRHR and NRHP and use the same seven variables or aspects to define integrity that are used to evaluate a resource’s eligibility for listing. These seven characteristics include 1) location, 2) design, 3) setting, 4) materials, 5) workmanship, 6) feeling, and 7) association.

²² California Office of Historic Preservation. “CEQA Guidelines Section 15064.5(a)(3) and California Office of Historic Preservation Technical Assistance Series #6.” Accessed August 31, 2020. <http://www.ohp.parks.ca.gov/pages/1069/files/technical%20assistance%20bulletin%206%202011%20update.pdf>.

California Native American Historical, Cultural, and Sacred Sites Act

The California Native American Historical, Cultural, and Sacred Sites Act applies to both state and private lands. The act requires that upon discovery of human remains, construction or excavation activity must cease and the county coroner be notified.

Public Resources Code Sections 5097 and 5097.98

Section 15064.5 of the CEQA Guidelines specifies procedures to be used in the event of an unexpected discovery of Native American human remains on non-federal land. These procedures are outlined in Public Resources Code Sections 5097 and 5097.98. These codes protect such remains from disturbance, vandalism, and inadvertent destruction, establish procedures to be implemented if Native American skeletal remains are discovered during construction of a project, and establish the Native American Heritage Commission (NAHC) as the authority to resolve disputes regarding disposition of such remains.

Pursuant to Public Resources Code Section 5097.98, in the event of human remains discovery, no further disturbance is allowed until the county coroner has made the necessary findings regarding the origin and disposition of the remains. If the remains are of a Native American, the county coroner must notify the NAHC. The NAHC then notifies those persons most likely to be related to the Native American remains. The code section also stipulates the procedures that the descendants may follow for treating or disposing of the remains and associated grave goods.

Local

Envision San José 2040 General Plan

The Envision San José 2040 General Plan includes the following policies that are specific to cultural resources and applicable to the proposed project:

Envision San José 2040 General Plan Relevant Cultural Resources Policies

Policies	Description
Policy ER-10.1	For 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.
Policy ER-10.2	Recognizing that Native American human remains may be encountered at unexpected locations, impose a requirement on all development permits and tentative subdivision maps that upon discovery during construction, development activity will cease until professional archaeological examination confirms whether the burial is human. If the remains are determined to be Native American, applicable state laws shall be enforced.
Policy ER-10.3	Ensure that City, State, and Federal historic preservation laws, regulations, and codes are enforced, including laws related to archaeological and paleontological resources, to ensure the adequate protection of historic and pre-historic resources.

City of San José Historic Preservation Ordinance

The City's Historic Preservation Ordinance (Chapter 13.48 of the Municipal Code) promotes the preservation of old historic or architecturally worthy structures and neighborhoods which impart a distinct aspect to the City and serve as visible reminders of the historical and cultural heritage of the City, the state, and the nation. The City contains over 200 designated City Landmarks, structures which represent a physical connection with significant persons, activities, or events from the City's past. Any historic property may be nominated for designation as a City Landmark by either the City Council or the Historic Landmarks Commission; property owners may also apply for nomination and consideration by the Historic Landmarks Commission. Factors to be considered when making a finding regarding Landmark designation of a historic structure include the following:

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 historic 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 historic 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.

4.5.1.2 Existing Conditions

Historical Resources

The site is vacant and does not contain any historical structures. The City of San José has identified approximately 166 City Landmarks in its Historic Resources Inventory. City Landmarks are concentrated in the older, established areas of the City including the Downtown, Naglee Park, Hensely and Shasta-Hanchett areas in the Central/Downtown Planning Area, the Willow Glen Planning Area, and the City's fringes in the Alviso, Almaden, Alum Rock and Edenvale Planning Areas. The City has also identified 21 historic districts and/or Conservation areas. The Project Site does not contain any historic resources or properties that are listed on federal, state, or local inventories and the site is not located within a historic district. The nearest listed resource on the Historic Resources Inventory is the Sakauye Residence at 2343 North First Street, approximately 0.3-mile southeast of the Project Site. The Sakauye Residence is recognized as a Contributing Site/Structure, meaning it contributes significantly to the historic fabric of the community and/or to a certain neighborhood.²³

²³ City of San José. "Historic Resources Inventory." Accessed August 6, 2022 <https://www.sanjoseca.gov/your-government/departments/planning-building-code-enforcement/planning-division/historic-preservation/historic-resources-inventory>

The archaeological records search prepared for the Project Site found that one cultural resource is recorded within the project area, consisting of the original location of Trimble Road linking First Street to the Guadalupe River. The former roadway was running northeast/southwest from today's North Trimble Road and North First Street intersection. The portion of the resource within the Project Site is in an open floodplain of the Guadalupe River. The road was established in the 1770s when it was used to access the Mission Santa Clara on the west side of the river. Site forms indicate that the area had been previously cultivated and any intact archaeological deposits related to the site are likely destroyed. Eight additional cultural resources were identified within a half mile radius of the Project Site.

Prehistoric Resources

Eighteen prehistoric archaeological sites, one isolated prehistoric find, two reported but unrecorded prehistoric resources and two Native American ethnographic villages/settlements are known to be present in the North San José Development Area. Prehistoric archaeological resources within and adjacent to the North San José Development Area are typically midden sites (former habitation sites) which provide evidence of intensive and extensive human occupation. Native American burials are often present in these deposits. Midden sites included former mounds along the Guadalupe River as well as sites covered with up to four feet of sediments.²⁴

The Project Site is in an area of sensitivity for prehistoric archaeological resources according to cultural sensitivity maps prepared for the General Plan EIR. No prehistoric cultural resources, historical features or artifacts were observed during the survey of the Project Site. However, in San José, Native American sites have been identified within half a mile of the Guadalupe River and Coyote Creek, within a quarter of a mile of their tributaries, or adjacent to springs. These resources are often buried under alluvium and recent fill. Due to the Project Site's proximity to the Guadalupe River and other previously identified resources, there is moderate to high potential for cultural resources and Native American resources on-site.

The Project Site was surveyed by an archaeologist on July 15, 2022. Extensive disturbance was observed throughout the entirety of the site from previous grading and tilling. Ground surface visibility was less than 10 percent in sections along the southwestern boundary bordering the Guadalupe River Trail, where vegetation, primarily grasses and some thicket, are dense and overgrown. The overall ground surface visibility of the site was around 25 percent due to dense grasses and thickets. Where the ground surface is visible, due to disturbance or bioturbation from rodent holes, soils are composed of silty sandy loam with subangular gravels interspersed with some larger rounded rocks and imported gravels. Soil composition observed in the northern quadrant was silty loam with subangular rocks and gravel present, apparently graded. The scars of two dirt roads are visible along the northern boundary of the site, and the entire site has been graded and disturbed, presumably for agricultural activities. Some chunks of concrete were observed during the survey, but it is unclear if it was dumped or from a structure on the site. The area where the old Trimble Road intersects the site was surveyed and no sign of the old road was observed. No Pre-Contact or historical features or artifacts were observed during the survey.

²⁴ City of San Jose. *Final Program Environmental Impact Report North San Jose Development Policies Update*. <https://www.sanjoseca.gov/home/showpublisheddocument/21903/636688268894370000>

4.5.2 Impact Discussion

For the purpose of determining the significance of the project's impact on cultural resources, would the project:

- a) Cause a substantial adverse change in the significance of a historical resource pursuant to CEQA Guidelines Section 15064.5?
- b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines Section 15064.5?
- c) Disturb any human remains, including those interred outside of dedicated cemeteries?

4.5.2.1 *Project Impacts*

a) Would the project cause a substantial adverse change in the significance of a historical resource pursuant to CEQA Guidelines Section 15064.5?

Pursuant to CEQA Guidelines Section 15064.5 (b)(1), a “substantial adverse change” in the significance of a historical resource means physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of a historical resource would be materially impaired. As described in Section 4.5.1.2 Existing Conditions, the Project Site is vacant and does not contain historic resources or properties listed on federal, state, or local inventories. Additionally, the Project Site is not located within a historic district and the proposed development would not detract from the historical significance of any nearby historic structures through incompatible land uses or design. The Off-Site Infrastructure Areas are all located within existing public right of way. Construction of the offsite infrastructure improvements would involve minor trenching and pipe installation within existing roadways and would not affect nearby structures. However, even though traditional trenching through a public right of way will not impact historic resources, in accordance with recent CEC Staff guidance on the evaluation of potential impacts to historic resources for linear facilities, the Applicant has commissioned an additional Historic Resource Evaluation for properties adjacent to the new proposed recycled water pipeline route. The Historic Resource Evaluation report will include the complete evaluation of properties adjacent to the site and along the recycled water pipeline route and will be docketed under separate cover when complete. Therefore, the proposed Project would have no impact on historically significant structures pursuant to CEQA Guidelines Section 15064.5.**(Less than Significant Impact)**

b) Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines Section 15064.5?

As described in Section 4.5.1.2 Existing Conditions, the Project Site is within an area of moderate to high archaeological sensitivity. Construction activities on-site could significantly impact archaeological resources, if encountered. Additionally, it is possible that construction activities within the Offsite Infrastructure Areas, although entirely within existing roadways, could significantly impact archaeological resources, if encountered

In accordance with the recommendations of the site-specific archaeological resources report, the following Project Design Features will be implemented by the Project to reduce impacts to subsurface archaeological resources.

PDF CUL-1.1: Treatment Plan: A Cultural Resources Treatment Plan shall be prepared by a qualified archaeologist, in consultation with a qualified Native American monitor, registered with the Native American Heritage Commission (NAHC) for the City of San José and that is traditionally and culturally affiliated with the geographic area. The Cultural Resources Treatment Plan shall reflect permit-level detail pertaining to depths and locations of all ground disturbing activities. The Cultural Resources Treatment Plan shall be prepared and submitted to the Supervising Environmental Planner of the City of San José Department of Planning, Building, and Code Enforcement prior to approval of a grading permit. The Treatment Plan shall contain, at a minimum:

- Identification of the scope of work and range of subsurface activities (including location map and development plan), including requirements for preliminary field investigations.
- Description of the environmental setting (past and present) and the historic/prehistoric background of the parcel (potential range of what might be found).
- Development of research questions and goals to be addressed by the investigation (what is significant vs. what is redundant information).
- Detailed field strategy used to record, recover, or avoid finds and address research goals.
- Analytical methods.
- Report structure and outline of document contents.
- Disposition of artifacts.
- Appendices: all site records, correspondence, and consultation with Native Americans, etc.

PDF CUL-1.2: Investigation: The Project applicant shall complete a preliminary field investigation program on the Project Site in conformance with the Cultural Resources Treatment Plan required under Project Design Feature PDF CUL-1.1. The locations of subsurface testing and exploratory trenching shall be determined prior to issuance of any grading permit based on the Cultural Resources Treatment Plan recommendations. A qualified archaeologist and a qualified Native American monitor, registered with the Native American Heritage Commission (NAHC) for the City of San José and that is

traditionally and culturally affiliated with the geographic area, shall complete a presence/absence exploration.

If any finds are discovered during the preliminary field investigation, the Project shall implement PDF CUL-1.4 for evaluation and recovery methodologies. The results of the preliminary field investigation shall be submitted to the Supervising Environmental Planner of the City of San José Department of Planning, Building, and Code Enforcement for review and approval prior to issuance of any grading permit.

PDF CUL-1.3: Construction Monitoring and Protection Measures: Although the data recovery and treatment program performed in accordance with CUL 1.2 would be expected to recover potentially significant materials and information from the areas impacted prior to grading, it is possible that additional resources could remain. Therefore, ground-disturbing activities in native soil (e.g., grading and excavation) shall be completed under the observation of a qualified archaeologist and a qualified Native American monitor, registered with the Native American Heritage Commission (NAHC) for the City of San José and that is traditionally and culturally affiliated with the geographic area.

The qualified archaeologist or a qualified Native American monitor, registered with the Native American Heritage Commission (NAHC) for the City of San José and that is traditionally and culturally affiliated with the geographic area, shall have authority to halt construction activities temporarily in the immediate vicinity of an unanticipated find. If, for any reasons, the qualified archaeologist or a qualified Native American monitor, registered with the Native American Heritage Commission (NAHC) for the City of San José and that is traditionally and culturally affiliated with the geographic area, is not present, but construction crews encounter a cultural resource, all work shall stop temporarily within 50 feet of the find until a qualified archaeologist in consultation with a qualified Native American monitor, registered with the Native American Heritage Commission (NAHC) for the City of San José and that is traditionally and culturally affiliated with the geographic area, has been contacted to determine the proper course of action. The Supervising Environmental Planner and Historic Preservation Officer of the City of San José Department of Planning, Building, and Code Enforcement shall be notified of any finds during the grading or other construction activities. Any human remains encountered during construction shall be treated according to the protocol identified in PDF CUL-2.5.

PDF CUL-1.4: Evaluation and Data Recovery: The Supervising Environmental Planner and Historic Preservation Officer of the City of San José Department of Planning, Building, and Code Enforcement shall be notified of any finds during the preliminary field investigation, grading, or other construction activities. construction activities shall be evaluated for eligibility for listing as a Candidate City Landmark and/or in the California Register of Historic

Resources. Data recovery methods may include, but are not limited to, backhoe trenching, shovel test units, hand auguring, and hand-excavation.

The techniques used for data recovery shall follow the protocols identified in the Cultural Resources Treatment Plan required in PDF CUL-1.1. Data recovery shall include excavation and exposure of features, field documentation, and recordation.

PDF CUL-1.5: Human Remains: Native American coordination shall follow the protocols established under Assembly Bill 52, State of California Code, and applicable City of San José procedures.

If any human remains are found during any field investigations, grading, or other construction activities, all provisions of California Health and Safety Code Sections 7054 and 7050.5 and Public Resources Code Sections 5097.9 through 5097.99, as amended per Assembly Bill 2641, shall be followed. In the event of the discovery of human remains during construction, there shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains. The project applicant or qualified archaeologist in consultation with a Native American representative registered with the Native American Heritage Commission from the City of San José and that is traditionally and culturally affiliated with the geographic area shall immediately notify the Supervising Environmental Planner of the City of San José Department of Planning, Building, and Code Enforcement, who will then notify the Santa Clara County Coroner. The Coroner shall make a determination as to whether the remains are Native American.

If the remains are believed to be Native American, the Coroner shall contact the Native American Heritage Commission (NAHC) within 24 hours. The NAHC shall then designate a Most Likely Descendant (MLD). The MLD shall inspect the remains and make a recommendation on the treatment of the remains and associated artifacts.

If one of the following conditions occurs, the Project applicant or his authorized representative shall work with the Coroner, in consultation with a qualified Native American monitor, registered with the Native American Heritage Commission (NAHC) for the City of San José and that is traditionally and culturally affiliated with the geographic area, to reinter the Native American human remains and associated grave goods with appropriate dignity in a location not subject to further subsurface disturbance:

- The Native American Heritage Commission is unable to identify a most likely descendent or the most likely descendent failed to make a recommendation within 48 hours after being notified by the commission.
- The descendant identified fails to make a recommendation; or

- The landowner or his authorized representative rejects the recommendation of the descendant, and the mediation by the Native American Heritage Commission fails to provide measures acceptable to the landowner.

PDF CUL-1.6: Site Security: At the discretion of the Supervising Environmental Planner and Historic Preservation Officer of the City of San José Department of Planning, Building, and Code Enforcement, site fencing shall be installed on-site during the investigation, grading, building, or other construction activities on the Project Site to avoid destruction and/or theft of potential cultural resources. The responsible qualified archaeologist, in consultation with a qualified Native American monitor, registered with the Native American Heritage Commission (NAHC) for the City of San José and that is traditionally and culturally affiliated with the geographic area, shall advise the Supervising Environmental Planner and Historic Preservation Officer of the City of San José Department of Planning, Building, and Code Enforcement as to the necessity for a guard. The purpose of the security guard shall be to ensure the safety of any potential cultural resources (including human remains) that are left exposed overnight on the Project Site. The Director of PBCE shall have the final discretion to authorize the use of a security guard at the project site.

PDF CUL-1.7: Final Reporting: Once all analyses and studies required been completed, the project applicant, or representative, shall prepare a final report summarizing the results of the field investigation, data recovery activities and results, and compliance with the Cultural Resources Treatment Plan. The report shall document the results of field and laboratory investigations and shall meet the Secretary of the Interior's Standards for Archaeological Documentation. The contents of the report shall be consistent with the protocol included in the Cultural Resources Treatment Plan. The report shall be submitted to the Director of Planning, Building, and Code Enforcement for review and approval prior to issuance of any Certificates of Occupancy (temporary or final). Once approved, the final documentation shall be submitted to the Northwest Information Center at Sonoma State University, as appropriate.

PDF CUL-1.8: Curation: Upon completion of the final report required by the Cultural Resources Treatment Plan, all recovered archaeological materials not identified as tribal cultural resources by the Native American monitor, shall be transferred to a long-term curation facility. Any curation facility used shall meet the standards outlined in the National Park Services' Curation of Federally Owned and Administered Archaeological Collections (36 CFR 79). The Project applicant shall notify the Supervising Environmental Planner of the City of San José Department of Planning, Building, and Code Enforcement of the selected curation facility prior to the issuance of any Certificates of Occupancy (temporary or final). To the extent feasible, and in consultation with the Native American representative, all recovered Native American/tribal cultural resources and artifacts shall be reburied on-site in an area that is unlikely to be disturbed again. Treatment of materials to be

curated shall be consistent with the protocols included in the c Cultural Resources Treatment Plan.

All archaeological materials recovered during the data recovery efforts shall be cleaned, sorted, catalogued, and analyzed following standard archaeological procedures, and shall be documented in a report submitted to the Director of Planning, Building and Code Enforcement and the NWIC.

PDF CUL-1.9: Dignified and Respectful Treatment – Cultural Sensitivity Training Prior to Construction: An important aspect of the consultation process is a dignified and respectful treatment of Tribal Cultural Resources. Prior to issuance of the grading permit, the Project shall be required to submit evidence that an Archaeological Monitoring Contractor Awareness Training was held prior to ground disturbance. The training shall be facilitated by the Project archaeologist in coordination with a Native American representative registered with the Native American Heritage Commissions for the City of San José and that is traditionally and culturally affiliated with the geographic area as described in Public Resources Code Section 21080.3.

The proposed Project would be required to implement the provisions of a project-specific Cultural Resources Treatment Plan, as outlined in the PDFs above. Implementation of these PDFs would ensure extensive subsurface investigation where subsurface excavation and groundwork would occur. Through this field investigation and data recovery program, the Project would avoid demolition, substantial alteration, or relocation of an eligible resource. Significant disturbance of any human remains, Native American or otherwise, would be avoided through a robust protection program designed to respond to an encounter with cultural resources and/or human remains in consultation with appropriate parties (e.g., the Most Likely Descendant).

With implementation of PDF CUL-2.1 – PDF CUL-2.9, the Project would not cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines Section 15064.5. **(Less than Significant Impact)**

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

Although it is not expected, there is a potential for human remains to occur on the site. Consistent with General Plan policy ER-10.2 and standard permit conditions for the City of San José, the Project would implement Project Design Feature PDF CUL-1.5, as described above, which would ensure that an appropriate process is followed in the event of accidental discovery of human remains during project construction. By following the process set forth in PDF CUL-1.5, the proposed project would not result in a significant impact to human remains. **(Less than Significant Impact)**

4.5.2.2 Cumulative Impacts

Would the project result in a cumulatively considerable contribution to a significant cumulative cultural resources impact?

The geographic area for cultural resources is the Project Site, the Off-Site Infrastructure Areas, and adjacent parcels as cultural resource impacts are typically localized and generally limited to the immediate area in which a given cultural resources is located. The cumulative projects may require excavation and grading or other activities that may affect unknown prehistoric cultural resources and/or historic resources. Other projects in the City of San José may also have cultural resources, irrespective of their designation as such on local, state, or federal registers. Any excavation or grading activities could affect these known and unknown cultural resources. Therefore, the City has adopted standard conditions that will be implemented by all projects to reduce potential impacts to cultural resources. Project-level analyses will determine the necessity of additional mitigation measures to reduce localized and site-specific impacts to these resources.

Historic Resources

As discussed above, the Project Site is not classified as a historic resource nor is it eligible to be listed on the CRHR, NRHP. The Off-Site Infrastructure Areas are all located within existing public right of way on paved streets and would only involve minor trenching and pipe installation. For these reasons, the project would not contribute to a significant cumulative impact on historic resources. **(Less than Significant Impact)**

Archaeological Resources

The cumulative projects (including the proposed project) would be required to implement General Plan policies and standard permit conditions to reduce impacts to archaeological resources (if encountered) to a less than significant level. The project includes PDFs CUL-1.1-CUL-1.9 in order to ensure the proposed development does not impact prehistoric or historic resources. As concluded in the General Plan EIR, future development under the General Plan, in conformance with existing policies and regulations, would not result in significant cumulative impacts to archaeological resources.²⁵ **(Less than Significant Cumulative Impact)**

Human Remains

Build out of the General Plan, including the proposed project and cumulative projects, would be required to implement General Plan policy ER-10.2 to reduce impacts to human remains (if encountered) to a less than significant level (refer to PDF CUL-1.5). Therefore, the City has adopted standard conditions that will be implemented by all projects to ensure if human remains are discovered during earthwork activities would be handled properly and to limit disturbance. As concluded in the General Plan EIR, future development under the General Plan, in conformance with existing policies and regulations, would not result in significant cumulative impacts to human remains.²⁶ **(Less than Significant Cumulative Impact)**

²⁵ City of San José. *Envision San José 2040 General Plan Integrated Final Program Environmental Impact Report*. September 2011.

²⁶ Ibid.

4.6 ENERGY

4.6.1 Environmental Setting

4.6.1.1 *Regulatory Framework*

Federal and State

Energy Star and Fuel Efficiency

At the federal level, energy standards set by the EPA apply to numerous consumer products and appliances (e.g., the EnergyStar™ program). The EPA also sets fuel efficiency standards for automobiles and other modes of transportation.

Renewables Portfolio Standard Program

In 2002, California established its Renewables Portfolio Standard Program, with the goal of increasing the percentage of renewable energy in the state's electricity mix to 20 percent of retail sales by 2010. Governor Schwarzenegger issued Executive Order (EO) S-3-05, requiring statewide emissions reductions to 80 percent below 1990 levels by 2050. In 2008, EO S-14-08 was signed into law, requiring retail sellers of electricity serve 33 percent of their load with renewable energy by 2020. In October 2015, Governor Brown signed SB 350 to codify California's climate and clean energy goals. A key provision of SB 350 requires retail sellers and publicly owned utilities to procure 50 percent of their electricity from renewable sources by 2030. SB 100, passed in 2018, requires 100 percent of electricity in California to be provided by 100 percent renewable and carbon-free sources by 2045.

Executive Order B-55-18 To Achieve Carbon Neutrality

In September 2018, Governor Brown issued an executive order, EO-B-55-18 To Achieve Carbon Neutrality, setting a statewide goal "to achieve carbon neutrality as soon as possible, and no later than 2045, and achieve and maintain net negative emissions thereafter." The executive order requires CARB to "ensure future Scoping Plans identify and recommend measures to achieve the carbon neutrality goal." EO-B-55-18 supplements EO S-3-05 by requiring not only emissions reductions, but also that, by no later than 2045, the remaining emissions be offset by equivalent net removals of CO₂ from the atmosphere through sequestration.

California Building Standards Code

The Energy Efficiency Standards for Residential and Nonresidential Buildings, as specified in Title 24, Part 6 of the California Code of Regulations (Title 24), was established in 1978 in response to a legislative mandate to reduce California's energy consumption. Title 24 is updated approximately every three years.²⁷ Compliance with Title 24 is mandatory at the time new building permits are issued by city and county governments.²⁸

²⁷ California Building Standards Commission. "California Building Standards Code." Accessed July 22, 2022. <https://www.dgs.ca.gov/BSC/Codes#@ViewBag.JumpTo>.

²⁸ California Energy Commission (CEC). "2019 Building Energy Efficiency Standards." Accessed July 22, 2022. <https://www.energy.ca.gov/programs-and-topics/programs/building-energy-efficiency-standards/2019-building-energy-efficiency>.

Regional and Local

Climate Smart San José

Climate Smart San José is a plan to reduce air pollution, save water, and create a stronger and healthier community. The City approved goals and milestones in February 2018 to ensure the City can substantially reduce GHG emissions through reaching the following goals and milestones:

- All new residential buildings will be Zero Net Carbon Emissions (ZNE) by 2020 and all new commercial buildings will be ZNE by 2030 (Note that ZNE buildings would be all electric with a carbon-free electricity source).
- San José Clean Energy (SJCE) will provide 100-percent carbon-free base power by 2021.
- One gigawatt of solar power will be installed in San José by 2040.
- 61 percent of passenger vehicles will be powered by electricity by 2030.

Envision San José 2040 General Plan and Greenhouse Gas Reduction Strategy

The General Plan includes strategies, policies, and action items that are incorporated into the City's GHG Reduction Strategy to help reduce GHG emissions. Multiple policies and actions in the General Plan have GHG implications, including land use, housing, transportation, water usage, solid waste generation and recycling, and reuse of historic buildings.

The Envision San José 2040 General Plan includes the following policies that are specific to energy resources and relevant to this analysis:

Envision San José 2040 General Plan Relevant Energy Resources Policies

Policy	Description
MS-1.1	Demonstrate leadership in the development and implementation of green building policies and practices. Ensure that all projects are consistent with or exceed the City's Green Building Ordinance and City Council Policies as well as State and/or regional policies which require that projects incorporate various green building principles into their design and construction.
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 industry practices.

Envision San José 2040 General Plan Relevant Energy Resources Policies

Policy	Description
MS-2.11	Require new development to incorporate green building practices, including those required by the Green Building Ordinance. Specifically target reduced energy use through construction techniques (e.g., design of building envelopes and systems to maximize energy performance), through architectural design (e.g., design to maximize cross ventilation and interior daylight) and through site design techniques (e.g., orienting buildings on sites to maximize the effectiveness of passive solar design).
MS-3.1	Require water-efficient landscaping, which conforms to the State’s Model Water Efficient Landscape Ordinance, for all new commercial, institutional, industrial, and developer-installed residential development unless for recreation or other area functions.
MS-5.5	Maximize recycling and composting from all residents, businesses, and institutions in the City.
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.
MS-6.8	Maximize reuse, recycling, and composting citywide.
MS-14.3	Consistent with the California Public Utilities Commission’s California Long Term Energy Efficiency Strategic Plan, as revised and when technological advances make it feasible, require all new residential and commercial construction to be designed for zero net energy use.
MS-14.4	Implement the City’s Green Building Policies (see Green Building Section) 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, and passive solar building design and planting of trees and other landscape materials to reduce energy consumption.
MS-14.5	Consistent with State and Federal policies and best practices, require energy efficiency audits and retrofits prior to or at the same time as consideration of solar electric improvements.

City’s Greenhouse Gas Reduction Strategy

The City’s GHG Reduction 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. Some measures are mandatory for all proposed development projects and others are voluntary and could be incorporated as mitigation measures for proposed projects, at the City’s discretion. GHG reduction measures serve the dual purpose of reducing GHG emissions and reducing wasteful and inefficient use of energy in new developments.

City of San José Green Building Standards

At the local level, the City of San José sets green building standards for municipal development. All projects are required to submit a Leadership in Energy and Environmental Design (LEED)²⁹, GreenPoint³⁰, or Build It Green checklist with the development proposal. Private developments are required to implement green building practices if they meet the Applicable Projects criteria defined by Council Policy 6-32 and shown in Table 4.6-1 below.

Table 4.6-1: Private Sector Green Building Policy Applicable Projects	
Applicable Project*	Minimum Green Building Rating
Commercial/Industrial – Tier 1 (Less than 25,000 Square Feet)	LEED Applicable New Construction Checklist
Commercial/Industrial – Tier 2 (25,000 Square Feet or greater)	LEED Silver
Residential – Tier 1 (Less than 10 units)	GreenPoint or LEED Checklist
Residential – Tier 2 (10 units or greater)	GreenPoint Rated 50 points or LEED Certified
High Rise Residential (75 feet or higher)	LEED Certified
Notes: *For mixed-use projects – only that component of the project triggering compliance with the policy shall be required to achieve the applicable green building standard. Source: City of San José. “Private Sector Green Building.” Accessed: July 22, 2022. https://www.sanjoseca.gov/your-government/departments-offices/environmental-services/energy/green-building/private-sector-green-building	

City of San José Municipal Code

The City’s Municipal Code includes regulations associated with energy efficiency and energy use. City regulations include a Green Building Ordinance (Chapter 17.84) to foster practices to minimize the use and waste of energy, water and other resources in the City of San José, Water Efficient Landscape Standards for New and Rehabilitated Landscaping (Chapter 15.10), requirements for Transportation Demand Programs for employers with more than 100 employees (Chapter 11.105), and a Construction and Demolition Diversion Deposit Program that fosters recycling of construction and demolition materials (Chapter 9.10).

Reach Building Code

In 2019, the San José City Council approved Ordinance No. 30311 and adopted the Reach Code Ordinance (Reach Code) to reduce energy-related GHG emissions consistent with the goals of Climate Smart San José. The Reach Code applies to new construction projects in San José. It requires new residential construction to be outfitted with entirely electric fixtures. Mixed-fuel buildings (i.e., use of natural gas) are required to demonstrate increased energy efficiency through a higher Energy

²⁹ Created by the non-profit organization United States Green Building Council, LEED is a certification system that assigns points for green building measures based on a 110-point rating scale.

³⁰ Created by the California based non-profit organization Build It Green, GreenPoint is a certification system for residential development that assigns points for green building measures based on a 381-point rating scale for multi-family development and 341-point rating scale for single-family developments.

Design Ratings and be electrification ready. In addition, the Reach Code requires EV charging infrastructure for all building types (above current CALGreen requirements), and solar readiness for non-residential buildings. An update to the ordinance was approved by the City Council on December 1, 2020 to prohibit the installation of natural gas infrastructure in new buildings unless otherwise exempted under the ordinance.

4.6.1.2 Existing Conditions

Total energy usage in California was approximately 6,957 trillion British thermal units (Btu) in the year 2020, the most recent year for which this data was available.³¹ Out of the 50 states, California is ranked second in total energy consumption and 49th in energy consumption per capita. The breakdown by sector was approximately 22 percent (1,508 trillion Btu) for residential uses, 19.6 percent (1,358 trillion Btu) for commercial uses, 25 percent (1,701 trillion Btu) for industrial uses, and 34 percent (2,356 trillion Btu) for transportation.³² This energy is primarily supplied in the form of natural gas, petroleum, nuclear electric power, and hydroelectric power.

Electricity

Electricity in Santa Clara County in 2020 was consumed primarily by the non-residential sector (73 percent), followed by the residential sector consuming 24 percent. In 2020, a total of approximately 16,435 gigawatt hours (GWh) of electricity was consumed in Santa Clara County.³³

San José Clean Energy (SJCE) is the default electricity provider for residents and businesses in the City of San José. SJCE sources the electricity and the Pacific Gas and Electric Company (PG&E) delivers it to customers over their existing utility lines. SJCE customers are automatically enrolled in the GreenSource program, which provides 80 percent GHG emission-free electricity. Customers can choose to enroll in SJCE's TotalGreen program at any time to receive 100 percent GHG emission-free electricity from entirely renewable sources.

Pacific Gas and Electric Company (PG&E) is an alternative electricity provider for residences and businesses in San José. The Project would opt out of the default SJCE enrollment and would receive electricity from PG&E. In 2021, natural gas facilities provided seven percent of PG&E's electricity delivered to retail customers; nuclear plants provided 39 percent; hydroelectric operations provided four percent; renewable energy facilities including solar, geothermal, and biomass provided 50 percent.³⁴

Natural Gas

PG&E provides natural gas services within the City of San José. In 2020, approximately two percent of California's natural gas supply came from in-state production, while the remaining supply was

³¹ United States Energy Information Administration. "California Energy Consumption by End-Use-Sector, 2020." Accessed July 20, 2022. <https://www.eia.gov/state/?sid=CA#tabs-2>.

³² Ibid.

³³ California Energy Commission. Energy Consumption Data Management System. "Electricity Consumption by County." Accessed July 25, 2022. <http://ecdms.energy.ca.gov/elecbycounty.aspx>.

³⁴ Pacific Gas and Electric Company. "Exploring Clean Energy Solutions." Accessed July 25, 2022. https://www.pge.com/en_US/about-pge/environment/what-we-are-doing/clean-energy-solutions/clean-energy-solutions.page?WT.mc_id=Vanity_cleanenergy.

imported from other western states and Canada.³⁵ In 2020 California used 2,144 trillion Btu of natural gas.³⁶ In 2020, Santa Clara County used less than one percent of the state's total consumption of natural gas.³⁷

Fuel for Motor Vehicles

In 2019, 15.4 billion gallons of gasoline were sold in California.³⁸ The average fuel economy for light-duty vehicles (autos, pickups, vans, and sport utility vehicles) in the United States has steadily increased from about 13.1 miles per gallon (mpg) in the mid-1970s to 25.4 mpg in 2020.³⁹ Federal fuel economy standards have changed substantially since the Energy Independence and Security Act was passed in 2007. That standard, which originally mandated a national fuel economy standard of 35 miles per gallon by the year 2020, was updated in April 2022 to require all cars and light duty trucks achieve an overall industry average fuel economy of 49 mpg by model year 2026.^{40,41}

4.6.2 Impact Discussion

For the purpose of determining the significance of the Project's impact on energy, would the Project:

- a) Result in a 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?
- c) Result in a substantial increase in demand upon energy resources in relation to projected supplies?

³⁵ California Gas and Electric Utilities. 2020 *California Gas Report*. Accessed July 20, 2022.

[https://www.socalgas.com/sites/default/files/2020-10/2020 California Gas Report Joint Utility Biennial Comprehensive Filing.pdf](https://www.socalgas.com/sites/default/files/2020-10/2020%20California%20Gas%20Report%20Joint%20Utility%20Biennial%20Comprehensive%20Filing.pdf).

³⁶ United States Energy Information Administration. "California Energy Consumption Estimate, 2020." Accessed July 20, 2022. <https://www.eia.gov/state/?sid=CA#tabs-2>.

³⁷ California Energy Commission. "Natural Gas Consumption by County." Accessed July 25, 2022. <http://ecdms.energy.ca.gov/gasbycounty.aspx>.

³⁸ California Department of Tax and Fee Administration. "Net Taxable Gasoline Gallons." Accessed July 20, 2022. <https://www.cdtfa.ca.gov/dataportal/dataset.htm?url=VehicleTaxableFuelDist>.

³⁹ United States Environmental Protection Agency. *The 2021 EPA Automotive Trends Report: Greenhouse Gas Emissions, Fuel Economy, and Technology since 1975*. November 2021. <https://nepis.epa.gov/Exe/ZyPDF.cgi?Dockkey=P1013L1O.pdf>

⁴⁰ United States Department of Energy. *Energy Independence & Security Act of 2007*. Accessed July 20, 2022. <http://www.afdc.energy.gov/laws/eisa>.

⁴¹ United States Department of Transportation. USDOT Announces New Vehicle Fuel Economy Standards for Model Year 2024-2026." Accessed July 20, 2022. <https://www.nhtsa.gov/press-releases/usdot-announces-new-vehicle-fuel-economy-standards-model-year-2024-2026>

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

Construction

Construction of the Project would require energy for the manufacture and transportation of building materials, preparation of the Project Site as well as the Off-Site Infrastructure Areas (i.e., , grading and excavation), and the construction of the buildings and related improvements. Construction energy usage is temporary and would not result in excessive energy consumption because construction processes are generally designed to be efficient to avoid excess monetary costs and it is reasonable to assume this would occur here. The Project would be constructed in an urbanized area with close access to roadways, construction supplies, and workers, making the Project more efficient than construction occurring in outlying, more isolated areas. Thus, the construction process is already efficient and opportunities for increasing energy efficiency during construction are limited.

The Project would be required to implement BAAQMD Best Management Practices, which would, among other things, restrict unnecessary idling of construction equipment and require the applicant to post signs on the Project Site reminding workers to shut off idle equipment, thus reducing the potential for energy waste. Pursuant with General Plan Policy MS-14.3 and MS-2.11, the Project would be required to implement the City's Green Building Policies to ensure that construction of the Project meets industry best practices and techniques are applied to maximize energy performance at the construction stage. The City's Zero Waste Strategic Plan would be implemented at a project level to enhance construction and demolition debris recycling, thus increasing diversion from landfills and further contributing to the energy efficiency of the Project's construction activities. For these reasons, construction of the Project would not result in wasteful or inefficient use of energy. **(Less than Significant Impact)**

Operation

Operation of the data center buildings and related infrastructure would consume energy for multiple purposes including, but not limited to, building heating and cooling, lighting, appliances and electronics. Energy would also be consumed during each vehicle trip generated by employees and visitors. The Project would be required to be built in accordance with Title 24 and CalGreen and include green building measures to reduce energy consumption. The Project would also be required to utilize 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 buildings would be implemented to limit water consumption to the extent feasible. Other than the proposed emergency backup generators, the Project would be designed to be 100 percent electric. No natural gas infrastructure would be installed or relied upon by the Project in accordance with the City of San José's Reach Code. In addition, the Project will pursue LEED v4 BD+C Gold certification for Data Centers. Due to the energy efficiency measures incorporated into the Project, it would not result in a wasteful, inefficient, or unnecessary consumption of energy, or wasteful use of energy resources.

Power Usage Effectiveness, or PUE, is a 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) (i.e., server) power draw (e.g., $PUE = \text{Total Facility Source Energy} / \text{IT Source Energy}$). For example, a PUE of two (2), means that the data center or laboratory must draw two (2) watts of electricity for every one (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 (1) where all power drawn by the facility goes to the IT infrastructure. The average annual PUE of the data centers proposed by the Project would be 1.20, and the peak PUE would be 1.27. Based on industry surveys, the average PUE for data centers is 1.67, although newly constructed data centers typically have PUEs ranging from 1.1 to 1.4.⁴² Due to the energy efficiency measures incorporated into the Project, it would not result in wasteful, inefficient, or unnecessary consumption of energy, or wasteful use of energy resources.

Energy would be also consumed by the Project during regular testing and maintenance of the 36 emergency backup generators. Each generator would be limited to a maximum of 50 hours per year of operation for testing and maintenance purposes. Based on fuel consumption assumptions in the air quality analysis prepared for the Project (refer to Table 4.3-14), the emergency generator engines would use approximately 345,700 gallons of fuel per year. According to the California Energy Commission's 2021 Weekly Fuel's Watch Report, the annual production of CARB Diesel Fuel in California was 1,256,396 barrels annually (or 52,768,632 gallons).^{43,44} The maximum proposed consumption of CARB Diesel Fuel by the Project is approximately 0.8 percent of the total California capacity. Since the generators would only be operated when necessary for testing and maintenance, and would not be used regularly for electricity generation, the Project would not result in a wasteful, inefficient, or unnecessary consumption of energy, or wasteful use of energy resources. Additionally, as described in PDF GHG-2 in Section 4.8, the project would use renewable diesel fuel for the diesel-fired generators to the extent feasible, further reducing the project's consumption on non-renewable resources. the Project would not have a significant adverse effect on local or regional energy supplies for the above reasons and would not create a significant adverse impact on California's energy resources. **(Less than Significant Impact)**

b) Would the Project conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

Statewide energy efficiency and renewable energy goals are set forth in the California Renewables Portfolio Standard Program, which is one of California's key programs for advancing renewable energy. The CEC verifies the eligibility of renewable energy procured by all entities serving retail

⁴² Uptime Institute. Annual Data Center Survey Results - 2019. Available at: <https://datacenter.com/wp-content/uploads/2019/06/data-center-survey-2019.pdf>

⁴³ Average of Production Capacity from January 1, 2021 through December 31, 2021. Source: California Energy Commission. California Energy Commission California Refinery Inputs. 2022. Accessed July 25, 2022. https://tableau.cnra.ca.gov/t/CNRA_CEC/views/WFW2_0_16391728913510/CaliforniaRefineryInputsandProduction?%3Adisplay_count=n&%3Aembed=y&%3AisGuestRedirectFromVizportal=y&%3Aorigin=viz_share_link&%3AAshowAppBanner=false&%3AAshowVizHome=n

⁴⁴ United States Energy Information Administration. "Frequently Asked Questions: How many gallons of gasoline and diesel fuel are made from one barrel of oil?". Last updated April 19, 2022. Accessed July 25, 2022. <https://www.eia.gov/tools/faqs/faq.php?id=327&t=10#:~:text=Petroleum%20refineries%20in%20the%20United,galon%20barrel%20of%20crude%20oil.>

sales of electricity in California, as these entities are obligated to participate and report energy portfolios to the CEC to comply with the Renewables Portfolio Standard Program.⁴⁵ Electricity would be provided to the Project by PG&E from sources of renewable and carbon-free power including wind, solar, geothermal, and hydroelectric. As described above, PG&E is subject to verification by the CEC as an electricity-providing entity. By sourcing electricity from PG&E, the Project would be compliant with statewide energy goals as set forth in the California Renewables Portfolio Standard Program.

In addition, the proposed Project would be required to comply with various local policies and regulations adopted to improve energy efficiency in new developments and increase utilization of renewable energy sources, including the City's Green Building Program, Private Sector Green Building Policy, Greenhouse Gas Reduction Strategy, Climate Smart San José, Reach Code and General Plan energy policies. Implementation of applicable local policies and regulations would ensure the Project is compliant with regional and statewide energy efficiency and renewable energy plans and policies, such as the California Public Utilities Commission's California Long Term Energy Efficiency Strategic Plan (General Plan Policy MS-14.3), the Model Water Efficient Landscape Ordinance (General Plan Policy MS-3.1), and CALGreen (City of San José Building Code). By adhering to adopted policies and regulations and sourcing electricity from PG&E, the proposed Project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency. **(Less than Significant Impact)**

c) Would the Project result in a substantial increase in demand upon energy resources in relation to projected supplies?

The CEC provides new forecasts for electricity and natural gas demand every two years as part of the Integrated Energy Policy Report process. According to the 2021 Integrated Energy Policy Report, annual electricity consumption in California in 2020 was approximately 279,000 GWh, which is expected to increase at a rate of about 1.6 percent annually through 2035 with the consumption reaching 340,000 GWh in 2035.⁴⁶ Demand forecasts for planning purposes use multiple scenarios, taking into account potential savings in different sectors, expected technological improvements, government mandates, and other factors. With continued inter-agency coordination, accurate forecasting, and research and development, California is expected to adequately supply the state's forecasted demand increases through 2035.

The proposed Project would have a maximum electricity demand of 856,728 MWh per year if the Project were to operate at maximum capacity at all times. This is an extremely unlikely scenario, and the actual energy demand of the Project would be substantially lower. Even the maximum Project electricity demand load would comprise a fraction of the expected statewide electricity consumption. The diesel fuel use for the emergency generators is discussed in checklist question "a", and would

⁴⁵ California Energy Commission. "Renewables Portfolio Standard – Verification and Compliance." Accessed July 25, 2023. <https://www.energy.ca.gov/programs-and-topics/programs/renewables-portfolio-standard/renewables-portfolio-standard>

⁴⁶ California Energy Commission. *Final 2021 Integrated Energy Policy Report Volume IV California Energy Demand Forecast*. February 17, 2022. Page 21. file:///C:/Users/mmcnamara/Downloads/TN241581_20220217T142233_ADOPTED%20Final%202021%20Integrated%20Energy%20Policy%20Report%20%20Volume%20IV%20California%20En.pdf

also represent a fraction of the expected statewide diesel fuel consumption. In addition, the proposed Project would be designed for energy efficiency and conservation in accordance with applicable provisions of the City's Green Building Program, Climate Smart San José goals and actions, Reach Code, and Greenhouse Gas Reduction Strategy. Therefore, the Project would not result in a substantial increase in demand upon energy resources relative to projected supplies. **(Less than Significant Impact)**

4.6.2.2 Cumulative Impacts

Would the Project result in a cumulatively considerable contribution to a significant cumulative energy impact?

Cumulative energy impacts could occur as a result of the Project in combination with the other projects in the cumulative scenario. All cumulative projects would use energy during construction; however, it is reasonable to assume that the overall construction schedule and process for all cumulative projects would be designed to be efficient to comply with applicable local regulations and to avoid excess monetary costs. Additionally, all cumulative projects would include applicable air quality-related measures to lessen idling times of equipment and improve the efficiency during construction in accordance with a comprehensive regulatory framework. As a result, any construction-related cumulative energy impact due to wasteful use of energy resources would be less than significant.

The proposed Project in conjunction with other larger cumulative developments could result in cumulative energy impacts during occupation if energy were wasted. All cumulative projects would be required to be constructed consistent with the City's adopted Green Building Ordinance, which requires energy efficient design and use of fixtures to ensure buildings do not waste energy. Operation/occupation of all cumulative projects in the cumulative scenario would not result in a substantial increase in demand upon energy resources because their combined energy requirements would not exceed anticipated state, county, or local energy supplies. Thus, there would not be a significant cumulative energy impact. Moreover, the Project's contribution to this already less than significant cumulative energy impact would not be cumulatively considerable for the reasons detailed above. **(Less than Significant Cumulative Impact)**

4.7 GEOLOGY AND SOILS

The following discussion is based, in part, on a Geotechnical Engineering Report prepared for the proposed Project by Terracon Consultants, Inc in December 2020. The Geotechnical Engineering Report is included in this SPPE Application as Appendix D.

4.7.1 Environmental Setting

4.7.1.1 *Regulatory Framework*

State

Alquist-Priolo Earthquake Fault Zoning Act

The Alquist-Priolo Earthquake Fault Zoning Act was passed following the 1971 San Fernando earthquake. The act regulates development in California near known active faults due to hazards associated with surface fault ruptures. Alquist-Priolo maps are distributed to affected cities, counties, and state agencies for their use in planning and controlling new construction. Areas within an Alquist-Priolo Earthquake Fault Zone require special studies to evaluate the potential for surface rupture to ensure that no structures intended for human occupancy are constructed across an active fault.

Seismic Hazards Mapping Act

The Seismic Hazards Mapping Act (SHMA) was passed in 1990 following the 1989 Loma Prieta earthquake. The SHMA directs the California Geological Survey (CGS) to identify and map areas prone to liquefaction, earthquake-induced landslides, and amplified ground shaking. CGS has completed seismic hazard mapping for the portions of California most susceptible to liquefaction, landslides, and ground shaking, including the central San Francisco Bay Area. The SHMA requires that agencies only approve projects in seismic hazard zones following site-specific geotechnical investigations to determine if the seismic hazard is present and identify measures to reduce earthquake-related hazards.

California Building Standards Code

The California Building Code (CBC) prescribes standards for constructing safe buildings. The CBC contains provisions for earthquake safety based on factors including occupancy type, soil and rock profile, ground strength, and distance to seismic sources. The CBC requires that a site-specific geotechnical investigation report be prepared for most development projects to evaluate seismic and geologic conditions such as surface fault ruptures, ground shaking, liquefaction, differential settlement, lateral spreading, expansive soils, and slope stability. The CBC is updated every three years.

California Division of Occupational Safety and Health Regulations

Excavation, shoring, and trenching activities during construction are subject to occupational safety standards for stabilization by the California Department of Industrial Relations, Division of Occupational Safety and Health (Cal/OSHA) under Title 8 of the California Code of Regulations and

Excavation Rules. These regulations minimize the potential for instability and collapse that could injure construction workers on the site.

Public Resources Code Section 5097.5

Paleontological resources are the fossilized remains of organisms from prehistoric environments found in geologic strata. They range from mammoth and dinosaur bones to impressions of ancient animals and plants, trace remains, and microfossils. These materials are valued for the information they yield about the history of the earth and its past ecological settings. California Public Resources Code Section 5097.5 specifies that unauthorized removal of a paleontological resource is a misdemeanor. Under the CEQA Guidelines, a project would have a significant impact on paleontological resources if it would disturb or destroy a unique paleontological resource or site or unique geologic feature.

Local

Envision San José 2040 General Plan

The General Plan includes the following geology and soils policies that are relevant to this analysis:

Envision San José 2040 General Plan Relevant Geology and Soil Policies

Policy	Description
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.
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.
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.
EC-4.4	Require all new development to conform to the City of San José's Geologic Hazard Ordinance.
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 a soil disturbance of one acre or more, adjacent to a creek/river, and/or are located in hillside areas. Erosion

Control Plans are also required for any grading occurring between October 1 and April 30.

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.

City of San José Municipal Code

Title 24 of the San José Municipal Code includes the 2019 California Building, Plumbing, Mechanical, Electrical, Existing Building, and Historical Building Codes (as amended from time to time). 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 17.10 (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, including State Seismic Hazard Zones for Liquefaction.

4.7.1.2 Existing Conditions

Regional Geology

The City of San José is located in the northern Santa Clara Valley, an alluvial basin underlain by sedimentary and metamorphic rocks of the Franciscan Complex. These alluvial deposits consist of unconsolidated to semi-consolidated sand, silt, clay, and gravel. The Santa Clara Valley is bounded by the Diablo Range to the east and the Santa Cruz Mountains to the west. The Valley was formed when sediments derived from both mountain ranges were exposed by tectonic uplift and regression of the inland sea which previously inundated this area.

On-Site Geologic Conditions

Topography and Soils

The Project Site (as well as the Off-Site Infrastructure Areas) are located in a relatively flat area on the floor of the Santa Clara Valley. Subgrade soils encountered in soil borings and cone penetration tests (CPTs) generally consisted of 15 to 30 feet of lean to fat clay with variable amounts of sand underlain by about five to 20 feet of sand with variable amounts of clay. The sand was followed by lean to fat clay to the maximum depth explored of 100.5 feet below the existing ground surface (bgs) with a 15 to 25-foot-thick layer of sand encountered at a depth of approximately 45 feet bgs. The subsurface clay soils are compressible. The near surface soils have moderate to high plasticity (expansiveness) and are sensitive to moisture variation. The Off-Site Infrastructure Areas are located within the public right of way along Orchard Parkway and Trimble Road and are underlain by soil and/or fill that has been compacted for construction of the existing roadways and installation of existing underground utility infrastructure.

Groundwater

Groundwater was encountered in soil borings at depths ranging from five to 29 feet bgs. Groundwater levels at the Project Site (as well as the Off-Site Infrastructure Areas) may fluctuate with time due to seasonal conditions, rainfall, and irrigation practices.

Seismicity and Seismic Hazards

The Project Site (as well as the Off-Site Infrastructure Areas) are located within the seismically active San Francisco Bay region. The San Francisco Bay Area contains several faults that are capable of generating earthquakes of magnitude 7.0 or higher. The San Andreas Fault system spans the Coast Ranges from the Pacific Ocean to the San Joaquin Valley. The closest faults to the Project Site are the Hayward (approximately five miles northeast of the Project Site), Calaveras (approximately eight miles east of the Project Site), Monte Vista-Shannon (approximately eight miles southwest of the site), and San Andreas (approximately 12 miles southwest of the Project Site). Neither the Project Site nor the Off-Site Infrastructure Areas are located within an Alquist-Priolo Earthquake Fault Zone or a Santa Clara County Fault Rupture Hazard Zone for any of the faults.^{47,48}

Liquefaction

Liquefaction can be defined as ground failure or loss of strength that causes otherwise solid soil to take on the characteristics of a liquid. This phenomenon is triggered by earthquakes or ground shaking that causes saturated or partially saturated soils to lose strength, potentially resulting in the soil's inability to support structures. Liquefaction can result in adverse impacts to human and building safety and is typically addressed at the building design stage of a project. The Project Site (as well as the Off-Site Infrastructure Areas) are located in a Liquefaction Hazard Zone, as identified in maps prepared by the California Geological Survey.⁴⁹

Paleontological Resources

Paleontological resources are the fossilized remains of organisms from prehistoric environments found in geologic strata. Most of the City of San José is situated on alluvial fan deposits of Holocene age that have a low potential to contain significant nonrenewable paleontological resources; however, older Pleistocene sediments present at or near the ground surface at some locations have high potential to contain these resources. These older sediments, often found at depths of greater than 10 feet below the ground surface, have yielded the fossil remains of plants and extinct terrestrial Pleistocene vertebrates. Based on Figure 3.11-1 of the 2040 General Plan EIR, Paleontologic Sensitivity of City of San José Geologic Units, the Project Site (as well as the Off-Site Infrastructure Areas) are located in an area of high paleontological sensitivity at depth.⁵⁰

⁴⁷ California Geological Survey. "Earthquake Zones of Required Investigation." Accessed July 13, 2022. <https://maps.conservation.ca.gov/cgs/EQZApp/app/>.

⁴⁸ County of Santa Clara Department of Planning and Development. "Santa Clara County Geologic Hazard Zones." Accessed July 13, 2022. Page 11. https://stgenpln.blob.core.windows.net/document/GEO_GeohazardATLAS.pdf.

⁴⁹ California Geological Survey. "Earthquake Zones of Required Investigation." Accessed July 13, 2022. <https://maps.conservation.ca.gov/cgs/EQZApp/app/>.

⁵⁰ City of San José. *Integrated Final Program Environmental Impact Report for the Envision San José 2040 General Plan*. September 2011. Figure 3.11-1.

4.7.2 Impact Discussion

For the purpose of determining the significance of the Project's impact on geology and soils, would the Project:

- a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:
 - 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)?
 - Strong seismic ground shaking?
 - Seismic-related ground failure, including liquefaction?
 - Landslides?
- b) Result in substantial soil erosion or the loss of topsoil?
- c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?
- d) Be located on expansive soil, as defined in the current California Building Code, 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 geological feature?

4.7.2.1 *Project Impacts*

-
- a) **Would the Project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving 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; strong seismic ground shaking; seismic-related ground failure, including liquefaction; or landslides?**
-

Fault Rupture

Neither the Project Site nor the Off-Site Infrastructure Areas are located within an Alquist-Priolo Earthquake Fault Zone or a Santa Clara County Fault Rupture Hazard Zone, making fault rupture at the Project Site unlikely. While existing faults are located in the region, the Project would be outside of the fault zone for any regional fault systems, and significant impacts from fault ruptures are not anticipated to occur. **(Less than Significant Impact)**

Seismic Ground Shaking

The Project Site (as well as the Off-Site Infrastructure Areas) are located within the seismically active San Francisco Bay region. The faults in this region are capable of generating earthquakes of

magnitude 7.0 or higher. During an earthquake, very strong ground shaking could occur at the Project Site.

Consistent with the City's General Plan and Municipal Code, to avoid and/or minimize potential damage from seismic shaking, the proposed Project would be required to be built using standard engineering and seismic safety design techniques. Consistent with these requirements, the following Project Design Feature, which is a Standard Permit Condition in the City of San José, shall be implemented to ensure the proposed Project is designed to address seismic hazards.

PDF GEO-1: The Project shall implement the following City of San José Standard Permit Conditions related to geological hazards:

- To avoid or minimize potential damage from seismic shaking, the Project shall be constructed using standard engineering and seismic safety design techniques. Building design and construction at the Project Site shall be completed in conformance with the recommendations of an approved geotechnical investigation. The report shall be reviewed and approved by the City of San José Department of Public Works as part of the building permit review and issuance process. The buildings shall meet the requirements of applicable Building and Fire Codes as adopted or updated by the City. The Project shall be designed to withstand soil hazards identified (if any) on the Project Site (as well as the Off-Site Infrastructure Areas) and the Project shall be designed to reduce the risk to life or property on-site and off-site to the extent feasible and in compliance with applicable provisions of the Building Code.
- All excavation and grading work shall be scheduled in dry weather months or, in the alternative, construction sites shall be weatherized.
- Stockpiles and excavated soils shall be covered with secured tarps or plastic sheeting when not in use.
- Ditches shall be installed to divert runoff around excavations and graded areas if necessary.
- The Project shall be constructed in accordance with the standard engineering practices in the California Building Code, as adopted by the City of San José. These standard practices would ensure that the future buildings on the Project Site are designed to properly account for soils-related hazards on the Project Site.

With implementation of the PDF GEO-1, the proposed Project would not expose people or structures to substantial adverse effects due to ground shaking; nor would the Project exacerbate existing geological hazards on the Project Site such that it would impact (or worsen) off-site geological and soil conditions. **(Less than Significant Impact)**

Liquefaction

As mentioned in Section 4.7.1.2 Existing Conditions, the Project Site (as well as the Off-Site Infrastructure Areas) are located within a Liquefaction Hazard Zone. According to the City's Municipal Code, a Certificate of Geologic Hazard Clearance is required prior to issuance of grading and/or development permits due to its location within a Geologic Hazard Zone. By subjecting the proposed Project to review by the City of San José's geologist and requiring geologic hazard clearance from the Director of Public Works, and through implementation of PDF GEO-1, hazards posed by seismically induced liquefaction would be reduced to less than significant. **(Less than Significant Impact)**

Lateral Spreading

Lateral spreading is a geologic hazard commonly associated with liquefaction. This phenomenon occurs when ground-shaking induces the horizontal displacement of relatively flat-lying soil towards an open or "free" face such as an open body of water, drainage channel, or excavation. Lateral spread presents a significant hazard to the integrity of buildings and other structures that are located in seismically active regions, such as the San Francisco Bay Area. The Project would be located in a Liquefaction Hazard Zone and adjacent to the Guadalupe River levee and flood channel, which presents a lateral spreading hazard for development of the Project. The bottom of the Guadalupe River appears to be roughly six feet lower in elevation than the Project Site. Given the relative flatness of the local topography and the fact that identified liquefiable soils at the Project Site were located at least 10 feet below the existing ground surface, the potential for lateral spreading to affect the Project is low. In accordance with City policy and PDF GEO-1 discussed above, the proposed Project would be designed in accordance with a site-specific geotechnical investigation to reduce the risk of geologic hazards at the Project Site (as well as the Off-Site Infrastructure Areas, as relevant), including lateral spreading. By constructing the Project in accordance with standard engineering practices and the recommendations of the geotechnical investigation, the proposed Project would not result in a significant impact related to lateral spreading. **(Less than Significant Impact)**

Landslides

The Project Site (as well as the Off-Site Infrastructure Areas) are located in a relatively flat area. There are no hillsides or areas of differential elevation within the vicinity of the Project Site. As such, the Project would not be located within a Landslide Hazard Zone, and the proposed Project would not pose a risk to human or building safety due to earthquake-induced landslides. **(No Impact)**

b) Would the Project result in substantial soil erosion or the loss of topsoil?

Ground disturbance on the Project Site (as well as the Off-Site Infrastructure Areas) would occur during grading, excavation for basement parking levels and trenching for utilities, and construction of the proposed buildings, parking structures and other proposed improvements and infrastructure. These activities could increase the exposure of affected soils to wind and water erosion. The City's NPDES Municipal Permit, urban runoff policies, and the Municipal Code are the primary means of enforcing erosion control measures through the grading and building permit process.

General Plan Action EC-4.5 requires an Erosion Control Plan for private development projects that have a soil disturbance of one acre or more, are adjacent to a creek/river, and/or are located in hillside areas. The proposed Project would disturb approximately 22.29 acres on-site, as well as 0.36 acre off-site, and the Project would be located adjacent to the Guadalupe River; therefore, an Erosion Control Plan would be required to be prepared for the Project. In addition, the City shall require both phases of the Project to comply with all applicable City regulatory programs pertaining to construction related erosion, including, without limitation, the Standard Permit Conditions listed in PDF GEO-1 above.

By implementing the above listed erosion control measures, preparing an Erosion Control Plan, and otherwise adhering to all applicable laws and regulations addressing erosion control, the proposed Project would reduce potential soil erosion impacts to a less than significant level. **(Less than Significant Impact)**

c) Would the Project be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the Project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?

Refer to checklist question a) for a discussion of landslide, lateral spreading, and liquefaction. The Project Site (as well as the Off-Site Infrastructure Areas) are located in a mapped liquefaction hazard zone. Neither the Project Site nor the Off-Site Infrastructure Areas are located within a State or County landslide hazard zone. Impacts related to these geological hazards would be further reduced with implementation of the City's Standard Permit Conditions listed in PDF GEO-1 above, which require future developments to be designed and constructed in accordance with applicable provisions of the recent California Building Code and a design-level geotechnical investigation that identifies site-specific ground failure hazards such as liquefaction and lateral spreading and appropriate techniques to minimize risks to people and structures. Development of the Project Site would not change or exacerbate the geologic conditions of the Project vicinity. Therefore, the Project would not be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the Project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse. The proposed Project would have a less than significant impact on the stability of the site geologic unit. **(Less than Significant Impact)**

d) Would the Project be located on expansive soil, as defined in the current California Building Code, creating substantial direct or indirect risks to life or property?

The Project Site (as well as the Off-Site Infrastructure Areas) located on expansive soil. By adhering to the recommendations included in the geotechnical investigation for soil and seismic hazards and implementing PDF GEO-1, the proposed Project would not result in a significant impact due to the underlying soils nor would it create substantial direct or indirect risks to life or property due to expansive soils. **(Less than Significant Impact)**

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?

The proposed Project would dispose of wastewater via lateral connections to the City's sewer system and would not require the use of septic tanks or alternative wastewater disposal systems. Therefore, there would be no impact. **(No Impact)**

f) Would the Project directly or indirectly destroy a unique paleontological resource or site or unique geological feature?

The proposed Project could potentially disturb undiscovered paleontological resources underlying the Project Site (as well as the Off-Site Infrastructure Areas) during excavation, grading and construction activities. As such, the following standard permit condition would be applied to the proposed Project to reduce and avoid impacts to unidentified paleontological resources as a Project Design Feature.

PDF GEO-2: The Project shall implement the following City of San José Standard Permit Condition related to paleontological resources:

- If vertebrate fossils are discovered during construction, all work on the Project Site or within the Off-Site Infrastructure Areas , as relevant) within 50 feet of any potential fossil find shall stop immediately, Director of Planning or Director's designee of the Department of Planning, Building and Code Enforcement (PBCE) shall be notified, and a qualified professional paleontologist shall assess the nature and importance of the find and recommend appropriate treatment, to the extent the find is considered significant. Treatment may include, but is not limited to, preparation and recovery of fossil materials so that they can be housed in an appropriate museum or university collection and may also include preparation of a report for publication describing the finds. The Project applicant shall be responsible for implementing the recommendations of the qualified paleontologist. A report of all findings shall be submitted to the Director of Planning or Director's designee of the PBCE.

Therefore, through implementation PDF GEO-2, the proposed Project would result in a less than significant impact to paleontological resources. **(Less than Significant Impact)**

4.7.2.2 Cumulative Impacts

Would the Project result in a cumulatively considerable contribution to a significant cumulative geology and soils impact?

The geographic scope for this cumulative analysis is the Project Site, Off-Site Infrastructure Areas, and adjacent parcels. Cumulatively, all other cumulative projects in the general vicinity of the Project Site would trigger similar geology, soils, and seismicity impacts as the proposed Project. All

cumulative projects are required to implement standard conditions of approval as well as identified mitigation measures, and to ensure consistency with applicable provisions of the California Building Code to avoid significant impacts related to seismic, geologic, and soils hazards and/or reduce them to a less than significant level. Thus, there would not be a cumulative significant impact in this regard. Moreover, for the reasons described above, the Project's contribution to this already less than significant cumulative impact would not be cumulatively considerable.

Regarding paleontological resources, cumulative projects would result in similar impacts in connection with construction. However, adherence to the Standard Permit Condition listed in PDF GEO-2 for discovery of paleontological resources as well as other identified mitigation measures, and adherence to other applicable requirements and standards would ensure that there would not be a cumulative significant impact in this regard. Moreover, for the reasons described above, the Project's contribution to this already less than significant cumulative impact would not be cumulatively considerable. For these reasons, the cumulative projects, including the proposed project, would not result in significant cumulative geologic and soils impacts. **(Less than Significant Cumulative)**

4.8 GREENHOUSE GAS EMISSIONS

The following discussion is based, in part, on information contained in the Air Quality Impact Assessment prepared for the Project by Atmospheric Dynamics, Inc., in July 2022 (refer to Section 4.3 of this SPPE Application), and a 2030 Greenhouse Gas Reduction Strategy Compliance Checklist completed by the Applicant (attached to this application as Appendix E).

4.8.1 Environmental Setting

4.8.1.1 *Background Information*

Gases that trap heat in the atmosphere, GHGs, regulate the earth's temperature. This phenomenon, known as the greenhouse effect, is responsible for maintaining a habitable climate. In GHG emission inventories, the weight of each gas is multiplied by its global warming potential (GWP) and is measured in units of CO₂ equivalents (CO₂e). The most common GHGs are carbon dioxide (CO₂) and water vapor but there are also several others, most importantly methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF₆). These are released into the earth's atmosphere through a variety of natural processes and human activities. Sources of GHGs are generally as follows:

- CO₂ and N₂O are byproducts of fossil fuel combustion.
- N₂O is associated with agricultural operations such as fertilization of crops.
- CH₄ is commonly created by off-gassing from agricultural practices (e.g., keeping livestock) and landfill operations.
- Chlorofluorocarbons (CFCs) were widely used as refrigerants, propellants, and cleaning solvents, but their production has been stopped by international treaty.
- HFCs are now used as a substitute for CFCs in refrigeration and cooling.
- PFCs and SF₆ emissions are commonly created by industries such as aluminum production and semiconductor manufacturing.

An expanding body of scientific research supports the theory that global climate change is currently causing changes in weather patterns, average sea level, ocean acidification, chemical reaction rates, and precipitation rates, and that it will increasingly do so in the future. The climate and several naturally occurring resources within California are adversely affected by the global warming trend. Increased precipitation and sea level rise will increase coastal flooding, saltwater intrusion, and degradation of wetlands. Mass migration and/or loss of plant and animal species could also occur. Potential effects of global climate change that could adversely affect human health include more extreme heat waves and heat-related stress; an increase in climate-sensitive diseases; more frequent and intense natural disasters such as flooding, hurricanes and drought; and increased levels of air pollution.

4.8.1.2 *Regulatory Framework*

State

Assembly Bill 32

Under the California Global Warming Solutions Act, also known as AB 32, CARB established a statewide GHG emissions cap for 2020, adopted mandatory reporting rules for significant sources of GHGs, and adopted a comprehensive plan, known as the Climate Change Scoping Plan, identifying how emission reductions would be achieved from significant GHG sources.

In 2016, SB 32 was signed into law, amending the California Global Warming Solution Act. SB 32, and accompanying Executive Order B-30-15, require CARB to ensure that statewide GHG emissions are reduced to 40 percent below the 1990 level by 2030. CARB updated its Climate Change Scoping Plan in December of 2017 to express the 2030 statewide target in terms of million metric tons of CO₂e (MMTCO₂e). Based on the emissions reductions directed by SB 32, the annual 2030 statewide target emissions level for California is 260 MMTCO₂e.

Senate Bill 375

SB 375, known as the Sustainable Communities Strategy and Climate Protection Act, was signed into law in September 2008. SB 375 builds upon AB 32 by requiring CARB to develop regional GHG reduction targets for automobile and light truck sectors for 2020 and 2035. The per capita GHG emissions reduction targets for passenger vehicles in the San Francisco Bay Area include a seven percent reduction by 2020 and a 15 percent reduction by 2035.

Consistent with the requirements of SB 375, the Metropolitan Transportation Commission (MTC) partnered with the Association of Bay Area Governments (ABAG), BAAQMD, and the Bay Conservation and Development Commission to prepare the region's Sustainable Communities Strategy (SCS) as part of the Regional Transportation Plan process. The SCS is referred to as Plan Bay Area 2050. Plan Bay Area 2050 establishes a course for reducing per capita GHG emissions through the promotion of compact, high-density, mixed-use neighborhoods near transit, particularly within identified Priority Development Areas (PDAs).

Regional and Local

2017 Clean Air Plan

To protect the climate, the 2017 CAP (prepared by BAAQMD) includes control measures designed to reduce emissions of methane and other super-GHGs that are potent climate pollutants in the near-term, and to decrease emissions of carbon dioxide by reducing fossil fuel combustion.

CEQA Air Quality Guidelines

The BAAQMD CEQA Air Quality Guidelines are intended to serve as a guide for those who prepare or evaluate air quality impact analyses for projects and plans in the San Francisco Bay Area. The jurisdictions in the San Francisco Bay Area Air Basin utilize the thresholds and methodology for assessing GHG impacts developed by BAAQMD within the CEQA Air Quality Guidelines. The

guidelines include information on legal requirements, BAAQMD rules, methods of analyzing impacts, and recommended mitigation measures.

Climate Smart San José

Climate Smart San José is a plan to reduce air pollution, save water, and create a stronger and healthier community. The City approved goals and milestones in February 2018 to ensure the City can substantially reduce GHG emissions through reaching the following goals and milestones:

- All new residential buildings will be Zero Net Carbon Emissions (ZNE) by 2020 and all new commercial buildings will be ZNE by 2030 (Note that ZNE buildings would be all electric with a carbon-free electricity source).
- San José Clean Energy (SJCE) will provide 100-percent carbon-free base power by 2021.
- One gigawatt of solar power will be installed in San José by 2040.
- 61 percent of passenger vehicles will be powered by electricity by 2030.

Reach Building Code

In 2019, the San José City Council approved Ordinance No. 30311 and adopted Reach Code Ordinance (Reach Code) to reduce energy-related GHG emissions consistent with the goals of Climate Smart San José. The Reach Code applies to new construction projects in San José. It requires new residential construction to be outfitted with entirely electric fixtures. Mixed-fuel buildings (i.e., use of natural gas) are required to demonstrate increased energy efficiency through a higher Energy Design Ratings and be electrification ready. In addition, the Reach Code requires EV charging infrastructure for all building types (above current CalGreen requirements), and solar readiness for non-residential buildings.

City of San José Private Sector Green Building Policy (6-32)

In October 2008, the City adopted the Private Sector Green Building Policy (6-32) that establishes baseline green building standards for private sector new construction and provides a framework for the implementation of these standards. This policy requires that applicable projects achieve minimum green building performance levels using the Council adopted standards.

San José 2030 Greenhouse Gas Reduction Strategy

The 2030 Greenhouse Gas Reduction Strategy (GHGRS) is the latest update to the City's GHGRS and is designed to meet statewide GHG reduction targets for 2030 set by Senate Bill 32. As a qualified Climate Action Plan, adopted after full CEQA review, the 2030 GHGRS allows for tiering and streamlining of GHG analyses under CEQA. The GHGRS identifies General Plan policies and strategies to be implemented by development projects in the areas of green building/energy use, multimodal transportation, water conservation, and solid waste reduction. Projects that comply with

the policies and strategies outlined in the 2030 GHGRS, would have less than significant GHG impacts under CEQA.⁵¹

Envision San José 2040 General Plan

The General Plan includes the following GHG policies that are relevant to this analysis.

Envision San José 2040 General Plan Relevant GHG Emissions Policies	
Policy	Description
MS-2.11	Require new development to incorporate green building practices, including those required by the Green Building Ordinance. Specifically, target reduced energy use through construction techniques (e.g., design of building envelopes and systems to maximize energy performance), through architectural design (e.g., design to maximize cross ventilation and interior daylight) and through site design techniques (e.g., orienting buildings on sites to maximize the effectiveness of passive solar design).
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 system, 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.
CD-3.2	Prioritize pedestrian and bicycle connections to transit, community facilities (including schools), commercial areas, and other areas serving daily needs. Ensure that the design of new facilities can accommodate significant anticipated future increases in bicycle and pedestrian activity.
CD-5.1	Design areas to promote pedestrian and bicycle movements and to facilitate interaction between community members and to strengthen the sense of community
LU05.4	Require new commercial development to facilitate pedestrian and bicycle access through techniques such as minimizing building separation from public sidewalks; providing safe, accessible, convenient, and pleasant pedestrian connections; and including secure and convenient bike storage.
TR-3.3	As part of the development review process, require that new development along existing and planned transit facilities consist of land use and development types and intensities that contribute toward transit ridership. In addition, require that new development is designed to accommodate and to provide direct access to transit facilities.

4.8.1.3 Existing Conditions

Unlike emissions of criteria and toxic air pollutants, which have regional and local impacts, emissions of GHGs have a broader, global impact. Global warming is a process whereby GHGs accumulating in the upper atmosphere contribute to an increase in the temperature of the earth and changes in weather patterns.

The Project Site is vacant and does not contribute to the region's GHG emissions portfolio.

⁵¹ City of San José. Greenhouse Gas Reduction Strategy. November 2020. <https://www.sanjoseca.gov/your-government/department-directory/planning-building-code-enforcement/planning-division/environmental-planning/greenhouse-gas-reduction-strategy>.

4.8.2 Impact Discussion

For the purpose of determining the significance of the Project's impact on greenhouse gas emissions, would the Project:

- a) Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment?
- b) Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs?

Significance Criteria

BAAQMD CEQA Guidelines include recommended thresholds for use in determining whether projects would have significant adverse environmental impacts. BAAQMD has adopted a numeric threshold of 10,000 MTCO₂e/yr for projects that require permits from the BAAQMD. Given that the Project would include standby generators requiring BAAQMD permits to operate, the significance threshold applicable to stationary source emissions from the Project is 10,000 MTCO₂e/yr. This BAAQMD threshold is consistent with stationary source thresholds adopted by other air quality management districts throughout the state. According to BAAQMD CEQA guidelines, the 10,000 MTCO₂e/yr threshold is expected to capture 95 percent of the stationary source sector GHG emissions in the Bay Area. The five percent of emissions that are from stationary source projects below the 10,000 MTCO₂e/yr threshold account for a small portion of the Bay Area's total GHG emissions from stationary sources and these emissions come from very small projects. According to BAAQMD, such small stationary source projects would not significantly add to the global problem of climate change, and they would not hinder the Bay Area's ability to reach the AB 32 goal in any significant way, even when considered cumulatively. New permit applications to BAAQMD for stationary sources that comply with the quantitative threshold of 10,000 MTCO₂e/yr would not be considered "cumulatively considerable" because they also would not hinder the state's ability to meet greenhouse gas emissions goals pursuant to AB 32. The AB 32 Scoping Plan measures, including the cap-and-trade program, provide for necessary emissions reductions from the stationary source sector to achieve AB 32 2020 goals.

Other Project-related emissions from mobile sources, area sources, energy use and water use, would not be included for comparison to this threshold, based on guidance in the BAAQMD's CEQA Guidelines. Instead, GHG impacts from all other Project-related emission sources would be considered to have a less-than-significant impact if the Project is consistent with the City's 2030 GHGRS and applicable regulatory programs and policies adopted by ARB or other relevant California agencies.

4.8.2.1 *Project Impacts*

a) **Would the Project generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment?**

Construction Emissions

As shown in the emissions calculations in Table 4.3-6 in Section 4.3 Air Quality, the Project's maximum annual GHG emissions from construction activities would be 584 metric tons. Because construction emissions would cease once construction is complete, they are considered short-term. Neither the City nor BAAQMD have an adopted threshold of significance for construction related GHG emissions. Because construction of the project would be temporary in nature and would not result in a permanent increase in emissions, the project would not interfere with the implementation of AB 32 or SB 32.. **(Less Than Significant Impact)**

Stationary Source Emissions

As shown in the emissions calculations in Table 4.3-8 in Section 4.3 Air Quality, the Project's annual GHG emissions from testing and maintenance of the backup generators would be 3,917 short tons (or 3,554 metric tons). This is below the BAAQMD threshold of 10,000 MTCO₂e/yr and is, therefore, less than significant. **(Less Than Significant Impact)**

Operational Emissions

Consistency with City of San José GHGRS

As discussed in Section 4.8.1.2, Regulatory Framework, projects that comply with the policies and strategies outlined in the 2030 GHGRS would have a less than significant GHG impact and are assumed to have less than significant (direct or indirect) GHG emissions. The City has developed a consistency checklist to determine if a project is consistent with the 2030 GHGRS. Compliance with these mandatory policies and strategies by the project ensure a project's consistency with the 2030 GHGRS. As documented in Appendix E, the Project would be consistent with the mandatory policies and strategies of the 2030 GHGRS. Therefore, since the Project would be consistent with 2030 GHGRS, GHG emissions generated by the Project would not conflict with AB 32 or SB 32. The Project includes the following Project Design Feature to ensure consistency with the GHGRS. This PDF is consistent with mitigation measures approved by the City of San Jose and the CEC in recent data center projects.

PDF GHG-1.1: The Project owner shall participate in the San José Clean Energy (SJCE) at the Total Green level (i.e., 100% carbon-free electricity) for electricity accounts associated with the Project, or enter into an electricity contract with SJCE or participate in a clean energy program that accomplishes the same goals of 100% carbon-free electricity as the SJCE Total Green Level. **(Less Than Significant Impact)**

While not required by any law, regulation, the 2030 GHGRS, or requirement to mitigate any significant project impact, the Project also includes the following Proposed Design Feature as a

voluntary commitment to the use of renewable diesel as its primary fuel source for the backup generating facilities.

PDF GHG-1.2: The Project applicant shall use renewable diesel fuel for the diesel-fired generators to the extent feasible. During an emergency where renewable diesel fuel supplies may be limited, the project owner will document their efforts to secure other vendors of renewable diesel fuel prior to refueling with non-renewable diesel. The Project applicant shall provide such documentation to the Director or Director's designee with the City of San Jose Planning, Building and Code Enforcement (PBCE).

Quantified Operational Emissions

As described previously, the significance of the project's operational GHG emissions is determined by the project's consistency with the City's 2030 GHGRS, which is discussed above. However, it is our understanding that the CEC prefers SPPE Applications to quantify a project's GHG emissions. The project's operational emissions are quantified in Table 4.8-2, below, and are included for informational purposes only.

Table 4.8-1: Project GHG Emissions	
Source	Annual Emissions (Metric Tons of CO₂e)
Miscellaneous Operations (Area, Energy, Mobile, Waste, and Water)	2,065
Emergency Engines (M&R Testing Only)	3,554
96 MW of Energy Use ¹	0
Total	5,619
Notes: ¹ The project would not result in any GHG emissions from electricity consumption with implementation of Project Design Feature PDF GHG-1, which requires the project to utilize 100% carbon-free electricity. Without PDF GHG 1.1, based on PG&E Carbon Intensity Factor of 204 lbs CO ₂ /Mw-hr and assuming 8,760 hours per year, the indirect emissions from energy consumption would be 77,803 Metric Tons CO ₂ e. Source: Atmospheric Dynamics Inc. Air Quality Impact Assessment. July 2022. Included as Section 4.3 of this SPPE Application.	

b) Would the Project conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs?

City of San José GHGRS

The Project applicant would be required to apply for building permits for the Project from the City of San José. For commercial or industrial projects subject to development review by the City of San José, such as the Project, the City's 2030 GHGRS presents the City's comprehensive path to reduce GHG emissions to achieve the 2030 reduction target, based on SB32, BAAQMD, and OPR. Additionally, the 2030 GHGRS leverages other important City plans and policies, including the General Plan, Climate Smart San José, and the City Municipal Code in identifying reductions

strategies that achieve the City's target. The City of San José's 2030 GHGRS represents San José's qualified climate action plan in compliance with CEQA.

The Project applicant would be required to incorporate measures from the GHGRS into the Project, as specified by the City during the design review process to ensure compliance with applicable laws, ordinances, regulations, and standards. Conformance with the applicable design codes and policies would be enforced during the City design review process.

As discussed above, the Project would be consistent with the 2030 GHGRS (refer to Appendix E).

Bay Area 2017 Clean Air Plan (CAP)

The Bay Area 2017 Clean Air Plan includes performance objectives, consistent with the state's climate protection goals under AB 32 and SB 375, designed to reduce 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 are included in the design and operation of the on-site electrical and mechanical systems. Additionally, as described above, the Project would participate in a clean energy program that accomplishes 100% carbon-free electricity for the Project. This would be consistent with the general purpose of Energy and Climate Measure (ECM)-1 – Energy Efficiency in the 2017 Bay Area Clean Air Plan.

Plan Bay Area 2040/California SB 375

Under the requirements of SB 375, the MTC and ABAG developed a Sustainable Communities Strategy (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 the project 2005 emissions. However, these emission reduction targets are intended for land use and transportation strategies only. The Project would be required to implement the identified TDM measure to reduce vehicle trips and VMT and 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. The Project's GHG emissions are predominantly from electricity usage. Because all electricity supplied to the Project by PG&E would be subject to the RPS requirements promulgated under SB 100, the Project would not conflict with plans, policies, or regulations adopted pursuant to SB 100.

ARB Scoping Plan

The ARB Scoping Plan outlines the State's plan for achieving the emissions reductions necessary to meet the 2030 emission target set by SB 32. As described above, the project's stationary source emissions are under relevant thresholds set by BAAQMD, and the project would be consistent with GHG Reduction Strategy which is intended to ensure projects in the City do not interfere with the State's ability to achieve the 2030 GHG emissions target. Additionally, the project would utilize

100% carbon-free electricity, resulting zero emissions related to electricity consumption. The project, therefore, would be consistent with the ARB Scoping Plan.

Conclusion

With implementation of the efficiency measures to be incorporated into the Project and the implementation of PDF GHG-1.1, PDF GHG-1.2 and PDF TRN-1, GHG emissions related to the Project would be consistent with applicable plans and policies adopted to reduce GHG emissions and would be required to comply with all regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions. The potential for the Project to conflict with an applicable plan, policy or regulation for GHG reductions would be less than significant. **(Less Than Significant Impact)**

4.8.2.2 Cumulative Impacts

Would the Project result in a cumulatively considerable contribution to a significant cumulative GHG emissions impact?

As discussed in Section 4.8.2.1, GHG emissions worldwide contribute, on a cumulative basis, to the significant adverse environmental impacts of global climate change. No single land use project could generate sufficient GHG emissions on its own to noticeably change the global average temperature. The combination of GHG emissions from past, present, and foreseeable future projects in San José, the entire state of California, and across the nation and around the world, contribute cumulatively to the phenomenon of global climate change and its associated environmental impacts. The above analysis of the project's GHG emissions impacts is, therefore, also necessarily an analysis of the Project's contribution to cumulative GHG emissions impacts. **(Less than Significant Cumulative Impact)**

4.9 HAZARDS AND HAZARDOUS MATERIALS

The discussion below is based in part on Phase I and Phase II Environmental Site Assessments (ESAs) prepared for the Project by Burns & McDonnell in December 2020 and February 2021, respectively. These reports are included as Appendices F and G.

4.9.1 Environmental Setting

4.9.1.1 *Regulatory Framework*

Overview

The storage, use, generation, transport, and disposal of hazardous materials and waste are highly regulated under federal and state laws. In California, the EPA has granted most enforcement authority over federal hazardous materials regulations to the California Environmental Protection Agency (CalEPA). In turn, local agencies have been granted responsibility for implementation and enforcement of many hazardous materials regulations under the Certified Unified Program Agency (CUPA) program.

Worker health and safety and public safety are key issues when dealing with hazardous materials. Proper handling and disposal of hazardous material is vital if it is disturbed during project construction. Cal/OSHA enforces state worker health and safety laws and regulations related to construction activities. Laws and regulations include exposure limits, requirements for protective clothing, and training requirements to prevent exposure to hazardous materials. Cal/OSHA also enforces occupational health and safety laws and regulations specific to lead and asbestos investigations and abatement.

Federal and State

Federal Aviation Regulations Part 77

Federal Aviation Regulations, Part 77 Objects Affecting Navigable Airspace (FAR Part 77) sets forth standards and review requirements for protecting the airspace for safe aircraft operation, particularly by restricting the height of potential structures and minimizing other potential hazards (such as reflective surfaces, flashing lights, and electronic interference) to aircraft in flight. These regulations require that the Federal Aviation Administration (FAA) be notified of certain proposed construction projects located within an extended zone defined by an imaginary slope radiating outward for several miles from an airport's runways, or which would otherwise stand at least 200 feet in height above the ground.

Comprehensive Environmental Response, Compensation, and Liability Act

The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), commonly known as Superfund, was enacted by Congress on December 11, 1980. This law created a tax on the chemical and petroleum industries and provided broad federal authority to respond directly to releases or threatened releases of hazardous substances that may endanger public health or the environment. Over five years, \$1.6 billion was collected and the tax went to a trust fund for cleaning

up abandoned or uncontrolled hazardous waste sites. CERCLA accomplished the following objectives:

- Established prohibitions and requirements concerning closed and abandoned hazardous waste sites;
- Provided for liability of persons responsible for releases of hazardous waste at these sites; and
- Established a trust fund to provide for cleanup when no responsible party could be identified.

The law authorizes two kinds of response actions:

- Short-term removals, where actions may be taken to address releases or threatened releases requiring prompt response; and
- Long-term remedial response actions that permanently and significantly reduce the dangers associated with releases or threats of releases of hazardous substances that are serious, but not immediately life-threatening. These actions can be completed only at sites listed on the EPA's National Priorities List.

CERCLA also enabled the revision of the National Contingency Plan (NCP). The NCP provided the guidelines and procedures needed to respond to releases and threatened releases of hazardous substances, pollutants, or contaminants. The NCP also established the National Priorities List. CERCLA was amended by the Superfund Amendments and Reauthorization Act on October 17, 1986.⁵²

Resource Conservation and Recovery Act

The Resource Conservation and Recovery Act (RCRA), enacted in 1976, is the principal federal law in the United States governing the disposal of solid waste and hazardous waste. RCRA gives the EPA the authority to control hazardous waste from the "cradle to the grave." This includes the generation, transportation, treatment, storage, and disposal of hazardous waste. RCRA also sets forth a framework for the management of non-hazardous solid wastes.

The Federal Hazardous and Solid Waste Amendments (HSWA) are the 1984 amendments to RCRA that focused on waste minimization, phasing out land disposal of hazardous waste, and corrective action for releases. Some of the other mandates of this law include increased enforcement authority for the EPA, more stringent hazardous waste management standards, and a comprehensive underground storage tank program.⁵³

⁵² United States Environmental Protection Agency. "Superfund: CERCLA Overview." Accessed May 11, 2020. <https://www.epa.gov/superfund/superfund-cercla-overview>.

⁵³ United States Environmental Protection Agency. "Summary of the Resource Conservation and Recovery Act." Accessed May 11, 2020. <https://www.epa.gov/laws-regulations/summary-resource-conservation-and-recovery-act>.

Government Code Section 65962.5

Section 65962.5 of the Government Code requires CalEPA to develop and update a list of hazardous waste and substances sites, known as the Cortese List. The Cortese List is used by state and local agencies and developers to comply with CEQA requirements. The Cortese List includes hazardous substance release sites identified by the Department of Toxic Substances Control (DTSC) and State Water Resources Control Board (SWRCB).⁵⁴

Toxic Substances Control Act

The Toxic Substances Control Act (TSCA) of 1976 provides the EPA with authority to require reporting, record-keeping and testing requirements, and restrictions relating to chemical substances and/or mixtures. Certain substances are generally excluded from TSCA, including, among others, food, drugs, cosmetics, and pesticides. The TSCA addresses the production, importation, use, and disposal of specific chemicals including polychlorinated biphenyls (PCBs), asbestos, radon, and lead-based paint.

California Accidental Release Prevention Program

The California Accidental Release Prevention (CalARP) Program aims to prevent accidental releases of regulated hazardous materials that represent a potential hazard beyond the boundaries of a property. Facilities that are required to participate in the CalARP Program use or store specified quantities of toxic and flammable substances (hazardous materials) that can have off-site consequences if accidentally released. The Santa Clara County Department of Environmental Health reviews CalARP risk management plans as the CUPA.

CCR Title 8, Section 1532.1

The United States Consumer Product Safety Commission banned the use of lead-based paint in 1978. Removal of older structures with lead-based paint is subject to requirements outlined by the Cal/OSHA Lead in Construction Standard, CCR Title 8, Section 1532.1 during demolition activities. Requirements include employee training, employee air monitoring, and dust control. If lead-based paint is peeling, flaking, or blistered, it is required to be removed prior to demolition.

Regional and Local

Municipal Regional Permit Provision C.12.f

Polychlorinated biphenyls (PCBs) were produced in the United States between 1955 and 1978 and used in hundreds of industrial and commercial applications, including building and structure materials such as plasticizers, paints, sealants, caulk, and wood floor finishes. In 1979, the EPA banned the production and use of PCBs due to their potential harmful health effects and persistence in the environment. PCBs can still be released to the environment today during demolition of buildings that contain legacy caulks, sealants, or other PCB-containing materials.

⁵⁴ California Environmental Protection Agency. "Cortese List Data Resources." Accessed May 28, 2020. <https://calepa.ca.gov/sitecleanup/corteselist/>.

With the adoption of the San Francisco Bay Region Municipal Regional Stormwater National Pollutant Discharge Elimination System (NPDES) Permit (MRP) by the San Francisco Bay Regional Water Quality Control Board on November 19, 2015, Provision C.12.f requires that permittees develop an assessment methodology for applicable structures planned for demolition to ensure PCBs do not enter municipal storm drain systems.⁵⁵ Municipalities throughout the Bay Area are currently modifying demolition permit processes and implementing PCB screening protocols to comply with Provision C.12.f. Buildings constructed between 1950 and 1980 that are proposed for demolition must be screened for the presence of PCBs prior to the issuance of a demolition permit. Single family homes and wood-frame structures are exempt from these requirements.

Envision San José 2040 General Plan

The following General Plan policies are specific to hazards and hazardous materials and are relevant to this analysis:

Envision San José 2040 General Plan Relevant Hazards and Hazardous Materials Policies

Policy	Description
EC-6.1	Require all users and producers of hazardous materials and wastes to clearly identify and inventory the hazardous materials that they store, use, or transport in conformance with local, state, and federal laws, regulations, and guidelines.
EC-6.2	Require proper storage and use of hazardous materials and wastes to prevent leakage, potential explosions, fires, or the escape of harmful gases, and to prevent individually innocuous materials from combining to form hazardous substances, especially at the time of disposal by businesses and residences. Require proper disposal of hazardous materials and wastes at licensed facilities.
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.
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.
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.
EC-7.5	In 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

⁵⁵ California Regional Water Quality Control Board. *San Francisco Bay Region Municipal Regional Stormwater NPDES Permit*. November 2015.

Envision San José 2040 General Plan Relevant Hazards and Hazardous Materials Policies

Policy	Description
	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.
EC-7.7	Determine for any development or redevelopment site that is within 1,000 feet of a known, suspected, or likely geographic ultramafic rock unit (as identified in maps developed by the Department of Conservation – Division of Mines and Geology) or any other known or suspected locations of serpentine or naturally occurring asbestos, if natural occurring asbestos exists and, if so, comply with the Bay Area Air Quality Management District’s Asbestos Air Toxic Control Measure requirements.
EC 7.8	Where an environmental review process identifies the presence of hazardous materials on a proposed development site, the City will ensure that feasible mitigation measures that will satisfactorily reduce impacts to human health and safety and to the environment are required of or incorporated into the projects. This applies to hazardous materials found in the soil, groundwater, soil vapor, or in existing structures.
EC-7.9	Ensure coordination with the County of Santa Clara Department of Environmental Health, Regional Water Quality Control Board, Department of Toxic Substances Control or other applicable regulatory agencies, as appropriate, on projects with contaminated soil and/or groundwater or where historical or active regulatory oversight exists.
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.
EC-7.11	Require sampling for residual agricultural chemicals, based on the history of land use, on sites to be used for any development or redevelopment to account for worker and community safety during construction. Mitigation to meet appropriate end use such as residential or commercial/industrial shall be provided.
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 toxics control measures (ATCMs) for Construction, Grading, Quarrying, and Surface Mining Operations.
TR-14.3	For development in the vicinity of airports, take into consideration the safety and noise policies identified in the Santa Clara County Airport Land Use Commission comprehensive land use plans for Mineta San José International and Reid-Hillview airports.
TR-14.4	Require avigation and “no build” easement dedications, setting forth maximum elevation limits as well as for acceptance of noise or other aircraft related effects, as needed, as condition of approval of development in the vicinity.

Norman Y. Mineta San José International Airport Comprehensive Land Use Plan

The Norman Y. Mineta San José International Airport is located approximately 1,100 southwest of the Project Site, which is within the Airport Influence Area (AIA). Development within the AIA can be subject to hazards from aircraft and also pose hazards to aircraft travelling to and from the airport. The County of Santa Clara Airport Land Use Commission (ALUC) adopted an Airport Comprehensive Land Use Plan (CLUP) in October of 2010 (amended November 16, 2016) to address these potential hazards and establish review procedures for potentially incompatible land uses.⁵⁶

The AIA is a composite of areas surrounding the airport that are affected by noise, height and safety considerations. These hazards are addressed in federal and state laws and regulations as well as in land use regulations and policies in the CLUP. The CLUP set standards focused on three areas of ALUC responsibility: noise, objects in navigable airspace, and the safety of persons on the ground and in aircraft. Projects within the AIA are subject to an additional level of review by the City (and potentially by the Airport Land Use Commission) to determine whether CLUP policies may impact the subject project.

4.9.1.2 Existing Conditions

Site/Vicinity History

According to a review of available historical data, the Project Site has been undeveloped and/or agricultural land since at least 1939. The buildings making up the adjacent Lumileds campus were constructed beginning in 1982. Hewlett-Packard occupied the same adjacent property from the 1982 through 1999. Hewlett-Packard operations included manufacturing LED lights, fiber optic components, and microwave frequency communications equipment on-site. In 2004, Lumileds Lighting, James R. Griffin Inc., Aaron Martini occupied the adjacent industrial campus. From 2009, Lumileds Lighting, which changed its name to Philips Lumileds Lighting Company, has been the sole occupant of the adjacent industrial campus. The existing Lumileds campus that is located adjacent to the Project Site consists of five main buildings housing manufacturing facilities, chemical storage areas, wastewater treatment areas, offices, recreation facilities, and a cafeteria.

The Off-Site Infrastructure Areas are located within existing public right of way. Most of these improvements are along Orchard Parkway and Trimble Road, with the exception of the new proposed recycled water pipeline (described in Section 3.3.6.1). The recycled water pipeline route is located in an area underlain by soil and/or fill that has been deemed suitable for construction of the existing roadways and installation of existing underground utility infrastructure.

On-Site Sources of Contamination

The Project Site is currently undeveloped, but was used for agricultural purposes from the 1930's through at least the late 1960's. Site history indicates that lead, arsenic, and organochlorine pesticides were reported and thought to be associated with the previous agricultural land use on the Project Site.

⁵⁶ Santa Clara County Airport Land Use Commission. *Norman Y. Mineta San José International Airport*. Amended November 16, 2016. https://stgenpln.blob.core.windows.net/document/ALUC_SJC_CLUP.pdf

As a result, there is a potential for residual agricultural chemicals to remain in the soil. The Phase I ESA determined this to be a recognized environmental condition.

Off-Site Sources of Contamination

The immediately surrounding properties in the Project vicinity include existing commercial and industrial uses. The Phase I ESA identified four recognized environmental conditions on the northern development adjacent the Project Site. These recognized environmental conditions have the potential to contaminate the Project Site. The following off-site facilities are considered a recognized environmental condition:

- The Orchard Parkway Phase II CPS-SLIC site located north-northeast of the Project Site has a site history of lead, arsenic, and organochlorine pesticides reports due to its previous agricultural land use. This site is listed as “Open – Verification Monitoring” as of 2017. Due to it being adjacent to the Project Site, there is potential for arsenical pesticides to be present on the Project Site.
- The Hewlett Packard Microwave Semiconductor facility, located directly north of the Project Site, was historically a Large Quantity Generator site with waste that included spent halogenated solvents, ignitable waste, corrosive waste, reactive waste, arsenic, chromium, lead, mercury, silver, nonhalogenated solvents, spent cyanide plating, plating bath residues, spent stripping and cleaning bath solutions, cyanides, cyclohexanone, and hydrofluoric acid or hydrogen fluoride. There is potential for these chemicals to be present on adjacent and upgradient land such as the Project Site, which would impact soil and groundwater.
- The Agilent Technologies, Inc. facility is adjacent to the Project Site and it was listed as a former diesel spill from a leaking underground storage tank in 2000 on the ENVIROSTOR database with the case closed in 2003. There are also chemical spills in 1994 (0.1 percent sodium hypochlorite and a water spill with a pH of 6.0) that entered the storm drains. Due to the proximity and upgradient location of this property to the Project Site and former environmental releases, there is potential for contamination on the Project Site.
- The Lumileds LLC facility, which is located directly north of the Project Site, is an industrial storm water facility that has received several violations for hazardous materials storage, testing and inspections, but the facility returned to compliance within two months of each violation. The facility is listed as a large quantity hazardous waste generator that treats hazardous waste on site. Based on proximity and upgradient location of this site and the various compliance issues reported by the Santa Clara County Environmental Health department on hazardous materials, there is potential for contamination on the Project Site.

As described previously, the Off-Site Infrastructure Areas are located within existing public right of way. Most of these improvements are along Orchard Parkway and Trimble Road, with the exception of the new proposed recycled water pipeline (described in Section 3.3.6.1). The recycled water pipeline route is located in an area underlain by soil and/or fill that has been deemed suitable for construction of the existing roadways and installation of existing underground utility infrastructure.

Phase II ESA Soil Sampling

The Phase II ESA dated February 10, 2021 investigated the recognized environmental conditions described above. The Phase II ESA investigation confirmed the presence of arsenic in the soil and the presence of metals in the groundwater on-site. The investigation did not find evidence of contamination from the documented spills of diesel fuel and 0.1 percent sodium hypochlorite. No additional contaminants beyond arsenic in soil and metals in groundwater were identified on the Project Site. The arsenic levels were found to be within the background levels for the area. The 10 metals exceeded California maximum contaminant limits for groundwater or the risk-based groundwater environmental screening levels for metals; however, the presence of metals may be related to natural concentrations instead of dissolved metals from an offsite, adjacent facility.

Airport Operations

The Norman Y. Mineta San José International Airport is located approximately 1,100 feet southwest of the Project Site. As previously mentioned, FAR Part 77 requires that the FAA be notified of certain proposed construction projects located within an extended zone defined by an imaginary slope radiating outward for several miles from an airport's runways, or which would otherwise stand at least 200 feet in height above ground. For the Project Site, any structure exceeding 40 feet in height above grade would require submittal to the FAA for airspace safety review. As the proposed Project would have a maximum height of 136 feet, notification to the FAA is required to determine the potential for the Project to create an aviation hazard. The Project Site is also in the AIA for the airport, which means the Project must comply with any applicable policies contained within the ALUC CLUP.

The project owner has engaged a consultant to prepare a thermal plume analysis to assess the potential effects of the thermal plumes from the backup generating facilities on airport operations. The analysis is underway and will be submitted under separate cover.

Fire Hazard Zone

The Project Site is not in a very high, high, or moderate fire hazard severity zone.⁵⁷

4.9.2 Impact Discussion

For the purpose of determining the significance of the Project's impact on hazards and hazardous materials, would the Project:

- a) Create a significant hazard to the public or the environment through 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?

⁵⁷ California Department of Forestry and Fire Protection. "FHSZ Viewer". Accessed July 25, 2022. <https://egis.fire.ca.gov/FHSZ/>

- d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?
- 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, 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?

4.9.2.1 *Project Impacts*

a) Would the Project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

Operation of the Project would include the use and storage of diesel fuel for testing and maintenance of the backup generators. Some oils and lubricants could be stored on-site for maintenance of mechanical equipment in the equipment yards. The Project would be required to prepare a Spill Prevention, Control and Countermeasure (SPCC) Plan in accordance with applicable laws and regulations to address the storage, use and delivery of renewable diesel and diesel fuel for the generators.

Each generator unit and its integrated fuel tanks would be designed with double walls. The interstitial space between the walls of each tank would be continuously monitored electronically for the existence of liquids. Underground piping would also be of double-wall construction with interstitial leak detection. Upon detection of a leak, the fuel transfer process would be disabled, and the alarm would be generated at the building(s)' monitoring system to alert the operations team.

Diesel fuel would be delivered on an as-needed basis in a compartmentalized tanker truck with maximum capacity of 8,500 gallons. For the bulk fuel storage tanks serving the buildings, the tanker truck would park on the primary access road located just above the underground fuel storage tank along the northwest and southeast sides of the buildings and would connect a fuel fill hose to a fill port located in the ground just above the underground fuel storage tank. For the fuel storage tanks located in the base of the two generators located in the tank area, the tanker truck would park near the generators and would extend a fuel fill hose through a hinged openings in the security fence surrounding the tank area.

There would not be any loading/unloading racks or containment for re-fueling events; however, a spill catch basin would be located at each fill port at the bulk underground diesel storage tanks and for the base mounted diesel storage tanks. To prevent a release from entering the storm drain system, storm drains would be temporarily blocked off by the truck driver and/or facility staff during fueling events. Rubber pads or similar devices would be kept in the generation yard to allow quick blockage of the storm sewer drains during fueling events.

To further minimize the potential of diesel fuel coming in contact with stormwater, to the extent feasible, fueling operations would be scheduled at times when storm events are improbable. Warning signs and/or wheel chocks would be used in the loading and/or unloading areas to prevent vehicles from departing before complete disconnection of flexible or fixed transfer lines. An emergency pump shut-off would be utilized if a pump hose breaks while fueling the tanks. Tanker truck loading and unloading procedures would be posted at the loading and unloading areas.

Urea or Diesel Exhaust Fluid (DEF) is used as part of the diesel engine combustion process to meet the emissions requirements. Urea would be stored in two (2) 55-gallon drums located within the outdoor generator enclosures and within the interior generator rooms. These drums can be filled in place from other drums, totes, or bulk tanker truck at the tank top or swapped out for new using quick connection fittings at the tank top.

Hazardous materials storage at the proposed Project would be regulated under applicable local, state and federal laws and regulations. For example, the Project would be subject to the Aboveground Petroleum Storage Act (APSA) due to the volume of fuel that would be stored in aboveground tanks. Tank facilities under APSA must comply with all APSA requirements and prepare and implement a Spill Prevention, Control, and Countermeasure Plan. The spill prevention measures described above would be required to be incorporated into the Plan. Additionally, a Hazardous Materials Business Plan would be required to be completed for the safe storage and use of chemicals in accordance with all relevant laws and regulations. Conformance with relevant laws and regulations would minimize the likelihood of hazardous material releases from the Project. **(Less Than Significant Impact)**

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?

Soil and Groundwater Contamination

As described in Section 4.9.1.2, contaminated soil and groundwater exists on the Project Site. The Off-Site Infrastructure Areas are located within the public right of way where roadways and utility infrastructure have already been constructed in accordance with applicable laws and regulations related to hazardous materials and contaminated soils/groundwater, it is possible that unknown contamination exists in these areas. Construction activities could result in the exposure of construction workers (and surrounding land uses) to hazardous materials. The following measures are included in the Project as Project Design Features to reduce hazardous materials impacts to a less than significant level.

PDF HAZ-1.1: A Site Management Plan (SMP) shall be prepared for the Project Site 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.

If there are no contaminants identified in areas of the Project Site to be disturbed that exceed applicable screening levels for construction workers published by the Regional Water Quality Control Board, Department of Toxic Substances Control, and/or Environmental Protection Agency, the Project applicant shall not be required to submit the Site Management Plan to an oversight agency and instead shall only submit to the City prior to construction earthwork activities.

In addition, all contractors and subcontractors shall develop a Health and Safety Plan (HSP) specific to their scope of work and based upon the known environmental conditions. The HSP shall be approved by the Director or Director's designee with the City of San Jose Department of Planning, Building and Code Enforcement (PBCE) and the City of San Jose Environmental Services Department (ESD) and implemented under the direction of a Site Safety and Health Officer.

Components of the SMP shall include, but shall not be limited to:

- A detailed discussion of the site background;
- 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.

Components of 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 and HSP shall be submitted to HMCD, DTSC, or equivalent regulatory agency for review and/or approval (if required). Copies of the approved SMP and HSP shall be provided to the PBCE Supervising Environmental Planner and Environmental Services Department (ESD) prior to issuance of grading permits.

PDF HAZ-1.2

The discharge of any water from construction dewatering activities shall be required to comply with National Pollutant Discharge Elimination System (NPDES) permit requirements or wastewater discharge permit conditions to the sanitary sewer, which may involve installation of a treatment system(s) at the dewatering location. For short-term discharge (less than 1-year), a discharge permit shall be obtained from the City of San José's Watershed Protection Division and the water discharged to the sanitary sewer. For long term discharge (greater than 1-year), the Project applicant shall obtain a NPDES permit from the California Regional Water Quality Control Board for discharge to the storm system.

Both discharge permits require pre-testing of the water to determine if the water meets the respective City or Regional Water Quality Control Board (RWQCB) pollutant discharge limits. The water shall be analyzed by a State-certified laboratory for the suspected pollutants prior to discharge. Water that exceeds discharge limits (if any) shall be treated to reduce pollutant concentrations to acceptable levels prior to discharge. Based on the results of the analytical testing, the Project applicant shall work with the RWQCB and the local wastewater treatment plant to determine appropriate disposal options and then implement same. A copy of the discharge permit or NPDES permit, whichever is applicable, shall be submitted to the Director of Planning or Director's designee prior to the start of construction.

With implementation of the Project Design Features described above, the proposed Project would result in a less than significant impact due to potentially contaminated soil and groundwater on-site. **(Less than Significant Impact)**

Project Operation

As described in the discussion under checklist question "a", the proposed Project would include the use and storage of diesel fuel for testing and maintenance of the backup generators associated with the data center. A Hazardous Materials Business Plan and a Spill Prevention, Control, and Countermeasure Plan would be required to be completed for the safe storage and use of chemicals. Conformance with relevant laws and regulations would minimize the likelihood of hazardous material releases from the Project. **(Less than Significant Impact)**

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?

The Project Site is not located within 0.25 mile of any existing or proposed schools. The closest school to the Project Site is Montague Elementary School, approximately 0.9-mile northwest of the site; there are no proposed schools within 0.25 mile. Therefore, the Project would not emit hazardous emissions or handle hazardous materials, substances, or waste within ¼-mile of an existing or proposed school. **(No Impact)**

d) Would the Project be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?

The Project would not be located on land that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5. As a result, there would be no impact. **(No Impact)**

e) If 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?

The Project Site is approximately 0.2 mile southwest of the San José Norman Y. Mineta International Airport. While the Project Site is not located within a CLUP-defined safety zone, the Project Site is located within the Norman Y. Mineta San José International AIA. The AIA is a composite of the areas surrounding the airport that are affected by noise, height, and safety considerations.⁵⁸

The Project would be subject to the applicable safety and noise policies identified in the CLUP. As a nonresidential land use, the Project would be compatible with the land use policies of the CLUP. Aircraft noise levels at the Project Site are discussed in Section 4.13, Noise and Vibration of this Application. As described previously, any structure exceeding 40 feet in height at the Project Site would require submittal to the FAA to determine the potential for the Project to create an aviation hazard. At a proposed maximum height of 136 feet above ground, the Project is required to be reviewed by the FAA for FAR Part 77 conformance. The Project would be required to obtain the appropriate FAA clearance prior to obtaining a building permit for vertical construction. **(Less than Significant Impact)**

f) Would the Project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

The proposed Project would develop a vacant site consistent with the current 2040 General Plan land use designations and would not alter evacuation routes. The Project would be constructed with a

⁵⁸ Santa Clara County Airport Land Use Commission. *Norman Y. Mineta San José International Airport*. Amended November 16, 2016. Figure 8. https://stgenpln.blob.core.windows.net/document/ALUC_SJC_CLUP.pdf

primary access route, as well as secondary emergency access, and would be constructed and operated in accordance with then-current building and fire codes and other applicable laws and regulations and would be required to be maintained in accordance with applicable City policies identified in the 2040 General Plan to avoid unsafe building conditions. Therefore, the proposed Project would not impair implementation of or physically interfere with an adopted emergency response plans and emergency evacuation plans and would have a less than significant impact **(Less than Significant Impact)**

g) Would the Project expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?

As described in Section **Error! Reference source not found.**, the Project would not be located in a fire hazard severity zone. The Project would not exacerbate existing conditions because the Project Site is not considered to be in an area at risk of wildland fires, and adding development on the site would not change the risk of wildland fires on the site or in the project area. Therefore, the Project would not expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires. **(Less than Significant Impact)**

4.9.2.2 Cumulative Impacts

Would the Project result in a cumulatively considerable contribution to a significant cumulative hazards and hazardous materials impact?

The geographic area for cumulative hazards and hazardous materials impacts is the Project Site and immediate vicinity.

As described in the discussion under question a, the proposed Project would include the use and storage of diesel fuel for testing and maintenance of the backup generators associated with the data center. A Hazardous Materials Business Plan would be required to be completed for the safe storage and use of chemicals and a Spill Prevention, Control, and Countermeasure Plan would be implemented. Conformance with relevant laws and regulations would minimize the likelihood of hazardous material releases from the Project and ensure the Project would not result in or substantially contribute to a significant cumulative impact related to the use and storage of hazardous materials.

No significant cumulative impacts associated with hazardous materials or contaminated soil/groundwater has been identified in the immediate project vicinity. Soil sampling completed on the Project Site did not detect significant quantities of contamination directly attributable to off-site sources, indicating there is no cumulative accumulation of contamination on the site. The Project would implement PDFs as well as adhere to all applicable laws and regulations with respect to the remediation of existing soil and groundwater contamination on the Project Site, thereby reducing contamination in the Project vicinity. The Project would not result in or substantially contribute to a cumulative impact related to soil and groundwater contamination. **(Less than Significant Cumulative Impact)**

4.10 HYDROLOGY AND WATER QUALITY

4.10.1 Environmental Setting

4.10.1.1 *Regulatory Framework*

Federal and State

The federal Clean Water Act and California's Porter-Cologne Water Quality Control Act are the primary laws related to water quality in California. Regulations set forth by the Environmental Protection Agency (EPA) and the State Water Resources Control Board (SWRCB) have been developed to fulfill the requirements of this legislation. EPA regulations include the National Pollutant Discharge Elimination System (NPDES) permit program, which controls sources that discharge pollutants into the waters of the United States (e.g., streams, lakes, bays, etc.). These regulations are implemented at the regional level by the Regional Water Quality Control Boards (RWQCBs). The Project Site is within the jurisdiction of the San Francisco Bay RWQCB.

Under Section 303(d) of the federal Clean Water Act, the SWRCB and RWQCBs are required to identify impaired surface water bodies that do not meet water quality standards and develop total maximum daily loads (TMDLs) for contaminants of concern. The list of the state's identified impaired surface water bodies, known as the "303(d) list" can be found on the on the RWQCB's website.⁵⁹

National Flood Insurance Program

The Federal Emergency Management Agency (FEMA) established the National Flood Insurance Program (NFIP) to reduce impacts of flooding on private and public properties. The program provides subsidized flood insurance to communities that comply with FEMA regulations protecting development in floodplains. As part of the program, FEMA publishes Flood Insurance Rate Maps (FIRMs) that identify Special Flood Hazard Areas (SFHAs). An SFHA is an area that would be inundated by the one-percent annual chance flood, which is also referred to as the base flood or 100-year flood.

Statewide Construction General Permit

The SWRCB has implemented an NPDES General Construction Permit for the State of California (Construction General Permit). For projects disturbing one acre or more of soil, a Notice of Intent (NOI) must be filed with the RWQCB by the project sponsor, and a Storm Water Pollution Prevention Plan (SWPPP) must be prepared by a qualified professional prior to commencement of construction and filed with the RWQCB by the project sponsor. The Construction General Permit includes requirements for training, inspections, record keeping, and, for projects of certain risk levels, monitoring. The general purpose of the requirements is to minimize the discharge of pollutants and to protect beneficial uses and receiving waters from the adverse effects of construction-related storm water discharges.

⁵⁹ San Francisco Regional Water Quality Control Board. "The 303(d) List of Impaired Water Bodies." Accessed July 14, 2022. https://www.waterboards.ca.gov/sanfranciscobay/water_issues/programs/TMDLs/303dlist.html.

Regional and Local

San Francisco Bay Basin Plan

The San Francisco Bay RWQCB regulates water quality in accordance with the Water Quality Control Plan for the San Francisco Bay Basin (Basin Plan). The Basin Plan lists the beneficial uses that the San Francisco Bay RWQCB has identified for local aquifers, streams, marshes, rivers, and the San Francisco Bay, as well as the water quality objectives and criteria that must be met to protect these uses. The San Francisco Bay RWQCB implements the Basin Plan by issuing and enforcing waste discharge requirements, including permits for nonpoint sources such as the urban runoff discharged by a City's stormwater drainage system. The Basin Plan also describes watershed management programs and water quality attainment strategies.

Municipal Regional Permit Provision C.3

The San Francisco Bay RWQCB re-issued the Municipal Regional Stormwater NPDES Permit (MRP) in May 2022 to regulate stormwater discharges from municipalities and local agencies (co-permittees) in Alameda, Contra Costa, San Mateo, and Santa Clara Counties, and the cities of Fairfield, Suisun City, and Vallejo.⁶⁰ Under Provision C.3 of the MRP, new and redevelopment projects that create or replace 5,000 square feet or more of impervious surface area are required to implement site design, source control, and Low Impact Development (LID)-based stormwater treatment controls to treat post-construction stormwater runoff. LID-based treatment controls are intended to maintain or restore the site's natural hydrologic functions, maximizing opportunities for infiltration and evapotranspiration, and using stormwater as a resource (e.g. rainwater harvesting for non-potable uses). The MRP also requires that stormwater treatment measures are properly installed, operated, and maintained.

In addition to water quality controls, the MRP requires new development and redevelopment projects that create or replace one 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 local rivers, streams, and creeks. Projects may be deemed exempt from these requirements if: (1) the post-project impervious surface area is less than, or the same as, the pre-project impervious surface area; (2) the project is located in a catchment that drains to a hardened (e.g., continuously lined with concrete) engineered channel or channels or enclosed pipes, which extend continuously to the Bay, Delta, or flow-controlled reservoir, or, in a catchment that drains to channels that are tidally influenced; or (3) the project is located in a catchment or subwatershed that is highly developed (i.e., that is 70 percent or more impervious).⁶¹

⁶⁰ California Regional Water Quality Control Board San Francisco Region. *Municipal Regional Stormwater NPDES Permit, Order No. R2-2022-0018, NPDES Permit No. CAS612008*. May 11, 2022

⁶¹ The Hydromodification Applicability Maps developed the permittees under Order No. R2-2009-0074 were prepared using this standard, adjusted to 65 percent imperviousness to account for the presence of vegetation on the photographic references used to determine imperviousness. Thus, the maps for Order No. R2-2009-0074 are accepted as meeting the 70 percent requirement.

Water Resources Protection Ordinance and District Well Ordinance

Valley Water operates as the flood control agency for Santa Clara County. Their stewardship also includes creek restoration, pollution prevention efforts, and groundwater recharge. Permits for well construction and destruction work, most exploratory boring for groundwater exploration, and projects within Valley Water property or easements are required under Valley Water's Water Resources Protection Ordinance and District Well Ordinance.

2021 Groundwater Management Plan

The 2021 Groundwater Management Plan (GWMP) describes the Valley Water's comprehensive groundwater management framework, including existing and potential actions to achieve basin sustainability goals and ensure continued sustainable groundwater management. The GWMP covers the Santa Clara and Llagas subbasins, which are located entirely in Santa Clara County. Valley Water manages a diverse water supply portfolio, with sources including groundwater, local surface water, imported water, and recycled water. About half of the county's water supply comes from local sources and the other half comes from imported sources. Imported water includes the District's State Water Project and Central Valley contract supplies and supplies delivered by the San Francisco Public Utilities Commission (SFPUC) to cities in northern Santa Clara County. Local sources include natural groundwater recharge and surface water supplies. A small portion of the county's water supply is recycled water.

Local groundwater resources make up the foundation of the county's water supply, but they need to be augmented by the District's comprehensive water supply management activities to reliably meet the county's needs. These include the managed recharge of imported and local surface water and in-lieu groundwater recharge through the provision of treated surface water and raw water, acquisition of supplemental water supplies, and water conservation and recycling.⁶²

Post-Construction Urban Runoff Management (City Council Policy No. 6-29)

The City of San José's Policy No. 6-29 implements the stormwater treatment requirements of Provision C.3 of the MRP. City Council Policy No. 6-29 requires new development and redevelopment projects to implement post-construction Best Management Practices (BMPs) and Treatment Control Measures (TCMs). This policy also established specific design standards for post-construction TCMs for projects that create or replace 10,000 square feet or more of impervious surfaces.

Post-Construction Hydromodification Management (City Council Policy No. 8-14)

The City of San José's Policy No.8-14 implements the hydromodification management requirements of Provision C.3 of the MRP. Policy No. 8-14 requires new development and redevelopment projects that create or replace one acre or more of impervious surface area, and are located within a subwatershed that is less than 65 percent impervious, to manage development-related increases in peak runoff flow, volume, and duration, where such hydromodification is likely to cause increased erosion, silt generation, or other impacts to local rivers, streams, and creeks. The policy requires these projects to be designed to control project-related hydromodification through a

⁶² Valley Water. *2021 Groundwater Management Plan, Santa Clara and Llagas Subbasins* .November 2021.

Hydromodification Management Plan (HMP). Projects that do not meet the minimum size threshold, drain into tidally influenced areas or directly into the Bay, or are infill projects in subwatersheds or catchment areas that are greater than or equal to 65 percent impervious would not be subject to the HMP requirement.

Construction Dewatering Waste Discharge Requirements

Each of the RWQCBs regulate construction dewatering discharges to storm drains or surface waters within its Region under the NPDES program and Waste Discharge Requirements.

City of San José Floodplain Ordinance

The City's Floodplain Ordinance establishes minimum elevations for finished building floors based on base flood elevations (BFEs) established for the NFIP, and generally prohibits any improvements that will cause a cumulative rise of more than one foot to the base flood elevation at any point in San José.

Envision San José 2040 General Plan

The General Plan includes policies for the purpose of avoiding or mitigating impacts resulting from planned development projects with the City. The following policies are specific to hydrology and water quality and are relevant to this analysis.

Envision San José 2040 General Plan Relevant Hydrology and Water Quality	
Policy	Description
Policy IN-3.7	Design new projects to minimize potential damage due to stormwaters and flooding to the site and other properties.
Policy IN-3.9	Require developers to prepare drainage plans for proposed developments that define needed drainage improvements per City standards.
Policy MS-3.4	Promote the use of green roofs (i.e., roofs with vegetated cover), landscape-based treatment measures, pervious materials for hardscape, and other stormwater management practices to reduce water pollution.
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 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 stormwater controls.
Policy EC-5.7	Allow new urban development only when mitigation measures are incorporated into the project design to ensure that new urban runoff does not increase flood risks elsewhere.

4.10.1.2 Existing Conditions**Water Quality**

The water quality of streams, creeks, ponds, and other surface water bodies can be greatly affected by pollution carried in contaminated surface runoff. Pollutants from unidentified sources, known as “non-point” source pollutants, are washed from streets, construction sites, parking lots, and other exposed surfaces into storm drains. Surface runoff from the Project Site, the Off-Site Infrastructure Areas, and surrounding vicinity is collected by storm drains and discharged to the Guadalupe River. The runoff often contains contaminants such as oil and grease, plant and animal debris (e.g., leaves, dust, and animal feces), pesticides, litter, and heavy metals. In sufficient concentration, these pollutants have been found to adversely affect the aquatic habitats to which they drain. The Guadalupe River, which is located immediately west of the Project Site, is currently listed on the 303(d)⁶³ list for diazinon, mercury, and trash.

Groundwater

The Project Site (as well as the Off-Site Infrastructure Areas) are located in the Santa Clara Valley Groundwater Basin between the Diablo Mountains to the east and Santa Cruz Mountains to the west. The Santa Clara Valley Groundwater Basin is filled by valley floor alluvium and the Santa Clara Formation. As described in the Phase II ESA, groundwater was encountered at a depth of five feet. Based on the topography of the Project Site, groundwater is expected to flow in a southwest direction towards the Guadalupe River.⁶⁴ Groundwater levels typically fluctuate seasonally depending on the variation in rainfall, irrigation from landscaping, and other factors. The Project Site does not contribute to the recharging of the County's groundwater aquifers managed by Valley Water.⁶⁵

Storm Drainage

The Project Site is currently undeveloped and pervious. Stormwater currently percolates into the ground on-site or flows untreated into storm drain inlets and manholes in the site vicinity, where it is then conveyed to the City's storm drain system, to the Guadalupe River and eventually to the San Francisco Bay.

The Off-Site Infrastructure Areas are located within the public right of way of paved roadways where stormwater flows into storm drain inlets and is conveyed to the City's storm drain system, to the Guadalupe River and eventually to the San Francisco Bay.

⁶³ The Clean Water Act (CWA), Section 303, establishes water quality standards and Total Maximum Daily Load (TMDL) programs. The 303(d) list is a list of impaired water bodies.

⁶⁴ Burns McDonnell. *Phase I Environmental Site Assessment 07SW 350 West Trimble Road San José, California*. December 14, 2020. Page 4-2.

⁶⁵ Valley Water. 2016 Groundwater Management Plan. Available at: <https://s3.us-west-2.amazonaws.com/assets.valleywater.org/2016%20Groundwater%20Management%20Plan.pdf>.

Flooding and Other Hazards

Flood Zone

The Federal Emergency Management Agency (FEMA) manages the NFIP and creates Flood Insurance Rate Maps (FIRMs) that designates 100-year floodplain zones and delineate other flood hazard areas. A 100-year floodplain zone is the area that has a one in one hundred (one percent) chance of being flooded in any one year based on historical data.

The Project Site is partially located in a 100-year floodplain (1 percent annual chance flood), according to FEMA Flood Insurance Rate Maps.⁶⁶ The portion of the Project Site within a 100-year floodplain is designated Flood Zone AH, which indicates an area with a one percent annual chance of shallow flooding, usually in the form of a pond, with an average depth ranging from one to three feet. The regulatory base flood elevation in this area is 27 feet NAVD 88. A small portion of the Off-Site Infrastructure Areas at the intersection of Trimble Road and Zanker Road is located in Flood Zone AH, with a regulatory base flood elevation in this area is 29 feet NAVD 88.

The floodway areas in Zone AH include the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1 percent annual chance flood can be carried without substantial increase in flood heights. The rest of the Project Site and Off-Site Infrastructure Areas are designated Flood Zone X, which indicates areas of the 0.2 percent annual chance flood, with average depths of less than one foot or with drainage areas less than one square mile. The Project Site (as well as the Off-Site Infrastructure Areas) are also within the boundaries of the North San José Floodplain Management Policy (NSJFMP). The flood elevations from this policy vary between 29' and 31' for the Project Site and Off-Site Infrastructure Areas.

The Project Site and Off-Site Infrastructure Areas are located within the dam failure inundation zone for the Anderson Dam, as identified in the General Plan 2040 FEIR (as amended).⁶⁷ The Project Site (as well as the Off-Site Infrastructure Areas) would be subject to inundation in the event of failure of the Anderson Dam.

Seiche

A seiche is the resonant oscillation of water generated in an enclosed body of water, such as San Francisco Bay, from seismic activity. Seiches are related to tsunamis for enclosed bays, inlets, and lakes. These tsunami-like waves can be generated by earthquakes, subsidence or uplift of large blocks of land, submarine and onshore landslides, sediment failures and volcanic eruptions. The strong currents associated with these events may be more damaging than inundation by waves. The largest seiche wave ever measured in the San Francisco Bay, following the 1906 earthquake, was four inches high. The Bay Area has not been adversely affected by seiches during its history within this seismically active region of California.⁶⁸

⁶⁶ Federal Emergency Management Agency. "FEMA Flood Map Service Center". Accessed July 25, 2022. <https://msc.fema.gov/portal/search?AddressQuery=370%20W%20Trimble%20Rd%2C%20San%20Jose%2C%20CA%2095131#searchresultsanchor>

⁶⁷ City of San José. *Envision San José 2040 General Plan FEIR*. Figure 3.7-5. Page 546. December 2011.

⁶⁸ US Army Corps of Engineers San Francisco District, Port of Oakland. *Oakland Harbor Navigation Improvement (-50 foot) Project SCH No. 97072051 Final Environmental Impact Statement/Report*, May 1998, updated January 2000.

Tsunami

Tsunami hazards for the Santa Clara County coastline have been modeled by the California Emergency Management Agency (Cal EMA) to identify areas at risk for tsunami inundation. Multiple source events were selected to represent local and distant earthquakes, and hypothetical extreme undersea, near-shore landslides occurring around the San Francisco Bay region. As defined by the Tsunami Inundation Map for Emergency Planning Milpitas Quadrangle dated July 31, 2009, the risk of inundation by tsunami at the Project Site (as well as the Off-Site Infrastructure Areas) is low.

Due to the Project Site's inland location and distance from large bodies of water (i.e., the San Francisco Bay), it is not subject to seiche or tsunami hazards, or sea level rise. The Project Site (as well as the Off-Site Infrastructure Areas) are located on flat terrain and would not be subject to potential mudslides.

4.10.2 Impact Discussion

For the purpose of determining the significance of the Project's impact on hydrology and water quality, would the Project:

- 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:
 - result in substantial erosion or siltation on- or off-site;
 - substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;
 - 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
 - impede or redirect flood flows?
- 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?

a) Would the Project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?

Construction-Related Water Quality Impacts

Construction activities, such as grading and excavation, may result in temporary impacts to surface water quality in local waterways. When disturbance to the soil occurs, sediments may be dislodged and discharged to the storm drainage system via surface runoff. The proposed Project would disturb approximately 22.29 acres of on-site soil as well as approximately 0.36 acre of soil within the Off-Site Infrastructure Areas, which is over the one-acre threshold requiring conformance with the Construction General Permit. As such, an NOI must be submitted to the RWQCB and a SWPPP must be developed for the Project to establish methods for controlling discharge associated with construction activities.

In addition to the Construction General Permit, development projects in San José are required to comply with the City's Grading Ordinance, which requires the use of erosion and sediment controls to protect water quality while a site is under construction. An Erosion Control Plan in accordance with all applicable standards and requirements would be prepared for the Project because over one acre of soil would be disturbed, and the Project Site (as well as the Off-Site Infrastructure Areas) are adjacent to a waterway (refer to Section **Error! Reference source not found.**). The Erosion Control Plan will be required to detail the BMPs to be implemented during the construction phases to prevent the discard of stormwater pollutants and minimize erosion.

The standard permit conditions below would be implemented and are incorporated into Applicant Proposed Project Design Feature PDF HYD-1.1.

- PDF HYD-1.1:** Consistent with applicable provisions of the General Plan, standard permit conditions that shall be implemented to prevent stormwater pollution and minimize potential sedimentation during construction include, but are not limited to, the following:
- Burlap bags filled with drain rock shall be installed around storm drains to route sediment and other debris away from the drains.
 - Earthmoving or other dust-producing activities shall be suspended during periods of high winds and when other dust reducing measures are ineffective.
 - All exposed or disturbed soil surfaces shall be watered at least twice daily to control dust as necessary.
 - Stockpiles of soil or other materials that can be blown by the wind shall be watered or covered.
 - All trucks hauling soil, sand, and other loose materials shall be covered and all trucks shall maintain at least two feet of freeboard.

- All paved access roads, parking areas, staging areas and residential streets adjacent to the construction sites shall be swept daily (with water sweepers).
- Vegetation in disturbed areas shall be replanted as quickly as possible.
- All unpaved entrances to the Project Site shall be filled with rock to remove mud from tires prior to entering City streets. A tire wash system shall be installed if requested by the City.
- The Project applicant shall comply with the City of San José Grading Ordinance, including implementing erosion and dust control during site preparation and with the applicable City of San José Zoning Ordinance requirements for keeping adjacent streets free of dirt and mud during construction.

Construction of the proposed Project, with implementation of the Construction General Permit requirements and City standard permit conditions, would not result in significant water quality impacts during construction. **(Less than Significant Impact)**

Post-Construction Water Quality Impacts

Under existing conditions, the Project Site is entirely comprised of pervious surface area. The Off-Site Infrastructure Areas consist entirely of paved impervious surfaces. Construction of the Project would result in the creation of approximately 588,607 square feet of impervious surface area on the Project Site, and the replacement of approximately 15,840 square feet of impervious surfaces in the Off-Site Infrastructure Areas. Therefore, the Project would be required to comply with the applicable provisions of the City of San José's Post-Construction Urban Runoff Policy 6-29 and the MRP.

The MRP requires all post-construction stormwater runoff to be treated by numerically sized LID treatment controls, such as biotreatment facilities, unless the project is granted Special Project LID Reduction Credits, which would allow the project to implement non-LID measures for all or a portion of the site depending on the project characteristics. Here, to treat stormwater runoff, the Project proposes to construct stormwater treatment areas consisting of multiple LID (bioretention areas totaling approximately 26,026 square feet). The stormwater treatment areas would be located adjacent to site roadways, in landscape areas adjacent to sidewalks, buildings, and other impervious surfaces, and around the perimeter of the Project Site.

In addition to LID measures the proposed Project would be required to comply with applicable measures included in the 2040 General Plan for managing stormwater runoff. With inclusion of LID stormwater treatment and compliance with the City's applicable regulatory policies pertaining to stormwater runoff, operation of the proposed Project would have a less than significant water quality impact.

The proposed Project would implement the standard permit conditions established by the City of San José and would be constructed with LID features to capture and release stormwater during project operations. Additionally, the Project would not negatively impact groundwater and, as described in Section 4.9, includes measures (PDFs HAZ-1.1 and HAZ-1.2) to ensure any required groundwater dewatering would not negatively impact groundwater. Therefore, the proposed Project would result

in less than significant impacts on runoff and groundwater associated with the proposed project.
(Less than Significant Impact)

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?

The proposed Project would be located within the Santa Clara groundwater basin, one of two groundwater basins located within the City of San José Urban Growth Boundary. Development of the Project would rely on existing sources of potable water and recycled water. The proposed Project would slightly increase the demand for potable water in the City (refer to Section **Error! Reference source not found.**); however, this increase would be nominal and would not result in the overdraft of any groundwater basins. The Project Site is not located on or adjacent to one of the Valley Water's major groundwater recharge systems.⁶⁹ The proposed Project would not establish groundwater wells to supply the Project, deplete groundwater supply, or interfere with groundwater recharge. Therefore, the proposed Project would not impede sustainable groundwater management of the basin. **(Less than Significant Impact)**

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 result in substantial erosion or siltation on- or off-site; substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site; 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 impede or redirect flood flows?

The existing Project Site is undeveloped and fully pervious; the Off-Site Infrastructure Areas consist of existing paved roadways. Construction of the Project would increase the on-site impervious surface area but would not increase impervious surfaces for the offsite infrastructure improvement areas. However, the Project would not alter the course of a stream or river. As part of the development of the proposed Project, a SWPPP would be prepared in compliance with applicable NPDES requirements and would ensure erosion or siltation impacts are less than significant.

Stormwater catch basins would be located throughout the Project Site. Stormwater would be collected in the catch basins, then directed to bioretention areas for treatment and detention before being conveyed off-site to an existing storm drain in Orchard Parkway. Although the Project would increase the amount of impervious surfaces on-site, the proposed detention system would limit runoff from the proposed Project to the equivalent of existing conditions and otherwise adhere to all applicable requirements and standards. **(Less than Significant Impact)**

⁶⁹ Santa Clara Valley Water District. *Groundwater Management Plan for the Santa Clara and Llagas Subbasins*. November 2021. Figure 4-2. Accessed July 25, 2022. https://s3.us-west-2.amazonaws.com/assets.valleywater.org/2021_GWMP_web_version.pdf

d) Would the Project risk release of pollutants due to Project inundation in flood hazard, tsunami, or seiche zones?

Flood Zone

As described previously, portions of the Project Site and Off-Site Infrastructure Areas lie within flood zone “AH” with a given base flood elevation of 27’ and 29’, respectively. The Project Site is also within the boundaries of the NSJFMP. The flood elevations from this policy vary between 29’ and 31’ for the site. Since these flood elevations are higher than those given by the FIRM, they govern the building finish floor elevations which would be set at least 1’ higher than the flood elevation.

In addition, the NSJFMP would require that a minimum of 25% of the Project Site be at a lower elevation than the existing back of walk for any section through the site taken perpendicular to the flood conveyance path (generally perpendicular to North 1st Street). To comply with this requirement, the finished grades of approximately the westernmost third of the Project Site would be required to be graded to not exceed the existing back of walk elevation, essentially maintaining existing topography. This means that the western portion of the Project Site will act as a flood conveyance path extension of Orchard Parkway and would allow for shallow floodwaters to pass through the Project Site.

Tsunami and Seiche

As discussed in Section 4.10.1.2 Existing Conditions, the Project would not be located adjacent to any large bodies of water (i.e., the San Francisco Bay), nor would the Project be located within a designated tsunami inundation zone. The Project Site (as well as the Off-Site Infrastructure Areas) are located on relatively flat terrain within an urban area of San José, and there are no nearby hillsides or steep embankments that could present a mudflow hazard. The proposed Project would not risk release of pollutants due to inundation by tsunami, seiche, or mudflow.

Dam Inundation Hazards

The Project would be located in the dam failure inundation area for the Anderson Dam. While the Project Site would be inundated should the Anderson Dam fail catastrophically, the California Division of Safety of Dams (DSOD) reviews and annually inspects dams for potential failure due to a major seismic event. Annual surveillance reports are submitted to the DSOD, under the California Department of Water Resources. Dams are also inspected by Valley Water immediately following seismic activities to assess for structural damage. While the potential inundation resulting from catastrophic dam failure could damage property and proposed Project structures Project Site and pose a severe hazard to public safety, the probability of such failure is extremely remote; therefore, dam failure inundation, and any subsequent pollutant release, is not considered a significant impact.

The Project would not risk release of pollutants due to project inundation in flood hazard, tsunami, or seiche zones. **(Less than Significant Impact)**

e) Would the Project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

Valley Water prepared a Groundwater Management Plan (GMP) for the Santa Clara Plain and Llagas subbasins in November 2021, describing its comprehensive groundwater management framework including objectives and strategies, programs and activities to support those objectives, and outcome measures to gauge performance.⁷⁰ The GMP is the guiding document for how Valley Water will ensure groundwater basins within its jurisdiction are managed sustainably. The Santa Clara Plain subbasin has not been identified as a groundwater basin in a state of overdraft.

Implementation of the proposed Project would not interfere with any actions set forth by Valley Water in its GMP regarding groundwater recharge, transport of groundwater, and/or groundwater quality. The proposed Project would be located in an urban area served by existing water retailers and would not directly extract groundwater to meet its water demands. As discussed under checklist question b), the Project would not be located in proximity to any recharge ponds or creeks managed by Valley Water. Therefore, the proposed Project would not preclude the implementation of the GMP. **(Less than Significant Impact)**

4.10.2.2 Cumulative Impacts

Would the Project result in a cumulatively considerable contribution to a significant cumulative hydrology and water quality impact?

Build out of the proposed Project and other projects in the cumulative scenario would involve redevelopment of existing developed and vacant sites with substantial impervious surfaces, and these cumulative projects would be required to conform to applicable General Plan goals, policies, and action statements as well as all other applicable laws and regulations regarding stormwater runoff, infrastructure and flooding. The proposed Project would increase the amount of stormwater runoff from the Project Site but would be required to comply with the Construction General Permit to reduce potential surface and groundwater quality impacts during construction. In addition, the Project would manage future stormwater runoff from the Project Site using LID-based treatment methods, in compliance with Provision C.3 of the MRP.

Cumulatively, other projects of similar scale in San José would also be required to adhere to General Plan policies, standard permit conditions, and existing regulations to ensure hydrology and water quality impacts are avoided or minimized. The existing policies and regulations would reduce the hydrology and water quality impacts of the proposed project and cumulative projects in the area; therefore, the project would not result in significant cumulative impacts to hydrology and water quality. **(Less than Significant Cumulative Impact)**

⁷⁰ Santa Clara Valley Water District. *Groundwater Management Plan for the Santa Clara and Llagas Subbasins*. November 2021. Accessed July 25, 2022. https://s3.us-west-2.amazonaws.com/assets.valleywater.org/2021_GWMP_web_version.pdf

4.11 LAND USE AND PLANNING

4.11.1 Environmental Setting

4.11.1.1 *Regulatory Framework*

Regional and Local

Airport Plans and Regulations

The Norman Y. Mineta San José International Airport is owned and operated by the City of San José. It is regulated by various federal, state, and local laws and regulations, including the Code of Federal Aviation Regulations. Part 77 of the Federal Aviation Regulations (FAR) regulate obstructions to navigable airspace, as described in Section 3.9 Hazards and Hazardous Materials of this DEIR. The Project Site is located within the Airport Influence Area (AIA) established by the Santa Clara County Airport Land Use Commission (ALUC) in its Comprehensive Land Use Plan (CLUP) for the airport. The AIA is a composite of areas surrounding the airport that are affected by noise, height, and safety considerations, and the CLUP sets forth standards and policies for land use compatibility with these airport considerations.

Envision San José 2040 General Plan

The General Plan includes policies for the purpose of avoiding or mitigation impacts resulting from planned development projects in the City. The following are relevant to this analysis:

Envision San José 2040 Relevant Land Use Policies

Policies	Description
CD-1.12	Use building design to reflect both the unique character of a specific site and the context of surrounding development and to support pedestrian movement throughout the building site by providing convenient means of entry from public streets and transit facilities where applicable, and by designing ground level building frontages to create an attractive pedestrian environment along building frontages. Unless it is appropriate to the site and context, franchise-style architecture is strongly discouraged.
CD-5.8	Comply with applicable Federal Aviation Administration regulations identifying maximum heights for obstructions to promote air safety.
TR-8.7	Encourage private property owners to share their underutilized parking supplies with the general public and/or other adjacent private developments.
TR-14.2	Regulate development in the vicinity of airports in accordance with Federal Aviation Administration regulations to maintain the airspace required for the safe operation of these facilities and avoid potential hazards to navigation.
TR-14.3	For development in the Airport Influence Area overlays, ensure that land uses and development are consistent with the height, safety and noise policies identified in the Santa Clara County Airport Land Use Commission (ALUC) comprehensive land use plans for Mineta San José International and Reid-Hillview airports, or find, by a two-thirds vote of the governing body, that the proposed action is

TR-14.4	consistent with the purposes of Article 3.5 of Chapter 4 of the State Aeronautics Act, Public Utilities Code Section 21670 et seq. Require avigation and “no build” easement dedications, setting forth maximum elevation limits as well as for acceptable of noise or other aircraft related effects, as needed, as a condition of approval of development in the vicinity of airports.
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North San José Area Development Policy

The NSJADP provided for the development of up to 32,000 new residential dwelling units allowing for approximately 56,640 new residents within North San José, and up to 26.7 million square feet of new industrial/office/R&D building space beyond existing entitlements, allowing for 83,000 new employees. On May 17, 2022 the San José City Council approved a series of amendments to the NSJADP that effectively retired the 2005 plan with respect to future development, while still requiring past entitled projects to fulfill their requirements including mitigation and payment of traffic impact fees under the policy.

4.11.1.2 *Existing Conditions*

General Plan and Zoning

The Project Site is designated IP-Industrial Park and CIC-Combined Industrial/Commercial in the General Plan and is in the CIC-Combined Industrial/Commercial Zoning District. The Off-Site Infrastructure Areas are located within the public right of way and do not have General Plan or zoning designations.

The IP-Industrial Park General Plan land use designation allows for a FAR of up to 10.0 and for heights ranging from two to 15 stories. The designation is intended for a wide variety of industrial uses such as research and development, manufacturing, assembly, testing, and offices. Industrial Park uses are limited to those for which the functional or operational characteristics of a hazardous or nuisance nature can be mitigated through design controls. Areas identified exclusively for Industrial Park uses may contain a very limited number of supportive and compatible commercial uses when such uses are of a scale and design providing support only to the needs of businesses and their employees in the immediate industrial area. The majority of the 22.29-acre Project Site falls within this land use designation.

The CIC-Combined Industrial/Commercial land use designation allows a significant amount of flexibility for the development of a varied mixture of compatible commercial and industrial uses, including hospitals and private community gathering facilities. Properties with this designation are intended for commercial, office, or industrial developments or a compatible mix of these uses. This designation occurs in areas where the existing development patterns exhibit a mix of commercial and industrial land uses or in areas on the boundary between commercial and industrial uses. Development intensity can vary significantly in this designation based on the nature of specific uses likely to occur in a particular area. In order to maintain an industrial character, small, suburban strip centers are discouraged in this designation, although larger big-box type developments may be allowed because they mix elements of retail commercial and warehouse forms and uses. The portion

of the Project Site within this designation includes a small part of the eastern section of the Project Site at the intersection of Orchard Parkway and Component Drive.

The CIC-Combined Industrial/Commercial Zoning District allows for a broad range of commercial uses and some industrial uses, primarily industrial parks.

Surrounding Land Uses

To the north of the Project Site, there is an existing industrial campus with a General Plan land use designation of IP-Industrial Park and CIC-Combined Industrial/Commercial. To the east of the Project Site, there is a vacant lot and an office campus designated as TEC-Transit Employment Center. To the south of the Project Site, there is a vacant office building and parking lot designated as IP-Industrial Park. To the west of the Project Site is the Guadalupe River and trail, designated as OSPH-Open Space, Parklands and Habitat.

4.11.2 Impact Discussion

For the purpose of determining the significance of the Project's impact on land use and planning, would the Project:

- 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?

4.11.2.1 *Project Impacts*

a) Would the Project physically divide an established community?

The Project would involve the development of approximately 22.29 acres of vacant land (as well as the Off-Site Infrastructure Areas), which are surrounded by light industrial and office uses, with two data center buildings, emergency backup generating facilities, a substation, and associated on-site and off-site facilities to serve the Project. It does not involve any division of existing land within an established community for future development, or the construction of dividing infrastructure like highways, freeways, or major arterial streets. The Project would not close roads or remove existing pedestrian or bicycle facilities that link the Project Site to the surrounding areas. To the contrary, the Project involves, among other things, construction of a Class I bike path to connect to the long-planned regional Guadalupe Trail (as well as a financial contribution to support the construction of the remaining regional trail segment that would be located on non-Microsoft owned lands), thereby enhancing bicycle connectivity. Residential communities are not located adjacent to the Project Site and access to existing residential communities in North San José would not be inhibited by the proposed Project. Therefore, the proposed Project would not physically divide an established community. **(Less than Significant Impact)**

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?

Consistency with General Plan and Municipal Code

The Project proposes to develop approximately 631,278 square feet of data center uses on the Project Site, along with an electrical substation. The proposed uses are consistent with those allowed under the General Plan designations of CIC-Combined Industrial/Commercial and IP-Industrial Park. The CIC-Combined Industrial/Commercial land use designation allows for a FAR up to 12.0 (1 to 24 stories) and the IP-Industrial Park land use designation allows for a FAR up to 10.0 (2 to 15 stories). The proposed Project would result in an FAR of 0.63.⁷¹, which would not exceed the allowable FAR for either designation.

The entire Project Site is zoned CIC-Combined Industrial/Commercial. The Project would construct buildings with a maximum height of approximately 136 feet. The maximum allowable height in the CIC-Combined Industrial/Commercial zoning district is 50 feet; however, the City's Zoning Code provides geographic area-specific height restrictions which supersede those set forth by individual zoning districts. In the North San José area, to the north and west of Interstate 880, the maximum allowable building height is determined by the FAA limits and shall not exceed 250 feet in any event (Municipal Code Section 20.85.020). The proposed Project would be well under the maximum height of 250 feet allowed by the Zoning Code and would be reviewed by the FAA to ensure the proposed building heights do not pose an aviation hazard (refer to Section 4.9 Hazards and Hazardous Materials). The Project's consistency with applicable General Plan policies and Municipal Code requirements pertaining to specific environmental impacts are discussed throughout this SPPE Application in the relevant resource areas. For these reasons, the proposed Project would not result in environmental impacts due to conflict with the General Plan or Zoning Code or any other land use plan, policy or regulation adopted for the purpose of avoiding or mitigating an environmental effect. **(Less than Significant Impact)**

Compatibility with Airport Operations

The Norman Y. Mineta San José International Airport is located approximately 0.2-mile southwest of the Project Site. The Project Site is located within the AIA for the airport, as shown in Figure 8 of the Comprehensive Land Use Plan for the Norman Y. Mineta San José International Airport.⁷² Refer to Section 4.9 Hazards and Hazardous Materials, for a discussion of Project compliance with FAA regulations and General Plan policies regarding aircraft safety.

Pursuant to City and ALUC policy, the Project would be required to notify the FAA and obtain an issuance of "no hazard" determination prior to Project approval. The Project would be required to grant an Avigation Easement over the Project Site as a Condition of Project Approval. The recorded easement would provide for acceptance of aircraft noise and other effects of aircraft flyovers. By requiring the proposed Project to comply with applicable General Plan policies and FAA procedures,

⁷¹ Proposed Data Center Square Footage 616,592 / Site Area Square Footage 971,388 = 0.63 FAR

⁷² Santa Clara County Airport Land Use Commission. *Comprehensive Land Use Plan Santa Clara County Norman Y. Mineta San José International Airport*. Amended November 16, 2016. Accessed July 13, 2022. https://stgenpln.blob.core.windows.net/document/ALUC_SJC_CLUP.pdf.

the proposed Project would have a less than significant impact on airport operations and would not conflict with the CLUP. **(Less than Significant Impact)**

City of San José Riparian Corridor Policy

The City of San José's Riparian Corridor Policy prohibits development within 100 feet of any riparian corridor. This includes buildings, structures, and/or ornamental landscaped areas. Any design modifications, such as the addition of landscaping or impervious surfaces along the Project Site's western boundary, would be subject to compliance with applicable setback requirements of the Riparian Corridor Policy. Therefore, the Project would not result in a significant environmental impact due to conflict with the Riparian Corridor Policy. **(Less than Significant Impact)**

4.11.2.2 Cumulative Impacts

Would the Project result in a cumulatively considerable contribution to a significant cumulative land use and planning impact?

The proposed Project would not include any infrastructure that could potentially divide an established community, such as roadways, bridges, or open spaces. Development of the project would be confined to the site and would be consistent with the General Plan and Zoning Ordinance (following the proposed conforming rezone). The project would not conflict with any other land use plans, policies, or regulations adopted to reduce or avoid environmental impacts.

Other projects in the city would be required to go through the City's development review process. Projects would be analyzed for conformance with applicable policies adopted for the purpose of avoiding or mitigating an environmental impact through the CEQA review process. The project, in combination with other cumulative development, would not result in a significant cumulative land use impact. **(Less than Significant Cumulative Impact)**

4.12 MINERAL RESOURCES

4.12.1 Environmental Setting

4.12.1.1 *Regulatory Framework*

State

Surface Mining and Reclamation Act

The Surface Mining and Reclamation Act (SMARA) was enacted by the California legislature in 1975 to address the need for a continuing supply of mineral resources, and to prevent or minimize the negative impacts of surface mining to public health, property, and the environment. As mandated under SMARA, the State Geologist has designated mineral land classifications in order to help identify and protect mineral resources in areas within the state subject to urban expansion or other irreversible land uses which would preclude mineral extraction. SMARA also allowed the State Mining and Geology Board (SMGB), after receiving classification information from the State Geologist, to designate lands containing mineral deposits of regional or statewide significance.

Pursuant to the mandate of the SMARA, the SMGB has designated the Communications Hill Area (Sector EE), bounded generally by the Southern Pacific Railroad, Curtner Avenue, SR 87, and Hillsdale Avenue as containing mineral deposits that are of regional significance as a source of construction aggregate materials. Neither the State Geologist nor the SMGB have classified any other areas in San José as containing mineral deposits of statewide significance or requiring further evaluation.

4.12.1.2 *Existing Conditions*

The Santa Clara Valley was formed when sediments derived from the Santa Cruz Mountains and the Mount Hamilton-Diablo Range were exposed by continuous tectonic uplift and regression of the inland sea that had previously inundated the area. As a result of this process, the topography of the City is relatively flat and there are no significant mineral resources. Neither the Project Site nor the Off-Site Infrastructure Areas are located in an area containing known mineral resources.

Mineral resources found in Santa Clara County include construction aggregate deposits such as sand, gravel, and crushed stone. The only area in the City of San José that is designated by the State Mining and Geology Board under the Surface Mining and Reclamation Act of 1975 (SMARA) as containing mineral deposits which are of regional significance is Communications Hill. Communications Hill is located over 7.5 miles southeast of the Project Site and generally bound by the Southern Pacific Railroad, Curtner Avenue, State Route 87, and Hillsdale Avenue.⁷³

4.12.2 Impact Discussion

For the purpose of determining the significance of the Project's impact on mineral resources, would the Project:

⁷³ City of San José. 2011. *Envision San José 2040 General Plan Final Program EIR*.

- a) Result in the loss of availability of a known mineral resource that would be of value to the region and 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?

4.12.2.1 *Project Impacts*

a) Would the Project result in the loss of availability of a known mineral resource that would be of value to the region and residents of the state?

Based on the United States Geological Survey (USGS) map of mines and mineral resources, neither the Project Site nor the Off-Site Infrastructure Areas are comprised of known mineral resources or mineral resource production areas.⁷⁴ Therefore, the proposed Project would not result in the loss of availability of a known mineral resource that would be of value to the residents in the state or region. **(No Impact)**

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?

Neither the Project Site nor the Off-Site Infrastructure Areas are recognized as a mineral resource recovery site on a local general plan, specific plan, or other land use plan. The proposed Project would not result in the loss of availability of a locally important mineral resource recovery site. **(No Impact)**

4.12.2.2 *Cumulative Impacts*

Would the Project result in a cumulatively considerable contribution to a significant cumulative mineral resources impact?

As discussed above, the proposed project would not result in the loss of availability of a known mineral resource or mineral resource recovery site. Therefore, the proposed project in combination with other projects would not contribute to a significant cumulative mineral resource impact. **(No Cumulative Impact)**

⁷⁴ United States Geological Survey. *Mineral Resources Online Spatial Data: Interactive maps and downloadable data for regional and global Geology, Geochemistry, Geophysics, and Mineral Resources*. Accessed July 14, 2022. <https://mrdata.usgs.gov/>

4.13 NOISE

The discussion in this section is based in part upon a Noise Report prepared for the Project by Environmental Systems Design, Inc., on June 30, 2022. The report is included in Appendix H of the SPPE Application.

4.13.1 Environmental Setting

4.13.1.1 *Regulatory Framework*

Noise

Factors that influence sound as it is perceived by the human ear, include the actual level of sound, period of exposure, frequencies involved, and fluctuation in the noise level during exposure. Noise is measured on a decibel scale, which serves as an index of loudness. The zero on the decibel scale is based on the lowest sound level that the healthy, unimpaired human ear can detect. Each 10 decibel increase in sound level is perceived as approximately a doubling of loudness. Because the human ear cannot hear all pitches or frequencies, sound levels are frequently adjusted or weighted to correspond to human hearing. This adjusted unit is known as the A-weighted decibel, or dBA.

Since excessive noise levels can adversely affect human activities and human health, federal, state, and local governmental agencies have set forth criteria or planning goals to minimize or avoid these effects. Noise guidelines are generally expressed using one of several noise averaging methods, including L_{eq} , DNL, or CNEL.⁷⁵ These descriptors are used to measure a location's overall noise exposure, given that there are times when noise levels are higher (e.g., when a jet is taking off from an airport or when a leaf blower is operating) and times when noise levels are lower (e.g., during lulls in traffic flows on freeways or in the middle of the night). L_{max} is the maximum A-weighted noise level during a measurement period.

Vibration

Ground vibration consists of rapidly fluctuating motions or waves with an average motion of zero. Vibration amplitude can be quantified using Peak Particle Velocity (PPV), which is defined as the maximum instantaneous positive or negative peak of the vibration wave. PPV has been routinely used to measure and assess ground-borne construction vibration. Studies have shown that the threshold of perception for average persons is in the range of 0.008 to 0.012 inches/second (in/sec) PPV.

4.13.1.2 *Regulatory Framework*

California Green Building Standards Code

For commercial uses, CalGreen (Section 5.507.4.1 and 5.507.4.2) requires that wall and roof-ceiling assemblies exposed to the adjacent roadways have a composite STC rating of at least 50 or a

⁷⁵ L_{eq} is a measurement of average energy level intensity of noise over a given period of time. Day-Night Level (DNL) is a 24-hour average of noise levels, with a 10 dB penalty applied to noise occurring between 10:00 PM and 7:00 AM. Community Noise Equivalent Level (CNEL) includes an additional five dB applied to noise occurring between 7:00 PM and 10:00 PM. Where traffic noise predominates, the CNEL and DNL are typically within two dBA of the peak-hour L_{eq} .

composite OITC rating of no less than 40, with exterior windows of a minimum STC of 40 or OITC of 30 when the commercial property falls within the 65 dBA L_{dn} or greater noise contour for a freeway or expressway, railroad, or industrial or stationary noise source. The state requires interior noise levels to be maintained at 50 dBA $L_{eq(1-hr)}$ or less during hours of operation at a proposed commercial use.

Transportation and Construction Guidance Manual

In 2013, the California Department of Transportation published a Transportation and Construction Guidance Manual. The Manual developed a synthesis of various vibration criteria to assess the damage potential for representative categories of structures and effects upon people.

The guideline criteria is summarized in Table 4.13-1 below which include seven categories. The first two categories (Categories 1 and 2) address human perceptibility of vibration only. The five remaining categories (Categories 3 through 7) address human perceptibility and potential for damage to buildings described as extremely fragile historic buildings, ruins, ancient monuments; fragile buildings; historic and some old buildings; older residential structures; new residential structures; and modern industrial/commercial buildings. Most, if not all, buildings in the downtown area would fall into Categories 5 through 7.

The goal in establishing vibration limits is to mitigate potential vibration impacts associated with demolition and construction activities to a less-than-significant level by establishing safe limits to protect structures from potential damage and to minimize vibration impacts on people and businesses.

Table 4.13-1: Construction Vibration Threshold Criteria			
Category	Continuous PPV at affected building (inch/sec)	Human Reaction	Effect on Buildings
1	0.01	Barely perceptible	No effect
2	0.04	Distinctly perceptible	Vibration unlikely to cause damage of any type to any structure
3	0.08	Distinctly perceptible to strongly perceptible	Recommended upper level of the vibration to which ruins and ancient monuments should be subjected
4	0.1	Strongly perceptible	Threshold at which there is a risk of cosmetic damage to fragile buildings with no risk of cosmetic damage to most buildings
5	0.25	Strongly perceptible to severe	Threshold at which there is a risk of damage to historic and some old buildings
6	0.3	Strongly perceptible to severe	Threshold at which there is a risk of damage to older residential structures

Table 4.13-1: Construction Vibration Threshold Criteria			
Category	Continuous PPV at affected building (inch/sec)	Human Reaction	Effect on Buildings
7	0.5	Severe - Vibrations considered unpleasant	Threshold at which there is a risk of damage to new residential and modern commercial/industrial structures
Source: Transportation and Construction Vibration Guidance Manual, California Department of Transportation, September 2013.			

Envision San José 2040 General Plan

The General Plan includes the following noise policies that are relevant to this analysis. The City's noise and land use compatibility guidelines are shown in Table 4.13-2, below.

Table 4.13-2: Land Use Compatibility Guidelines for Community Noise in San José						
Land Use Category	Exterior DNL Value in Decibels					
	55	60	65	70	75	80
1. Residential, Hotels and Motels, Hospitals and Residential Care ¹						
2. Outdoor Sports and Recreation, Neighborhood Parks and Playgrounds						
3. Schools, Libraries, Museums, Meeting Halls, and Churches						
4. Office Buildings, Business Commercial, and Professional Offices						
5. Sports Arena, Outdoor Spectator Sports						
6. Public and Quasi-Public Auditoriums, Concert Halls, and Amphitheaters						

¹Noise mitigation to reduce interior noise levels pursuant to Policy EC-1.1 is required.

-  **Normally Acceptable:**
Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements.
-  **Conditionally Acceptable:**
Specified land use may be permitted only after detailed analysis of the noise reduction requirements and noise mitigation 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 policies. Development would only be considered when technically feasible mitigation is identified that is also compatible with relevant design guidelines.

Envision San José 2040 Relevant Noise Policies

Policies	Description
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. Applicable standards and guidelines for land uses in San José include: <u>Interior Noise Levels</u> The City’s standard for interior noise levels in residences, hotels, motels, residential care facilities, and hospitals is 45 dBA DNL. Include appropriate site and building design, building construction and noise attenuation techniques in new development to meet this standard. For sites with exterior noise levels of 60 dBA DNL or more, an acoustical analysis following protocols in the City-adopted California Building Code is required to demonstrate that development projects can meet this standard. The acoustical analysis shall base required noise attenuation techniques on expected <i>Envision General Plan</i> traffic volumes to ensure land use compatibility and General Plan consistency over the life of this plan. <u>Exterior Noise Levels</u> The City’s acceptable exterior noise level objective is 60 dBA DNL or less for residential and most institutional land uses (refer to Table EC-1 in the General Plan). Residential uses are considered “normally acceptable” with exterior noise exposures of up to 60 dBA DNL and “conditionally compatible” where the exterior noise exposure is between 60 and 75 dBA DNL such that the specified land use may be permitted only after detailed analysis of the noise reduction requirements and needed noise insulation features are included in the design.
EC-1.2	Minimize the noise impacts of new development on land uses sensitive to increased noise levels (Land Use Categories 1, 2, 3 and 6 in Table EC-1 in the General Plan) 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.
EC-1.3	Mitigate noise generation of new nonresidential 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.

- 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.
- EC-1.7 Require construction operations within San José to use best available noise suppression devices and techniques and limit construction hours near residential uses per the City's Municipal Code. The 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.
- For such large or complex projects, a construction noise logistics plan that specifies hours of construction, noise and vibration minimization measures, posting or notification of construction schedules, and designation of a noise disturbance coordinator who would respond to neighborhood complaints will be required to be in place prior to the start of construction and implemented during construction to reduce noise impacts on neighboring residents and other uses.
- EC-2.3 Require new development to minimize continuous vibration impacts to adjacent uses during demolition and construction. For sensitive historic structures, including ruins and ancient monuments or buildings that are documented to be structurally weakened, a continuous vibration limit of 0.08 in/sec PPV (peak particle velocity) will be used to minimize the potential for cosmetic damage to a building. 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. Avoid use of impact pile drivers within 25 feet of any buildings, and within 100 feet of a historical building, or building in poor condition. On a project-specific basis, this distance of 100 feet may be reduced to 50 feet where warranted by a technical study by a qualified professional that verifies that there will be virtually no risk of cosmetic damage to sensitive buildings from the new development during demolition and construction.

Municipal Code

Chapter 20.100.450 of the Municipal Code establishes allowable hours of construction within 500 feet of a residential unit between 7:00 a.m. to 7:00 p.m. on Monday through Friday, unless otherwise expressly allowed in a Development Permit or other planning approval. The Municipal Code does not establish quantitative noise limits for demolition or construction activities occurring in the City.

The Zoning Ordinance limits noise levels to 55 dBA L_{eq} at any residential property line, 60 dBA L_{eq} at commercial property lines, and 70 dBA L_{eq} at any industrial property line, unless otherwise expressly allowed in a Development Permit or other planning approval. The Zoning Ordinance also limits noise emitted by stand-by/backup and emergency generators to 55 decibels at the property line

of residential properties. The testing of generators is limited to 7:00 AM to 7:00 PM, Monday through Friday.

4.13.1.3 Existing Conditions

The Project Site and Off-Site Infrastructure Areas are located in an urban area of North San José. The surrounding land uses are characterized by office and industrial campuses with surface parking lots. The predominant sources of ambient noise in the Project vicinity include vehicle traffic (along US 101, West Trimble Road, and Orchard Parkway) and aircraft flyovers associated with the San José International Airport. The Project Site is located within the current 65 to 70 dBA CNEL noise contours for the San José International Airport.⁷⁶ In 2027 and 2037, the Project Site would be within 60 to 65 dBA CNEL noise contours.^{77,78} Commercial noise sources such as parking lot activities and delivery loading/unloading activities also contribute to the ambient noise levels at the Project Site. Noise levels can get lower over time due to increased efficiency and technological improvements to noise generating sources.

Measurements of the Project Site noise were conducted July 19 through 21, 2022. Measurements were conducted over a 25-hour period and the measured noise levels are provided in Table 4.13-3 below.

Table 4.13-3: Noise Survey Results			
	L _{eq} (dBA)	Penalty (dBA)	Overall CNEL
Day	57.5	0	62.1
Evening	57.7	5	
Night	55.4	10	
Source: Environmental Systems Design, Inc. SJ04 Environmental Noise Report. California Energy Commission and San José Planning Department. July 29, 2022			

These measured noise levels are within anticipated noise levels from the Airport Noise Contours described above, as the Project Site is within the 65 dBA CNEL noise contour.

The Project Site is vacant and does not contain sensitive receivers. Recreational users of the Guadalupe River Trail are not considered sensitive receptors because of their temporary use of the trail. The closest sensitive receptors are participants at the Silicon Valley Church approximately 770 feet northwest of the Project Site and residences located approximately 0.8-mile to the north of the Project Site in the City of Santa Clara.

⁷⁶ Santa Clara County Airport Land Use Commission. *Comprehensive Land Use Plan Santa Clara County Norman Y. Mineta San José International Airport*. Figure 5. Amended November 16, 2016. Accessed July 13, 2022. https://stgenpln.blob.core.windows.net/document/ALUC_SJC_CLUP.pdf.

⁷⁷ Norman Y. Mineta San José International Airport. “2027 CNEL Contours for Airport Master Plan”. Amended June 8, 2010. Accessed July 14, 2022. https://www.flysanjose.com/sites/default/files/2017-03/2010_Contours.pdf

⁷⁸ Norman Y. Mineta San José International Airport. “2037 CNEL Contours for Airport Master Plan”. Amended April 28, 2020. Accessed July 14, 2022. https://www.flysanjose.com/sites/default/files/noise/2037_CNEL.pdf

4.13.2 Impact Discussion

For the purpose of determining the significance of the Project's impact on noise, would the Project result in:

- 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?

City of San José Standards

The City of San José relies on the following guidelines and standards for new development to avoid impacts above the CEQA thresholds of significance outlined above.

Construction Noise

For temporary construction-related noise to be considered significant, construction noise levels would have to exceed ambient noise levels by 5.0 dBA L_{eq} or more and exceed the normally acceptable levels of 60 dBA L_{eq} at the nearest noise-sensitive land uses or 70 dBA L_{eq} at office or commercial land uses for a period of more than 12 months.

Operational Noise

The City of San José considers a significant noise impact to occur where existing noise sensitive land uses would be subject to permanent noise level increases of 3.0 dBA DNL or more where noise levels would equal or exceed the "Normally Acceptable" level, or 5.0 dBA DNL or more where noise levels would remain normally acceptable. A significant noise impact would also be identified if the project would expose persons to or generate noise levels that would exceed applicable noise standards presented in the General Plan.

Construction Vibration

The City of San José relies on guidance developed by Caltrans to address vibration impacts from development projects in San José. A vibration limit of 12.7 millimeters per second (mm/sec; 0.5 inch/sec) PPV is used for buildings that are structurally sound and designed to modern engineering standards. A conservative vibration limit of 5.0 mm/sec (0.2 inches/sec) PPV has been used for buildings that are found to be structurally sound but where structural damage is a major concern. For historic buildings or buildings that are documented to be structurally weakened, a conservative limit of 2.0 mm/sec (0.08 inches/sec) PPV is used to provide the highest level of protection.

4.13.2.1 Project Impacts

- 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?**

Construction Noise

Construction activities for individual projects are typically carried out in stages. During each stage of construction, there would be a different mix of equipment operating, and noise levels would vary by stage and vary within stages, based on the amount of equipment in operation and the location at which the equipment is operating. Typical construction noise levels at a distance of 50 feet are shown in Tables 4.13-4 and 4.13-5. Table 4.13-4 shows the average noise level ranges by construction phase, and Table 4.13-5 shows the average and maximum noise level ranges for different construction equipment. Construction-generated noise levels drop off at a rate of about 6 dBA per doubling of the distance between the source and receptor. Shielding by buildings or terrain can provide an additional 5 to 10 dBA noise reduction at distant receptors.

Table 4.13-4: Typical Ranges of Construction Noise Levels at 50 Feet, L _{eq} (dBA)								
	Domestic Housing		Office Building, Hotel, Hospital, School, Public Works		Industrial Parking Garage, Religious Amusement & Recreations, Store, Service Station		Public Works Roads & Highways, Sewers, and Trenches	
	I	II	I	II	I	II	I	II
Ground Clearing	83	83	84	84	84	83	84	84
Excavation	88	75	89	79	89	71	88	78
Foundations	81	81	78	78	77	77	88	88
Erection	81	65	87	75	84	72	79	78
Finishing	88	72	89	75	89	74	84	84
I - All pertinent equipment present at site.								
II - Minimum required equipment present at site.								
Source: U.S.E.P.A., Legal Compilation on Noise, Vol. 1, p. 2-104, 1973.								

Table 4.13-5: Construction Equipment 50-foot Noise Emission Levels (dBA)		
Equipment Category	L_{eq}^{1,2,3}	L_{max}^{1,2}
Air Hose	93	100
Air-Operated Post Driver	83	85
Asphalt Distributor Truck (Asphalt Sprayer)	-	70
Auger Drill	88	101
Backhoe	76	84
Bar Bender	66	75
Blasting (Abrasive)	100	103
Blasting (Explosive)	83	93
Chainsaw	79	83
Chip Spreader	-	77
Chipping Gun	95	100
Circular Saw	73	76
Compactor (Plate)	-	75
Compactor (Roller)	82	83
Compressor	66	67
Concrete Batch Plant	87	90
Concrete Grinder	-	97
Concrete Mixer Truck	81	82
Concrete Pump Truck	84	88
Concrete Saw	85	88
Crane	74	76
Directional Drill Rig	68	80
Drum Mixer	66	71
Dump Truck (Cyclical)	82	92
Dump Truck (Passby)	-	73
Excavator	76	87
Flatbed Truck	-	74
Front End Loader (Cyclical)	72	81
Front End Loader (Passby)	-	71
Generator	67	68
Grader (Passby)	-	79
Grinder	68	71
Hammer Drill	72	75
Hoe Ram	92	99
Horizontal Bore Drill	87	88
Impact Pile Driver	99	105
Impact Wrench	68	72
Jackhammer	91	95
Jig Saw	92	95
Joint Sealer	-	74
Man Lift	72	73
Movement Alarm	79	80
Mud Recycler	73	74
Nail Gun	70	74
Pavement Scarifier (Milling Machine)	-	84
Paving – Asphalt (Paver, Dump Truck)	-	82
Paving – Asphalt (Paver, MTV, Dump Truck)	-	83
Paving – Concrete (Placer, Slipform Paver)	87	91
Paving – Concrete (Texturing/Curing Machine)	73	74
Paving – Concrete (Triple Roller Tube Paver)	85	88

Table 4.13-5: Construction Equipment 50-foot Noise Emission Levels (dBA)		
Equipment Category	L_{eq}^{1,2,3}	L_{max}^{1,2}
Power Unit (Power Pack)	81	82
Pump	73	74
Reciprocating Saw	64	66
Rivet Buster	100	107
Rock Drill	92	95
Rumble Strip Grinding	-	87
Sander	65	68
Scraper	-	92
Shot Crete Pump/Spray	78	87
Street Sweeper	-	81
Telescopic Handler (Forklift)	-	88
Vacuum Excavator (Vac-Truck)	86	87
Ventilation Fan	62	63
Vibratory Concrete Consolidator	78	80
Vibratory Pile Driver	99	105
Warning Horn (Air Horn)	94	99
Water Spray Truck	-	72
Welding Machine	71	72
Notes: ¹ Measured at 50 feet from the construction equipment, with a “slow” (1 sec.) time constant ² Noise levels apply to total noise emitted from equipment and associated components operating at full power while engaged in its intended operation. ³ Equipment without average (L _{eq}) noise levels are non-stationary and best represented only by maximum instantaneous noise level (L _{max}). Source: Project 25-49 Data, National Cooperative Highway Research Program, https://apps.trb.org/cmsfeed/trbnetprojectdisplay.asp?projectid=3889 , October 2018		

Construction of onsite improvements would occur over a period of approximately 50 months. Typical hourly average construction noise levels for projects of this type would range from 75 to 89 dBA L_{eq} at a distance of 50 feet, depending on the intensity of construction activity at a given time. This is roughly equivalent to the distance of the nearest building to the Project Site, which is associated with the industrial uses to the north. The nearest residences are located roughly 0.8 mile from the Project Site and would not experience substantial construction noise from the Project. A church is located roughly 770 feet northwest of the Project Site and would experience construction noise levels ranging from approximately 51 to 65 dBA L_{eq}, based on a drop off rate of 6 dBA per doubling of the distance between the source and receptor, or 46 to 60 dBA L_{eq} if shielding by existing buildings is taken into account, which would apply in this instance due to intervening structures.

Construction activities would also occur in the offsite infrastructure improvement area, which are located adjacent to commercial and industrial uses. Intermittent noise would be caused by periodic, short-term equipment operation. For example, equipment such as excavators and backhoes would operate intermittently during the construction period along various segments of the line. Construction of the offsite infrastructure improvements is expected to last roughly 90 days.

There are no residential uses within 500 feet of the Project Site or commercial/office uses within 200 feet of the Project Site. An industrial campus is located directly north of the site, but the General Plan does not limit construction noise levels at industrial uses. Project construction noise levels would not exceed ambient noise levels by 5.0 dBA L_{eq} or more, nor would they exceed the normally acceptable levels of 60 dBA L_{eq} at the nearest noise-sensitive land uses or 70 dBA L_{eq} at office or commercial

land uses for a period of more than 12 months. As a result, the Project would not result in significant construction noise impacts.

The City of San José requires all projects to implement the following Standard Permit Conditions, which are included in this SPPE Application as an Applicant Proposed Project Design Feature, to reduce construction noise.

PDF NOI-1: The Project shall implement the following City of San José Standard Permit Conditions related to construction noise:

- Limit construction hours to between 7:00 AM and 7:00 PM, Monday through Friday, unless permission is granted with a development permit or other planning approval. No construction activities are permitted on the weekends at sites within 500 feet of a residence. Construction outside of these hours may be approved through a development permit based on a site-specific “construction noise mitigation plan” and a finding by the Director of PBCE that the construction noise mitigation plan is adequate to prevent noise disturbance of affected residential uses.
- Construct solid plywood fences around construction sites adjacent to operational business, residences, or other noise-sensitive land uses.
- Equip all internal combustion engine-driven equipment with intake and exhaust mufflers that are in good condition and appropriate for the equipment.
- Prohibit unnecessary idling of internal combustion engines.
- Locate stationary noise-generating equipment such as air compressors or portable power generators as far as possible from sensitive receptors (if any). Construct temporary noise barriers to screen stationary noise-generating equipment when located near adjoining sensitive land uses (if any).
- Utilize “quiet” air compressors and other stationary noise sources where technology exists.
- Control noise from construction workers’ radios to a point where they are not audible at existing residences bordering the Off-Site Infrastructure Areas.
- Notify all adjacent business, residences, and other noise-sensitive land uses of the construction schedule, in writing, and provide a written schedule of “noisy” construction activities to adjacent land uses and nearby residences.
- If complaints are received or excessive noise levels cannot be reduced using the measures above, erect a temporary noise control blanket barrier along surrounding building facades that face the construction sites.
- Designate a “disturbance coordinator” who shall be responsible for responding to any complaints about construction noise. The disturbance coordinator shall determine the cause of the noise complaint (e.g., bad

muffler, etc.) and shall require that reasonable measures be implemented to current the problem. Conspicuously post a telephone number for the disturbance coordinator at the construction site and include it in the notice sent to neighbors regarding the construction schedule.

With implementation of the project design feature above, the proposed Project would not result in a significant construction noise impact. **(Less than Significant Impact)**

Operational Noise

Mechanical Equipment Noise

The proposed Project would include backup diesel powered generators, fluid coolers, VRF condensers, and dedicated outdoor air systems. The City's Noise Element requires noise produced by operation of mechanical equipment to be limited to 55 dBA DNL at receiving noise-sensitive land uses and 70 dBA DNL at industrial land uses. The noise that would be potentially generated by the mechanical equipment and emergency generators were modeled under two scenarios: Cooling Only and Testing scenarios. The Cooling Only scenario accounted for day-to-day operations where no emergency backup generators would be operating. The Testing scenario accounted for generator testing. As mentioned in Section **Error! Reference source not found.**, the nearest noise sensitive receivers would be participants at the Silicon Valley Church 770 feet northwest of the Project Site and residences located roughly 0.8 mile north of the site. The surrounding uses are all industrial and office developments. As shown in Table 4.13-6, the ambient noise limits are not exceeded at any receiver location for either the Cooling Only or Testing scenarios. Therefore, the Project's noise impact due to mechanical equipment would be less than significant. **(Less than Significant Impact)**

Table 4.13-6: Summary of Noise Model Results (dBA)				
Receiver Locations	Land Use	Noise Limit (dBA)	Cooling Only Scenario	Generator Testing Scenario
Northern Property Line	Industrial	70	55.7	69.3
Eastern Property Line	Industrial	70	53.2	55.2
Southern Property Line	Industrial	70	52.2	57.2
Western Property Line	Industrial	70	57.3	62.7
Nearest Residence	Residential	55	50.0	52.5

Based on the Project-generated noise levels listed above, the Project would not increase the ambient noise level at adjacent properties more than five dBA. The nearest residential property impact is calculated to be significantly lower than existing noise measurements and Airport Noise Contours. Users of the Guadalupe Trail, located just west of the Project Site, would not experience noise levels from the Project Site more than the existing Airport Noise Contour of 65 dBA.

b) Would the Project result in generation of excessive groundborne vibration or groundborne noise levels?

Construction Vibration

Construction of the Project would occur over a period of approximately 50 months. A significant impact would be identified if the construction of the Project would generate groundborne vibration levels at adjacent structures exceeding 0.5 in/sec PPV, as these levels would have the potential to result in damage to buildings that are structurally sound and designed to modern engineering standards.

Onsite Project construction activities, such as drilling, the use of jackhammers, rock drills and other high-power or vibratory tools, and rolling stock equipment (tracked vehicles, compactors, etc.) may generate substantial vibration in the immediate vicinity of the work area. Impact or vibratory pile driving is not proposed as a method of construction. Vibration levels would vary depending on soil conditions, construction methods, and equipment used. Table 4.13-7 presents typical vibration levels that could be expected from construction equipment at a distance of 25 feet, and calculated vibrations levels that could be expected at distances of 100 and 150 feet. There are no historic structures in the project vicinity which would be susceptible to vibration.

Table 4.13-7: Vibration Source Levels for Construction Equipment (in/sec PPV)				
Equipment		25 feet	100 feet	150 feet
Vibratory Roller		0.210	0.048	0.029
Clam Shovel Drop		0.202	0.047	0.028
Hoe Ram		0.089	0.020	0.012
Large bulldozer		0.089	0.020	0.012
Caisson drilling		0.089	0.020	0.012
Loaded trucks		0.076	0.018	0.011
Jackhammer		0.035	0.008	0.005
Hydromill (slurry wall)	in soil	0.017	0.004	0.002
	in rock	0.008	0.002	0.001
Small bulldozer		0.003	0.001	0.000
Source: Transit Noise and Vibration Impact Assessment, United States Department of Transportation, Office of Planning and Environment, Federal Transit Administration, September 2018 as modified by Illingworth & Rodkin, Inc., March 2022.				
These levels calculated assuming normal propagation conditions, using a standard equation of $PPV_{eqmt} = PPV_{ref} * (25/D)^{1.5}$, from FTA, May 2006.				

The closest existing structure (which is located on the adjacent Lumileds campus) to the Project Site is roughly 50 feet to the north of the project boundary. As seen in Table 4.13-7, construction-generated vibration levels would not exceed 0.5 in/sec PPV at any structure in the project vicinity.

Construction of the offsite infrastructure improvements would generate less vibration than construction of the data center facility. Construction activities within the Off-Site Infrastructure Areas would occur in the street right of way at a distance greater than 25 feet from nearby buildings and would not generate substantial vibration at nearby structures. **(Less than Significant Impact)**

Operation Vibration

The emergency backup generators and HVAC equipment would be installed with vibration isolators, which would limit levels of vibration to a level below human perception. Therefore, operational vibration impacts would be less than significant. **(Less than Significant Impact)**

-
- 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?**
-

The Norman Y. Mineta International Airport is located 0.2-mile southwest of the Project Site. The Project Site is exposed to noise levels between 65 and 70 dBA CNEL because of activities at the airport. Based on the General Plan Land Use Compatibility Guidelines, outdoor noise levels of up to 70 dBA DNL are considered satisfactory for commercial, industrial and office uses. As described above, existing ambient noise levels on the site were measured to be 62.1 dBA CNEL, and the project is located within the Airport's 65 dBA CNEL noise contour, both of which are below the applicable acceptable outdoor noise level of 70 dBA DNL. Therefore, the Project's proximity to the airport would not result in the exposure of people residing or working in the project area to excessive noise levels. Due to its location within the 65 dBA CNEL noise contours, the Project would be required to grant an Avigation Easement to the City as an acceptance of airport noise levels. **(Less than Significant Impact)**

4.13.2.2 Cumulative Impacts

Would the Project result in a cumulatively considerable contribution to a significant cumulative noise impact?

The Project's noise and vibration impacts are localized; therefore, the geographic study area is the Project Site and surrounding area (within 1,000 feet of the Project Site). For purposes of construction impacts, the cumulative projects include a pending (i.e., application submitted but not approved) project located roughly 1,000 feet north of the site that proposes to redevelop a 10.35-acre portion of the 37.57-acre parcel located at 350 West Trimble Road with a 56-foot-tall, 208,000-square foot manufacturing and assembly building. There are no other pending projects located within 1,000 feet of the site. The nearest approved (but not constructed) projects are located at 90 East Brokaw (Brokaw Road Office-Parcel III); 3130, 3120, 3110, and 3100 Zanker Road (Innovation Place; and 2890 North First Street (The Station on North First). Those sites are located over 1.5 miles from the Project Site. Noise from sources at this distance would not overlap in a manner that noticeably increases noise levels in the immediate vicinity of the cumulative projects. Assuming the proposed Project and the adjacent project at 350 West Trimble Road receive their respective approvals, a worst-case scenario assuming an overlapping construction schedule of the two projects was assumed. In this scenario, overall construction noise levels could increase by up to three dBA above those discussed above generated by the proposed Project alone. However, the project is located in an area surrounded by industrial and office uses. The nearest sensitive receptor to the project site is a church located roughly 770 feet away. Project-generated construction noise levels at the church would be roughly 60 dBA, potentially increasing to 63 dBA with the addition of the adjacent pending project

located at 350 West Trimble Road. As described previously, ambient noise levels in the project were measured to be 62.1 dBA CNEL, and the Airport noise contour for the area is 65 dBA CNEL. Cumulative construction noise levels at the sensitive receptor would, therefore, not be 5.0 dBA or more over ambient conditions, per the City's threshold. Further, construction noise would be temporary and construction measures would be required to be implemented by both projects to reduce construction noise, per standard permit conditions. Thus, there would be no significant cumulative impact with respect to construction noise, and the Project would not result in a cumulatively considerable contribution to this already less than significant cumulative noise and vibration impact.

With respect to cumulative operational impacts, the adjacent pending project located at 350 West Trimble Road would be located roughly 1,000 feet north of the site and consists of an advanced manufacturing building. Operational noise of this use would be limited to rooftop mechanical equipment, and would likely generate lower noise levels than the cooling equipment and backup generators proposed by the Project. As described previously, the Project would not generate substantial noise levels at adjacent property lines or nearby sensitive receptors. Due to the nature of the proposed use at the adjacent 350 West Trimble site, the distance between the two uses, and the noise levels generated by operation of both projects, the projects would result in a less than significant cumulative noise impact. **(Less than Significant Cumulative Impact)**

4.14 POPULATION AND HOUSING

4.14.1 Environmental Setting

4.14.1.1 *Regulatory Framework*

State

Housing-Element Law

State requirements mandating that housing be included as an element of each jurisdiction's general plan is known as housing element law. The Regional Housing Need Allocation (RHNA) is the state-mandated process to identify the total number of housing units (by affordability level) that each jurisdiction must accommodate in its housing element. California housing element law requires cities and counties to: 1) zone adequate lands to accommodate its RHNA; 2) produce an inventory of sites that can accommodate its share of the RHNA; 3) identify governmental and non-governmental constraints to residential development; 4) develop strategies and a work plan to mitigate or eliminate those constraints; and 5) adopt a housing element and update it on a regular basis.⁷⁹ The City of San José Housing Element and related land use policies were last updated in January of 2015.

Regional and Local

Plan Bay Area 2050

Plan Bay Area 2050 is a long-range plan for the nine-county San Francisco Bay Area that provides strategies that increase the availability of affordable housing, support a more equitable and efficient economy, improve the transportation network, and enhance the region's environmental resilience. Plan Bay Area 2050 promotes the development of a variety of housing types and densities within identified Priority Development Areas (PDAs). PDAs are areas generally near existing job centers or frequent transit that are locally identified for housing and job growth.⁸⁰

ABAG allocates regional housing needs to each city and county within the San Francisco Bay Area, based on statewide goals. These allocations are designed to lay the foundation for Plan Bay Area 2050's long-term envisioned growth pattern for the region. ABAG also develops a series of forecasts and models to project the growth of population, housing units, and jobs in the Bay Area. ABAG, MTC, and local jurisdiction planning staff created the Forecasting and Modeling Report, which is a technical overview of the of the growth forecasts and land use models upon which Plan Bay Area 2050 is based.

⁷⁹ California Department of Housing and Community Development. "Regional Housing Needs Allocation and Housing Elements" Accessed July 19, 2022. <http://hcd.ca.gov/community-development/housing-element/index.shtml>.

⁸⁰ Association of Bay Area Governments and Metropolitan Transportation Commission. *Plan Bay Area 2050*. October 21, 2021. Page 20.

4.14.1.2 *Existing Conditions*

The population of San José was estimated to be approximately 976,482 in January 2022 with an average of 2.91 persons per household.⁸¹ The City had approximately 344,112 housing units as of January 1, 2022. The ABAG estimates that there will be an approximate City population of 1,377,145 and 448,310 households by the year 2040.⁸²

The jobs/housing balance refers to the ratio of employed residents to jobs in a given community or area. When the ratio reaches 1.0, a balance is struck between the supply of local housing and jobs. The jobs/housing resident ratio is determined by dividing the number of local jobs by the number of employed residents that can be housed in local housing.

The City currently has a higher number of employed residents than jobs (approximately 0.8 jobs per employed resident), but this trend is projected to reverse with full build out under the General Plan. The General Plan assumptions, as amended in the first Four-Year Review in 2016, envision a Jobs/Employee Resident ratio of 1.1/1 or 382,200 new jobs by 2040.⁸³ To meet the current and projected housing needs in the City, the 2040 General Plan identifies areas for mixed-use and residential development to accommodate 120,000 new dwelling units by 2040.

The Project Site is vacant and contains no housing. Surrounding uses consist of industrial and office uses. The Project Site is located in the North San José area; expected growth in this area includes 26.7 million square feet of new industrial/office/R&D uses, 1.7 million square feet of new neighborhood serving commercial uses, and the addition of 32,000 new residential units.

4.14.2 Impact Discussion

For the purpose of determining the significance of the Project's impact on population and housing, would the Project:

- 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) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

⁸¹ California Department of Finance. "E-5 Population and Housing Estimates for Cities, Counties, and the State, 2021-2022." May 2022.

⁸² Association of Bay Area Governments. *Projections 2040*. November 2018.

⁸³ City of San José. *Addendum to the Envision San José 2040 General Plan Final Program Environmental Impact Report and Supplemental Program Environmental Impact Report*. November 2016. Page 16.

4.14.2.1 *Project Impacts*

-
- 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)?**
-

The Project would construct two data center buildings, a utility substation, generator equipment yard, surface parking, landscaping, trail improvements, access improvements, and utility pipeline connections. The Project would be a low employment-generating use. Therefore, approval of the Project would not substantially increase jobs in the City. The Project would result in a temporary increase in jobs during construction; however, this temporary increase would not result in substantial permanent population growth in the area. The proposed Project would not induce substantial population growth in the City or substantially alter the City's job/housing ratio and would, therefore, result in a less than significant population and housing impacts. **(Less than Significant Impact)**

-
- b) Would the Project displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?**
-

The Project Site does not include residents or housing units and, therefore, the Project would not displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere. **(No Impact)**

4.14.2.2 *Cumulative Impacts*

-
- Would the Project result in a cumulatively considerable contribution to a significant cumulative population and housing impact?**
-

The proposed Project would not remove any housing or displace any people. Cumulative projects in the City could potentially remove housing and/or facilitate unplanned growth; however, the General Plan incorporates a land use vision for the planned build out to 2040, which would utilize existing areas within the City's Urban Growth Boundary to increase residential development. New housing developments as part of the General Plan buildout would focus on an intensification of land use in already developed areas.

The General Plan FEIR identified a significant unavoidable impact related to a project jobs/housing imbalance with full buildout of the General Plan. The project would be a low employment-generating use. Approval of the Project would be a minor increment of the overall jobs represented by the cumulative projects. For this reason, the jobs added by the Project would not make a cumulatively considerable contribution to a worsening of the jobs/housing imbalance. **(Less than Significant Cumulative Impact)**

4.15 PUBLIC SERVICES
4.15.1 Environmental Setting
4.15.1.1 *Regulatory Framework*

State

Government Code Section 66477

The Quimby Act (included within Government Code Section 66477) requires local governments to set aside parkland and open space for recreational purposes. It provides provisions for the dedication of parkland and/or payment of fees in lieu of parkland dedication to help mitigate the impacts from new residential developments. The Quimby Act authorizes local governments to establish ordinances requiring developers of new residential subdivisions to dedicate parks, pay a fee in lieu of parkland dedication, or perform a combination of the two.

Government Code Section 65995 through 65998

California Government Code Section 65996 specifies that an acceptable method of offsetting a project's effect on the adequacy of school facilities is the payment of a school impact fee prior to the issuance of a building permit. Government Code Sections 65995 through 65998 set forth provisions for the payment of school impact fees by new development by "mitigating impacts on school facilities that occur (as a result of the planning, use, or development of real property" (Section 65996[a]). The legislation states that the payment of school impact fees "are hereby deemed to provide full and complete school facilities mitigation" under CEQA (Section 65996[b]).

Developers are required to pay a school impact fee to the school district to offset the increased demands on school facilities caused by the proposed residential development project. The school district is responsible for implementing the specific methods for mitigating school impacts under the Government Code.

Regional and Local

Countywide Trails Master Plan

The Santa Clara County Trails Master Plan Update is a regional trails plan approved by the Santa Clara County Board of Supervisors. It provides a framework for implementing the County's vision of providing a contiguous trail network that connects cities to one another, cities to the county's regional open space resources, County parks to other County parks, and the northern and southern urbanized regions of the County. The plan identifies regional trail routes, sub-regional trail routes, connector trail routes, and historic trails.

Envision San José 2040 General Plan

The General Plan includes policies for the purpose of avoiding or mitigating impacts resulting from planned development projects with the City. The following policies are specific to public services are relevant to this analysis.

Envision San José 2040 Relevant Public Services Policies

Policies	Description
ES-3.1	Provide rapid and timely Level of Service (LOS) response time to all emergencies: 1. For police protection, use as a goal a response time of six minutes or less for 60 percent of all Priority 1 calls, and of eleven minutes or less for 60 percent of all Priority 2 calls. 2. For fire protection, use as a goal a total response time (reflex) of eight minutes and a total travel time of four minutes for 80 percent of emergency incidents.
ES-3.9	Implement urban design techniques that promote public and property safety in new development through safe, durable construction and publicly-visible and accessible spaces.
ES-3.11	Ensure that adequate water supplies are available for fire-suppression throughout the City. Require development to construct and include all fire suppression infrastructure and equipment needed for their projects.

4.15.1.2 Existing Conditions

Fire Protection Services

Fire protection services for the Project Site are provided by the San José Fire Department (SJFD). The SJFD responds to all fires, hazardous materials spills, and medical emergencies (including injury accidents) in the City. The closest fire stations to the Project Site are Station No. 29 at 199 Innovation Drive (approximately 2.2 miles north of the Project Site) and Station No. 5 located at 1380 N. 10th Street (approximately 2.6 miles southeast of the Project Site).

For fire protection services, the City has a total response time goal of eight minutes and a total travel time goal of four minutes for 80 percent of emergency incidents (per General Plan Policy ES-3.1).

Police Protection Services

Police protection services for the Project Site are provided by the San José Police Department (SJPD), which is headquartered at 201 West Mission Street, approximately 3.3 miles southeast of the Project Site. SJPD is divided into four geographic divisions: Central, Western, Foothill, and Southern. The Project Site is directly served by the SJPD Central Division, which includes a Police Captain, four Lieutenants, and 18 Sergeants that each supervise teams of officers assigned to one of the 28 police teams who cover three shifts, 24/7.⁸⁴

For police protection services, SJPD has a service goal of six minutes or less for 60 percent of all Priority 1 (emergency) calls and 11 minutes or less for 60 percent of all Priority 2 (non-emergency) calls (per General Plan Policy ES-3.1).

⁸⁴ San José Police Department. Central Division. Accessed July 14, 2022. <https://www.sjpd.org/about-us/organization/bureau-of-field-operations/central-division>

Parks

The City of San José owns and maintains approximately 3,435 acres of parkland, including neighborhood parks, community parks, and regional parks. The City also has 54 community centers and neighborhood centers. Other recreational facilities include five public pools, six public skate parks and over 55 miles of trails.

The City's Department of Parks, Recreation, and Neighborhood Services is responsible for development, operation, and maintenance of all City park facilities. Nearby City park and recreational facilities include Rosemary Gardens (approximately 2.3 miles southeast of the Project Site), Iris Chang Park (approximately 2.3 northeast of the Project Site), and Riverview Park (approximately 2.2 miles northwest of the Project Site). The Project Site is also located adjacent to the Guadalupe River trail, which is a core trail system within San José's trail network. When the trail is fully developed, it will extend approximately 20 miles and provide a link between San Francisco Bay and South San José.

Schools and Libraries

The Project vicinity is served by the Santa Clara Unified School District and residences near the site are assigned to Montague Elementary School (located at 750 Laurie Avenue, approximately 1.9 miles northwest of the Project Site), Buchser Middle School (located at 1111 Bellomy Street, approximately 3.6 miles southwest of the Project Site), and Santa Clara High School (located at 3000 Benton Street, approximately 5.6 miles southwest of the Project Site). The nearest library to the Project Site is Joyce Ellington Library, located at 491 E. Empire Street, approximately 4.8 miles southeast of the Project Site.

4.15.2 Impact Discussion

For the purpose of determining the significance of the Project's impact on public services, would the Project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:

- a) Fire protection?
- b) Police protection?
- c) Schools?
- d) Parks?
- e) Other public facilities?

4.15.2.1 *Project Impacts*

-
- a) **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 fire protection services?**
-

The Project Site is currently served by the SJFD. The proposed Project may result in an incremental increase in the need for fire services associated with increased building area and employment, but would not require the construction of new facilities or stations.

The Project would be required to be constructed in conformance with then-current Building and Fire Codes, and the SJFD would review Project plans to ensure appropriate safety features are incorporated to reduce fire hazards. The potential incremental increase in fire protection services would not require new or expanded fire protection facilities (the construction of which could cause significant environmental impacts) in order to maintain acceptable service ratios, response times or other performance objectives for fire protection services. **(Less than Significant Impact)**

-
- b) **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 police protection services?**
-

The Project Site is currently served by the SJPD. The Project may result in an incremental increase in the need for police services associated with increased building area and employment, but would not require the construction of new facilities or stations.

The SJPD would review the final site design, including proposed landscaping, access, and lighting, to ensure that the Project provides adequate safety and security measures. The potential incremental increase in police protection services would not require new or expanded police protection facilities (the construction of which could cause significant environmental impacts) in order to maintain acceptable service ratios, response times or other performance objectives for police protection services. **(Less than Significant Impact)**

-
- c) **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 schools?**
-

The proposed Project would not generate substantial population growth in the Project vicinity or result in the use of public facilities in the area by new residents. The Project proposes a data center facility, not a residential use, and would therefore not generate students. Moreover, the Project would be required to pay applicable school impact fees pursuant to SB 50. The Project would not require

new or expanded school facilities, the construction of which could cause environmental impacts. **(No Impact)**

-
- d) 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 parks?**
-

The proposed Project would not generate substantial population growth in the Project vicinity or result in the use of public facilities in the area by new residents. Some employees at the Project Site may visit local parks; however, this would be a minute increase and would not create the need for any new facilities or adversely impact the physical condition of existing facilities. **(Less than Significant Impact)**

-
- e) 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 other public facilities?**
-

The proposed Project would not generate substantial population growth in the Project vicinity or result in the use of public facilities in the area by new residents. Some employees at the Project Site may visit library facilities; however, this would be a minute increase and would not create the need for any new facilities or adversely impact the physical condition of existing facilities. **(No Impact)**

4.15.2.2 Cumulative Impacts

Would the Project result in a cumulatively considerable contribution to a significant cumulative public services impact?

The geographic area for cumulative public services impacts is the City of San José. All cumulative projects would be required to be built in conformance with then-current Building and Fire Codes and public safety requirements in the General Plan. The Project would not develop residences, and therefore, would not result in a cumulatively considerable contribution to a cumulative park and recreational facility impacts. For this reason, the cumulative projects would result in a less than significant cumulative impact to police, fire, and recreational facilities. **(Less than Significant Cumulative Impact)**

The project does not propose construction of residences, and therefore, would not contribute to cumulative school or library impacts. **(No Cumulative Impact)**

4.16 RECREATION

4.16.1 Environmental Setting

4.16.1.1 *Regulatory Framework*

State

Government Code Section 66477

The Quimby Act (included within Government Code Section 66477) requires local governments to set aside parkland and open space for recreational purposes. It provides provisions for the dedication of parkland and/or payment of fees in lieu of parkland dedication to help mitigate the impacts from new residential developments. The Quimby Act authorizes local governments to establish ordinances requiring developers of new residential subdivisions to dedicate parks, pay a fee in lieu of parkland dedication, or perform a combination of the two.

Envision San José 2040 General Plan Policies

The General Plan includes policies for the purpose of avoiding or mitigating impacts resulting from planned development projects within the City. The following policies are specific to recreational resources are relevant to this analysis:

Envision San José 2040 Relevant Recreation Policies

Policies	Description
PR-1.1	Provide 3.5 acres per 1,000 population of neighborhood/community serving parkland through a combination of 1.5 acres of public park and 2.0 acres of recreational school grounds open to the public per 1,000 San José residents.
PR-1.2	Provide 7.5 acres per 1,000 population of citywide/regional park and open space lands through a combination of facilities provided by the City of San José and other public land agencies.
PR-1.3	Provide 500 SF per 1,000 population of community center space.

4.16.1.2 *Existing Conditions*

The City of San José owns and maintains approximately 3,435 acres of parkland, including neighborhood parks, community parks, and regional parks. The City also has 54 community centers and neighborhood centers. Other recreational facilities include five public pools, six public skate parks and over 55 miles of trails.

The City's Department of Parks, Recreation, and Neighborhood Services is responsible for development, operation, and maintenance of all City park facilities. Nearby City park and recreational facilities include Rosemary Gardens (approximately 2.3 miles southeast of the Project Site), Iris Chang Park (approximately 2.3 northeast of the Project Site), and Riverview Park (approximately 2.2 miles northwest of the Project Site). The Project Site is also located adjacent to the Guadalupe River trail, which is a core trail system within San José's trail network. When the trail

is fully developed, it will extend approximately 20 miles and provide a link between San Francisco Bay and South San José.

4.16.2 Impact Discussion

For the purpose of determining the significance of the Project's impact on recreation:

- a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?
- 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?

4.16.2.1 *Project Impacts*

-
- 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?**
-

The Project proposes to develop industrial uses on a vacant site. No residential uses are proposed. While employees of the Project may utilize parks and recreational facilities in the area, the Project would not generate demand for neighborhood or regional park facilities such that substantial physical deterioration of these facilities would occur or be accelerated. **(Less than Significant Impact)**

-
- 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?**
-

The proposed Project would not include recreational facilities. Some employees may use nearby parks and recreational facilities; however, this would not represent a substantial increase and would not require the construction or expansion of recreational facilities. **(Less than Significant Impact)**

4.16.2.2 *Cumulative Impacts*

-
- Would the Project result in a cumulatively considerable contribution to a significant cumulative recreation impact?**
-

Other projects in the City could increase the use of recreational facilities, such as neighborhood and regional parks and community centers, to the point of disrepair. In the 2040 General Plan EIR (as amended), the City identified that with expected population growth through 2035, additional parks and community centers would be required to accommodate the increase in population. Existing City policies and regulations, such as the Parkland Dedication Ordinance and Parkland Impact Ordinance, function to collect fees from new development (or require parkland to be dedicated) for the purpose of maintaining the City's service level objectives. By requiring cumulative projects to adhere to existing policies and regulations, the cumulative impact of future development on recreational facilities would be minimized.

The proposed Project does not include new residential development; therefore, its impact on recreational facilities in the project area would be minimal. The proposed project, when combined with other projects in the City, would not result in a cumulatively considerable contribution to this already less than significant cumulative recreation impact. **(Less than Significant Cumulative Impact)**

4.17 TRANSPORTATION

The following discussion is based, in part, on a Transportation Analysis prepared for the proposed project by Hexagon Transportation Consultants, Inc. The Transportation Analysis, dated June 20, 2022, is included in this SPPE Application as Appendix I. The Transportation Analysis recommends mitigation measures to reduce the projects potential transportation impacts. The Applicant has incorporated these measures into Project Design Features in this application.

4.17.1 Environmental Setting

4.17.1.1 *Regulatory Framework*

State

Regional Transportation Plan

MTC is the transportation planning, coordinating, and financing agency for the nine-county San Francisco Bay Area, including Santa Clara County. MTC is charged with regularly updating the Regional Transportation Plan, a comprehensive blueprint for the development of mass transit, highway, airport, seaport, railroad, bicycle, and pedestrian facilities in the region. MTC and ABAG adopted Plan Bay Area 2050 on October 21, 2021, which includes a Regional Transportation Plan to guide regional transportation investment for revenues from federal, state, regional and local sources through 2050.

Senate Bill 743

SB 743 establishes criteria for determining the significance of transportation impacts using a vehicle miles traveled (VMT) metric intended to promote the reduction of GHG emissions, the development of multimodal transportation networks, and a diversity of land uses. Specifically, SB 743 requires analysis of VMT in determining the significance of transportation impacts. Local jurisdictions were required by Governor's Office of Planning and Research (OPR) to implement a VMT policy by July 1, 2020.

SB 743 did not authorize OPR to set specific VMT impact thresholds, but it did direct OPR to develop guidelines for jurisdictions to utilize. CEQA Guidelines Section 15064.3(b)(1) describes factors that might indicate whether a development project's VMT may be significant. Notably, projects located within 0.50 mile of transit should be considered to have a less than significant transportation impact based on OPR guidance.

Regional

Congestion Management Program

The Santa Clara Valley Transportation Authority (VTA) oversees the Congestion Management Program (CMP), which is aimed at reducing regional traffic congestion. The relevant state legislation requires that urbanized counties in California prepare a CMP in order to obtain each county's share of gas tax revenues. State legislation requires that each CMP define traffic LOS standards, transit service standards, a trip reduction and transportation demand management plan, a land use impact

analysis program, and a capital improvement element. VTA has review responsibility for proposed development projects that are expected to affect CMP-designated intersections.

Local

Transportation Analysis Policy (San José City Council Policy 5-1)

As established in City Council Policy 5-1, Transportation Analysis Policy, the City of San José uses VMT as the metric to assess transportation impacts from new development. For industrial projects (e.g., warehouse, manufacturing, distribution), the impact would be less than significant if the project VMT is equal to or less than existing average regional VMT per employee. Screening criteria have been established to determine which projects require a detailed VMT analysis. If a project meets the relevant screening criteria, it is considered to have a less than significant VMT impact.

If a project's VMT does not meet the established thresholds, mitigation measures would be required, where feasible. The policy also requires preparation of a Local Transportation Analysis to analyze non-CEQA transportation issues, including local transportation operations, intersection level of service, site access and circulation, and neighborhood transportation issues such as pedestrian and bicycle access and recommend transportation improvements. The VMT policy does not negate Area Development policies and Transportation Development policies approved prior to adoption of Policy 5-1; however, it does negate the City's Protected Intersection policy as defined in Policy 5-3.

Screening criteria have been established to determine which projects require a detailed VMT analysis. If a project meets the relevant screening criteria, it is considered to have a less than significant VMT impact. Under Policy 5-1, the screening criteria are:

1. Small infill projects;
2. Local-serving retail;
3. Local-serving public facilities;
4. Transit supportive projects in Planned Growth Areas with low VMT and high quality transit;
5. Restricted affordable, transit supportive residential projects in Planned Growth Areas with high quality transit;
6. Transportation projects that reduce or do not increase VMT.

The VMT policy does not negate Area Development policies (ADPs) and Transportation Development policies (TDPs) approved prior to adoption of Policy 5-1. Policy 5-1 does, however, negate the City's Protected Intersection policy as defined in Policy 5-3.

North San José Traffic Impact Fee Plan

The City of San José amended the North San José Area Development Policy on May 17, 2022. Future developments in the area will not be subject to the North San José Traffic Impact Fee Plan.

City of San José Bike Plan 2020

The City of San José adopted the San José Better Bike Plan 2025 in October 2020.⁸⁵ The plan focuses on building new bikeways and enhancing existing bikeways through the implementation of supportive programs and policies. The overall goal of the City is to make bicycling safe and convenient for all ages and abilities in all parts of the city. The plan includes the following goals for improving bicycle access and connectivity: 1) Build a 100-mile low stress connected network, 2) achieve a 15 percent bike mode share by 2040 and a 20 percent bike mode share by 2050, 3) eliminate all roadway facilities and major inquiries to align with Vision Zero San José, 4) Expand the availability of sidewalk bike parking, secure bike parking, and end-of-trip facilities at transit stops, 5) achieve Gold-Level Bicycle Friendly Community Status, and 6) Expand shared micromobility.. Planned bicycle facilities identified in the Better Bike Plan 2025 in the project area include the following:

Planned Class I bike trails:

- Component Drive, between Guadalupe River Trail and Orchard Parkway

Planned Class IV bike lanes:

- Trimble Road, along its entire length
- First Street, between Taylor Street and Alviso
- Orchard Parkway, along its entire length
- Component Drive, between Orchard Parkway and Zanker Road
- Zanker Road, along its entire length
- Plumeria Drive, along its entire length
- Bonaventure Drive, along its entire length

Envision San José 2040 General Plan

The following General Plan policies are relevant to this analysis.

Envision San José 2040 Relevant Transportation Policies	
Policies	Description
TR-1.1	Accommodate and encourage use of non-automobile transportation modes to achieve San José's mobility goals and reduce vehicle trip generation and vehicle miles traveled (VMT).
TR-1.2	Consider impacts on overall mobility and all travel modes when evaluating transportation impacts of new developments or infrastructure projects.
TR-1.4	Through the entitlement process for new development, fund needed transportation improvements for all transportation modes, giving first consideration to improvement of bicycling, walking and transit facilities. Encourage investments that reduce vehicle travel demand. Development proposals shall be reviewed for their impacts on all transportation modes through the study of Vehicle Miles Traveled (VMT), Envision San José 2040

⁸⁵ City of San José. *San José Better Bike Plan 2025*. October 2020. Accessed July 14, 2022. <https://www.sanjoseca.gov/home/showpublisheddocument/68962/637477999451470000>

Envision San José 2040 Relevant Transportation Policies

Policies	Description
	General Plan policies, and other measures enumerated in the City Council Transportation Analysis Policy and its Local Transportation Analysis. Projects shall fund or construct proportional fair share mitigations and improvements to address their impacts on the transportation systems. The City Council may consider adoption of a statement of overriding considerations, as part of an EIR, for projects unable to mitigate their VMT impacts to a less than significant level. At the discretion of the City Council, based on CEQA Guidelines Section 15021, projects that include overriding benefits, in accordance with Public Resources Code Section 21081 and are consistent with the General Plan and the Transportation Analysis Policy 5-1 may be considered for approval. The City Council will only consider a statement of overriding considerations for (i) market-rate housing located within General Plan Urban Villages; (ii) commercial or industrial projects; and (iii) 100% deed-restricted affordable housing as defined in General Plan Policy IP-5.12. Such projects shall fund or construct multimodal improvements, which may include improvements to transit, bicycle, or pedestrian facilities, consistent with the City Council Transportation Analysis Policy 5-1. Area Development Policy. An “area development policy” may be adopted by the City Council to establish special transportation standards that identifies development impacts and mitigation measures for a specific geographic area. These policies may take other names or forms to accomplish the same purpose.
TR-1.6	Require that public street improvements provide safe access for motorists and pedestrians along development frontages per current City design standards.
TR-2.8	Require new development where feasible to provide on-site facilities such as bicycle storage and showers, provide connections to existing and planned facilities, dedicate land to expand existing facilities or provide new facilities such as sidewalks and/or bicycle lanes/paths, or share in the cost of improvements.
TR-3.3	As part of the development review process, require that new development along existing and planned transit facilities consist of land use and development types and intensities that contribute towards transit ridership. In addition, require that new development is designed to accommodate and to provide direct access to transit facilities.
TR-5.3	Development projects’ effects on the transportation network will be evaluated during the entitlement process and will be required to fund or construct improvements in proportion to their impacts on the transportation system. Improvements will prioritize multimodal improvements that reduce VMT over automobile network improvements.
TR-8.4	Discourage, as part of the entitlement process, the provision of parking spaces significantly above the number of spaces required by code for a given use.
TR-8.6	Allow reduced parking requirements for mixed-use developments and for developments providing shared parking or a comprehensive TDM program, or developments located near major transit hubs or within Villages and Corridors and other growth areas.
TR-8.9	Consider adjacent on-street and City-owned off-street parking spaces in assessing need for additional parking required for a given land use or new development.

4.17.1.2 *Existing Conditions*

Roadway Network

Regional access to the Project Site is provided via United States Highway 101 (US 101) and Interstate 880 (I-880). Local access to the site is provided by Trimble Road, North First Street, Zanker Road, Charcot Avenue, Orchard Parkway, and Component Drive. These facilities are described below.

United States Highway 101

US 101 is a north/south freeway with six mixed-flow lanes and two high-occupancy-vehicle (HOV) lanes through most of Santa Clara and San José. US 101 extends northward through San Francisco and southward through Gilroy. Access to and from the Project Site is provided via an interchange at Trimble Road.

Interstate 880

I-880 is a north/south freeway providing regional access from East Bay cities to San José, where it ultimately becomes SR 17 and extends into Santa Cruz. Within the project vicinity, I-880 provides six mixed-flow lanes and two high-occupancy-vehicle (HOV) lanes. Access to the Project Site from I-880 is provided via an interchange at Montague Expressway.

Trimble Road

Trimble Road is a six-lane arterial extending southward from Montague Expressway to De La Cruz Boulevard near US 101. Direct access to the Project Site from Trimble Road is provided via a right-in/right-out driveway and a full-access signalized driveway.

North First Street

First Street is a north-south roadway that extends from the north San José area through downtown San José. In the vicinity of the Project Site, First Street is a four-lane roadway. First Street, in conjunction with Brokaw Road, provides full access to US 101.

Zanker Road

Zanker Road is four-lane arterial that extends from US 101 northward just north of SR 237 where it transitions to Los Esteros Road. Zanker Road intersects with Charcot Avenue and provides a parallel route to First Street in the study area.

Charcot Avenue

Charcot Avenue is a two- to four-lane roadway that begins at the US 101/SR 87 junction as the SR 87 off- and on ramps to/from North First Street and runs eastward to O'Toole Avenue, just west of I-880, where it terminates. West of North First Street, Charcot Avenue is a four-lane roadway that provides direct access to SR 87, while the segment east of North First Street functions as a two-lane collector street providing access to adjacent employment areas.

Orchard Parkway

Orchard Parkway is two-lane north-south roadway that begins at First Street just south of Tasman Drive and extends south to Charcot Avenue, where it transitions to O'Nel Drive. Direct access to the Project Site from Orchard Parkway is proposed to be provided via four driveways.

Component Drive

Component Drive is a two-lane east-west roadway that runs along the southern project frontage and extends from just west of Orchard Parkway to Zanker Road. Component Drive has a posted speed limit of 35 mph. Direct access to the Project Site along Component Drive is proposed to be provided via two driveways.

Bicycle and Pedestrian Facilities

There are several bike paths and several roadways with striped bike lanes in the vicinity of the Project Site. Bicycle facilities are divided into four classes of relative significance. Class I bikeways are bike paths that are physically separated from motor vehicles and offer two-way bicycle travel on a separate path. Class II bikeways are striped bike lanes on roadways that are marked by signage and pavement markings. Class III bikeways are bike routes and only have signs and/or Sharrow (shared lane markings) to help guide bicyclists on recommended routes to certain locations. Class IV bikeways are on-street bicycle facilities that incorporate physical barriers (e.g., raised curbs, flexible bollards, vehicle parking, grade separation, etc.) to separate bicycles from the flow of vehicular traffic. There are no Class IV bikeways in the Project vicinity. Class II striped bike lanes are provided on the following roadways:

- North First Street - Between Brokaw Road and Alviso
- Trimble Road - Between Seaboard Avenue (just east of US 101) and Montague Expressway
- Orchard Parkway - Along its entirety between Charcot Avenue and North First Street
- Charcot Avenue - Between Orchard Parkway and Zanker Road

The Guadalupe River multi-use trail system runs through the City of San José along the Guadalupe River and is shared between pedestrians and bicyclists and separated from motor vehicle traffic. The Guadalupe River trail is an 11-mile continuous Class I bikeway from Curtner Avenue in the south to Alviso in the north. This shared trail system runs adjacent to SR 87 near the Project vicinity. This trail system can be accessed via Trimble Road approximately 750 feet west of the Project entrance on Trimble Road.

Pedestrian facilities in the Project vicinity consist primarily of sidewalks along nearly all the surrounding streets, including the Project frontages on Trimble Road and Orchard Parkway. Sidewalks are missing on the north side of Component Drive, west of Orchard Parkway along the Project's frontage, and along an approximately 1,000-foot segment between Orchard Parkway and First Street.

Transit Services

Existing transit services to the study area are provided by the VTA. The site is not served directly by any bus routes. The nearest bus service to the Project Site is provided by local bus route 20, which operates along Montague Expressway, First Street, and Plumeria Drive. Route 20 provides services between the Milpitas Bay Area Rapid Transit (BART) Station and Sunnyvale Transit Center with approximately 30-minute headways during the commute periods. The nearest route 20 bus stops are located near the intersection of First Street and Plumeria Drive, approximately one mile from the Project Site.

In addition to the bus routes described above, the Project Site is served by the VTA's light rail system. The light rail system extends 42.2 miles from south San José through downtown to the northern areas of San José, Santa Clara, Milpitas, Mountain View, and Sunnyvale. The Component light rail station is located at the North First Street and Component Drive intersection, approximately half a mile from the Project Site. The Component station is served by the Santa Teresa-Baypointe light rail Line (Blue Line) and the Winchester-Old Ironsides Line (Green Line).

4.17.2 Impact Discussion

For the purpose of determining the significance of the Project's impact on transportation, would the Project:

- a) Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadways, bicycle lanes, and pedestrian facilities?
- b) 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?

4.17.2.1 *Project Impacts*

-
- a) Would the Project conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadways, bicycle lanes, and pedestrian facilities?**
-

Transit Facilities

Although data centers are a low employment use, the proposed Project would bring new jobs to the area and is anticipated to increase the use of transit facilities in the area, including the nearby Component LRT station. The General Plan EIR concluded that upon implementation of the General Plan, transit ridership throughout the City would increase. The proposed Project would encourage the use of transit facilities by bringing new jobs to a Planned Growth Area of the City with accessible local and regional transit connections, and by including measures to reduce vehicle trips to and from the site (refer to PDF TRN-1). The Project Site is located within walking distance (half a mile) of the Component station. The proposed Project would not generate many transit riders but any increased transit demand could be accommodated by the currently available ridership capacity of the VTA light rail service. Additionally, the Project would not remove, or inhibit access to, any public transit

facilities. For these reasons, the proposed Project would not conflict with a program, plan, ordinance, or policy regarding transit facilities. **(Less than Significant Impact)**

Bicycle and Pedestrian Facilities

The proposed Project would develop data center buildings and associated on- and off-site facilities on vacant parcels. The Project would be in proximity to the Guadalupe River trail and Class II bikeways on Trimble Road and Orchard Parkway. The proposed Project would not remove, or inhibit access to, any existing or planned bicycle facilities. The Project would result in the construction of a Class I bike path along the Project's southern property line. The bike path is planned to extend from the intersection of Orchard Parkway and Component Drive to the existing Guadalupe Trail on the existing levee. This Class I bike path would help facilitate achievement of the planned regional Guadalupe Bike Trail; it is anticipated that the final interconnection of this regional trail (which is not on land owned by Microsoft) between Orchard Parkway to the Guadalupe Bike Trail will be made in the future by those with the authority over the levee property between the Guadalupe Bike Trail and the Project Site in adherence with all applicable laws and regulations. The Project would also provide bicycle spaces in accordance with applicable Municipal Code requirements.⁸⁶

The Project would include pedestrian pathways that would circulate throughout the Project Site and connect to existing sidewalks along Orchard Parkway. The Project would not inhibit pedestrian flow through the area by reducing sidewalk width or eliminating sidewalks to accommodate vehicular travel. The proposed Project would not conflict with a program, plan, ordinance or policy regarding bicycle and/or pedestrian facilities. **(Less than Significant Impact)**

b) Would the Project conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)?

As described in Section 4.17.1.1 Regulatory Framework, the City's adopted Transportation Policy (City Council Policy 5-1) sets forth the thresholds of significance and methodology for analyzing the VMT impacts of development projects. The methodology used to determine existing and project VMT and the analysis of the Project's VMT impacts are described below.

VMT Evaluation Methodology

The effects of the proposed Project on VMT were evaluated using the methodology outlined in the City's Transportation Analysis Handbook. VMT is the total miles of travel by personal motorized vehicles a project is expected to generate in a day. Typically, development projects that are farther from other, complementary land uses (such as a business park far from housing) and in areas without transit or active transportation infrastructure (bike lanes, sidewalks, etc.) generate more driving than development near complementary land uses with more robust transportation options. Therefore, developments located in a central business district or planned growth area with high density and

⁸⁶ As an additional community benefit, , the Project anticipates working collaboratively with the San José Department of Public Works to confirm Microsoft's willingness to make a voluntary financial contribution towards the above-referenced final interconnection of the planned Class IV separated bike path along the Project Site's frontage on Orchard Parkway.

diversity of complementary land uses and frequent transit services are expected to internalize trips and generate shorter and fewer vehicle trips than developments located in a suburban area with low density of residential developments and no transit service in the project vicinity. When assessing an office or industrial project, the project's VMT is divided by the number of employees.

The City of San José's Transportation Policy establishes procedures for determining project impacts on VMT based on project description, characteristics, and/or location. The City's Transportation Policy establishes screening criteria for various land uses; projects which meet the screening criteria would not require a detailed, quantitative assessment of VMT. The City's screening criteria for an industrial project is 30,000 square feet of total gross floor area or less. The proposed project would construct approximately 631,278 square feet of data center use, which is equivalent to 128,337 square feet of industrial space. Therefore, the Project would exceed the screening criterion and a complete VMT analysis is required.

VMT Evaluation Tool

To determine whether a project would result in transportation impacts related to VMT, the City has developed the San José VMT Evaluation Tool to streamline the analysis for development projects. Based on the APN of a project, the VMT Evaluation Tool identifies the existing average VMT per capita and employee for the project area. Using the following information, the VMT evaluation tool calculates the project generated VMT: project location, type of development, project description, and proposed trip reduction measures.

Projects located in areas where the existing VMT is greater than the established threshold are referred to as being "high-VMT areas". Projects in high-VMT areas are required to include a set of VMT reduction measures that would reduce the project VMT to the greatest extent possible. The VMT evaluation tool evaluates a list of selected VMT reduction measures that can be applied to a project to reduce the project VMT. There are four strategy tiers whose effects on VMT can be calculated with the VMT evaluation tool:

1. Project characteristics (e.g., density, diversity of uses, design, and affordability of housing) that encourage walking, biking and transit uses;
2. Multimodal network improvements that increase accessibility for transit users, bicyclists, and pedestrians;
3. Parking measures that discourage personal motorized vehicle-trips; and
4. Transportation demand management (TDM) measures that provide incentives and services to encourage alternatives to personal motorized vehicle-trips.

Thresholds of Significance

The thresholds of significance for employment uses set forth in the Transportation Analysis Policy are based on the existing regional average VMT per employee. The existing regional average VMT level for industrial employment uses is 14.37 VMT per employee. Projects which exceed this VMT level would result in a significant VMT impact pursuant with the City's policy.

Project-Level VMT Analysis

Based on the results of the VMT Evaluation tool, the Project VMT would be 15.48 VMT per employee. The project generated VMT would exceed the threshold of 14.37 VMT per employee. Therefore, the project would result in a significant VMT impact. The following measure is included in the project as an Applicant Proposed Project Design Feature to reduce VMT to an acceptable level.

PDF TRN-1: The Project shall implement the following VMT reduction measure.

- The Project shall limit the on-site parking supply (a Tier 3 VMT reduction measure) to mitigate the VMT impact. The Project shall provide a total of 148 vehicle parking spaces, which is 25 fewer spaces than what the City of San José Municipal Code requires. The Project shall request and obtain a parking exception from the City of San José Department of Planning, Building & Code Enforcement in order to qualify for the parking reduction.

Decreasing a project's parking supply encourages employees to choose an alternative transportation mode for their commutes, thereby reducing VMT. Implementation of the PDF described above would reduce the project VMT generated from 15.48 per employee to 14.36 per employee (a reduction of about 7.5 percent). Impacts would therefore be less than significant.. **(Less than Significant Impact)**

c) Would the Project substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

Geometric Design

Sight Distance

Based on the results of the Transportation Analysis, the sight distance at Project driveways would be adequate. No tall vegetation or objects would obscure sign distance at the Project driveway and parking is not allowed on Orchard Parkway. The horizontal curvature at Orchard Parkway would also benefit sight distance from the driveways. Therefore, the Project does not substantially increase hazards related to sight distance along Orchard Parkway and adequate sight distance would be provided, which would reduce the likelihood of collisions. **(Less than Significant Impact)**

On-Site Circulation

To provide adequate on-site circulation for all vehicle types, including larger emergency vehicles and garbage trucks, the design of all internal roadways shall adhere to the City of San José design standards and guidelines. The design of the Project Site must include adequate corner radii along all internal roadways/drive aisles, as well as driveway width, drive aisle width, parking dimensions, and signage that satisfies the design standards. Appropriate visible and/or audible warning signs shall be provided at the parking garage access points to alert pedestrians and bicyclists of vehicles exiting the garages. By designing the site in accordance with the City's design standards and guidelines, the project would not substantially increase hazards related to on-site vehicular circulation. As described

in the Transportation Analysis, the on-site circulation would be efficient with only one dead-end drive aisle located at the end of the parking serving the southern building but there would be adequate turn-around space provided. For these reasons, there would be no significant impacts related to on-site circulation. **(Less than Significant Impact)**

Land Use Compatibility

The proposed industrial/office land uses would be located in an area of the City that is developed with similar land uses. The Project Site is located immediately adjacent to an existing industrial facility (Lumileds). To the east of the Project Site, there is a vacant lot and an office campus and there is a vacant office building and parking lot to the south of the Project Site. Towards the west is the Guadalupe River and trail. None of the adjacent uses would preclude the proposed use of the Project Site, and the Project's proximity to these land uses would not result in substantial hazards. Therefore, the Project would not result in a significant impact due to land use incompatibilities. **(Less than Significant Impact)**

d) Would the Project result in inadequate emergency access?

The City of San José Fire Department requires that all portions of the buildings be within 150 feet of a fire access road and requires a minimum of 6 feet clearance from the property line along all sides of the buildings. Adequate clearance would be provided around the perimeters of the buildings and all areas of the proposed buildings would be within 150 feet of a fire access road. The Project driveway width and drive aisles would also accommodate emergency vehicles. The proposed Project would also be required to comply with the applicable City of San José policies and ordinances requiring adequate emergency access for the Project Site. For these reasons, the proposed Project would not interfere with the emergency response to the Project vicinity. Therefore, the proposed Project would result in a less than significant impact to emergency access to and around the Project Site. **(Less than Significant Impact)**

4.17.2.2 Cumulative Impacts

Would the Project result in a cumulatively considerable contribution to a significant cumulative transportation impact?

Projects must demonstrate consistency with the Envision San José 2040 General Plan to address cumulative impacts. Consistency with the City's General Plan is based on the project's density, design, and conformance to the General Plan goals and policies. If a project is determined to be inconsistent with the General Plan, a cumulative impact analysis is required per the City's Transportation Analysis Handbook.

The Transportation Analysis determined that the Project is consistent with the applicable General Plan goals and policies. The Project would be consistent with the zoning designation of Combined Industrial Commercial (CIC), the proposed employment density would be consistent with the General Plan Land Use designation for the site, and the Project would be consistent with the City of San José Better Bike Plan 2025 due to the construction of a Class I bikeway trail extension along the Project's southern boundary. The Project also incorporates a PDF (PDF TRN-1) to reduce project-

generated VMT below the City’s threshold of significance. The proposed Project would not result in a cumulatively considerable contribution to a significant cumulative impact. **(Less than Significant Cumulative Impact)**

4.18 TRIBAL CULTURAL RESOURCES

4.18.1 Environmental Setting

4.18.1.1 *Regulatory Framework*

State

Assembly Bill 52

AB 52, effective July 2015, established a new category of resources for consideration by public agencies called Tribal Cultural Resources (TCRs). AB 52 requires lead agencies to provide notice of projects to tribes that are traditionally and culturally affiliated with the geographic area if they have requested to be notified. Where a project may have a significant impact on a tribal cultural resource, consultation is required until the parties agree to measures to mitigate or avoid a significant effect on a tribal cultural resource or until it is concluded that mutual agreement cannot be reached.

Under AB 52, TCRs are defined as follows:

- Sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are also either:
 - Included or determined to be eligible for inclusion in the California Register of Historic Resources, or
 - Included in a local register of historical resources as defined in Public Resources Code Section 5020.1(k).
- A resource determined by the lead agency to be a TCR.

4.18.1.2 *Existing Conditions*

Native Americans occupied Santa Clara Valley and the greater Bay Area for more than 5,000 years. The exact time period of the Ohlone (originally referred to as Costanoan) migration into the Bay Area is debated by scholars. Dates of the migration range between 3000 B.C. and 500 A.D. Regardless of the actual time frame of their initial occupation of the Bay Area and, in particular, Santa Clara Valley, it is known that the Ohlone had a well-established population of approximately 7,000 to 11,000 people with a territory that ranged from the San Francisco Peninsula and the East Bay, south through the Santa Clara Valley and down to Monterey and San Juan Bautista.

The Ohlone people were hunter/gatherers focused on hunting, fishing, and collecting seasonal plant and animal resources, including tidal and marine resources from San Francisco Bay. The customary way of living, or lifeway, of the Costanoan/Ohlone people disappeared by about 1810 due to disruption by introduced diseases, a declining birth rate, and the impact of the California mission system established by the Spanish in the area beginning in 1777.

The Project Site consists of an approximately 22.29-acre vacant site in North San José, as well as Off-Site Infrastructure Areas that include a roughly 1.5 mile area associated with a proposed recycled water line extension. As described in Section **Error! Reference source not found.**, an archaeological literature search was prepared for the site to identify

any potential cultural resources present on-site or in adjacent areas. The literature search identified one cultural resource (Old Trimble Road) present within the Project Site.

The Native American Heritage Commission responded to Sacred Lands File request on July 27, 2022 noting that the results of the request were positive. The NAHC search area encompasses many square miles around the site. Because the specific sacred lands identified in the search are confidential, the nature of the tribal cultural resource and its specific location within the search area is unknown. As a result, it is unknown if sacred lands are located on or adjacent to the site.

4.18.2 Impact Discussion

For the purpose of determining the significance of the project's impact on tribal cultural resources, 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:

- a) 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)?
- b) 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 Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

4.18.2.1 *Project Impacts*

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- a) Would the project cause a substantial adverse change in the significance of a tribal cultural resource that is 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)?**
-

AB 52 requires lead agencies to complete formal consultations with California Native American tribes during the CEQA process to identify tribal cultural resources that may be subject to significant impacts by a project. Where a project may have a significant impact on a tribal cultural resource, the lead agency's environmental document must discuss the impact and whether feasible alternatives or mitigation measures could avoid or substantially lessen the impact. This consultation requirement applies only if the tribes have sent written requests for notification of projects to the lead agency. The Ohlone Tribe submitted a request in July of 2018 for notification of projects requiring a Negative Declaration, a Mitigated Negative Declaration, or an Environmental Impact Report that would involve ground-disturbing activities within the City of San José. At the time of the preparation of this SPPE Application, two tribes have sent written requests for notification of projects to the City of San José and one verbal request has been made.

- On July 9, 2018, a representative of the Ohlone Indian Tribe, Inc., requested notification of projects in accordance with Public Resources Code Section

21080.3.1 subd (b). In response to a more specific verbal request in a meeting with City staff and the representative on July 12, 2018, clarification was received that such notification be sent only for projects in the City of San José that involve ground disturbing activities in downtown, and that such requests may be sent via e-mail only for future projects require a Negative Declaration, Mitigated Negative Declaration, or Environmental Impact Report. As this project is not in downtown, no notification was sent to the Ohlone Indian Tribe, Inc.

- On June 17, 2021, Chairwoman Geary of the Tamien Nation verbally requested AB52 notification and the written notice received June 28, 2021, requesting notification of projects in accordance with Public Resources Code Section 21080.3.1 subd (b), for all proposed projects that require a Negative Declaration, Mitigated Negative Declaration, or Environmental Impact Report.
- On June 30, 2021, Kanyon Sayers-Roods of the Band of Costanoan Ohlone people verbally requested AB52 notification for all proposed projects that require a Negative Declaration, Mitigated Negative Declaration, or an Environmental Impact Report.

It is assumed in this SPPE Application that the CEC, as the Lead Agency, will conduct Tribal Consultation pursuant to the requirements of AB 52 during the EIR preparation process.

There are no known tribal cultural resources on-site that are listed or eligible for listing in the California Register of the City of San José Historic Resource Inventory. No tribal cultural features, including sites, features, places, cultural landscapes or sacred places were identified on-site. However, a record search of the NAHC Sacred Lands File was completed for the site and the results were positive. Therefore, the proposed development activities (particularly grading, trenching, and/or excavating) could damage as-yet unrecorded subsurface resources, including tribal resources. Undiscovered tribal resources at the Project Site could potentially be eligible for listing in local or statewide registers of historical resources. Accordingly, an appropriate process must be followed during site development which would ensure that any resources that are uncovered are properly accounted for and preserved for study. Consistent with General Plan Policies ER-10.2 and ER-10.3, standard conditions and mitigation measures would be applied to the Project Site which would avoid any significant impacts to tribal cultural resources discovered during development of the site (refer to Section **Error! Reference source not found.****Error! Reference source not found.**, PDFs CUL-1.1 through 1.4 and CUL-2.1). Additionally, construction the project would include a Native American monitor on-site. Therefore, the proposed project would have a less than significant impact on tribal cultural resources. **(Less than Significant Impact)**