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# APPLICATION FOR SMALL POWER PLANT EXEMPTION

Martin Backup Generating Facility (22-SPPE-3)

SUBMITTED TO: CALIFORNIA ENERGY COMMISSION  
SUBMITTED BY: **Martin Avenue Properties LLC**

November 2022





## SECTION 1.0 INTRODUCTION AND PURPOSE

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Martin Avenue Properties, LLC (Martin Properties) files this Application for a Small Power Plant Exemption (SPPE Application) pursuant to Public Resources Code Section 25541 and Section 1934 et seq. of the California Energy Commission (Commission) regulations for the 96 MW<sup>1</sup> Martin Backup Generating Facility (MBGF). The MBGF will consist of a total of forty-four (44) 2.75-MW diesel fired generators that will be used exclusively to provide up to 96 MW of backup emergency generation to support the Martin Data Center (MDC), to be located at 651 Martin Avenue in Santa Clara, California. Forty (40) of the generators would be dedicated to replace the electricity needs of the data center in case of a loss of utility power, and four (4) of the generators would be used to support redundant critical cooling equipment and other general building and life safety services (house generators). Project elements will also include switchgear and distribution cabling to interconnect the generators to their respective portion of the building. Figure 1-1 depicts the Regional Location of the MDC and the MBGF. Figure 1-2 shows the Site Vicinity. Figure A0.0, Appendix A shows the Architectural Site Plan for the project.

Unlike the typical electrical generating facility reviewed by the Commission, the MBGF is designed to operate only when electricity from Silicon Valley Power (SVP) is unavailable to the MDC. The MBGF will not be electrically interconnected to the electrical transmission grid. Rather, it will consist of one generation yard electrically interconnected solely to the MDC.

**Section 2** of the SPPE Application provides a detailed description of the construction and proposed operation of the MBGF. To describe the context of the MBGF and its role in serving the MDC, Section 2 also includes a general description of the MDC.

**Section 3** 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 4** of the SPPE Application includes environmental information and analyses in sufficient detail to allow the Commission to conduct an Environmental Impact Report consistent with the California Environmental Quality Act (CEQA) Guidelines.

**Section 5** of the SPPE Application includes a discussion of Alternative backup generation configurations, technology, and alternative fuels considered by Martin Properties.

**Section 6** 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 MBGF as required by Subsection (i) of Appendix F of the CEC SPPE Regulations.

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<sup>1</sup> Maximum electrical demand of the CA3 Data Center.



**Section 7** of the SPPE Application contains a list of addresses of properties and addresses of property owners (where not the same as the site address) within 1,000 feet of the site and 500 feet of offsite linear facilities for CEC noticing purposes.

**Section 8** provides a list of those who assisted in the preparation of this SPPE Application.

**Section 9** provides a list of acronyms used in this SPPE Application.

## **1.1 NEED FOR BACKUP GENERATION**

The primary goal of the MDC is to be a state-of-the-art data center that provides greater than 99.999 percent reliability (fine nines of reliability). The MDC has been designed to reliably meet the increased demand of digital economy, its customers and the continued growth. The MDC's purpose is to provide its customers with mission critical space to support their servers, including space conditioning and a steady stream of high-quality power supply. Interruptions of power could lead to server damage or corruption of the data and software stored on the servers by Martin Properties' clients. The MDC will be supplied electricity by SVP through a new distribution substation constructed on the MDC site and owned and operated by SVP.

To ensure a reliable supply of high-quality power, the MBGF was designed to provide backup electricity to the MDC only in the event electricity cannot be supplied from SVP and delivered to the MDC building. To ensure no interruption of electricity service to the servers housed in the MDC building, the servers will be connected to uninterruptible power supply (UPS) systems that store energy and provide near-instantaneous protection from input power interruptions. However, to provide electricity during a prolonged electricity interruption, the UPS systems will require a flexible and reliable backup power generation source to continue supplying steady power to the servers and other equipment. The MBGF provides that backup power generation source.

The MDC's Project Objectives are as follows:

- Develop a state-of-the-art data center large enough to meet projected growth;
- Develop the Data Center on land that has been zoned for data center use at a location acceptable to the City of Santa Clara;
- Develop a Data Center that can be constructed in two phases which can be timed to match projected growth;
- To incorporate the most reliable and flexible form of backup electric generating technology into the MBGF 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 MBGF must provide a higher reliability than 99.999 percent in order for the MDC to achieve an overall reliability of equal to or greater than 99.999 percent reliability.



- The MBGF must provide reliability to 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 units fails due to external or internal failure, the system will have redundancy to continue to operate without interruption.
  - The MDC must have on-site means to sustain power for 24-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 and approvals are required.
  - **Technical Feasibility.** The selected backup electric generation technology must utilize systems that are compatible with one another.

## 1.2 COMMISSION SPPE JURISDICTION

Martin Properties acknowledges that the Commission's authorizing statute grants exclusive authority for the Commission to issue licenses for the construction and operation of thermal power plants with generating capacities in excess of 50 MW.<sup>2</sup> For thermal power plants with generating capacities greater than 50 MW but less than 100 MW, the Commission can grant an exemption from its licensing authority<sup>3</sup>. The MBGF is not a typical power generating facility in that it consists of generators that can operate independently. In addition, the generators are arranged to support individual portions of the building within the data center. None of the generators will be interconnected to the electrical transmission system and therefore no electricity can be delivered off site.<sup>4</sup>

### 1.2.1 Data Center Facilities Not Within Scope of SPPE

The MDC is not within the scope of the Commission's jurisdiction because it is not a thermal power plant. The MDC is the sole consumer of the electricity produced by the MBGF. Martin Properties is submitting an application for a Master Plan to construct and operate the MDC to the City of Santa Clara (City) for review. The City is anticipated to begin its Project Clearance Committee (PCC) review in December 2022.

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<sup>2</sup> Public Resources Code (PRC) Section 25500.

<sup>3</sup> PRC Section 25541 and Title 20 California Code of Regulations (CCR) Section 1934.

<sup>4</sup> The Commission Staff has determined that notwithstanding these facts, the Commission has jurisdiction over the MBGF. Martin Properties reserves all its rights regarding whether or not the Commission has jurisdiction over the MBGF and the filing of this SPPE Application is not an admission by Martin Properties that the Commission has exclusive jurisdiction over the MBGF or the MDC.



Martin Properties believes that although the CEC is the lead agency for making a determination of whether the MBGF is a thermal power plant that can qualify for a SPPE, the ultimate decision does not extend to the MDC facilities. Martin Properties does acknowledge that the CEC should include the potential effects of the MDC in its CEQA analysis, but the ultimate determination of whether the MDC should be approved, denied, or subject to mitigation measures is solely within the City's jurisdiction. To assist the CEC in preparing its CEQA document Martin Properties provides a description of the MDC in Section 2. The potential effects of the MDC are considered in environmental analyses of Section 4 in a manner to assist the Commission in evaluating combined impacts from the co-location of the MBGF and the MDC.

To enable the City to timely conduct its review of the modified MDC, Martin Properties requests the Commission complete its review of the MBGF by March, 2023 and within the Commission's statutory 135-day obligation.

### **1.3 PROJECT BENEFITS**

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

- Use minimal water for cooling;
- Repurpose a brownfield site
- Minimize extension of overhead electrical lines;
- Incorporate Noise minimization measures; and
- Incorporate Energy and Water Efficiency Measures

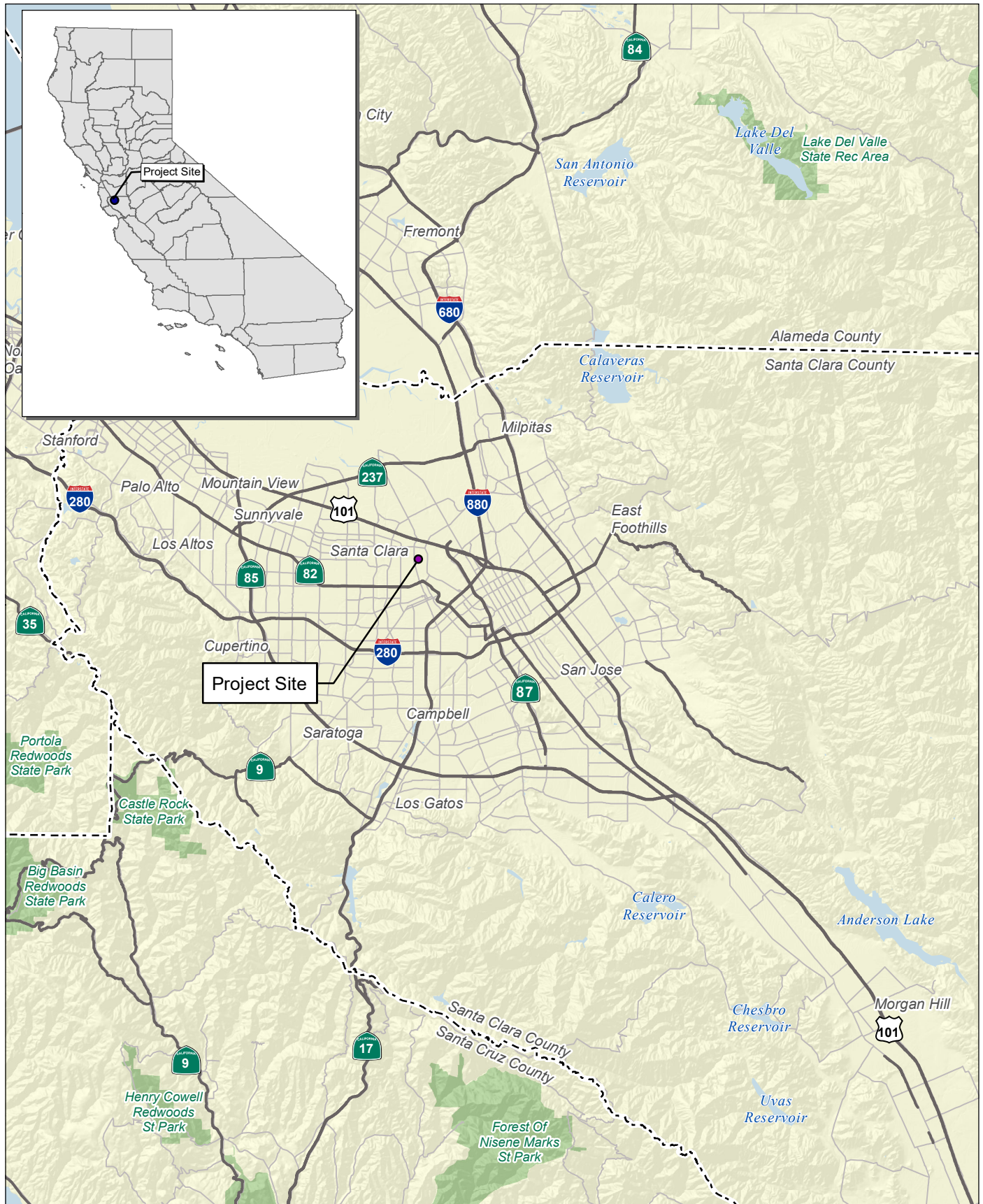
Due to the heat generated by the data center equipment, cooling is one of the main uses of electricity in data center operations. In order to reduce GHG emissions and reduce the use of energy related to building operations, the project proposes to implement the following efficiency measures.

- Daylight penetration to offices
- LED lighting fixtures and occupancy sensors
- Reflective roof surface
- Meet or exceed Title 24 requirements
- Electric vehicle (EV) parking
- Low flow plumbing fixtures
- Landscaping would meet City of Santa Clara requirements for low water use
- Use a low GHG emission refrigerant in the project chillers



## **EXECUTIVE SUMMARY FIGURES**





**Figure 1-1**  
**Regional Location Map**





Source: Bing Aerial Imagery.



Figure 1-2  
Site Vicinity Map



## **SECTION 2.0     PROJECT DESCRIPTION**

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### **2.1     OVERVIEW OF PROPOSED GENERATING FACILITIES**

MBGF will be an emergency backup generating facility with a generation capacity of up to 96 MW to support the need for the MDC to provide uninterruptible power supply for its tenant's servers. The MBGF will consist of 44 diesel-fired backup generators arranged in a generation yard located on the east side of the MDC. Forty (40) of the generators would be dedicated to replace the electricity needs of the data center in case of a loss of utility power, and four (4) of the generators would be used to support redundant critical cooling equipment and other general building and life safety services (house generators). Project elements will also include switchgear and distribution cabling to interconnect the generators to their respective portion of the building.

### **2.2     GENERATING FACILITY DESCRIPTION, CONSTRUCTION AND OPERATION**

#### **2.2.1     Site Description**

The proposed MDC site encompasses approximately 7.17 acres and is located at 651 Martin Avenue in Santa Clara, California, APN 224-04-071. The property is zoned MH-Heavy Industrial. The site is currently developed with four (4) separate single-story structures encompassing a total of approximately 77,220 square feet.<sup>5</sup> The structures were used as commercial/warehouse and include associated paved surface parking and loading dock. The existing buildings consist of concrete and prefabricated metal building. The existing buildings facades consist of painted formed metal panels.

All four of the existing buildings will be demolished as part of the Project . The main entrance to the MDC building will be located on Martin Avenue at the southwest corner of the property, with a secondary entrance also on Martin Avenue near the easternmost portion of the property.

Native and non-native trees and ornamental landscaping are located along the Martin Avenue frontage of the property, as well as the northern and eastern property boundaries. The trees along the western property line are located on the adjacent property and are to remain. In accordance with the arborist report, the project proposes to demolish the existing shrubs and groundcovers on the site, while protecting-in-place trees not in conflict with proposed utilities, grading, stormwater treatment facilities, and architectural improvements.

The property is irregularly shaped and is generally bound to the North by an existing warehouse, to the East by an existing railroad line operated by Union Pacific, to the South by Martin Avenue, and to the West by an existing office building.

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<sup>5</sup> The four existing buildings on site encompass 3,533 square feet, 27,243 square feet, 5,073 square feet, and 41,371 square feet.



The project area consists primarily of commercial and industrial land uses. The area contains some buildings that are similar in height and scale to the existing buildings on the project site and some buildings that are similar in height and scale to the proposed MDC building. The Norman Y. Mineta San José International Airport is located approximately one quarter mile east of the site.

The nearest residentially zoned properties are approximately 3,000 feet to the south (near the intersection of Main Street and Cabrillo Avenue) and 5,800 feet to the north (at the intersection of Lafayette Street and Laurie Avenue). There are several residences approximately 1,400 feet to the southwest of the project site, located on property zoned for heavy industrial uses.

## **2.2.2 General Site Arrangement and Layout**

The 44 emergency backup generators (40 for the data center suites and 4 house generators) will be located at the site in a generation yard adjacent to the south side of the MDC building. Figure A0.0, Appendix A shows the General Arrangement and Site Layout of the MBGF within the MDC site.

Each backup generator is a fully independent package system each with dedicated diesel fuel tank and urea storage located on a skid below the generator and within the generator enclosure. The generation yard will be electrically connected to the MDC building through above ground cable bus to a location within the building that houses electrical distribution equipment.

## **2.2.3 Generating Capacity**

### **2.2.3.1 Overview**

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

1. The MBGF uses internal combustion engines and not turbines.
2. The MBGF internal combustion engines have a peak rating and a continuous rating.
3. The MBGF through software technology and electronic devices is controlled exclusively by the (MDC).
4. The MBGF has been designed with a distributed redundant system with a 5 to make 4 redundancy. Each system will serve two of the 16 lineups as described in Section 2.2.4.1.
5. There will be a total of 8 data center generators which are redundant.
6. There will be a total of 4 house generators to provide electricity during emergencies to support portions of the admin building and features necessary for emergency response. Two of these generators are redundant.



7. The MBGF will only be operated for maintenance, testing and during emergency utility power outages.
8. The MBGF will only operate at a load equal to the demand of the MDC during an emergency utility outage.
9. The MBGF is only interconnected to the MDC and is not interconnected to the transmission or distribution grid.

### **2.2.3.2 Generating Capacity and PUE**

The Commission has determined the maximum generating capacity of a backup generating facility is the maximum of capacity of the load being served. The design demand of the MDC, which the MBGF has 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 ever occur. The MDC load on that worst-case day will be 96 MW.

It is important to understand that while the MDC will be designed to accommodate the full IT equipment load of the building, it is Martin Properties' experience that the customers that lease data center space do not utilize the entire load identified in their lease. This typically results in data center demand loads approximately 60 to 80 percent. Therefore, a fully leased 96 MW data center would only be expected to reach a demand load around 77 MW.

The data center industry utilizes a factor called the Power Utilization Efficiency Factor (PUE) to estimate the efficiency of its data centers. The 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 1.45 (Total 92.8 MW demand of Building on Worst Case Day divided by 64.0 MW Total Critical IT Load). The average annual PUE would be 1.26 (Total 80.7 MW demand of Building average conditions divided by 64.0 MW Design Critical IT Load). These PUE estimates are based on design assumptions and represent worst case.

As described above, the expected PUE is much lower because the Critical IT that is leased by clients is rarely fully utilized. Martin Properties' experience with operation of other data centers is that the actual annualized PUE will be closer to 1.25.

## **2.2.4 Backup Electrical System Design**

### **2.2.4.1 Overview**

As discussed above there will be 16 data center suites in the MDC. Each data center suite will be designed to handle 4 MW (megawatts) of IT equipment load. The total maximum load of each data center suite will be 6 MW which includes the IT equipment load, mechanical equipment to cool the IT equipment load, lighting and data center



monitoring equipment. The sum of the 16-center suite will result in 64 MW of IT equipment load and 96 MW of total electrical load.

There are 16 data center suites or lineups. The backup electrical system has been designed to serve the lineups in pairs. Each redundant system of 5, 2.75 MW generators serves 2 data center lineups. Each 5-generator redundant system is designed for one generator to be taken out of service at any moment in time (called “5 to make 4”). During and emergency all 5 generators will start and carry load up to approximately 80% of their nameplate rating supporting the two lineups they serve. If one of the generators fails or needs to be taken out of service during the emergency, the 5 to make 4 design allows the failing generator to be removed from operation automatically with the remaining 4 generators to continue to serve the lineups up to the maximum design load of the two data center suites.

Each redundant backup generation system is made up of 5 “capacity groups” with each electrical capacity group sized at 2.75 MW (2750 kW) of total power. An electrical capacity group consists of one 2.75 kW generator, one 3,000kVA 34.5kV-480V medium voltage transformer, one 4,000 ampere 480-volt service switchboard and a 2,000-kW uninterruptible power supply (UPS) system.

The IT equipment will have dual cords that will take power from two different capacity groups. The dual cords are designed to evenly draw power from both cords when power is available on both cords, and automatically draw all of its power from a single cord when power becomes un-available on the other cord.

Each of the 5-to-make-4 electrical systems will be designed to continue supporting all of the IT equipment load in the two data center suites it serves any time one of the five capacity groups is either scheduled to be out-of-service for maintenance or becomes unavailable due to equipment failure. Therefore, the 13.750 MW of total power equipment capacity installed for each 5-to-make-4 system effectively provides only 11 MW of total power.

The dual corded IT equipment load gets power from two independent capacity groups. Ten different cord configurations exist and are used to evenly balance the loads between these pairs of capacity groups: A-B, A-C, A-D, A-E, B-C, B-D, B-E, C-D, C-E, and D-E.

As an example of the electrical system design, when electrical capacity group A becomes un-available, the IT equipment connected to the A and B electrical capacity group will automatically shift its entire load to the B electrical capacity group. IT equipment connected between the A-C, A-D, and A-E electrical capacity groups also performs a similar power transfer in the event of an A capacity group failure.

The electrical load on each electrical capacity group is monitored by the building automation system. When the any of the electrical capacity groups reach 72 percent loaded (based on 90 percent of the 80 percent maximum loading under normal operation), an alarm is activated in the engineering office. The operations staff will work with the tenants to ensure that the leased power levels are not exceeded.



The consequence of electrical capacity groups exceeding 80 percent loaded could lead to dropping IT equipment when coupled with a capacity group failure event. If all the capacity groups serving a data center suite (five capacity groups) are loaded over 80 percent and an electrical capacity group fails, the resulting load transferring to the four available capacity group would exceed the rating of the capacity groups and would lead to over-current protection devices tripping open due to the overload condition. Therefore, it is vital to the reliability of the data center to make sure that all capacity groups remain below the 80 percent threshold.

#### **2.2.4.2 Utility-to-Generator Transfer Control Components and Logic**

In an outdoor rated switchboard located next to the Generator Alternator, there will be a Load Disconnect Breaker that is Normally Closed while the generator is both in and out of operation. From that load disconnect, 480V rated power cable bus, rated for the full ampacity output rating of the generator, will traverse from the generator to a Generator Switchboard, and then into the data center facility terminating on a dedicated Main Generator Input Breaker.

The generator switchboard includes a load bank breaker, allowing each generator to be individually connected to a load bank for periodic maintenance and testing. This breaker is an electrically operated breaker that is normally open when the generator is not in operation, and the Main Switchboard has not requested generator power.

This Generator Main Breaker is electrically interlocked with an adjacent Utility Transformer Main Breaker to allow only one of the Breakers to closed at any time. Upon the loss of utility power, the PLC transfer controller will send a start signal to the generator, followed by the Utility Breaker opening, followed by a confirmation that the generator has started leading to the Generator Main Breaker being closed.

Once the Generator Main Breaker is closed, the power created from the individual generator is then transmitted to the IT equipment (via a 2.0 MW (2,000 kW) uninterruptable power supply (UPS) system) and mechanical equipment designed to cool the IT equipment load served by the UPS. This load is the same load that the dedicated Utility Transformer was supplying power to prior to the utility interruption. Power from this individual generator cannot be transferred to any other load or system, or anywhere outside the facility.

The uninterruptible power supply (UPS) system includes back-up batteries sized for five minutes of battery back-up time. During the time between a transfer between utility and generator power, the UPS system continues to support the IT equipment load without interruption. During a utility-to-generator transfer, the duration of the power outage between the sources will typically be around 15 seconds; it takes around ten seconds to get the generator started and up to voltage. During a generator-to-utility transfer, the duration of the power outage between the sources will typically be around five seconds.



### 2.2.4.3 Uninterruptible Power Supply (UPS) System Description

The UPS System and Batteries are part of the MDC and are not part of the MBGF. However, the following description is provided to describe how the UPS system is intended to operate. The UPS will protect the load against surges, sags, under voltage, and voltage fluctuation. The UPS will have built-in protection against permanent damage to itself and the connected load for all predictable types of malfunctions. The load will be automatically transferred to the bypass line without interruption in the event of an internal UPS malfunction. The status of protective devices will be indicated on an LCD graphic display screen on the front of the UPS. The UPS will operate in the following modes:

- Normal - IGBT Rectifier converts AC input power to DC power for the inverter and for charging the batteries. The IGBT inverter supplies clean and stable AC power continuously to the critical load. The UPS Inverter output shall be synchronized with the bypass AC source when the bypass source is within the AC input voltage and frequency specifications.
- Loss of Main Power - When Main Power is lost, the battery option shall automatically back up the inverter so there is no interruption of AC power to the critical load.
- Return of Main Power or Generator Power - The system shall recover to the Normal Operating Mode and shall cause no disturbance to the critical load while simultaneously recharging the backup battery.
- Transfer to Bypass AC source - If the UPS becomes overloaded, or an internal fault is detected, the UPS controls shall automatically transfer the critical load from the inverter output to the bypass AC source without interruption. When the overload or internal warning condition is removed, after a preset “hold” period the UPS will automatically re-transfer the critical load from the bypass to the inverter output without interruption of power to the critical load.
- Maintenance Bypass - An optional manual make-before-break maintenance bypass panel may be provided to electrically isolate the UPS for maintenance or test without affecting load operation.

The UPS system batteries will have tab washers mounted on front terminal posts capable of accepting the wiring components of a battery monitoring system. Batteries will have an expected life of ten years. Each battery bank will provide a minimum of five minutes of backup at 100 percent rated inverter load of 1000kW, @ 77°F (25°C), 1.67 end volts per cell, beginning of life.

### 2.2.5 Generator System Description

Each of the 44 generators for the data center suites will be Caterpillar Model 3516E standby emergency diesel fired generators equipped with Selective Catalytic Reduction (SCR) equipment and diesel particulate filters (DPF) to comply with Tier 4 emissions standards.



The maximum peak generating capacity of each generator is 2.75 MW for standby applications (short duration operation). Under normal operation with all when all five generators are active, the maximum load on each generator is designed to be 80 percent of the peak capacity. Manufacturer specification sheets and performance data for the proposed generators are provided in Appendix B.

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 MDC. 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 MDC.

The generator package will integrate a dedicated fuel tank urea tank within the generator enclosure. The generators will be constructed in a stacked configuration. The bottom generators will be placed on a concrete slab and the upper generators will be supported on a raised structural steel platform. The generators enclosures are approximately 10 feet wide, 30 feet long and 29 feet high. Generators will have a stack heights between approximately 25 and 55 feet. Each pair of generators will be spaced approximately five feet apart horizontally. The west end of the generator yard will be partially enclosed with a 70-foot-high perforated metal screen to obscure views of the generators from Martin Avenue.

### **2.2.6 Fuel System**

The backup generators will use renewable diesel as its primary fuel when feasible and ultra-low sulfur diesel as fuel (<15 parts per million sulfur by weight) when renewable diesel is not readily available. Each of the 44 generator units serving the data center area will have an approximately 5400-gallon diesel fuel storage tank with high fuel level of approximately 5100 gallons. Approximately 4700 gallons are required for 24-hour operation. The generators would have a combined diesel fuel storage capacity of approximately 237,600 gallons, which is sufficient to provide more than 24 hours of emergency generation at full electrical worst-case demand of the MDC.

### **2.2.7 Cooling System**

Each generator will be air cooled independently as part of its integrated package and therefore there is no common cooling system for the MBGF.

### **2.2.8 Water Supply and Use**

The MBGF will not require any consumption of water.



### **2.2.9 Waste Management**

The MBGF will not create any waste materials other than minor amounts of solid waste created during construction and maintenance activities.

#### **2.2.10 Hazardous Materials Management**

The MBGF will prepare a Spill Prevention, Control and Countermeasure Plan (SPCC) to address the storage, use and delivery of diesel fuel for the generators.

Each generator unit and its integrated fuel tanks have been designed with double walls. The interstitial space between the walls of each tank is continuously monitored electronically for the existence of liquids. This monitoring system is electronically linked to an alarm system in the engineering office that alerts personnel if a leak is detected. Additionally, the standby generator units are housed within a self-sheltering enclosure that prevents the intrusion of storm water.

Diesel fuel will be delivered on an as-needed basis in a compartmentalized tanker truck with maximum capacity of 8,500 gallons. The tanker truck parks on the access road to the south of the generator yard and extends the fuel fill hose through one of multiple hinged openings in the precast screen wall surrounding the generator equipment yard.

There are no loading/unloading racks or containment for re-fueling events; however, a spill catch basin is located at each fill port for the generators. 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 for diesel fuel to come into 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 is stored in 2, 55-gallon drums located within the generator enclosure. 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.



### **2.2.11 MBGF Project Construction**

Construction activities for the MDC are expected to begin in May 2024 and are discussed in more detail in Section 2.3.4. Since the site preparation activities for the MDC will include the ground preparation and grading of the entire MDC site, the only construction activities for the MBGF would involve construction of the generation yard. This will include construction of concrete slabs, fencing, installation of underground and above ground conduit and electrical cabling to interconnect to the MDC Building switchgear, and placement and securing the generators.

The generators themselves will be assembled offsite and delivered to site by truck. Each generator will be placed within the generation yard by a crane.

Construction of the generation yard and placement of the generators is expected to take six months and is included in the overall construction schedule for the MDC described in section 2.3.4. Construction personnel for the MBGF are estimated to range from 10 to 15 workers including one crane operator.

### **2.2.12 MBGF Facility 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). Please see Section 4.3 for a description of the testing and maintenance frequencies and loading proposed for the MBGF.

## **2.3 MDC DATA CENTER FACILITIES DESCRIPTION**

### **2.3.1 Overview**

As described in Section 1.2, the Commission SPPE's determination is limited to solely to the MBGF. However, in order for the Commission to inform the decision-makers of the potential environmental effects of the MBGF, in combination with the MDC, Martin Properties has included a complete description of the MDC.

The proposed MDC site encompasses approximately 7.17 acres and is located at 651 Martin Avenue in Santa Clara, California, APN 224-04-071. The property is zoned MH-Heavy Industrial zoning. The site is currently developed with four (4) separate single-story structures encompassing a total of approximately 77,220 square feet.<sup>6</sup> The structures were used as commercial/warehouse and include associated paved surface parking and

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<sup>6</sup> The four existing buildings on site encompass 3,533 square feet, 27,243 square feet, 5,073 square feet, and 41,371 square feet.



loading dock. The existing buildings consist of concrete and prefabricated metal building. The existing buildings facades consist of painted formed metal panels.

The nearest residentially zoned properties are approximately 3,000 feet to the south (near the intersection of Main Street and Cabrillo Avenue) and 5,800 feet to the north (at the intersection of Lafayette Street and Laurie Avenue). There are several residences approximately 1,400 feet to the southwest of the project site, located on property zoned for heavy industrial uses.

All four of the existing buildings will be demolished as part of the Project. The main entrance to the MDC building will be located on Martin Avenue at the southwest corner of the property, with a secondary entrance also on Martin Avenue near the easternmost portion of the property.

The MDC project will consist of construction of a four-story 467,200 square foot data center building, utility substation, generator equipment yard (the MBGF), surface parking and landscaping, and a recycled water pipeline extension. The data center building will house computer servers for private clients in a secure and environmentally controlled structure and would be designed to provide 64 megawatts (MW) of power to information technology (Critical IT) equipment. The Architectural Site Plan of the proposed development is shown in Figure A0.0, Appendix A. Figures A3.0, A3.1, and A4.0, Appendix A show the Building Elevations.

The data center building will consist of two main components; the data center suites that will house client servers, and the administrative facilities including support facilities such as the building lobby, restrooms, conference rooms, landlord office space, customer office space, loading dock and storage.

The data center suite components will consist of four levels of data center space. Each level will contain four data center suites and corresponding electrical/UPS rooms. The data center is being designed with an average rack power rating of 8.3 kW.

The four-story data hall building is composed of admin, data hall, and loading dock masses. The admin portion, located on the south side of the building, is clad with curtain wall and metal panel systems. The data hall portion is clad primarily with EIFS. The top of the parapet at the admin and data hall is at 87.5 feet. The loading dock portion is a single-story mass, also clad in EIFS to match the data hall. Three exterior stairs located on the NE, NW, and SW corners of the building are semi enclosed with a perforated metal rain screen. A rooftop dunnage platform is provided at 94.25 feet for mechanical equipment. A sound attenuating screen topping off at 102.25 feet fully encloses the platform. Access to the platform is provided by a freight elevator on the NE corner of the building. The top of the elevator parapet is at 119.66 feet. Floor plans of each level of the data center building are shown on Figures A1.1, A1.2, A1.3, and A1.4, Appendix A. The roof level plan is shown on Figure A1.5, Appendix A. Area calculations for each level are shown in Figure A2.0, Appendix A.



The project would construct a new 100 MVA (mega volt-ampere) electrical substation along the southern boundary of the site. The two-bay substation (two 100 MVA 60 kV-34.5kV step-down transformers and primary distribution switchgear) will be designed to allow one of the two transformers to be taken out of service, effectively providing 100 MVA of total power (a 2-to-make-1 design).

The substation will have an all-weather asphalt surface underlain by an aggregate base. A concrete masonry unit screen wall, 13 feet in height, would surround portions of the substation with the remainder of the substation protected with an 8-foot height chain link fence. An oil containment pit surrounding each transformer will capture unintended oil leaks. Access to the substation will be from through the project site off Martin Ave.

The substation will be capable of delivering electricity to the MDC from Silicon Valley Power (SVPs) new adjacent switching station but will not allow any electricity generated from the MBGF to be delivered to the transmission grid. Availability of substation control systems will be ensured through a redundant DC battery backup system.

### **2.3.2 Building Heights and Setbacks**

The data center building will be approximately 87.5 feet in height to the top of parapet. The mechanical equipment screen on the roof the building will extend to a height of 102.25 feet in height from the top of the slab.

The building will be located in the center of the site and will be set back at a minimum of 149 feet from the front yard to the south (Martin Avenue), a minimum of 46 feet from the side yard to the west (adjacent to a non-residential zone), a minimum of 141 feet from the side yard to the east (adjacent to railroad tracks), and a minimum of 50 feet from the rear yard to the north (adjacent to a non-residential zone).

### **2.3.3 Site Access, Parking, and Employment**

The overall project site will include one primary entrance from Martin Avenue located in the southwestern corner of the site and one secondary entrance also from Martin Avenue located at the southeastern corner of the site. The site currently has two entrances from Martin Avenue in the same general areas as the proposed entrances.

The project would provide a total of 92 parking spaces on site including 4 accessible and 1 van accessible parking space.

Table 2-1 summarizes the anticipated headcount of personnel and visitors that would be on-site throughout a typical day. It is anticipated that on an average day there will be 33-35 people at the building throughout the day, with 17-30 people in the building at the same time. The Project will include a Project Design Measure to require Staff personnel to work a 4-40 work schedule.



**Table 2-1: Anticipated Average Daily Headcount**

Type	Daily Persons	Persons Per Shift
Operational	14	2-9 <sup>1</sup>
Security	5	2-5 <sup>2</sup>
Janitor	2	1-2
Tenant Personnel	10-12	10-12
Visitors	2	2
<b>Total</b>	<b>33-35</b>	<b>17-30</b>

<sup>1</sup> Operational staff work in three shifts: day (9 employees), swing (3 employees), and graveyard (2 employees)

<sup>2</sup> There will be 2 security staff stationed at the building and 3 shift rovers that patrol the Project building and other nearby data center sites.

### **2.3.4 Demolition, Site Grading, Excavation, and Construction**

Demolition, grading, excavation and construction will take place in two phases. Phase I will include demolition of the existing building and infrastructure that cannot be reused; grading of the entire site; installation of utility services including interim power and construction of the on-site substation; and construction of the shell of the building and some of the interior rooms necessary to meet tenant schedules. Phase II will include construction of the remainder of the interior rooms and components of the building as the building is leased to tenants.

Phase I activities are anticipated to begin in May 2024 and take approximately 14 months to complete. Phase I will include construction workforce with a peak number of workers of approximately 190 per month and an average of approximately 100 per month. Phase II construction would begin as soon as commercially feasible, likely in 2025 and take approximately 11 months to complete for commercial operation of the remaining interior rooms by the beginning of 2025. Phase II construction workforce is estimated to have a peak number of workers of approximately 100 per month with an average of approximately 60 per month. These estimates of construction workers include the construction worker estimates for the MBGF.

It is estimated that up to 12,000 cubic yards of soil will be imported to raise the site to acceptable elevation per FEMA flood zone information (Zone AO). Grading of the site is not expected to require the export of any soil or undocumented fill material.

### **2.3.5 Landscaping**

The MDC proposes to remove all 33 trees on-site, due to clearance conflicts requirements mandated by Silicon Valley Power (SVP), and various conflicts with proposed civil and site improvements. One of the trees is classified as a protected tree under the City of Santa Clara tree protection ordinance. The City of Santa Clara's landscape ordinance mandates a 2:1 replacement with 24-inch box size trees, or 1:1 replacement with 36-in



box size trees. The MDC proposes to mitigate for the loss of any trees through a combination of 24-inch box size and 36-inch box size replacements.

New landscaping consisting of trees, large and medium shrubs, and groundcovers will be installed along the property boundaries, building perimeters, stormwater treatment facilities, and landscape beds distributed throughout the parking facilities. Trees would be planted five feet away from new or existing water mains or utility lines.

The new Landscape will include drought tolerant native and non-native trees, shrubs, and ground covers. New planting will also be tolerant of recycled water. The landscape design will meet State and City WELO requirements for water use. We estimate that the new planting will be approximately 40-45% under the landscape Maximum Water Use for the site as calculated with the WELO formulas.

### **2.3.6 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 10,000 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). Examples of C.3 LID measures include bioretention areas, flow-through planters, and subsurface infiltration systems.

The MDC proposes to construct stormwater treatment areas consisting of LID (Low-Impact Development) bioretention areas and at-grade flow-through planter boxes totaling approximately 11,000 square feet, based on preliminary impervious calculations, sized according to the requirements of the MRP. The stormwater treatment areas would be located around the perimeter of the site, and adjacent to paved parking areas and building.

In the existing condition, stormwater discharges the site via existing storm drain laterals into the site into the public storm drain system at three locations; the southeast corner of the 651 Martin Avenue property, the southwest corner of the 651 Martin Avenue property and near the center of the property along the Martin Avenue frontage. The proposed project will not be utilizing any of the existing storm drain laterals to the site and is proposing new storm drain connections to the public storm drain system.

The San Francisco Bay Regional Water Quality Control Board (RWQCB) has issued a 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 10,000 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). Examples of C.3 LID measures include bioretention areas, flow-through planters, and subsurface infiltration systems.

Downspouts for the roof drainage will discharge directly into bioretention areas or flow-through planters located adjacent to the building. 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 site.

Flow-through planters and bioretention planters will include perforated underdrains and overflow structures that connect to the on-site storm drains system which eventually discharges to the public storm system in Martin Avenue described previously.

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 "purple area", defined as catchments draining to a hardened channel and/or tidal area. According to the MRP, hydromodification controls (HMC) are not required for projects located in purple areas of the HMP Applicability Map. Therefore, MDC will not incorporate HMC into the project's development.

## **2.3.7 Site Water Supply and Use**

### **2.3.7.1 Site Grading and Construction**

Grading and construction of the MDC including the MBGF is estimated to utilize 1.75-acre feet of water over the 24-month construction period for Phase I and Phase II.

### **2.3.7.2 MDC Operation**

The MDC could require water when outside air temperatures approach design to augment its adiabatic cooling system. The data center will be designed to use up to 0.8 AFY of recycled water when supply for cooling when it is available and provided by the City of Santa Clara, and a potable water connection will be provided as a back-up source to the recycled water system in the interim period.

Total potable water use at full buildout of the MDC is estimated to be approximately 2 AFY. Landscaping for the site is estimated to use up to 1 AFY. Historical use at the site is approximately 3.2 AFY.



## **2.3.8 Utility Interconnections**

### **2.3.8.1 General**

As part of the construction of the new building, domestic water, fire water, sanitary sewer, and fiber connections will be made from the City infrastructure systems located along Martin Avenue. There is an 8-inch diameter domestic water line operated by the City of Santa Clara in Martin Avenue along the frontage of the property that the project anticipates will be required by the City to be upsized a 12-inch line. This domestic water line will serve as the primary source for water and fire supply to the project. There is also an existing recycled water line located on the east side of the UPRR tracks, approximately 100 feet to the east of the subject property. The project intends to extend the recycled water line as a secondary source of water as shown on Appendix A, Figure C4, Utility Plan.

### **2.3.8.2 SVP Electrical Distribution Facilities**

As part of the MDC, Martin Properties will construct a new on-site switching station to SVP specifications and an on-site MDC owned substation to provide 60kV service to the site. The switching station will ultimately be owned and operated by SVP as part of its 60kV loop system. The proposed switching station will be located along Martin Ave to the and cut-in to the existing 60kV line passing nearby. The station will be configured as a loop with two radial taps to the MDC substation. Reliability is maintained such that, if there is a fault along any section of the Loop, electric service is still supplied from the receiving station at the other of the 60kV loop.

The new conductor that interconnects the new substation to the Bulk Electric System (BES) will be an ACCR type, size 715 double bundle with a carrying capacity of 310 MVA. SVP's general practice is to use tubular steel transmission poles structures to loop in and out of the switchyard. The new SVP switchyard is adjacent to the existing 60 kV transmission line. Tie in will occur by intercepting and routing the line through the switching station. There may be up to three new transmission poles anticipated to be performed as tie-in. All three would be located on the project site.

## **2.4 PROJECT DESIGN MEASURES**

The following Project Design Measures (PDMs) are proposed by Martin Properties and are incorporated into the design of the project. They are outlined here to ensure that Staff's assessment of the potential impacts of the MBGF and MDC is completed with these measures in place. These PDMs are also repeated in each environmental technical section where applicable and in many cases are identical to the Mitigation Measures adopted by Staff and approved by the Commission in the recent CA3 Backup Generating Facility SPPE proceeding.



## 2.4.1 Air Quality

**PDM AQ-1** To ensure that fugitive dust impacts are less than significant, the project will implement the Bay Area Air Quality Management District (BAAQMD) recommended Best Management Practices (BMPs) during the construction phase, the project owner shall implement a construction emissions control plan that has been reviewed and approved by the Director or Director's designee of the City of Santa Clara Community Development Department prior to the issuance of any grading or building permits, whichever occurs earliest. These BMPs are incorporated into the design of the project and will include:

- Water all exposed areas (e.g., parking areas, graded areas, unpaved access roads) twice a day.
- Maintain a minimum soil moisture of 12% in exposed areas by maintaining proper watering frequency.
- Cover all haul trucks carrying sand, soil, or other loose material.
- Suspend excavation, grading, and/or demolition activities when average wind speed exceeds 20 miles per hour.
- Pave all roadways, driveways, and sidewalks as soon as possible. Lay building pads as soon as grading is completed, unless seeding or soil binders are used.
- Install wind breaks (e.g., trees, fences) on the windward side(s) of actively disturbed areas of construction with a maximum 50 percent air porosity.
- Use a power vacuum to sweep and remove any mud or dirt-track next to public streets if visible soil material is carried onto the streets.
- Limit vehicle speeds on unpaved roads to 15 miles per hour (mph).
- Minimize idling time for all engines by shutting engines when not in use or limiting idling time to a maximum of five minutes. Provide clear signage for construction workers at all access points.
- Properly tune and maintain construction equipment in accordance with manufacturer's specifications. Check all equipment against a certified visible emissions calculator.
- Post a publicly visible sign with the telephone number and person to contact at the City of Santa Clara and the on-site job superintendent regarding dust complaints.
- Install vegetative ground cover in disturbed areas as soon as possible and water appropriately until vegetation is established.



- Limit simultaneous occurrence of excavation, grading, and ground-disturbing construction activities.
- Install water washers to wash all trucks and equipment prior to leaving site.
- Treat site access to a distance of 100 feet from the paved road with a 6- to 12- inch compacted layer of wood chip, mulch, or gravel.
- Install sandbag or other erosion control measures to prevent silt runoff to public roadways from sites with a slope greater than one percent.
- Minimize idling time of diesel-powered construction vehicles to two minutes.
- All off-road equipment greater than 25 horsepower (hp) shall have engines that meet or exceed Tier 4 final off-road emission standards. Use of zero-emission and hybrid-powered equipment is encouraged.
- All on-road trucks used for material delivery or hauling shall have engines that meet or exceed 2014 CARB emissions standards.
- Where grid power is available, portable diesel engines should be prohibited.
- Use low VOC (i.e., ROG) coatings beyond the local requirements (i.e., Regulation 8, Rule 3: Architectural Coatings).
- All construction equipment, diesel trucks, and generators be equipped with Best Available Control Technology for emission reductions of NOx and PM.
- All contractors use equipment that meets CARB's most recent certification standard for off-road heavy-duty diesel engines.

## **2.4.2 Biological Resources**

### **PDM BIO-1, Avoid and Minimize Impacts to Protected Bird Species**

- If possible, demolition and construction activities, including removal of trees and vegetation clearing, shall take place between September and January. If demolition or construction activities, including removal of the trees on –site, would take place between January and September, a pre-construction survey for nesting raptors and other protected native or migratory birds shall be conducted by a qualified ornithologist, approved by the City of Santa Clara, to identify active nests that may be disturbed during project implementation. Pre-construction surveys shall be conducted no more than 14 days prior to the initiation of demolition or construction activities or tree relocation or removal. Surveys shall be repeated if project activities are suspended or delayed for more than 14 days during the



nesting season. The surveying ornithologist shall inspect all trees in and immediately adjacent to the construction area to be disturbed by these activities, and the ornithologist shall, in consultation with the California Department of Fish and Wildlife (CDFW), designate a construction-free buffer zone (typically 250 feet for non-raptors to 500 feet for raptors) around the nest until the end of the nesting activity. Any changes to a buffer zone must be approved by the City of Santa Clara, in consultation with CDFW. The nests and buffers will be field checked weekly by the approved ornithologist. The approved buffer zone will be marked in the field with exclusion fencing, within which no construction, tree removal, or vegetation clearing shall commence until the ornithologist verifies that the nest(s) are no longer active. If an active bird nest is discovered during demolition or construction, then a buffer zone shall be established under the guidelines specified.

- The applicant shall submit a report indicating the results of the survey and any designated buffer zones to the satisfaction of the City of Santa Clara's Director of Community Development prior to the issuance of permits for tree removal, demolition, or grading. The report(s) shall contain maps showing the location of all nests, species nesting, status of the nest (e.g. incubation of eggs, feeding of young, near fledging), and the buffer size around each nest (including reasoning behind any alterations to the initial buffer size). The report shall be provided within 10 days of completing a pre-construction nest survey.

## **PDM BIO-2: Avoid and Minimize Impacts to Bat Species**

If suitable roosting habitat for special-status bats will be affected by project construction (e.g., removal of buildings, removal of trees), a qualified wildlife biologist shall conduct surveys for special-status bats during the appropriate time of day to maximize detectability to determine if bat species are roosting near the work area no less than 7 days and no more than 14 days prior to beginning tree removal and/or demolition ground disturbance. Survey methodology may include visual surveys of bats (e.g., observation of bats during foraging period), inspection for suitable habitat, bat sign (e.g., guano), or use of ultrasonic detectors (e.g., Anabat, etc.). Visual surveys shall include trees within 0.25 mile of construction activities. The type of survey will depend on the condition of the potential roosting habitat. If no bat roosts are found, then no further study is required.

- If evidence of bat use is observed, the number and species of bats using the roost shall be determined. Bat detectors may be used to supplement survey efforts.
- If roosts are determined to be present and must be removed, the bats shall be excluded from the roosting site before the tree or structure is removed. Exclusion methods may include use of one-way doors at roost entrances (bats may leave, but not reenter) or sealing roost entrances when the site can be confirmed to contain no bats. Exclusion efforts may be restricted during periods of sensitive activity (e.g., during hibernation or while females in maternity colonies are nursing young).
- If roosts cannot be avoided or it is determined that construction activities may cause roost abandonment, such activities shall not commence until permanent,



elevated bat houses have been installed outside of, but near, the construction area. Placement and height will be determined by a qualified wildlife biologist, but the height of bat house shall be at least 15 feet. Bat houses shall be multichambered and be purchased or constructed in accordance with CDFW standards. The number of bat houses required shall be dependent upon the size and number of colonies found, but at least one bat house shall be installed for each pair of bats (if occurring individually) or of a sufficient number to accommodate each colony of bats to be relocated.

- If bat roosts are detected, then a Bat Mitigation and Monitoring Plan (Plan) shall be prepared and implemented to mitigate for the loss of roosting habitat. The Plan shall include information pertaining to the species of bat and location of the roost, exclusion methods and roost removal procedures, compensatory mitigation for permanent impacts (including specific mitigation ratios and location of proposed mitigation as described in above bullet) and monitoring to assess bat use of mitigation areas. This Plan shall be submitted to CDFW for review.

### **PDM BIO-3, Tree Removal**

The project applicant shall obtain approval by the City's Department of Community Development for all trees to be removed. Acquisition of this permit shall include details of the final mitigation numbers. The City of Santa Clara's Tree Ordinance (SCCC 12.35.090(C)(7) mandates a replacement ratio and size of tree species for planting. Depending on the species and size of the tree, additional mitigation may be required by the City of Santa Clara. The project proposes to mitigate for the loss of 33 trees through a combination of 24-inch box size and 36-inch box size.

### **PDM BIO-4, Trees to Remain: Avoidance and Minimization of Impacts**

The project applicant shall follow the tree protection measures for trees that are to remain in place, as included as specific conditions by the City of Santa Clara as part of Architectural Review approval and included on the approved landscape plans for the project.

## **2.4.3 Cultural Resources**

**PDM CUL-1** The following project-specific measures would be implemented during construction to avoid significant impacts to unknown subsurface cultural resources:

- A Secretary of the Interior - qualified archaeologist and a Native American cultural resources monitor shall be on site to monitor all ground-disturbing activity, including the removal of foundations and landscaping, on the project site. The project applicant shall submit the name and qualifications of the selected archaeologist and Native American monitor, along with a signed letter of commitment or



agreement to monitor, to the City's Director of Community Development prior to the issuance of a grading permit. Preference in selecting Native American monitors shall be given to Native Americans with:

- Aboriginal, culturally affiliated ties to the area being monitored.
- Knowledge of local historic and prehistoric Native American village sites.
- Knowledge and understanding of Health and Safety Code, section 7050.5, and Public Resources Code, section 5097.9 et seq.
- Ability to effectively communicate the requirements of Health and Safety Code, section 7050.5, and Public Resources Code, section 5097.9 et seq.
- Ability to work with law enforcement officials and the Native American Heritage Commission to ensure the return of all associated grave goods taken from a Native American grave during excavation.
- Ability to travel to project sites within traditional tribal territory.
- Knowledge and understanding of California Code of Regulations, title 14, section 15064.5.
- Ability to advocate for the preservation in place of Native American cultural features through knowledge and understanding of CEQA mitigation provisions.
- Ability to read a topographical map and be able to locate site and reburial locations for future inclusions in the Native American Heritage Commission's Sacred Lands Inventory.
- Knowledge and understanding of archaeological practices, including the phases of archaeological investigation.

After the removal of pavement and prior to grading, the archaeologist shall conduct a pedestrian survey over the exposed soils to determine if any surface archaeological manifestations are present.

- After the demolition of the existing building and paved parking lot on the site, a qualified archaeologist with a Native American monitor present shall complete mechanical presence/absence testing for archaeological deposits and cultural materials. In the event any prehistoric site indicators are discovered, additional backhoe testing will be conducted to map the aerial extent and depth below the surface of the deposits. In the event prehistoric or historic archaeological deposits are found during presence/absence testing, the significance of the find will be determined. If deemed significant, a treatment plan will be prepared and



provided to the city's Director of Community Development. Where Native American cultural materials are identified, the archaeological monitor will prepare a treatment plan in collaboration with the monitoring California Native American tribe. The key elements of a treatment plan shall include the following:

- Identify the scope of work and range of subsurface effects (include location map and development plan),
- Describe the environmental setting (past and present) and the historic/prehistoric background of the parcel (potential range of what might be found),
- Develop research questions and goals to be addressed by the investigation (what is significant vs. what is redundant information),
- Detail the field strategy used to record, recover, or avoid the finds (photos, drawings, written records, provenience data maps, soil profiles, excavation techniques, standard archaeological methods) and address research goals.
- Analytical methods (radiocarbon dating, obsidian studies, bone studies, historic artifacts studies [list categories and methods], packaging methods for artifacts, etc.); the monitoring California Native American tribe shall determine the appropriateness of analytical methods proposed for Native American cultural materials,
- Report structure, including a technical and layperson's report and an outline of document contents in one year of completion of development (provide a draft for review before a final report),
- Disposition of the artifacts (the monitoring California Native American tribe will determine the disposition of California Native American cultural materials),
- Appendices: site records, update site records, correspondence, consultation with Native Americans, etc.

The archaeologist and California Native American monitor will monitor full - time all grading and ground disturbing activities associated with the construction of the proposed project. If the archaeologist and Native American monitor believe that a reduction in monitoring activities is prudent, then a letter report detailing the rationale for making such a reduction and summarizing the monitoring results shall be provided to the city's Director of Community Development. Department of Recreation 523 forms shall be submitted along with the report for any cultural resources encountered over 50 years old.



- If prehistoric or historic resources are encountered during on - site construction activities, all activity within a 50 - foot radius of the find shall be stopped, the city's Director of Community Development shall be notified, and a Secretary of the Interior qualified archaeologist shall examine the find and record the site, including field notes, measurements, and photography for a Department of Parks and Recreation 523 Primary Record form. The archaeologist shall make a recommendation in collaboration with the monitoring California Native American tribe regarding eligibility for the California Register of Historical Resources, data recovery, curation, or other appropriate mitigation. Ground-disturbance within the 50 - foot radius can resume once these steps are taken and the city' s Director of Community Development has concurred with the recommendations. Within 30 days of the completion of the construction or cultural resources monitoring, whichever comes first, a report of findings documenting any cultural resource finds, recommendations, data recovery efforts, and other pertinent information gleaned during cultural resources monitoring shall then be submitted to the city's Director of Community Development under confidential cover, along with a report that redacts the location(s) of all cultural resources. Once finalized, this report shall be submitted to the Northwest Information Center at Sonoma State University.
- Prior to and for the duration of ground-disturbance, the project owner shall provide Worker Environmental Awareness Program training to all existing and any new employees. This training should include: a discussion of the applicable laws and penalties under the laws; samples or visual aids of the artifacts that could be encountered in the project vicinity, including what those artifacts may look like partially buried, or wholly buried and freshly exposed; and instructions to halt work in the vicinity of any potential cultural resource discovery, and notify the city - approved archaeologist and Native American cultural resources monitor. The Native American monitor shall provide a Tribal Cultural Resources Sensitivity Training in conjunction with the Worker Environmental Awareness Program.

**PDM CUL-2** The project proposes to implement the following measure to ensure the project's impacts to human remains are less than significant:

- If human remains are discovered during the presence/absence testing or excavation and/or grading of the site, all activity within a 50-foot radius of the find will be stopped. The Santa Clara County Coroner will be notified and shall determine whether the remains are of Native American origin or whether an investigation into the cause of death is required. If



the remains are determined to be Native American, the coroner will notify the NAHC immediately. Once NAHC identifies the most likely descendants, the descendants will make recommendations regarding proper burial, which will be implemented in accordance with the California Code of Regulations, title 14, section 15064.5(e) of the CEQA Guidelines. All actions taken under this mitigation measure shall comply with the Health and Safety Code, section 7050.5(b).

#### **2.4.4 Geology and Soils**

**PDM GEO-1:** In order to ensure the project design conforms to the requirements of a final geotechnical engineering investigation and California and local building standards and codes, the following is proposed as mitigation incorporated into the project. Incorporation will ensure seismic hazards are reduced to less than significant levels.

- To avoid or minimize potential damage from seismic shaking, the project would be built using standard engineering and seismic safety design techniques. Building redevelopment design and construction at the site shall be completed in conformance with the recommendations of a design-level geotechnical investigation, which will be included in a report to the City. The report shall be reviewed and approved by the City of Santa Clara's Building Division as part of the building permit review and issuance process. The building shall meet the requirements of applicable Building and Fire Codes, including the 2019 California Building Code, as adopted or updated by the City. The project shall be designed to withstand potential geologic hazards identified on the site and the project shall be designed to reduce the risk to life or property to the extent feasible and in compliance with the Building Code.

**PDM GEO-2:** The project proposes to implement the following measures to as best management practices to ensure impacts to paleontological resources are less than significant.

Prior to the start of any subsurface excavations that would extend beyond previously disturbed soils, all construction forepersons and field supervisors shall receive training by a qualified professional paleontologist, as defined by the Society of Vertebrate Paleontology, who is experienced in teaching non- specialists, to ensure they can recognize fossil materials and shall follow proper notification procedures in the event any are uncovered during construction. Procedures to be conveyed to workers include halting construction within 50 feet of any potential fossil find and notifying a qualified paleontologist, who shall evaluate its significance.



If a fossil is found and determined by the qualified paleontologist to be significant and avoidance is not feasible, the paleontologist shall develop and implement an excavation and salvage plan in accordance with Society of Vertebrate Paleontology standards. Construction work in these areas shall be halted or diverted to allow recovery of fossil remains in a timely manner. Fossil remains collected during the monitoring and salvage portion of the mitigation program shall be cleaned, repaired, sorted, and cataloged. Prepared fossils, along with copies of all pertinent field notes, photos, and maps, shall then be deposited in a scientific institution with paleontological collections. A final Paleontological Mitigation Plan Report shall be prepared that outlines the results of the mitigation program. The Director of Planning and Inspection shall be responsible for ensuring that the paleontologist's recommendations regarding treatment and reporting are implemented.

#### **2.4.5 Greenhouse Gas Emissions**

**PDM GHG-1** In accordance with Action Item B-1-7 in the City of Santa Clara's 2022 Climate Action Plan, the project owner shall contract with SVP at the 2020 Green Power Standard (i.e., 100% carbon-free electricity) for electricity accounts associated with the project or participate in a clean energy program that accomplishes the same goals of 100% carbon-free electricity as the SVP 2020 Green Power Standard.

**PDM GHG-2** The project owner shall use renewable diesel as the primary fuel for the emergency backup generators to the maximum extent feasible, and only use ultra-low sulfur diesel (ULSD) as a secondary fuel in the event of supply challenges or disruption in obtaining renewable diesel. If testing confirms that use of this fuel will not result in emissions that would cause the project to exceed applicable thresholds after any available mitigation for such emissions has been applied, the project owner shall ensure that renewable fuels are used for a minimum of at least 44 percent of total energy use by the emergency backup generators by December 31, 2024; 52 percent by December 31, 2027; and 60 percent by December 31, 2030. Renewable fuels shall be used for 100 percent of total energy use by the emergency backup generators by December 31, 2045. The project owner shall provide an annual report of the status of procuring and using renewable diesel to the director, or director's designee, of the city of Santa Clara Electric Utility Department demonstrating compliance with this measure.



## 2.4.6 Hazards and Hazardous Materials

**PDM HAZ-1** The project will implement the following measures to reduce potentially significant soil and or groundwater impacts to construction workers to a less than significant level.

- Prior to the issuance of grading permits, shallow soil samples shall be taken in areas where soil disturbance is anticipated to determine if contaminated soils with concentrations above established construction/trench worker thresholds may be present due to historical agricultural use and from historical leaks and spills. The soil sampling plan must be reviewed and approved by the Santa Clara Fire Department Fire Prevention and Hazardous Materials Division prior to initiation of work. Once the soil sampling analysis is complete, a report of the findings will be provided to the Santa Clara Fire Department Fire Prevention and Hazardous Materials Division and other applicable City staff for review.
- Documentation of the results of the soil sampling shall be submitted to and reviewed by the City of Santa Clara prior to the issuance of a grading permit. Any soil with concentrations above applicable environmental screening levels or hazardous waste limits would be characterized, removed, and disposed of off-site at an appropriate landfill according to all state and federal requirements.
- A Site Management Plan (SMP) will be prepared to establish management practices for handling impacted groundwater and/or soil material that may be encountered during site development and soil-disturbing activities. Components of the SMP will include:
  - a detailed discussion of the site background.
  - a summary of the analytical results.
  - preparation of a Health and Safety Plan by an industrial hygienist.
  - protocols for conducting earthwork activities in areas where impacted soil and/or groundwater are present or suspected.
  - worker training requirements, health and safety measures and soil handling procedures shall be described.
  - protocols shall be prepared to characterize/profile soil suspected of being contaminated so that appropriate mitigation, disposal, or reuse alternatives, if necessary, can be implemented.
  - notification procedures if previously undiscovered significantly impacted soil or groundwater is encountered during construction.
  - notification procedures if previously unidentified hazardous materials, hazardous waste, underground storage tanks are encountered during construction.
  - on-site soil reuse guidelines.



- 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. Prior to issuance of grading permits, a copy of the SMP must be approved by the Santa Clara County Environmental Health Department, and the Santa Clara Fire Department Fire Prevention and Hazardous Materials Division. Prior to issuance of grading permits, a copy of the SMP must be approved by the Santa Clara County Environmental Health Department, and the Santa Clara Planning Division.

If contaminated soils are found in concentrations above risk-based thresholds pursuant to the terms of the SMP, remedial actions and/or mitigation measures will be taken to reduce concentrations of contaminants to levels deemed appropriate by the selected regulatory oversight agency for ongoing site uses. Any contaminated soils found in concentrations above thresholds to be determined in coordination with regulatory agencies shall be either 1) managed or treated in place, if deemed appropriate by the oversight agency or 2) removed and disposed of at an appropriate disposal facility according to California Hazardous Waste Regulations (CCR, tit. 22, div. 4.5) and applicable local, state, and federal laws.

## 2.4.7 Hydrology and Water Quality

**PDM HYD-1** The project will incorporate the following into the design and these measures should be treated as mitigation incorporated into the project. The following will reduce construction-related water quality impacts:

- 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.
- 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 required to cover all trucks or maintain at least two feet of freeboard.
- All paved access roads, parking areas, and staging areas 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 site shall be filled with rock to knock mud from truck tires prior to entering City streets. A tire wash system may also be employed at the request of the City.



## **SECTION 3.0     PROJECT INFORMATION**

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### **Project Title**

Martin Backup Generating Facility and Martin Data Center

### **Lead Agency Contact**

Eric Veerkamp

Project Manager

Siting, Transmission and Environmental Protection (STEP) Division

California Energy Commission

1516 Ninth Street, MS-15

Sacramento, CA 95814

Phone: 916-651-0966

E-mail: Eric.Veerkamp@energy.ca.gov

### **Project Applicant**

Martin Avenue Properties, LLC

651 Martine Avenue

Santa Clara, CA 95051

### **Project Location**

651 Martin Avenue

Santa Clara, CA 95051

### **Assessor's Parcel Number**

224-04-071

### **General Plan Designation and Zoning District**

General Plan Designation:            Heavy Industrial

Zoning District:                        MH - Heavy Industrial



## SECTION 4.0 ENVIRONMENTAL SETTING, IMPACTS, AND MITIGATION

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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 and Tribal 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	Utilities and Service Systems
4.9	Hazards and Hazardous Materials	4.19	Wildfire
4.10	Hydrology and Water Quality		

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 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. For significant impacts, feasible mitigation is identified. “Proposed Design Measures” are measures that the applicant has agreed to incorporate into the design of the project that will minimize, avoid, or eliminate a significant impact (CEQA Guidelines Section 15370).
- **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 issue accordingly addresses the following issues: 1) would the effects of all of past, present, and probable future (pending) 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?

Table 3-1 identifies the approved (but not yet constructed or occupied) and pending projects in the project vicinity that are evaluated in the cumulative analysis.

**Table 3-1 Cumulative Projects**

<b>Name and Location</b>	<b>Description</b>	<b>Status</b>
2330 Monroe Street Affordable Housing Project	General Plan Amendment and Rezoning of a 2.47-acre City-owned vacant site from Single Family residential (R1-6L) to Planned Development (PD) to support the construction of a single building ranging in height from two to three stories and containing 65 residential affordable units.	Approved
3625 Peterson Way Office Project	Architectural review of two new, eight-story office buildings connected by bridges at two levels, a four-level parking structure with attached amenity building.	Pending review



3905 Freedom Circle Mixed-Use Project	General Plan Amendment and Re-zoning to Planned Development to construct a mixed-use development project on a 13.3-acre site within the Freedom Circle Focus Plan area, which consists of up to 1,100 residential units with 1,540 parking spaces, up to 2,000 square feet of commercial space with 10 parking spaces and a 2-acre public park.	Pending review
Lawrence Station Project – Lawrence Expressway	Architectural review for the construction of an up to 328 units, four-story, multi-family development on a 3.92 gross-acre site.	Pending review
Muslim Community Association Facility, 3003 Scott Boulevard and 3080 Alfred Street.	Application to amend the current Use Permit to allow for expansion of the existing pre-kindergarten through eighth grade school from 400 students up to 900 students (including up to 150 high school students) and Muslim Community Association support services on the current Light Industrial (ML) zoned property at 3003 Scott Boulevard and on the adjoining ML-zoned expansion property at 3080 Alfred Street.	Pending review
3375 Scott Boulevard Office Project	Demolition of existing office buildings and construction of a new six-story, 237,107 square foot office building, two-story 13,643 square foot amenity building, four-level parking structure and associated site improvements on a 5.8-acre site.	Approved

For each resource area, cumulative impacts may occur over different geographic areas. For example, the project 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 issue 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 3.0-2 provides a summary of the different geographic areas used to evaluate cumulative impacts.

<b>Table 3-2: Geographic Considerations in Cumulative Analysis</b>	
<b>Resource Area</b>	<b>Geographic Area</b>
Aesthetics	Project site and adjacent parcels
Agriculture and Forestry Resources	Countywide
Air Quality	San Francisco Bay Area Air Basin
Biological Resources	Project site and adjacent parcels



<b>Table 3-2: Geographic Considerations in Cumulative Analysis</b>	
<b>Resource Area</b>	<b>Geographic Area</b>
Cultural Resources	Project site and adjacent parcels
Energy	Energy provider's territory
Geology and Soils	Project site and adjacent parcels
GHGs	Planet-wide
Hazards and Hazardous Materials	Project site and adjacent parcels
Hydrology and Water Quality	San Tomas Aquino watershed
Land Use and Planning/Population and Housing	Citywide
Minerals	Identified mineral recovery or resource area
Noise and Vibration	Project site and adjacent parcels
Public Services and Recreation	Citywide
Transportation/Traffic	Citywide
Tribal Cultural Resources	Project site and adjacent parcels
Utilities and Service Systems	Citywide
Wildfire	Within or adjacent to the wildfire hazard zone



## 4.1 AESTHETICS

### 4.1.1 CEQA Checklist

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
<b>Aesthetics</b>				
Would the project:				
1) Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3) In non-urbanized areas, substantially degrade the existing visual character or quality of public views <sup>7</sup> 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
4) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

### 4.1.2 Environmental Setting

#### 4.1.2.1 Existing Conditions on Site

As discussed in Section 2.2.1 Existing Site Description, the approximately 7.71-acre site is currently developed. The site is currently developed with four (4) separate single-story structures encompassing a total of approximately 77,220 square feet.<sup>8</sup> The structures were used as commercial/warehouse and include associated paved surface parking and loading dock. The existing buildings consist of concrete and prefabricated metal. The existing buildings facades consist of painted formed metal panels.

<sup>7</sup> Public views are those that are experienced from publicly accessible vantage points.

<sup>8</sup> The four existing buildings on site encompass 3,533 square feet, 27,243 square feet, 5,073 square feet, and 41,371 square feet.



The site is within a fully developed area in Santa Clara with flat topography. Views of the eastern foothills from public viewpoints are partially blocked by existing industrial structures in the area.

#### **4.1.2.2 Surrounding Land Uses**

The property is irregularly shaped and is generally bound to the North by an existing warehouse, to the East by an existing railroad line operated by Union Pacific, to the South by Martin Avenue, and to the West by an existing office building. The property is zoned MH-Heavy Industrial. The project area consists primarily of commercial and industrial land uses. The area contains some buildings that are similar in height and scale to the existing buildings on the project site and some buildings that are similar in height and scale to the proposed MDC building. The Norman Y. Mineta San José International Airport is located approximately one quarter mile east of the site.

The nearest residentially zoned properties are approximately 3,000 feet to the south (near the intersection of Main Street and Cabrillo Avenue) and 5,800 feet to the north (at the intersection of Lafayette Street and Laurie Avenue). There are several residences approximately 1,400 feet to the southwest of the project site, located on property zoned for heavy industrial uses.

There are no scenic vistas within the City of Santa Clara. There are also no scenic resources on-site, and the site is not visible from a scenic highway.

#### **4.1.3 Environmental Impact Discussion**

For purposes of analyzing potential Aesthetic related impacts, it is not necessary or prudent to separate the potential impacts of the MBGF and the MDC. Therefore, the following analysis uses the term “Project” which encompasses both construction and operation of the MBGF, the MDC and all related ancillary facilities.

##### **4.1.3.1 Would the project have a substantial adverse effect on a scenic vista?**

There are no scenic vistas within the City of Santa Clara. The Project, therefore, would not have a substantial adverse effect on a scenic vista. **(No Impact)**

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

The site is not visible from a scenic highway. The Project, therefore, would not substantially damage scenic resources within a state scenic highway. **(No Impact)**



**4.1.3.3 Would the project degrade the existing visual character or quality of public views of the site and its surroundings or would it conflict with applicable zoning and other regulations governing scenic quality**

Aesthetic values are subjective. Opinions as to what constitutes a degradation of visual character differ among individuals. One of the best methods for assessing what constitutes a visually acceptable standard for new buildings is the City's design standards and implementation of those standards through the City's design process. The following discussion addresses the proposed changes to the visual setting of the project area and factors that are part of the community's assessment of the aesthetic values of a project's design.

All four of the existing buildings on the site will be demolished as part of the Project. The MDC project will consist of construction of a four-story 467,200 square foot data center building, utility substation, generator equipment yard (the MBGF), surface parking and landscaping, and a recycled water pipeline extension. The data center building will house computer servers for private clients in a secure and environmentally controlled structure and would be designed to provide 64 megawatts (MW) of power to information technology (Critical IT) equipment. The main entrance to the MDC building will be located on Martin Avenue at the southwest corner of the property, with a secondary entrance also on Martin Avenue near the easternmost portion of the property.

The four-story data hall building is composed of admin, data hall, and loading dock masses. The admin portion, located on the south side of the building, is clad with curtain wall and metal panel systems. The data hall portion is clad primarily with EIFS. The top of the parapet at the admin and data hall is at 87.5 feet. The loading dock portion is a single-story mass, also clad in EIFS to match the data hall. Three exterior stairs located on the NE, NW, and SW corners of the building are semi enclosed with a perforated metal rain screen. A rooftop dunnage platform is provided at 94.25 feet for mechanical equipment. A sound attenuating screen topping off at 102.25 feet fully encloses the platform. Access to the platform is provided by a freight elevator on the NE corner of the building. The top of the elevator parapet is at 119.66 feet.

The building will be located in the center of the site and will be set back at a minimum of 149 feet from the front yard to the south (Martin Avenue), a minimum of 46 feet from the side yard to the west (adjacent to a non-residential zone), a minimum of 141 feet from the side yard to the east (adjacent to railroad tracks), and a minimum of 50 feet from the rear yard to the north (adjacent to a non-residential zone).

Though the MDC building would be larger in mass and scale than the existing buildings, it would be similar in scale to development across the broader area. The exterior of the



building and the proposed screening fences would be subject to the City's design review process and would conform to current community design guidelines and landscaping standards for the MH-Heavy Industrial zoning district. The guidelines were developed to support community aesthetic values, preserve neighborhood character, and promote a sense of community and place throughout the City.

For the reasons described above, the Project would not degrade the existing visual character or quality of the site and its surroundings, nor would it conflict with applicable zoning and other regulations governing scenic quality. **(Less than Significant Impact)**

#### **4.1.3.4 Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?**

The project would include pole mounted site light fixtures along the site perimeter, as well as along the perimeter of the MBGF utility yard, and outdoor security lighting along the MDC building and driveway entrances. The outside lighting would comply with the City's lighting requirements (City Code Section 18.48.140) and would be comparable in brightness to the ambient lighting in the surrounding area. Additionally, outdoor lighting would be angled downward and would include light visors and light hoods. The exterior surfaces of the MDC building would consist primarily of precast concrete and would not be a significant source of glare during daytime hours.

Building materials and lighting plans would be reviewed by the City's Architectural Committee and the Planning Division staff prior to issuance of building permits to ensure that the project would not create a substantial new source of light or glare. The Project, therefore, would not create a new source of substantial light or glare, nor would it adversely affect day or nighttime views in the area. **(Less than Significant Impact)**

#### **4.1.4 Mitigation Measures**

No mitigation measures are required to support a finding by the Commission that the project will not result in significant adverse visual resource or aesthetic impacts.

#### **4.1.5 Governmental Agencies**

The only governmental agency with regulatory authority applicable to aesthetics and visual resources for the project would be the City of Santa Clara. Compliance with the City of Santa Clara requirements will be ensured through its design review process which is underway.



## 4.2 AGRICULTURAL AND FORESTRY RESOURCES

### 4.2.1 CEQA Checklist

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
<b><u>Agriculture and Forest Resources</u></b>				
Would the project:				
1) 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3) 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))?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4) Result in a loss of forest land or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
5) 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

### 4.2.2 Environmental Setting

According to the Santa Clara County Important Farmland 2016 Map, the project site is designated as *Urban and Built-Up Land*. *Urban and Built-Up Land* is defined as land with a density of at least six structures per 10-acre parcel. *Urban and Built-Up Land* is commonly used for residential, industrial and commercial purposes, golf courses, landfills,



airports, sewage treatment, and water control structures.<sup>9</sup> According to the Santa Clara County Office of the Assessor, the site is not subject to a Williamson Act contract.

#### **4.2.3 Environmental Impact Discussion**

For purposes of analyzing potential agricultural impacts, it is not necessary or prudent to separate the potential impacts of the MBGF and the MDC. Therefore, the following analysis uses the term “Project” which encompasses construction and operation of the MBGF, the MDC and all related ancillary facilities.

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

According to the Santa Clara County Important Farmland 2016 Map, the project site is designated as *Urban and Built-Up Land*. The Project, therefore, would not convert farmland to non-agricultural use. **(No Impact)**

##### **4.2.3.2 Would the project conflict with existing zoning for agricultural use, or a Williamson Act contract?**

The site is zoned MH-Heavy Industrial. According to Santa Clara County Office of the Assessor, the site is 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)**

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

The site is zoned MH-Heavy Industrial. The Project, therefore, would not conflict with existing zoning for, or cause rezoning of, forest land, timberland, or timberland zoned Timberland Production. **(No Impact)**

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<sup>9</sup> California Department of Conservation, *Santa Clara County Important Farmland Map 2016*. Available at: <ftp://ftp.consrv.ca.gov/pub/dlrp/FMMP/pdf/2016/scl16.pdf>



**4.2.3.4 Would the project result in a loss of forest land or conversion of forest land to non-forest use?**

No forestland is located on or near the site. The Project, therefore, would not result in a loss of forest land or conversion of forest land to non-forest use. **(No Impact)**

**4.2.3.5 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 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)**

**4.2.4 Mitigation Measures**

No mitigation measures are required to support a finding by the Commission that the Project will not result in significant impacts to agricultural resources.

**4.2.5 Governmental Agencies**

There are no government agencies with agricultural or forest service-related regulatory authority applicable to the Project.



### 4.3 AIR QUALITY

This section presents the evaluation of emissions and impacts resulting from the construction and operation of Martin Backup Generating Facility (MBGF) which supports the Martin Data Center (MDC), as well as the proposed design measures to be used to minimize emissions and limit impacts to below established significance thresholds. This section is based upon an Air Quality and Greenhouse Gas Technical Report (AQ Technical Report) prepared by Ramboll US Consulting Inc. in accordance with the California Energy Commission (CEC) application requirements for a Small Power Plant Exemption (SPPE) and the rules and regulations of the Bay Area Air Quality Management District (BAAQMD). This analysis is but one part of a larger analysis, which seeks an SPPE Decision from the CEC and an Authority to Construct (ATC) from the BAAQMD.

This section summarizes the findings and conclusions of the Air Quality and Public Health analyses relative to answering the specific CEQA Checklist questions below, and contained in the AQ Technical Report and supporting materials included in Appendix B.

#### 4.3.1 CEQA Checklist

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
<b><u>Air Quality</u></b>				
Would the project:				
1) Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2) 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3) Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
4) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>



### 4.3.2 Environmental Setting

Overall air quality in the San Francisco Bay Area Air Basin (SFBAAB) is better than most other areas, including the South Coast, San Joaquin Valley, and Sacramento regions. This is due to a more favorable climate, with cooler temperatures and better air circulation<sup>10</sup>. MBGF's proximity to both the Pacific Ocean and the San Francisco Bay has a moderating influence on the climate. This portion of the Santa Clara Valley is bounded by the San Francisco Bay to the north, the Santa Cruz Mountains to the southwest, and the Diablo Range to the east. The surrounding terrain greatly influences winds in the valley, resulting in a prevailing wind that flows along the valley's northwest-southeast axis. Although air quality improvements have occurred, violations and exceedances of the state ozone and particulate matter standards continue to persist in the SFBAAB and still pose challenges to state and local air pollution control agencies (CARB, 2013).

Pollutants in the air can cause health problems, especially for children, the elderly, and people with heart or lung problems. Healthy adults may experience symptoms during periods of intense exercise. Pollutants can also cause damage to vegetation, animals, and property.

Air quality is determined by measuring ambient concentrations of criteria pollutants, which are those pollutants for which acceptable levels of exposure can be determined and for which standards have been set. Degradation of air quality is determined by comparing projected air concentrations to the available ambient air quality standards. Toxic air contaminants (TACs) are different from criteria pollutants as there are no ambient air quality standards for TACs, and a health risk assessment (HRA) is conducted to evaluate whether risks of exposure to TACs create an adverse impact.

Please see Section 4.8 of this application for more details on the project's greenhouse gas emissions.

#### 4.3.2.1 Overview of Existing Air Quality

**Air Quality Standards.** The U.S. Environmental Protection Agency (EPA) has established National Ambient Air Quality Standards (NAAQS) for the following seven pollutants, termed criteria pollutants: ozone, nitrogen dioxide (NO<sub>2</sub>), carbon monoxide (CO), sulfur dioxide (SO<sub>2</sub>), particulate matter with aerodynamic diameter less than or equal to 10 microns (PM<sub>10</sub>), particulate matter with aerodynamic diameter less than or equal to 2.5 microns (PM<sub>2.5</sub>), and airborne lead. Similarly, the California Air Resources

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<sup>10</sup> The rapid horizontal movement of air and injection of cleaner air.



Board (CARB) has established California Ambient Air Quality Standards (CAAQS) for the seven pollutants listed above and for visibility-reducing particles (VRP), sulfates, hydrogen sulfide, and vinyl chloride. Unique meteorological conditions in California and differences of opinion by medical panels established by the CARB and EPA cause considerable diversity between state and federal standards currently in effect in California. In general, the CAAQS are more stringent than the corresponding NAAQS. The standards currently in effect in California are shown in Table 4.3-1.



**Table 4.3-1. National and California Ambient Air Quality Standards**

Pollutant	Averaging Time	CAAQS <sup>a</sup>	NAAQS <sup>b</sup>	
			Primary <sup>c</sup>	Secondary <sup>d</sup>
Ozone	1 hour 8 hours	0.09 ppm 0.070 ppm	-- 0.070 ppm	-- 0.070 ppm
CO	1 hour 8 hours	20 ppm 9 ppm	35 ppm 9 ppm	-- --
NO <sub>2</sub>	1 hour Annual Arithmetic Mean	0.18 ppm 0.030 ppm	0.100 ppm <sup>e</sup> 0.053 ppm	-- 0.053 ppm
SO <sub>2</sub>	1 hour 3 hours 24 hours Annual Arithmetic Mean	0.25 ppm -- 0.04 ppm --	0.075 ppm <sup>f</sup> -- 0.14 ppm 0.030 ppm	-- 0.5 ppm -- --
PM <sub>10</sub>	24 hours Annual Arithmetic Mean	50 µg/m <sup>3</sup> 20 µg/m <sup>3</sup>	150 µg/ m <sup>3</sup> --	150 µg/ m <sup>3</sup> --
PM <sub>2.5</sub>	24 hours Annual Arithmetic Mean	-- 12 µg/ m <sup>3</sup>	35 µg/ m <sup>3</sup> 12 µg/ m <sup>3</sup>	35 µg/ m <sup>3</sup> 15 µg/ m <sup>3</sup>
Lead	30-Day Average Calendar Quarter Rolling 3-Month Average	1.5 µg/ m <sup>3</sup> -- --	-- 1.5 µg/ m <sup>3</sup> 0.15 µg/ m <sup>3</sup>	-- 1.5 µg/ m <sup>3</sup> 0.15 µg/ m <sup>3</sup>
VRP	8 hours	g	--	--
Sulfates	24 hours	25 µg/ m <sup>3</sup>	--	--
Hydrogen Sulfide	1 hour	0.03 ppm	--	--
Vinyl Chloride	24 hours	0.01 ppm	--	--

Source: CARB, 2016.

<sup>a</sup> CAAQS for ozone, CO, SO<sub>2</sub> (1- and 24-hour), NO<sub>2</sub>, and particulate matter (PM<sub>10</sub>, PM<sub>2.5</sub>, and VRP) are values that are not to be exceeded. All others are not to be equaled or exceeded.

<sup>b</sup> NAAQS (other than ozone, particulate matter, and those based on annual arithmetic mean) are not to be exceeded more than once a year. The 8-hour ozone standard is attained when the 3-year average of the fourth highest daily concentration is 0.070 ppm or less. The 24-hour PM<sub>10</sub> standard is attained when the 3-year average of the 99th percentile of monitored concentrations is less than the standard. The 24-hour PM<sub>2.5</sub> standard is attained when the 3-year average of the 98th percentile is less than the standard.

<sup>c</sup> Primary Standards: The levels of air quality necessary, with an adequate margin of safety, to protect the public health. <sup>d</sup> Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.

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

<sup>f</sup> To attain the 1-hour national standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 0.075 ppm.

<sup>g</sup> Statewide visibility reducing particle standard (except Lake Tahoe Air Basin) - Particles in sufficient amount to produce an extinction coefficient of 0.23 per kilometer when the relative humidity is less than 70 percent.

Notes:

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

µg/ m<sup>3</sup> = microgram(s) per cubic meter ppm = part(s) per million



**Attainment Status.** The EPA, CARB, and local air districts classify areas as attainment, unclassified, or nonattainment. The classification depends on whether the monitored ambient air quality data show compliance, insufficient data available, or non-compliance with the ambient air quality standards, respectively. MBGF would be located within Santa Clara County under the jurisdiction of the Bay Area Air Quality Management District (BAAQMD). Table 4.3-2 summarizes attainment status for the criteria pollutants in the SFBAAB 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 hours	-- Marginal Non-attainment <sup>a</sup>	Non-attainment Non-attainment
CO	1 hour 8 hours	Maintenance Maintenance	Attainment Attainment
NO <sub>2</sub>	1 hour Annual Arithmetic Mean	Attainment Attainment	Attainment --
SO <sub>2</sub>	1 hour 3 hours 24 hours Annual Arithmetic Mean	Attainment Attainment Attainment Attainment	Attainment -- Attainment --
PM <sub>10</sub>	24 hours Annual Arithmetic Mean	Unclassified --	Non-attainment Non-attainment
PM <sub>2.5</sub>	24 hours Annual Arithmetic Mean	Non-attainment <sup>b</sup> Unclassified/Attainment	-- Non-attainment
Lead	30-Day Average Calendar Quarter Rolling 3-Month Average	Attainment Attainment --	-- -- --
VRP	8 hours	--	Unclassified
Sulfates	24 hours	--	Attainment
Hydrogen Sulfide	1 hour	--	Unclassified
Vinyl Chloride	24 hours	--	No information available

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

<sup>a</sup> On October 1, 2015, the national 8-hour ozone primary and secondary standards were lowered from 0.075 to 0.070 ppm. An area will meet the standard if the fourth-highest maximum daily 8-hour ozone concentration per year, averaged over three years, is equal to or less than 0.070 ppm. USEPA made recommendations on attainment designations for California by October 1, 2016 and issued final designations on June 4, 2018, classifying the San Francisco Bay Area Air Basin as being in Nonattainment (Federal Register Vol. 83, No. 107, pp. 25776-25848). Nonattainment areas will have until 2020 to 2037 to meet the health standard, with attainment dates varying based on ozone level in the area.

<sup>b</sup> On January 9, 2013, EPA issued a final rule to determine that the Bay Area attains the 24-hour PM<sub>2.5</sub> national standard. This EPA rule suspends key State Implementation Plan requirements as long as monitoring data continue to show that the Bay Area attains the standard. Despite this EPA action, the Bay Area will continue to be designated as “non-attainment” for the national 24- hour PM<sub>2.5</sub> standard until such time as the BAAQMD submits a “redesignation request” and a “maintenance plan” to EPA, and EPA approves the proposed redesignation.

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



**Existing Conditions.** The existing conditions in the project area are summarized in Table 4.3-3, which provides the background ambient air concentrations of criteria pollutants for the previous 3 years (2019-2019) as measured at certified monitoring stations near the MBGF site. To evaluate air quality degradation as a result of MBGF, modeled air concentrations are combined with the respective background concentrations presented in Table 4.3-3 and used for comparison to the NAAQS and CAAQS.

**Table 4.3-3. Summary of Background Ambient Air Concentrations<sup>a</sup>**

Pollutant	Averaging Period	Units			2021	3-Year Average (2019-2021)	3-Year Maximum (2019-2021)
			2019	2020			
NO <sub>2</sub>	1-Hour (maximum)	ppb	60	52	47	53	60
	1-Hour (98th percentile)	ppb	52	45	39	45	52
	Annual Mean	ppb	10.6	9.6	8.7	9.7	10.6
CO	1-Hour	ppm	1.7	1.9	1.7	1.8	1.9
	8-Hour	ppm	1.3	1.5	1.5	1.4	1.5
SO <sub>2</sub> <sup>2</sup>	1-Hour	ppb	15	2.9	1.8	6.4	15
	1-Hour (99th percentile)	ppb	2.2	2.3	1.5	2.0	2.3
	3-Hour	ppb	14.5	2.9	1.8	6.4	15
	24-Hour	ppb	1.5	0.8	0.7	1.0	1.5
	Annual Mean	ppb	0.14	0.17	0.17	0.16	0.17
PM <sub>10</sub>	24-Hour (maximum)	µg/m <sup>3</sup>	75	134	42	84	134
	Annual Mean	µg/m <sup>3</sup>	18	25	19	21	25
PM <sub>2.5</sub>	24-Hour (98th Percentile)	µg/m <sup>3</sup>	21	56	23	33	56
	Annual Mean	µg/m <sup>3</sup>	9.1	11.5	8.9	9.8	11.5

<sup>1</sup> Background values were collected from Monitor Site ID 060850005 located at 158B Jackson Street in San Jose, California, as reported by the USEPA.

<sup>2</sup> The 1-hour maximum SO<sub>2</sub> background was conservatively used as the background value for the 3-hour SO<sub>2</sub> averaging period.

Abbreviations:

CO - carbon monoxide

NO<sub>2</sub> - nitrogen dioxide

PM<sub>10</sub> - particulate matter less than 10 microns

PM<sub>2.5</sub> - particulate matter less than 2.5 microns

SO<sub>2</sub> - sulfur dioxide

ppb - parts per billion

ppm - parts per million

µg/m<sup>3</sup> - micrograms per cubic meter



Each criteria pollutant and TAC is described in this section, including their known health risks.

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

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

Nitrogen Dioxide. NO<sub>2</sub> is a byproduct of combustion sources such as on-road and off-road motor vehicles or stationary fuel combustion sources. The principal form of nitrogen oxide produced by combustion is nitric oxide (NO); however, NO reacts quickly with oxygen to form NO<sub>2</sub>, creating a mixture of NO and NO<sub>2</sub> commonly called NOX. Exposures to NO<sub>2</sub>, along with pollutants from vehicle exhaust, are associated with respiratory symptoms, episodes of respiratory illness, and impaired lung function.

Sulfur Dioxide. SO<sub>2</sub> is a colorless, pungent gas formed primarily by the combustion of sulfur-containing fossil fuels. Effects from SO<sub>2</sub> exposures at levels near the 1-hour standard include bronchoconstriction accompanied by symptoms that may include wheezing, shortness of breath, and chest tightness, especially during exercise or physical activity.

Particulate Matter. Particulate matter (PM<sub>10</sub> and PM<sub>2.5</sub>) includes a wide range of solid or liquid particles, including smoke, dust, aerosols, and metallic oxides. Extensive research indicates that exposures to ambient PM<sub>10</sub> and PM<sub>2.5</sub> concentrations that exceed current air quality standards are associated with increased risk of hospitalization for lung- and heart-related respiratory illness, including emergency room visits for asthma. Particulate matter exposure is also associated with increased risk of premature death, especially in the elderly and people with pre-existing cardiopulmonary disease. In



children, studies have shown an association between particulate matter exposure and reduced lung function and increased respiratory symptoms and illnesses.

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

#### **4.3.2.2 Regulatory Background**

Federal, state, and regional agencies regulate air quality in the SFBAAB, where the MBGF and MDC are 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.

CAA Section 112 (Title 42, U.S. Code Section 7412) addresses emissions of hazardous air pollutants (HAPs). This act requires new sources that emit more than 10 tons per year of any specified HAP or more than 25 tons per year of any combination of HAPs to apply Maximum Achievable Control Technology (MACT).

State. CARB is the state agency that regulates mobile sources throughout the state and oversees implementation of the state air quality laws and regulations, including the California Clean Air Act. CARB also established the CAAQS, which are typically considered more stringent than the NAAQS.

TACs are primarily regulated through state and local risk management programs, which are designed to eliminate, avoid, or minimize the risk of adverse health effects from exposures to TACs. A chemical becomes a regulated TAC in California based on designation by the California Office of Environmental Health Hazard Assessment (OEHHA) (BAAQMD, 2017c). Assembly Bill 2588, also known as the Air Toxics “Hot Spots” Information and Assessment Act,<sup>11</sup> requires that, based on results of an HRA conducted per CARB/OEHHA guidelines, TACs do not exceed acceptable levels. As part

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<sup>11</sup> California Health and Safety Code Sections 44360 – 44366.



of its jurisdiction under Assembly Bill 2588,<sup>12</sup> OEHHA derives cancer potencies and reference exposure levels (RELs) for individual air contaminants, based on the current scientific knowledge that includes consideration of possible differential effects on the health of infants, children, and other sensitive subpopulations, and in accordance with the mandate of the Children's Environmental Health Protection Act.<sup>13</sup> Sections of the California Public Resources Code require a quantitative HRA for new or modified sources, including power plants that emit one or more TACs.<sup>14</sup>

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

2017 Bay Area Clean Air Plan. The 2017 Bay Area Clean Air Plan was adopted by the BAAQMD on April 19, 2017 and provides a regional strategy to protect public health and 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. Ground-level ozone and the key ozone precursor pollutants (VOCs and NOX)
2. Particulate matter (PM10 and PM2.5), as well as the precursors to secondary PM2.5
3. TACs
4. Greenhouse gases

BAAQMD Regulation 2, Rule 2: New Source Review. This rule applies to all new or modified sources requiring a Permit to Operate and requires Best Available Control Technology (BACT) for any new source with a Potential to Emit of 10.0 or more pounds per day (lb/day) of any single pollutant. Offsets are required at a ratio of 1:1 if more than 10 tons per year but less than 35 tons per year of NOX or Precursor Organic Compounds, or more than 100 tons per year of PM2.5, PM10, or SO2, are emitted. Offsets are required at a ratio of 1.15:1 if more than 35 tons per year of NOx or Precursor organic compound is emitted.

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<sup>12</sup> California Health and Safety Code Section 44360(b)(2).

<sup>13</sup> Senate Bill 25, Escutia, Chapter 731, Statutes of 1999; California Health and Safety Code Sections 39669.5 et seq.

<sup>14</sup> California Public Resources Code Section 25523(a); Title 20, Sections 1752.5, 2300 – 2309 and Division 2, Chapter 5, Article 1, Appendix B, Part (1), California Code of Regulations (CCR); California Clean Air Act; California Health and Safety Code Section 39650, et seq.



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. Under this rule, a project would be denied an Authority to Construct if it exceeds any of the specified risk limits, which are consistent with BAAQMD's California Environmental Quality Act (CEQA) significance thresholds. Best Available Control Technology for Toxics (TBACT) would also be required for any new or modified source of TACs where the source has a cancer risk greater than 1.0 in 1 million or a chronic hazard index (HI) greater than 0.20. The specific toxicity values of each particular TAC, as identified by OEHHA, are listed in Table 2-5-1 of this rule for use in the HRA.

Local. The Santa Clara 2035 General Plan includes goals and policies to reduce exposure of Santa Clara's sensitive population to exposure of air pollution and TACs. The following goals, policies, and actions are applicable to the MBGF:

#### ***Air Quality Goals***

- 5.10.2-G1 Improved air quality in Santa Clara and the region.
- 5.10.2-G2 Reduced greenhouse gas (GHG) emissions that meet the State and regional goals and requirements to combat climate change.

#### ***Air Quality Policies***

- 5.10.2-P1 Support alternative transportation modes and efficient parking mechanisms to improve air quality.
- 5.10.2-P2 Encourage development patterns that reduce vehicle miles traveled and air pollution.
- 5.10.2-P3 Encourage implementation of technological advances that minimize public health hazards and reduce the generation of air pollutants.
- 5.10.2-P4 Encourage measures to reduce GHG emissions to reach 30 percent below 1990 levels by 2020.
- 5.10.2-P5 Promote regional air pollution prevention plans for local industry and businesses.
- 5.10.2-P6 Require "Best Management Practices" for construction dust abatement.

### **4.3.3 Environmental Impact Discussion**

#### **4.3.3.1 Significance Criteria**

This analysis is based upon the general methodologies in the most recent BAAQMD CEQA Guidelines (last updated in May 2017 [BAAQMD, 2017c]) and numeric thresholds for the SFBAAB, including the criteria pollutant thresholds listed in Table 4.3-4.



For evaluation purposes, TACs are separated into carcinogens and non-carcinogens based on the nature of the physiological effects associated with exposure to the pollutant. Therefore, there are two kinds of thresholds for TACs. Cancer risk is expressed as excess cancer cases per 1 million exposed individuals, typically over a lifetime of exposure. Acute and chronic exposure to non-carcinogens is expressed as an HI, which is the ratio of expected exposure levels to an acceptable REL (BAAQMD, 2017c).

The significance thresholds for TACs and PM<sub>2.5</sub> applied to the siting of a new source are listed in Table 4.3-4 and summarized in the following text.

The significance thresholds for a single source are as follows:

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

The significance thresholds for cumulative impacts are also summarized below. A project would have a cumulative considerable impact if the aggregate total of all past, present, and foreseeable future sources within a 1,000-foot distance from the fence line of a source plus the contribution from the project, exceeds the following:

- An excess lifetime cancer risk level of more than 100 in 1 million
- A non-cancer chronic HI greater than 10.0
- An annual average PM<sub>2.5</sub> concentration of greater than 0.8  $\mu\text{g}/\text{m}^3$

For assessing community risks and hazards, a 1,000-foot distance is recommended around the project property boundary. BAAQMD recommends that any proposed project that includes the siting of a new source assess associated impacts within 1,000 feet, taking into account both individual and nearby cumulative sources (that is, proposed project plus existing and foreseeable future projects).

Cumulative sources represent the combined total risk values of each individual source within the 1,000-foot evaluation zone (BAAQMD, 2017c).



**Table 4.3-4. Bay Area Air Quality Management District Thresholds of Significance**

Pollutant	Construction	Operation	
	Average Daily Emissions (lb/day)	Average Daily Emissions (lb/day)	Maximum Annual Emissions (tons per year)
VOCs, NO <sub>x</sub>	54	54	10
PM <sub>10</sub>	82 (exhaust only)	82	15
PM <sub>2.5</sub>	54 (exhaust only)	54	10
Fugitive Dust	BMPs	None	None
Risk and Hazards for New Sources and Receptors (Project)	as Operational Threshold	Increased cancer risk of > 10.0 in 1 million Increased non-cancer risk of > 1.0 HI (chronic or acute) Ambient PM <sub>2.5</sub> increase of > 0.3 µg/m <sup>3</sup> (Zone of influence: 1,000-foot radius from property line of source or receptor)	
Risk and Hazards for New Sources and Receptors (Cumulative)	as Operational Threshold	Increased cancer risk of > 100 in 1 million (from all local sources) Increased non-cancer risk of > 10.0 HI (from all local sources) (chronic) Ambient PM <sub>2.5</sub> increase of > 0.8 µg/m <sup>3</sup> (from all local sources) (zone of influence: 1,000-foot radius from property line of source or receptor)	

Source: BAAQMD, 2017c.

> = greater than

BMP = best management practice

The conclusions of the air quality analysis are summarized below as responses to CEQA checklist questions. A full discussion of the air quality analysis underlying these conclusions is presented in the Air Quality Technical Report in Appendix B.

#### 4.3.3.2 Would the project conflict with or obstruct implementation of the applicable air quality plan?

The MDC and the MBGF project would not conflict with or obstruct the implementation of the applicable air quality plan due to the following:

- The MBGF will comply with all applicable rules and regulations of the BAAQMD regarding emissions of criteria pollutants.
- The MBGF will comply with all applicable rules and regulations of the BAAQMD regarding emissions of toxic pollutants.
- The proposed engines at the MBGF will comply with the applicable federal Tier 4 emissions standards for emergency standby electrical generation CI engines.



- The MBGF will comply with all applicable provisions of the applicable 2017 BAAQMD Air Quality Implementation Plan.
- The MBGF will obtain and maintain all required air quality related permits from the BAAQMD.

**(Less than Significant Impact)**

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

The MBGF 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 will 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 and are fully described in the AQ Technical Report (Appendix B). To ensure best management practices are incorporated into the design of the Project, Martin Properties has included Project Design Measure **PDM AQ-1** below.
- See offset mitigation requirements under the NSR discussion above and more thoroughly described in the AQ Technical Report (Appendix B).

**(Less than Significant Impact)**

**PDM AQ-1** To ensure that fugitive dust impacts are less than significant, the project will implement the Bay Area Air Quality Management District (BAAQMD) recommended Best Management Practices (BMPs) during the construction phase, the project owner shall implement a construction emissions control plan that has been reviewed and approved by the Director or Director's designee of the City of Santa Clara Community Development Department prior to the issuance of any grading or building permits, whichever occurs earliest. These BMPs are incorporated into the design of the project and will include:

- Water all exposed areas (e.g., parking areas, graded areas, unpaved access roads) twice a day.
- Maintain a minimum soil moisture of 12% in exposed areas by maintaining proper watering frequency.



- Cover all haul trucks carrying sand, soil, or other loose material.
- Suspend excavation, grading, and/or demolition activities when average wind speed exceeds 20 miles per hour.
- Pave all roadways, driveways, and sidewalks as soon as possible. Lay building pads as soon as grading is completed, unless seeding or soil binders are used.
- Install wind breaks (e.g., trees, fences) on the windward side(s) of actively disturbed areas of construction with a maximum 50 percent air porosity.
- Use a power vacuum to sweep and remove any mud or dirt-track next to public streets if visible soil material is carried onto the streets.
- Limit vehicle speeds on unpaved roads to 15 miles per hour (mph).
- Minimize idling time for all engines by shutting engines when not in use or limiting idling time to a maximum of five minutes. Provide clear signage for construction workers at all access points.
- Properly tune and maintain construction equipment in accordance with manufacturer's specifications. Check all equipment against a certified visible emissions calculator.
- Post a publicly visible sign with the telephone number and person to contact at the City of Santa Clara and the on-site job superintendent regarding dust complaints.
- Install vegetative ground cover in disturbed areas as soon as possible and water appropriately until vegetation is established.
- Limit simultaneous occurrence of excavation, grading, and ground-disturbing construction activities.
- Install water washers to wash all trucks and equipment prior to leaving site.
- Treat site access to a distance of 100 feet from the paved road with a 6- to 12- inch compacted layer of wood chip, mulch, or gravel.
- Install sandbag or other erosion control measures to prevent silt runoff to public roadways from sites with a slope greater than one percent.
- Minimize idling time of diesel-powered construction vehicles to two minutes.
- All off-road equipment greater than 25 horsepower (hp) shall have engines that meet or exceed Tier 4 final off-road emission standards. Use of zero-emission and hybrid-powered equipment is encouraged.



- All on-road trucks used for material delivery or hauling shall have engines that meet or exceed 2014 CARB emissions standards.
- Where grid power is available, portable diesel engines should be prohibited.
- Use low VOC (i.e., ROG) coatings beyond the local requirements (i.e., Regulation 8, Rule 3: Architectural Coatings).
- All construction equipment, diesel trucks, and generators be equipped with Best Available Control Technology for emission reductions of NOx and PM.
- All contractors use equipment that meets CARB's most recent certification standard for off-road heavy-duty diesel engines.

**4.3.3.4 Would the project expose sensitive receptors to substantial pollutant concentrations?**

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

- The air quality impact analysis presented in the AQ Technical Report (Appendix B) shows that the MBGF will not cause or contribute to a violation of any state or federal ambient air quality standard.
- The construction and operational health risk assessments presented in the AQ Technical Report (Appendix B) demonstrates that the emissions of toxic air contaminants from the MBGF processes will not cause a significant risk to any sensitive or non-sensitive receptor with respect to cancer or acute and chronic impacts.

**(Less than Significant Impact)**

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

The MBGF 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 offsite receptors.
- The MBGF and MDC are not one of the project types listed in the BAAQMD CEQA guidelines as producing odors that may affect offsite receptors.



- The analysis 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 offsite receptors.

**(Less than Significant Impact)**

#### **4.3.4 Mitigation Measures**

##### **4.3.4.1 Construction**

No mitigation measures for construction related air quality impacts because Martin Properties incorporates Project Design Measure **PDM AQ-1** into the design of the project.

##### **4.3.4.2 Operations**

No mitigation measures are required for operations related air quality impacts because the project will fully offset its NO<sub>x</sub> emissions in accordance with BAAQMD rules.

#### **4.3.5 Governmental Agencies**

As discussed above the BAAQMD has regulatory authority over the air emissions from the MBGF. The MBGF will obtain and comply with the BAAQMD's Authority to Construct and Permit to Operate requirements.



#### **4.4 BIOLOGICAL RESOURCES**

This section evaluates potential effects on biological resources that may result from project implementation. This section is based on the Biological Resources Assessment (BRA) prepared by First Carbon Solutions which is included in Appendix C. The BRA describes the results of the survey conducted by FCS and assesses the site's potential to support special-status species, sensitive biological communities such as wetlands or riparian habitats, and the potential presence of other sensitive biological resources protected by local, State, and federal laws and regulations.

An arborist report for the project site was prepared by HMM to identify and map the trees present on-site, determine each tree's overall condition, and determine if any trees are regulated under any local policies or city ordinances. The arborist report is presented as Attachment C to the BRA.



#### 4.4.1 CEQA Checklist

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
<b><u>Biological Resources</u></b>				
Would the project:				
1) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3) 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4) 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 wildlife nursery sites?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
5) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or State habitat conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

#### 4.4.2 Environmental Setting

The proposed MDC site encompasses approximately 7.17 acres and is located at 651 Martin Avenue in Santa Clara, California, APN 224-04-071. The property is zoned MH-Heavy Industrial. The site is currently developed with four (4) separate single-story



structures encompassing a total of approximately 77,220 square feet.<sup>15</sup> The structures were used as commercial/warehouse and include associated paved surface parking and loading dock. The existing buildings consist of concrete and prefabricated metal. The existing buildings facades consist of painted formed metal panels. The entire project site is designated Urban/Developed.

All four of the existing buildings will be demolished as part of the Project. The main entrance to the MDC building will be located on Martin Avenue at the southwest corner of the property, with a secondary entrance also on Martin Avenue near the easternmost portion of the property.

Native and non-native trees and ornamental landscaping are located along the Martin Avenue frontage of the property, as well as the northern and eastern property boundaries. The trees along the western property line are located on the adjacent property and are to remain. In accordance with the arborist report, the project proposes to demolish the existing shrubs and groundcovers on the site, while protecting-in-place trees not in conflict with proposed utilities, grading, stormwater treatment facilities, and architectural improvements.

The property is irregularly shaped and is generally bound to the North by an existing warehouse, to the East by an existing railroad line operated by Union Pacific, to the South by Martin Avenue, and to the West by an existing office building.

The project area consists primarily of commercial and industrial land uses. The area contains some buildings that are similar in height and scale to the existing buildings on the project site and some buildings that are similar in height and scale to the proposed MDC building. The Norman Y. Mineta San José International Airport is located approximately one quarter mile east of the site.

#### **4.4.3 Environmental Impact Discussion**

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

The Special-status Plant Species contained in the BRA, Appendix B) queries list 9 potentially or confirmed occurring special-status plant species documented by CDFW (CNDDDB) and CNPS (CNPSEI) within the *San Jose West, California* Topographic

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<sup>15</sup> The four existing buildings on site encompass 3,533 square feet, 27,243 square feet, 5,073 square feet, and 41,371 square feet.



Quadrangle and the eight surrounding quadrangles.<sup>16,17,18</sup> The lists also include the species' status and required habitat. None of the species in the table have the potential to occur within the project site, as no native natural habitats occur on the project site that could support native special status plants.

Based upon the literature review, field survey, and professional experience, no special-status plant species are expected to occur on the project site due to the absence of suitable habitat, previous land use, and the urban/developed land cover.

The literature search identified 38 potentially occurring or confirmed special-status wildlife species that have the potential to occur within the *San Jose West* and *California*, Topographic Quadrangles and the eight surrounding quadrangles. The list includes the species' status and habitat requirements.

No fish or other aquatic species have the potential to occur on-site due to the lack of suitable water features. Additionally, the lack of vernal pools precludes the presence of vernal pool fairy shrimp (*Branchinecta lynchi*). No suitable habitat exists for amphibian and semi-aquatic species such as California tiger salamander (*Ambystoma californiense*) and western pond turtle (*Emys marmorata*). No suitable habitat for burrowing owl (*Athene cunicularia*) and Swainson's hawk (*Buteo swainsoni*) is present.

The numerous ornamental trees predominantly located on the site boundary (see Arborist Report) could provide suitable habitat for a variety of species of nesting birds. Construction activities that occur during the avian nesting season (generally February 15 to August 31) could disturb nesting sites for bird species protected under the FGC or MBTA. The removal of trees during the nesting season could result in direct harm to nesting birds, while noise, light, and other man-made disturbances may cause nesting birds to abandon their nests.

Maternity colonies for pallid bat (*Antrozous pallidus*) or any other bat species are unlikely to be present on the project site, as no evidence of a bat roost was observed and no structures or trees with high-quality roost sites were detected on the site during the reconnaissance-level site visit on October 25, 2022. Pallid bats may move through the site occasionally, as this species forages for miles surrounding a maternity colony;

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<sup>16</sup> United States Geological Survey (USGS). 2022. National Geospatial Program. Website: [https://www.usgs.gov/core-science-systems/national-geospatial-program/us-topo-maps-america?qt-science\\_support\\_page\\_related\\_con=4#qt-science\\_support\\_page\\_related\\_con](https://www.usgs.gov/core-science-systems/national-geospatial-program/us-topo-maps-america?qt-science_support_page_related_con=4#qt-science_support_page_related_con)

<sup>17</sup> California Department of Fish and Wildlife (CDFW). 2022. CNDDB RareFind 5 California Natural Diversity Database Query for Special-Status Species. Website: <https://map.dfg.ca.gov/rarefind/view/RareFind.aspx>. Accessed October 28, 2022.

<sup>18</sup> California Native Plant Society (CNPS). 2022. California Native Plant Society Rare and Endangered Plant Inventory. Website: <http://www.rareplants.cnps.org/>. Accessed October 28, 2022.



however, the site does not provide preferred foraging habitat (other than illuminated lamps in the parking lot that attract insects) because no open habitat is present.

The project applicant has incorporated nesting bird avoidance and minimization measures in PDM BIO-1 and roosting bat species avoidance and minimization measures in PDM-BIO-2 to ensure that project impacts on migratory birds and sensitive bats are less than significant.

### **PDM BIO-1, Avoid and Minimize Impacts to Protected Bird Species**

- If possible, demolition and construction activities, including removal of trees and vegetation clearing, shall take place between September and January. If demolition or construction activities, including removal of the trees on –site, would take place between January and September, a pre-construction survey for nesting raptors and other protected native or migratory birds shall be conducted by a qualified ornithologist, approved by the City of Santa Clara, to identify active nests that may be disturbed during project implementation. Pre-construction surveys shall be conducted no more than 14 days prior to the initiation of demolition or construction activities or tree relocation or removal. Surveys shall be repeated if project activities are suspended or delayed for more than 14 days during the nesting season. The surveying ornithologist shall inspect all trees in and immediately adjacent to the construction area to be disturbed by these activities, and the ornithologist shall, in consultation with the California Department of Fish and Wildlife (CDFW), designate a construction-free buffer zone (typically 250 feet for non-raptors to 500 feet for raptors) around the nest until the end of the nesting activity. Any changes to a buffer zone must be approved by the City of Santa Clara, in consultation with CDFW. The nests and buffers will be field checked weekly by the approved ornithologist. The approved buffer zone will be marked in the field with exclusion fencing, within which no construction, tree removal, or vegetation clearing shall commence until the ornithologist verifies that the nest(s) are no longer active. If an active bird nest is discovered during demolition or construction, then a buffer zone shall be established under the guidelines specified.
- The applicant shall submit a report indicating the results of the survey and any designated buffer zones to the satisfaction of the City of Santa Clara's Director of Community Development prior to the issuance of permits for tree removal, demolition, or grading. The report(s) shall contain maps showing the location of all nests, species nesting, status of the nest (e.g. incubation of eggs, feeding of young, near fledging), and the buffer size around each nest (including reasoning



behind any alterations to the initial buffer size). The report shall be provided within 10 days of completing a pre-construction nest survey.

## **PDM BIO-2: Avoid and Minimize Impacts to Bat Species**

If suitable roosting habitat for special-status bats will be affected by project construction (e.g., removal of buildings, removal of trees), a qualified wildlife biologist shall conduct surveys for special-status bats during the appropriate time of day to maximize detectability to determine if bat species are roosting near the work area no less than 7 days and no more than 14 days prior to beginning tree removal and/or demolition ground disturbance. Survey methodology may include visual surveys of bats (e.g., observation of bats during foraging period), inspection for suitable habitat, bat sign (e.g., guano), or use of ultrasonic detectors (e.g., Anabat, etc.). Visual surveys shall include trees within 0.25 mile of construction activities. The type of survey will depend on the condition of the potential roosting habitat. If no bat roosts are found, then no further study is required.

- If evidence of bat use is observed, the number and species of bats using the roost shall be determined. Bat detectors may be used to supplement survey efforts.
- If roosts are determined to be present and must be removed, the bats shall be excluded from the roosting site before the tree or structure is removed. Exclusion methods may include use of one-way doors at roost entrances (bats may leave, but not reenter) or sealing roost entrances when the site can be confirmed to contain no bats. Exclusion efforts may be restricted during periods of sensitive activity (e.g., during hibernation or while females in maternity colonies are nursing young).
- If roosts cannot be avoided or it is determined that construction activities may cause roost abandonment, such activities shall not commence until permanent, elevated bat houses have been installed outside of, but near, the construction area. Placement and height will be determined by a qualified wildlife biologist, but the height of bat house shall be at least 15 feet. Bat houses shall be multichambered and be purchased or constructed in accordance with CDFW standards. The number of bat houses required shall be dependent upon the size and number of colonies found, but at least one bat house shall be installed for each pair of bats (if occurring individually) or of a sufficient number to accommodate each colony of bats to be relocated.
- If bat roosts are detected, then a Bat Mitigation and Monitoring Plan (Plan) shall be prepared and implemented to mitigate for the loss of roosting habitat. The Plan shall include information pertaining to the species of bat and location of the roost,



exclusion methods and roost removal procedures, compensatory mitigation for permanent impacts (including specific mitigation ratios and location of proposed mitigation as described in above bullet) and monitoring to assess bat use of mitigation areas. This Plan shall be submitted to CDFW for review.

With implementation of the protection measures PDM BIO-1 and PDM BIO-2, potential project-related impacts on special-status species and protected nesting birds and roosting bats are less-than-significant.

**(Less than Significant Impact with Mitigation Incorporated into the Project Design)**

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

The land cover present on the project site is entirely classified as Urban/Developed and does not contain any aquatic or riparian habitats, or other sensitive natural communities. **(No Impact)**

**4.4.3.3 Would the project 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?**

The project site does not support aquatic or wetland habitats or waters of the U.S. or State of California. **(No Impact)**

**4.4.3.4 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 wildlife nursery sites?**

The project site does not lie within any known wildlife movement corridor. The project site is entirely developed, and is also surrounded by roads, railroad tracks, and urban development that limits wildlife movement. Due to the presence of existing barriers, the project site does not function as a wildlife corridor. No wildlife nursery sites exist, with the exception of potentially nesting birds, addressed under 4.4.3.1 and related protection measures. Therefore, there are no impacts related to wildlife corridors, linkages, and wildlife movement; or wildlife nursery sites. **(No Impact)**



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

According to the arborist report, the project site contains a total of 33 trees comprised of twelve species. The MDC proposes to remove all 33 trees on-site, due to clearance conflicts requirements mandated by Silicon Valley Power (SVP), and various conflicts with proposed civil and site improvements. One of the trees is classified as a protected tree under the City of Santa Clara tree protection ordinance, consisting of the Peruvian peppertree (*Schinus molle*), identified as tree number 26 in the Arborist Report, and shown on Exhibit 6 of this BRA, and shown on Photo 1 in Appendix A of the BRA (Appendix C).

The City of Santa Clara's landscape ordinance mandates a 2:1 replacement with 24-inch box size trees, or 1:1 replacement with 36-in box size trees. The MDC proposes to mitigate for the loss of any trees through a combination of 24-inch box size and 36-inch box size replacements.

#### **(Less than Significant Impact with Mitigation Incorporated into the Project Design)**

New landscaping consisting of trees, large and medium shrubs, and groundcovers will be installed along the property boundaries, building perimeters, stormwater treatment facilities, and landscape beds distributed throughout the parking facilities. Trees would be planted five feet away from new or existing water mains or utility lines.

The new Landscape will include drought tolerant native and non-native trees, shrubs, and ground covers. New planting will also be tolerant of recycled water. The landscape design will meet State and City WELO requirements for water use. We estimate that the new planting will be approximately 40-45% under the landscape Maximum Water Use for the site as calculated with the WELO formulas. Therefore, Martin Properties has incorporated measures into the project design to require application for removal permits as described in PDM BIO-3 and shall avoid and minimize impacts to the trees to be preserved by implementing PDM BIO-4.

#### **PDM BIO-3, Tree Removal**

The project applicant shall obtain approval by the City's Department of Community Development for all trees to be removed. Acquisition of this permit shall include details of the final mitigation numbers. The City of Santa Clara's Tree Ordinance (SCCC 12.35.090(C)(7) mandates a replacement ratio and size of tree species for planting. Depending on the species and size of the tree, additional mitigation may be required by the City of Santa Clara. The project proposes to mitigate for the loss of 33 trees through a combination of 24-inch box size and 36-inch box size.



#### **PDM BIO-4, Trees to Remain: Avoidance and Minimization of Impacts**

The project applicant shall follow the tree protection measures for trees that are to remain in place, as included as specific conditions by the City of Santa Clara as part of Architectural Review approval and included on the approved landscape plans for the project.

With the implementation of these PDMs, potential impacts to protected trees by the development of the proposed project will be reduced to less than significant levels.

##### **4.4.3.6 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 does not lie within the boundaries of any adopted Habitat Conservation Plan (HCP), Natural Community Conservation Plan (NCCP), or other approved local, regional, or State habitat conservation plan. Therefore, no impact would occur. **(No Impact)**

#### **4.4.4 Mitigation Measures**

No mitigation measures are necessary to ensure less than significant biological resource impacts because the applicant has incorporated the following Project Design Measures into the project.

#### **4.4.5 Governmental Agencies**

Because the site does not support or is adjacent to wildlife habitat that would require any special wildlife agency permit, the only agency that may be affected by the project would be the City of Santa Clara, which would enforce its tree ordinance through the PCC design process and tree removal permitting.



#### **4.5 CULTURAL RESOURCES AND TRIBAL CULTURAL RESOURCES**

This section describes the existing cultural, archaeological, and historical resources setting and potential effects from project implementation on the project site and its surrounding area. This section is based on, relies upon, and hereby incorporates by referend, a Cultural Resources Assessment (CRA) for the Project, prepared by Paleowest, LLC, dated October 14, 2022. The CRA has been prepared in accordance with previous CEC Staff guidance and will be docketed pursuant to a Request For Confidentiality.

To avoid any potential disclosure of sensitive information and to avoid inconsistencies, this section contains only a summary of the conclusions of the CRA, relevant to a CEQA analysis, and includes applicant proposed Project Design Measures.



#### 4.5.1 CEQA Checklist

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
<b><u>Cultural Resources and Tribal Cultural Resources</u></b>				
Would the project:				
1) Cause a substantial adverse change in the significance of a historical resource as pursuant to Section 15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3) Disturb any human remains, including those interred outside of formal cemeteries?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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:				
4) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k), or	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
5) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

#### 4.5.2 Environmental Setting

A description of the Environmental Setting is contained in Section 3 of the CRA and should be used by Staff to assist in describing the Environmental Setting for the Project.



### 4.5.3 Environmental Impact Discussion

PaleoWest completed the cultural resource assessment for the Project between August and September 2022. The assessment included archival research on the history of the area using existing cultural resource reports, aerial photographs, historical topographic maps, the Santa Clara County Assessor's Office, and online repositories. PaleoWest completed a literature review and records search for the Project site and an adjoining 0.5-mile (mi)-wide records search area. No known cultural resources are in or directly adjacent to the Project site, and one prior cultural resource investigation partially overlaps the southern extent of the Project site. Site visits were completed to evaluate the existing conditions, historic features, and architectural significance of the extant structures at the Project site (Assessor's Parcel No. [APN] 224-04-071) and three Historic Period structures at 650 Walsh Avenue (APN 224-04-077), 590 Martin Avenue, (APN 230-03-069), and 630 Martin Avenue (APN 224-35-014) within the Project area. Each property was photographed, recorded, and evaluated for the National Register of Historic Places (NRHP), the California Register of Historic Resources (CRHR), and the City of Santa Clara Historic Preservation and Resource Inventory (HRI).

PaleoWest recommends the 651 Martin Avenue Property not eligible for listing in the NRHP or the CRHR and does not meet the criteria for local significance and is not eligible for inclusion in the City of Santa Clara HRI. Furthermore, PaleoWest recommends the properties at 650 Walsh Avenue, 590 Martin Avenue, and 630 Martin Avenue not eligible for listing in the NRHP, CRHR, or the City of Santa Clara HRI. None of the four properties are historical resources for the purposes of CEQA. The properties have been evaluated in accordance with Section 15064.5(a)(2)-(3) of the CEQA Guidelines, using the criteria outlined in Section 5024.1 of the California Public Resources Code. No further management of these properties is recommended.

Archaeological sensitivity was also assessed for the Project site. The Project site was graded when the property was developed; this and subsequent construction have disturbed the ground and diminished archaeological potential. While it is unlikely intact Historic Period archaeological resources would be encountered, nearby waterways and underlying Holocene basin deposits suggest the area is moderately sensitive for Pre-Contact Period archaeological resources.

In accordance with the City of Santa Clara's 2010–2035 General Plan policies 5.6.3-P1–P2 and 5.6.3-P4, PaleoWest recommends a qualified archaeologist should be retained to oversee implementation of an archaeological monitoring program that includes archaeological monitoring and cultural resource sensitivity training for construction personnel (i.e., Worker Environmental Awareness Program). Additionally, in accordance



with 5.6.3-P5–P6, this report includes standard procedures in the event of unexpected archaeological resources and/or Native American human remains or funerary objects.

A complete description of the Cultural Resources Inventory and the Field Investigation are included in Sections 4 and 5 of the CRA, respectively.

**4.5.3.1 Would the project cause a substantial adverse change in the significance of a historical resource as pursuant to Section 15064.5?**

**Construction**

Sections 5.3 of the CRA contain a complete analysis which demonstrates that there are significant historical resources on or adjacent to the project site and therefore, potential impacts would be less than significant. **(Less than Significant Impact)**

**Operation**

Impacts related to a substantial adverse change in historic resources are limited to construction impacts because no subsurface activity would occur during operation that could uncover previously undiscovered historic resources. Therefore, no impacts would occur at operation. **(No Impact)**

**4.5.3.2 Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?**

**Construction**

Archaeological sensitivity was also assessed in Section 4 of the CRA. Given the proximity of nearby waterways and underlying Holocene basin deposits, the Project site is considered moderately sensitive for previously unidentified Pre-Contact Period archaeological sites. However, the Project site was graded when the property was developed; this and subsequent construction have disturbed the ground and diminished archaeological potential in the area. It is unlikely intact Historic Period archaeological resources would be encountered; however, the area is still considered moderately sensitive for Pre-Contact Period archaeological resources.

To minimize potential cultural resource-related potential effects from the Project and in accordance with the recommendations of the CRA, guidance from the General Plan, and from prior CEC certified Final Environmental Impact Reports prepared for recent data center SPPEs, Martin Properties proposes the following Project Design Measures which are hereby incorporated into the design of the MBGF and MDC. **(Less than Significant Impact)**



**PDM CUL-1** The following project-specific measures would be implemented during construction to avoid significant impacts to unknown subsurface cultural resources:

- A Secretary of the Interior - qualified archaeologist and a Native American cultural resources monitor shall be on site to monitor all ground-disturbing activity, including the removal of foundations and landscaping, on the project site. The project applicant shall submit the name and qualifications of the selected archaeologist and Native American monitor, along with a signed letter of commitment or agreement to monitor, to the City's Director of Community Development prior to the issuance of a grading permit. Preference in selecting Native American monitors shall be given to Native Americans with:
  - Aboriginal, culturally affiliated ties to the area being monitored.
  - Knowledge of local historic and prehistoric Native American village sites.
  - Knowledge and understanding of Health and Safety Code, section 7050.5, and Public Resources Code, section 5097.9 et seq.
  - Ability to effectively communicate the requirements of Health and Safety Code, section 7050.5, and Public Resources Code, section 5097.9 et seq.
  - Ability to work with law enforcement officials and the Native American Heritage Commission to ensure the return of all associated grave goods taken from a Native American grave during excavation.
  - Ability to travel to project sites within traditional tribal territory.
  - Knowledge and understanding of California Code of Regulations, title 14, section 15064.5.
  - Ability to advocate for the preservation in place of Native American cultural features through knowledge and understanding of CEQA mitigation provisions.
  - Ability to read a topographical map and be able to locate site and reburial locations for future inclusions in the Native American Heritage Commission's Sacred Lands Inventory.
  - Knowledge and understanding of archaeological practices, including the phases of archaeological investigation.

After the removal of pavement and prior to grading, the archaeologist shall conduct a pedestrian survey over the exposed soils to determine if any surface archaeological manifestations are present.

- After the demolition of the existing building and paved parking lot on the site, a qualified archaeologist with a Native American monitor present shall complete



mechanical presence/absence testing for archaeological deposits and cultural materials. In the event any prehistoric site indicators are discovered, additional backhoe testing will be conducted to map the aerial extent and depth below the surface of the deposits. In the event prehistoric or historic archaeological deposits are found during presence/absence testing, the significance of the find will be determined. If deemed significant, a treatment plan will be prepared and provided to the city's Director of Community Development. Where Native American cultural materials are identified, the archaeological monitor will prepare a treatment plan in collaboration with the monitoring California Native American tribe. The key elements of a treatment plan shall include the following:

- Identify the scope of work and range of subsurface effects (include location map and development plan),
- Describe the environmental setting (past and present) and the historic/prehistoric background of the parcel (potential range of what might be found),
- Develop research questions and goals to be addressed by the investigation (what is significant vs. what is redundant information),
- Detail the field strategy used to record, recover, or avoid the finds (photos, drawings, written records, provenience data maps, soil profiles, excavation techniques, standard archaeological methods) and address research goals.
- Analytical methods (radiocarbon dating, obsidian studies, bone studies, historic artifacts studies [list categories and methods], packaging methods for artifacts, etc.); the monitoring California Native American tribe shall determine the appropriateness of analytical methods proposed for Native American cultural materials,
- Report structure, including a technical and layperson's report and an outline of document contents in one year of completion of development (provide a draft for review before a final report),
- Disposition of the artifacts (the monitoring California Native American tribe will determine the disposition of California Native American cultural materials),
- Appendices: site records, update site records, correspondence, consultation with Native Americans, etc.

The archaeologist and California Native American monitor will monitor full - time all grading and ground disturbing activities associated with the construction of the proposed project. If the archaeologist and Native American monitor believe that a



reduction in monitoring activities is prudent, then a letter report detailing the rationale for making such a reduction and summarizing the monitoring results shall be provided to the city's Director of Community Development. Department of Recreation 523 forms shall be submitted along with the report for any cultural resources encountered over 50 years old.

- If prehistoric or historic resources are encountered during on - site construction activities, all activity within a 50 - foot radius of the find shall be stopped, the city's Director of Community Development shall be notified, and a Secretary of the Interior qualified archaeologist shall examine the find and record the site, including field notes, measurements, and photography for a Department of Parks and Recreation 523 Primary Record form. The archaeologist shall make a recommendation in collaboration with the monitoring California Native American tribe regarding eligibility for the California Register of Historical Resources, data recovery, curation, or other appropriate mitigation. Ground-disturbance within the 50 - foot radius can resume once these steps are taken and the city' s Director of Community Development has concurred with the recommendations. Within 30 days of the completion of the construction or cultural resources monitoring, whichever comes first, a report of findings documenting any cultural resource finds, recommendations, data recovery efforts, and other pertinent information gleaned during cultural resources monitoring shall then be submitted to the city's Director of Community Development under confidential cover, along with a report that redacts the location(s) of all cultural resources. Once finalized, this report shall be submitted to the Northwest Information Center at Sonoma State University.
- Prior to and for the duration of ground-disturbance, the project owner shall provide Worker Environmental Awareness Program training to all existing and any new employees. This training should include: a discussion of the applicable laws and penalties under the laws; samples or visual aids of the artifacts that could be encountered in the project vicinity, including what those artifacts may look like partially buried, or wholly buried and freshly exposed; and instructions to halt work in the vicinity of any potential cultural resource discovery, and notify the city - approved archaeologist and Native American cultural resources monitor. The Native American monitor shall provide a Tribal Cultural Resources Sensitivity Training in conjunction with the Worker Environmental Awareness Program.



## **Operation**

Impacts related to a substantial adverse change in the significance of an archeological resource are limited to construction impacts. No respective direct or indirect operational impacts related to archeological resources would occur. **(No Impact)**

### **4.5.3.3      Would the project disturb any human remains, including those interred outside of formal cemeteries?**

## **Construction**

No human remains or cemeteries are known to exist within or near the project site. However, there is always the possibility that subsurface construction activities associated with the proposed project, such as trenching and grading, could potentially damage or destroy previously undiscovered human remains. This represents a potentially significant impact related to human remains. Project Design Measure **PDM CUL-2** would require that work is halted, and the County Coroner is called to make a determination as to the nature of the remains and to confirm the next steps regarding contacting the NAHC and appropriate tribal representatives. In addition, in the event of the accidental discovery or recognition of any human remains, CEQA Guidelines Section 15064.5(d)—Effects on Human Remains, Health and Safety Code Section 7050.5, and Public Resources Code Sections 5097.94 and Section 5097.98 must be followed. Therefore, with implementation of PD CUL-3 and compliance with aforementioned CEQA Guidelines, direct and indirect impacts related to disturbance of human remains would be less than significant. **(Less than Significant Impact)**

**PDM CUL-2** The project proposes to implement the following measure to ensure the project's impacts to human remains are less than significant:

- If human remains are discovered during the presence/absence testing or excavation and/or grading of the site, all activity within a 50-foot radius of the find will be stopped. The Santa Clara County Coroner will be notified and shall determine whether the remains are of Native American origin or whether an investigation into the cause of death is required. If the remains are determined to be Native American, the coroner will notify the NAHC immediately. Once NAHC identifies the most likely descendants, the descendants will make recommendations regarding proper burial, which will be implemented in accordance with the California Code of Regulations, title 14, section 15064.5(e) of the CEQA Guidelines. All actions taken under this mitigation measure shall comply with the Health and Safety Code, section 7050.5(b).



## **Operation**

Impacts related to a project's potential to disturb human remains are limited to construction impacts as no subsurface activity or excavation would occur during operation. Therefore, no respective direct or indirect operational impacts related to human remains would occur. **(No Impact)**

- 4.5.3.4      **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 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)?**

## **Construction**

No listed or potentially eligible TCRs have been identified within the project site. Specifically, a review of the CRHR, the NAHC Sacred Lands File (See CRA, Appendix B) a records search conducted at the NWIC, and a pedestrian survey of the project site failed to identify any listed TCRs that could be adversely affected by construction of the proposed project. As such, there are no known eligible or potentially eligible TCRs that could be adversely affected by the proposed project. Therefore, impacts related to previously listed TCRs would be less than significant. **(Less Than Significant Impact)**

## **Operation**

Impacts related to a project's potential to cause a substantial adverse change in the significance of a State listed or eligible TCR are limited to construction impacts. No respective operational impacts would occur. **(No Impact)**

- 4.5.3.5      **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 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.**

## **Construction**

PaleoWest contacted the NAHC on July 29, 2022 for a review of the SLF. The objective of the SLF search was to determine if the NAHC had any knowledge of Native American



cultural resources (e.g., traditional use or gathering area, place of religious or sacred activity, etc.) within the immediate vicinity of the Project area. On August 30, 2022, the NAHC responded stating that the SLF search for the Project was negative and provided a contact list of local Native American groups to be contacted for additional information.

The NAHC response provided a list of Native American contacts (Valentin Lopez, Chairperson, Amah Mutsun Tribal Band; Irenne Zwierlein, Chairperson, Amah Mutsun Tribal Band of Mission San Juan Bautista; Canyon Sayers-Roods, Indian Canyon Mutsun Band of Costanoan; Ann Marie Sayers, Chairperson, Indian Canyon Mutsun Band of Costanoan; Monica Arellano, Vice Chairwoman, Muwekma Ohlone Indian Tribe of the SF Bay Area; Timothy Perez, North Valley Yokuts Tribe, Katherine Perez, Chairperson, North Valley Yokuts Tribe; Desiree Vigil, THPO, The Ohlone Indian Tribe; Andrew Galvan, Chairperson, The Ohlone Indian Tribe; Kenneth Woodrow, Chairperson, Wuksache Indian Tribe/Eshom Valley Band; Johnathon Wasaka Costilla, THPO, Tamien Nation; and Quirina Luna Geary, Chairperson, Tamien Nation.

The results of the SLF Search and Native American Contacts List provided by the NAHC can be found in the CRA, Appendix B. No Native American representatives were contacted as part of PaleoWest's investigation.

Impacts related to previously listed TCRs would be less than significant. **(Less Than Significant Impact)**

#### **Operation**

Impacts related to a project's potential to cause a substantial adverse change in the significance of a State listed or eligible TCR are limited to construction impacts. No respective operational impacts would occur. **(No Impact)**

#### **4.5.4 Mitigation Measures**

No mitigation measures are necessary to ensure less than significant archaeological, historical or tribal cultural impacts because the applicant has incorporated Project Design Measures **PDM CUL-1** and **PDM CUL-2** into the project.

#### **4.5.5 Governmental Agencies**

The CEC as lead agency will conduct outreach to Native American tribes. The City of Santa Clara will ensure the project applicant complies with all archaeological or historic resource related regulations as part of its permitting review and compliance process.



## 4.6 ENERGY AND ENERGY RESOURCES

### 4.6.1 CEQA Checklist

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
<b><u>Energy and Energy Resources</u></b>				
Would the project:				
1) Result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy, or wasteful use of energy resources, during project construction or operation?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

### 4.6.2 Environmental Setting

#### 4.6.2.1 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. In 2008, Executive Order 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.



## ***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, and the 2019 Title 24 updates went into effect on January 1, 2020<sup>19</sup>. Compliance with Title 24 is mandatory at the time new building permits are issued by city and county governments.<sup>20</sup>

## ***California Green Building Standards Code***

CALGreen establishes mandatory green building standards for buildings in California. CALGreen was developed to reduce GHG emissions from buildings, promote environmentally responsible and healthier places to live and work, reduce energy and water consumption, and respond to state environmental directives. The most recent update to CALGreen went into effect on January 1, 2019, and covers five categories: planning and design, energy efficiency, water efficiency and conservation, material and resource efficiency, and indoor environmental quality.

## ***Advanced Clean Cars Program***

CARB adopted the Advanced Clean Cars program in 2012 in coordination with the EPA and National Highway Traffic Safety Administration. The program combines the control of smog-causing pollutants and GHG emissions into a single coordinated set of requirements for vehicle model years 2015 through 2025. The program promotes development of environmentally superior passenger cars and other vehicles, as well as saving the consumer money through fuel savings.<sup>21</sup>

## **Local**

### ***Santa Clara General Plan***

The General Plan includes several energy use and conservation policies designed to protect energy resources in the City. These policies include the following:

Policy 5.10.3-P1: Promote the use of renewable energy resources, conservation and recycling programs.

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<sup>19</sup> California Building Standards Commission. "Welcome to the California Building Standards Commission." Accessed March 5, 2021. <http://www.bsc.ca.gov/>.

<sup>20</sup> California Energy Commission (CEC). "2019 Building Energy Efficiency Standards." Accessed March 5, 2021. <https://www.energy.ca.gov/programs-and-topics/programs/building-energy-efficiency-standards/2019-building-energy-efficiency>.

<sup>21</sup> California Air Resources Board. "The Advanced Clean Cars Program." Accessed March 5, 2021. <https://www.arb.ca.gov/msprog/acc/acc.htm>.



Policy 5.10.3-P4: Encourage new development to incorporate sustainable building design, site planning and construction, including encouraging solar opportunities.

Policy 5.10.3-P5: Reduce energy consumption through sustainable construction practices, materials and recycling.

Policy 5.10.3-P6: Promote sustainable buildings and land planning for all new development, including programs that reduce energy and water consumption in new development.

Policy 5.10.4-P8: Provide incentives for LEED certified, or equivalent development.

#### **4.6.2.2 Existing Conditions**

Total energy usage in California was approximately 7,967 trillion British thermal units (Btu) in the year 2018, the most recent year for which this data was available. Out of the 50 states, California is ranked second in total energy consumption and 48th in energy consumption per capita. The breakdown by sector was approximately 18.3 percent (1,439 trillion Btu) for residential uses, 19.2 percent (1,509 trillion Btu) for commercial uses, 23.5 percent (1,848 trillion Btu) for industrial uses, and 39.1 percent (3,170 trillion Btu) for transportation<sup>22</sup>. 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 2019 was consumed primarily by the commercial sector (76 percent), followed by the residential sector consuming 24 percent. In 2019, a total of approximately 16,665 gigawatt hours (GWh) of electricity was consumed in Santa Clara County<sup>23</sup>.

Silicon Valley Power (SVP) is the City of Santa Clara's energy utility and would provide electricity service to the project site. For commercial customers, SVP offers several options for participation in green energy programs, including a carbon-free energy option<sup>24</sup>.

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<sup>22</sup> United States Energy Information Administration. *State Profile and Energy Estimates, 2018*. Accessed March 5, 2021. <https://www.eia.gov/state/?sid=CA#tabs-2>.

<sup>23</sup> California Energy Commission. Energy Consumption Data Management System. "Electricity Consumption by County." Accessed March 5, 2021. <http://ecdms.energy.ca.gov/electbycounty.aspx>.

<sup>24</sup> Silicon Valley Power. "Did you Know." Accessed March 5, 2021. <http://www.siliconvalleypower.com/>.



## **Natural Gas**

PG&E provides natural gas services within the City of Santa Clara. In 2018, approximately one percent of California's natural gas supply came from in-state production, while the remaining supply was imported from other western states and Canada<sup>25</sup>. In 2018, residential and commercial customers in California used 34 percent of the state's natural gas, power plants used 35 percent, the industrial sector used 21 percent, and other uses used 10 percent. Transportation accounted for one percent of natural gas use in California. In 2018, Santa Clara County used approximately 3.5 percent of the state's total consumption of natural gas<sup>26</sup>.

## **Fuel for Motor Vehicles**

In 2019, 15.4 billion gallons of gasoline were sold in California.<sup>27</sup> 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 24.9 mpg in 2019.<sup>28</sup> 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 subsequently revised to apply to cars and light trucks model years 2020 through 2035.<sup>29,30</sup>

### **4.6.3 Environmental Impact Discussion**

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

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<sup>25</sup> California Gas and Electric Utilities. 2019 *California Gas Report*. Accessed March 5, 2021.

[https://www.socalgas.com/regulatory/documents/cgr/2019\\_CGR\\_Supplement\\_7-1-19.pdf](https://www.socalgas.com/regulatory/documents/cgr/2019_CGR_Supplement_7-1-19.pdf).

<sup>26</sup> California Energy Commission. "Natural Gas Consumption by County." Accessed March 5, 2021.

<http://ecdms.energy.ca.gov/gasbycounty.aspx>.

<sup>27</sup> California Department of Tax and Fee Administration. "Net Taxable Gasoline Gallons." Accessed March 5, 2021.

<https://www.cdtfa.ca.gov/dataportal/dataset.htm?url=VehicleTaxableFuelDist>.

<sup>28</sup> United States Environmental Protection Agency. "The 2020 EPA Automotive Trends Report: Greenhouse Gas Emissions, Fuel Economy, and Technology since 1975." January, 2021. Accessed March 5, 2021. <https://nepis.epa.gov/Exe/ZyPDF.cgi?Dockkey=P1010U68.pdf>

<sup>29</sup> United States Department of Energy. *Energy Independence & Security Act of 2007*. Accessed March 5, 2021.

<http://www.afdc.energy.gov/laws/eisa>.

<sup>30</sup> Public Law 110-140—December 19, 2007. *Energy Independence & Security Act of 2007*. Accessed March 5, 2021.

<http://www.gpo.gov/fdsys/pkg/PLAW-110publ140/pdf/PLAW-110publ140.pdf>.



## **Construction**

Construction of the project would require energy for the demolition of existing buildings, manufacture and transportation of building materials, site preparation and grading, and the actual construction of the buildings and infrastructure. As discussed in Section 4.3 Air Quality, the project would implement measures to minimize the idling of construction equipment. Additionally, the project would participate in the City's Construction and Demolition Debris Recycling Program by recycling or diverting at least 50 percent of materials generated for discards by the project in order to reduce the amount of demolition and construction waste going to the landfill. Diversion saves energy by reusing and recycling materials for other uses (instead of landfilling materials and using additional non-renewable resources).

## **MBGF Operation**

Energy would be consumed by the MBGF during regular testing and maintenance of the 44 emergency backup generators. According to California law each generator is limited to a maximum of 50 hours per year of operation. Assuming a worst-case scenario where all generators are tested at full load for the full 50 hours per year, the MBGF would consume up to 421,740 gallons of fuel per year. According to the California Energy Commission's 2020 Weekly Fuel's Watch Report, the annual capacity of CARB Diesel Fuel in California was 187,416,000 barrels annually. The proposed consumption of CARB Diesel Fuel by the MBGF is less than 0.0053 percent of the total California annual capacity. This is also an overestimate of the use of CARB Diesel Fuel because the MBGF has been designed to use renewable diesel as its primary fuel relying on CARB Diesel Fuel when renewable diesel is unavailable.

Because the generators would only be operated when necessary for testing and maintenance, and would not be used regularly for electricity generation, the MBGF would not result in a wasteful, inefficient, or unnecessary consumption of energy, or wasteful use of energy resources. Additionally, the MBGF would not have a significant adverse effect on local or regional energy supplies and will not create a significant adverse impact on California's energy resources.

It is important to note that maintenance and readiness testing of the emergency backup generators are crucial to the project's viability. The most important data center criterion is reliability. Crucial services such as the 911, Offices of Emergency Management, and utilities infrastructure are increasingly using data centers for their operation. Reliability and data security requirements of a data center would be compromised by limiting or reducing fuel consumption for the purpose of maintenance and readiness testing. This includes the primary generators as well as the redundant ones. Even though the redundant generators are intended to provide backup service to the rest of the generators,



their operational reliability is equally important. If any of the primary generators fails to operate, a redundant generator must be ready to run to take up the lost load. So, it is crucial that the redundant generators be regularly tested and maintained according to the same testing and maintenance requirements as the primary ones and as prescribed by the manufacturer's warranty conditions. The use of diesel fuel for the generators for readiness testing and maintenance would not be unnecessary, inefficient, or wasteful.

The use of the standby generators for emergency purposes would be limited to times when there is an interruption of SVP's electric service. Under emergency conditions, defined as the loss of electrical power to the data center, which are infrequent and short-duration events, the generators could operate and use diesel fuel, as necessary, to maintain data center operations. The Caterpillar emergency backup generator models selected for the MBGF have an efficiency rating comparable to other commercially available diesel-fueled generators of similar generating capacity.

### **MDC Operation**

Operation of the MDC 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 MDC would be built in accordance with Title 24 and CALGreen and include green building measures to reduce energy consumption. The MDC would also 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 building would be implemented to limit water consumption. Due to the energy efficiency measures incorporated into the facility, the MDC would not result in a wasteful, inefficient, or unnecessary consumption of energy, or wasteful use of energy resources. **(Less than Significant Impact)**

#### **4.6.3.2 Would the project conflict with or obstruct a state or local plan for renewable energy or energy efficiency?**

During operation, MDC would use both nonrenewable energy resources and renewable energy resources in SVP's portfolio of resources. SVP's 2018 Integrated Resource Plan identified that it expects to exceed 50 percent eligible renewable resources in its portfolio by 2030<sup>31</sup>. As SVP procures more renewable energy for its portfolio, less nonrenewable

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<sup>31</sup> Silicon Valley Power 2018 Integrated Resource Plan, <https://www.siliconvalleypower.com/home/showpublisheddocument?id=62481>



energy sources will be needed and therefore less nonrenewable power would be provided to MDC. In addition, the City of Santa Clara and SVP have adopted what is referred to as “Reach Codes,” which are local energy targets that “reach” beyond the state minimum requirements for energy use in building design and construction.<sup>32</sup> Additionally, the MDC would not obstruct SVP from implementing its current Integrated Resource Plan and achieving the State’s goals pursuant to SB 100.

The MBGF’s use of diesel fuel is a significant departure from typical power generating facilities that use fossil fuels as their primary source of energy, as the MBGF’s generators would operate only during testing and during emergencies when the primary source of energy to operate the MDC, electricity from SVP, is cut off. The MBGF’s use of diesel fuel would not obstruct SVP’s ability to meet the requirements of SB 100.

The Project would participate in the city’s Construction and Demolition Debris Recycling Program and implement measures to promote walking, bicycling, and transit use, thereby reducing motor vehicle use. Through the city’s design review process, MDC would be required to comply with the California Green Building Code and the city’s General Plan Land Use Policies related to energy—Santa Clara’s 2010–2035 Master Plan, which are consistent with the EPA’s Energy Star and Fuel Efficiency program.

Power Usage Effectiveness (PUE) is a metric used to compare the efficiency of facilities that house computer servers. It is defined as the ratio of total facility energy draw (including the facility’s mechanical and electrical loads) to IT server electrical power draw ( $PUE = \text{total facility source energy [including the Critical IT source energy]} / \text{Critical IT source energy}$ ). While the PUE is always greater than 1, the closer it is to 1, the greater the portion of the power drawn by the facility that goes to the Critical IT server equipment.

The PUE has been used as a guideline for assessing and comparing energy and power efficiencies associated with data centers since 2007. According to the Uptime Institute 2019 Annual Data Center Survey Results the current average PUE is 1.67. As discussed in Section 2.2.3.2 Martin Properties estimates that for the MDC, the maximum peak PUE is expected to be 1.45, the average annual PUE is expected to be 1.26, and actual PUE will be about 1.25, all well below the industry average.

As described in Section 2.2.2.1 the design for MDC is for an average rack power rating of 8.3 kW. Through energy efficient design and increased renewable electricity use, the Project would neither conflict with, nor obstruct state or local plans for renewable energy

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<sup>32</sup> <https://www.siliconvalleypower.com/sustainability/commitment-to-renewable-energy/building-electrification-and-electric-vehicle-reach-codes>



or energy efficiency, and therefore would have no adverse impact on them. **(Less Than Significant Impact)**

#### **4.6.4 Mitigation Measures**

No mitigation measures are necessary as the Project is designed to ensure no significant energy or energy resource-related environmental impacts.

#### **4.6.5 Governmental Agencies**

The only governmental agency affected by the Project's energy use is the City of Santa Clara and its municipal utility Silicon Valley Power. Through the design review and energy contracting processes, SVP will be able to ensure that the Project will not negatively affect its ability to comply with its Integrated Resources Plan and its ability to serve its customers.



## **4.7 GEOLOGY AND SOILS**

The following discussion is based on a Geotechnical Investigation (September 24, 2021) prepared by Cornerstone Group. The report is attached as Appendix D of this Application.



#### 4.7.1 CEQA Checklist

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
<b><u>Geology and Soils</u></b>				
Would the project:				
1) 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)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
- Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
- Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
- Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2) Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3) Be located on a geologic unit or soil that is unstable, or that will become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
4) Be located on expansive soil, as defined in the current California Building Code, creating substantial direct or indirect risks to life or property?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
5) 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
6) Directly or indirectly destroy a unique paleontological resource or site or unique geological feature?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>



## **4.7.2 Environmental Setting**

### **4.7.2.1 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 Standards Code (CBC) prescribes standards for constructing safer 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; the current version is the 2019 CBC.

##### ***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 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.

### ***Paleontological Resources Regulations***

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 are valued for the information they yield about the history of the earth and its past ecological settings. The 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. Paleontological resources are fossils, the remains or traces of prehistoric life preserved in the geologic record. They range from the well-known and well publicized (such as mammoth and dinosaur bones) to scientifically important fossils.

### **Local**

#### ***Santa Clara General Plan***

General Plan policies geology and soils-related policies applicable to the project include the following.

Policy 5.6.3-P1: Require that new development avoid or reduce potential impacts to archaeological, paleontological and cultural resources.

Policy 5.6.3-P40: Require that a qualified paleontologist/archaeologist monitor all grading and/or excavation if there is a potential to affect archeological or paleontological resources, including sites within 500 feet of natural water courses and the Old Quad neighborhood.

Policy 5.6.3-P5: In the event that archeological/paleontological resources are discovered, require that work be suspended until the significance of the find and recommended actions are determined by a qualified archeologist/paleontologist.

Policy 5.10.5-P5: Regulate development, including remodeling or structural rehabilitation, to ensure adequate mitigation of safety hazards, including flooding, seismic, erosion, liquefaction and subsidence dangers.



Policy 5.10.5-P6: Require that new development is designed to meet current safety standards and implement appropriate building codes to reduce risks associated with geologic conditions.

Policy 5.10.5-P7: Implement all recommendations and design solutions identified in project soils reports to reduce potential adverse effects associated with unstable soils or seismic hazards.

### ***Santa Clara City Code***

Title 15 of the Santa Clara City Code includes the City's adopted Building and Construction Code. These regulations are based on the CBC and include requirements for building foundations, walls, and seismic resistant design. Requirements for grading and excavation permits and erosion control are included in Chapter 15.15 Building Code. Requirements for building safety and earthquake reduction hazard are addressed in Chapter 15.55 Seismic Hazard Identification.

#### **4.7.2.2 Existing Conditions**

The project site is located in the Santa Clara Valley, a relatively flat alluvial basin, bounded by the Santa Cruz Mountains to the southwest and west, the Diablo Mountain Range to the east, and the San Francisco Bay to the north.

#### **Soil Conditions**

According to the Geologic Map of the San Jose West Quadrangle, California (Wentworth and others, 1999), the site is located in an area underlain by Holocene age (less than 11,000 years old) levee deposits and basin deposits. Levee deposits are generally described as loose, moderate- to well-sorted sandy or clayey silt grading to sandy or silty clay. Basin deposits are generally described as dark-colored clay with very fine silty clay, rich in organic material, and deposited beyond the levees and flood plains in the flood basins where stilling flood waters drop their finest sediment. These geologic materials may be susceptible to some degree of compressibility when subject to new building loads.

#### **Groundwater**

Based on cone penetration testing performed during the soil borings completed for the Limited Preliminary Geotechnical Investigation (refer to Appendix D) depth to groundwater in the area can range from approximately 4 to 10 feet below ground surface (bgs). Fluctuations in groundwater levels are common due to seasonal fluctuations, underground drainage patterns, regional fluctuations, and other factors.



## **Seismicity and Seismic Hazards**

The San Francisco Bay Area is one of the most seismically active areas in the United States. While seismologists cannot predict earthquake events, the U.S. Geological Survey's Working Group on California Earthquake Probabilities estimates there is a 72 percent chance of at least one magnitude 6.7 earthquake occurring in the Bay Area region between 2002 and 2032. Higher levels of shaking and damage would be expected for earthquakes occurring at closer distances. The faults considered capable of generating significant earthquakes in the area are generally associated with the well-defined areas of crustal movement, which trend northwesterly.

The three major faults in the region are the Calaveras Fault (approximately 9.4 miles east of the site), the San Andreas Fault (approximately 11.3 miles west of the site), and the Hayward Fault (approximately 6.1 miles east of the site). The project site is not located within a fault rupture zone.<sup>33</sup>

Ground shaking at the project site is predicted to be strong to very strong as determined by the Association of Bay Area Governments (ABAG). The project site is not located within the limits of an Alquist-Priolo Earthquake Fault Zone and there are no known active faults within the City limits of Santa Clara.

## **Liquefaction**

Soil liquefaction is a condition where saturated granular soils near the ground surface undergo a substantial loss of strength during seismic events. Loose, water-saturated soils are transformed from a solid to a liquid state during ground shaking. Liquefaction can result in significant deformations and ground rupture or sand boils. Soils most susceptible to liquefaction are loose, uniformly graded, saturated, fine-grained sands that lie close to the ground surface. According to the State of California Official Seismic Hazard Zones Map for the San Jose West Quadrangle (California Geological Survey, 2002), the site is located in an area considered potentially susceptible to earthquake-induced liquefaction.

Plate 1.2 of the State Seismic Hazard Zone Report 058 (California Geological Survey, 2002) estimates the depth to groundwater in the site vicinity to be less than 10 feet below existing site grades. In addition, according to the Association of Bay Area Governments (ABAG) Earthquake Liquefaction Susceptibility Map (Knudsen and others, 2000), the site is located in an area considered to have a moderate susceptibility to earthquake-induced liquefaction.

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<sup>33</sup> Santa Clara County. *Santa Clara County Geologic Hazard Zones*. October 26, 2012.



## **Lateral Spreading**

Lateral spreading is a type of ground failure related to liquefaction. It consists of the horizontal displacement of flat-lying alluvial material toward an open face, such as the steep bank of a stream channel.

There are no stream channels on or adjacent to the site, therefore the project site would not be subject to lateral spreading.

## **Paleontological Resources**

The City of Santa Clara is situated on alluvial fan deposits of the Holocene age. These relatively young sediments have low potential to yield fossil resources or to contain significant nonrenewable paleontological resources. However, these recent sediments overlie sediments of older Pleistocene sediments with high potential to contain paleontological resources. These older sediments, often found at depths of ten feet or more below the ground surface, have yielded the fossil remains of plants and extinct terrestrial Pleistocene vertebrates. Ground disturbing activities of ten feet or more have the potential to impact undiscovered paleontological resources in older Pleistocene sediments.<sup>34</sup>

### **4.7.3 Environmental Impact Discussion**

#### **4.7.3.1 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.?**

As discussed in Section 4.7.2.2, there are no known active or potentially active faults crossing the project site. The site is not located within an Earthquake Fault Zone as defined by the State of California Alquist-Priolo Earthquake Fault Zoning Act. The project site is not located within a fault rupture zone.

The project site is located in a seismically active region. Geologic conditions on the site would require the new building be designed and constructed in accordance with standard engineering techniques and current California Building Code requirements, to avoid or minimize potential damage from seismic shaking and liquefaction on the site.

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<sup>34</sup> City of Santa Clara. City of Santa Clara Draft 2010-2035 General Plan. January 2011. Page 328.



The project site is located in a mapped liquefaction hazard zone. The site is not located within a landslide hazard zone. The project incorporates Project Design Measure **PDM GEO-1** below.

**PDM GEO-1:** In order to ensure the project design conforms to the requirements of a final geotechnical engineering investigation and California and local building standards and codes, the following is proposed as mitigation incorporated into the project. Incorporation will ensure seismic hazards are reduced to less than significant levels.

- To avoid or minimize potential damage from seismic shaking, the project would be built using standard engineering and seismic safety design techniques. Building redevelopment design and construction at the site shall be completed in conformance with the recommendations of a design-level geotechnical investigation, which will be included in a report to the City. The report shall be reviewed and approved by the City of Santa Clara's Building Division as part of the building permit review and issuance process. The building shall meet the requirements of the applicable Building and Fire Codes, including the 2019 California Building Code, as adopted or updated by the City. The project shall be designed to withstand potential geologic hazards identified on the site and the project shall be designed to reduce the risk to life or property to the extent feasible and in compliance with the Building Code.

With the incorporation of this Project Design Measure the project will not result in earthquake-related impacts. **(Less than Significant Impact)**

#### **4.7.3.2 Would the project result in substantial soil erosion or the loss of topsoil?**

Ground disturbance at the site would be required for demolition and on-site improvements. Ground disturbance would expose soils and increase the potential for wind or water related erosion and sedimentation at the site until construction is complete. Compliance with the erosion control measures, as required by the National Pollutant Discharge Elimination System (NPDES) is the primary means of enforcing erosion control measures through the grading and building permit process. In accordance with General Plan policies, construction activities would be subject to the requirements of the regulatory programs and policies in place and, therefore, would have a less than significant soil erosion impact.

With respect to the MBGF facility components, construction will involve limited ground disturbance as the site grading for the MDC will be completed prior to installation of the MBGF components. The only ground disturbance directly attributable to the MBGF will be the minor trenching for electrical interconnection to the MDC. **(Less than Significant Impact)**



**4.7.3.3 Would the project be located on a geologic unit or soil that is unstable, or that will become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?**

The project site is located in a mapped liquefaction hazard zone. The site is not located within a landslide hazard zone. The project has incorporated Project Design Measure **PDM GEO-1**, which would avoid or reduce impacts related to the stability of soil on-site. The project would not change or exacerbate local geologic conditions of the project area and would not result in a significant geology hazards impact. **(Less than Significant Impact)**

**4.7.3.4 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 is located on expansive soil as defined in Section 1803.5.3 of the CBC. The project would be required to adhere to the SHMA and CBC, which would reduce impacts related to expansive soils to a less than significant level. The policies of the City of Santa Clara 2010-2035 General Plan have been adopted for the purpose of avoiding or mitigating environmental effects resulting from planned development within the City. Santa Clara General Plan Policy 5.10.5-P6 requires that new developments be designed to meet current safety standards and implement appropriate building codes to reduce risk associated with geologic conditions. **(Less than Significant Impact)**

**4.7.3.5 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 project site is located within an urban area of Santa Clara where sewers are available to dispose wastewater from the project site. Therefore, the project site would not need to support septic tanks or alternative wastewater disposal systems. **(No Impact)**

**4.7.3.6 Would the project directly or indirectly destroy a unique paleontological resource or site or unique geological feature?**

There are no known unique paleontological resources or unique geological features within the City. However, ground disturbing activities of ten feet or more have the potential to impact undiscovered paleontological resources. The MDC would require excavation trenching of depths of up to 15 feet. Foundations will be augured piles, likely to exceed



depths of 30 feet. Although unlikely, paleontological resources could be encountered during construction of the MDC. The applicant has incorporated Project Design Measure **PDM GEO-2** to address the potential for discovery of paleontological resources during excavation in native materials.

**PDM GEO-2:** The project proposes to implement the following measures to as best management practices to ensure impacts to paleontological resources are less than significant.

Prior to the start of any subsurface excavations that would extend beyond previously disturbed soils, all construction forepersons and field supervisors shall receive training by a qualified professional paleontologist, as defined by the Society of Vertebrate Paleontology, who is experienced in teaching non- specialists, to ensure they can recognize fossil materials and shall follow proper notification procedures in the event any are uncovered during construction. Procedures to be conveyed to workers include halting construction within 50 feet of any potential fossil find and notifying a qualified paleontologist, who shall evaluate its significance.

If a fossil is found and determined by the qualified paleontologist to be significant and avoidance is not feasible, the paleontologist shall develop and implement an excavation and salvage plan in accordance with Society of Vertebrate Paleontology standards. Construction work in these areas shall be halted or diverted to allow recovery of fossil remains in a timely manner. Fossil remains collected during the monitoring and salvage portion of the mitigation program shall be cleaned, repaired, sorted, and cataloged. Prepared fossils, along with copies of all pertinent field notes, photos, and maps, shall then be deposited in a scientific institution with paleontological collections. A final Paleontological Mitigation Plan Report shall be prepared that outlines the results of the mitigation program. The Director of Planning and Inspection shall be responsible for ensuring that the paleontologist's recommendations regarding treatment and reporting are implemented.

Although the MDC site will be graded and any excavation for deep foundations would be completed prior to installation of any of the MBGF facilities, the MBGF would perform trenching to install the underground cabling for the electrical interconnection between each generator yard and the MDC building it serves. This trenching is most likely to occur in previously disturbed soils shallower than 10 feet. In the unlikely event the trenching activities encounter potential paleontological resources, implementation of **PDM GEO-2**



would ensure that any potential impacts from the trenching activities for the MBGF would be reduced to less than significant levels. **(Less than Significant Impact)**

#### **4.7.4 Mitigation Measures**

No mitigation measures are necessary because the project applicant has incorporated the following Project Design Measures into the project.

#### **4.7.5 Governmental Agencies**

The only governmental agency that would be affected by the project is the City of Santa Clara as it is the agency with authority to implement the building codes during its project review and monitoring of construction. The City of Santa Clara is likely to incorporate compliance with the building codes as conditions of approval and will ensure they are complied with during construction.



## 4.8 GREENHOUSE GAS EMISSIONS

The following discussion is based, in part, on emission calculations prepared for the project by Ramboll US Consulting, Inc. dated October, 2022. A copy of the emission calculations is included in Appendix B.

### 4.8.1 CEQA Checklist

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
<b><u>Greenhouse Gas Emissions</u></b>				
Would the project:				
1) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

### 4.8.2 Environmental Setting

#### 4.8.2.1 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 GWP and is measured in units of CO<sub>2</sub> equivalents (CO<sub>2</sub>e). The most common GHGs are carbon dioxide (CO<sub>2</sub>) and water vapor but there are also several others, most importantly methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF<sub>6</sub>). These are released into the earth's atmosphere through a variety of natural processes and human activities. Sources of GHGs are generally as follows:

- CO<sub>2</sub> and N<sub>2</sub>O are byproducts of fossil fuel combustion.
- N<sub>2</sub>O is associated with agricultural operations such as fertilization of crops.
- CH<sub>4</sub> 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.

#### **4.8.2.2 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 2040. Plan Bay Area 2040 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.

### ***Other Implementing Laws and Regulations***

There are a number of laws that have been adopted as a part of the State of California's efforts to reduce GHG emissions and their contribution to climate change. State laws and



regulations related to growth, development, planning and municipal operations in Santa Clara include, but are not limited to:

- California Mandatory Commercial Recycling Law (AB 341)
- California Water Conservation in Landscaping Act of 2006 (AB 1881)
- California Water Conservation Act of 2009 (SBX7-7)
- Various Diesel-Fuel Vehicle Idling regulations in Chapter 13 of the California Code of Regulations
- Building Energy Efficiency Standards (Title 24, Part 6)
- California Green Building Code (Title 24, Part 11)
- Appliance Energy Efficiency Standards (Title 20)

Implementation of the policies in the City's General Plan as a part of the City's development permitting and other programs provides for meeting building standards for energy efficiency, recycling, and water conservation, consistent with the laws and regulations designed to reduce GHG emissions.

## **Local**

### ***City of Santa Clara General Plan***

The Santa Clara 2010-2035 General Plan includes policies that address the reduction of GHG gas emissions during the planning horizon of the General Plan. Goals and policies that address sustainability (see Appendix 8.13: Sustainability Goals and Policies Matrix in the General Plan) are aimed at reducing the City's contribution to GHG emissions. As described below, the development of a comprehensive GHG emissions reduction strategy for the City is also included in the General Plan.

5.3.1-P10: Provide opportunities for increased landscaping and trees in the community, including requirements for new development to provide street trees and a minimum 2:1 on- or off-site replacement for trees removed as part of the proposal to help increase the urban forest and minimize the heat island effect.

5.3.1-P14: Encourage TDM strategies and the provision of bicycle and pedestrian amenities in all new development greater than 25 housing units or more than 10,000 non-residential square feet, and for City employees, in order to decrease use of the single-occupant automobile and reduce vehicle miles traveled, consistent with the Climate Action Plan.



5.8.5-P1: Require new development and City employees to implement TDM programs that can include site-design measures, including preferred carpool and vanpool parking, enhanced pedestrian access, bicycle storage and recreational facilities.

5.8.5-P5: Encourage TDM programs that provide incentives for the use of alternative travel modes to reduce the use of single-occupant vehicles.

5.4.1-P15: Work with Valley Transportation Authority to improve transit access, information and frequency along El Camino Real, including the implementation of a Bus Rapid Transit or similar transit service near Regional Mixed-Use areas.

### ***Santa Clara Climate Action Plan 2022***

The City of Santa Clara Climate Action Plan 2022 (2022 CAP) is the latest update to the City's CAP and is designed to meet the statewide GHG reduction targets for 2030 set by Senate Bill 32. As a Qualified Climate Action Plan, the 2022 CAP allows for tiering and streamlining of GHG analyses under CEQA. The 2022 CAP identifies existing City policies and regulations as well as new measures to be implemented by development projects in the areas of building/energy use, transportation & land use, materials & consumption, natural resources & water resources, and community resilience & wellbeing. Projects that comply with the policies and strategies outlined in the 2022 CAP and that are consistent with the General Plan land use designation on the project site would have a less than significant GHG impact.

#### **4.8.2.3 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 site is currently developed with four (4) separate single-story structures encompassing a total of approximately 77,220 square feet.<sup>35</sup> The structures were used as commercial/warehouse and include associated paved surface parking and loading dock. The existing buildings consist of concrete and prefabricated metal. The existing buildings facades consist of painted formed metal panels. All four of the existing buildings will be demolished as part of the Project .

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<sup>35</sup> The four existing buildings on site encompass 3,533 square feet, 27,243 square feet, 5,073 square feet, and 41,371 square feet.



The main source of GHG emissions associated with the existing uses on-site is the electricity use of the existing building. Additional emissions also result from vehicle trips associated with the building's daily operations.

#### **4.8.3 Environmental Impact Discussion**

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 future projects in Santa Clara, 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.

As outlined in the CEQA Guidelines, a lead agency may analyze and mitigate significant GHG emissions in a plan for the reduction of GHG emissions that has been adopted in a public process following environmental review. GHG impacts from project-related emission sources are typically considered to have a less-than-significant impact if the project is consistent with the City's 2022 CAP as well as applicable regulatory programs and policies adopted by ARB or other California agencies.

The BAAQMD has established guidance for stationary sources such as the project's backup generators. The threshold to determine the significance of an impact from GHG emissions is 10,000 metric tons of CO<sub>2</sub>e per year. This threshold is consistent with stationary source thresholds adopted by other air quality management districts throughout the state and is intended to capture 95 percent of all GHG emissions from new permit applications from stationary sources in the San Francisco Bay Area Basin. Stationary-source projects include land uses that would accommodate processes and equipment that emit GHG emissions and would require a BAAQMD permit to operate. The standby generators included as part of the project would be permitted sources, and as such, the BAAQMD's 10,000 metric tons of CO<sub>2</sub>e per year threshold is appropriate for analyzing the significance of emissions produced by the generators. If annual emissions of operational-related GHGs from the generators exceed these levels, the project would result in a cumulatively considerable contribution of GHG emissions and a cumulatively significant impact to global climate change. Emissions from mobile sources and area sources associated with data center operation would not be included for comparison to this threshold, based on guidance in the BAAQMD's CEQA Guidelines.

On April 20, 2022, the BAAQMD Board of Directors held a public meeting and adopted updated CEQA Thresholds for Evaluating the Significance of Climate Impacts from Land Use Projects and Plans. These thresholds are presented below. GHG impacts from data



center operation would be considered to have a less than significant impact if the project is consistent with the updated BAAQMD thresholds.

**BAAQMD GHG Thresholds for Land Use Projects (Must Include A or B)**

- A. Projects must include, at a minimum, the following project design elements:
1. Buildings
    - a. The project will not include natural gas appliances or natural gas plumbing (in both residential and nonresidential development).
    - b. The project will not result in any wasteful, inefficient, or unnecessary energy usage as determined by the analysis required under CEQA Section 21100(b)(3) and Section 15126.2(b) of the State CEQA Guidelines.
  2. Transportation
    - a. Achieve a reduction in project-generated vehicle miles traveled (VMT) below the regional average consistent with the current version of the California Climate Change Scoping Plan (currently 15 percent) or meet a locally adopted Senate Bill 743 VMT target, reflecting the recommendations provided in the Governor's Office of Planning and Research's Technical Advisory on Evaluating Transportation Impacts in CEQA:
      - i. Residential projects: 15 percent below the existing VMT per capita
      - ii. Office projects: 15 percent below the existing VMT per employee
      - iii. Retail projects: no net increase in existing VMT
    - b. Achieve compliance with off-street electric vehicle requirements in the most recently adopted version of CALGreen Tier 2.
- B. Projects must be consistent with a local GHG reduction strategy that meets the criteria under State CEQA Guidelines Section 15183.5(b).

The Project meets the new BAAQMD GHG Land Use Project standards by demonstrating compliance with the 2022 CAP and therefore consistent with "a local GHG reduction strategy that meets the criteria under State CEQA Guidelines Section 15183.5(b)"; and therefore complying with Item B of the standards.



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

**Construction Emissions**

GHG emissions associated with construction are estimated to be approximately 806 metric tons per year, including demolition, site preparation, grading, and on-and-off-site construction. 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.

**Stationary Source Emissions from Routine Generator Testing and Maintenance**

The consumption of diesel fuel to test generators at the MBGF would result in direct CO<sub>2</sub> emissions. On an annual basis, the project's total operational emissions related to emergency backup generator maintenance and testing use would be approximately 3,287 metric tons of CO<sub>2e</sub> per year (refer to Table 16 in Appendix B). This is well below the BAAQMD threshold for stationary sources of 10,000 metric tons per year of CO<sub>2e</sub> for stationary sources.

**Operational Emissions**

As described previously, BAAQMD adopted updated GHG thresholds in April 2022. Operational emissions from the project would be considered less than significant impact if the project is consistent with the updated BAAQMD thresholds. An analysis of the project's consistency with these thresholds is included in Table 4.8-1, below.



<b>Table 4.8-1: Consistency with BAAQMD Thresholds for Land Use Projects</b>	
<b>BAAQMD Threshold</b>	<b>Project Consistency</b>
<b>Buildings</b>	
a. The project will not include natural gas appliances or natural gas plumbing (in both residential and nonresidential development).	<b>Consistent.</b> The project would not include natural gas appliances or natural gas plumbing.
b. The project will not result in any wasteful, inefficient, or unnecessary energy usage as determined by the analysis required under CEQA Section 21100(b)(3) and Section 15126.2(b) of the State CEQA Guidelines.	<b>Consistent.</b> As described in further detail in Section 4.6 Energy, the project would not result in any wasteful, inefficient, or unnecessary energy usage.
<b>Transportation</b>	
a. Achieve a reduction in project-generated vehicle miles traveled (VMT) below the regional average consistent with the current version of the California Climate Change Scoping Plan (currently 15 percent) or meet a locally adopted Senate Bill 743 VMT target, reflecting the recommendations provided in the Governor's Office of Planning and Research's Technical Advisory on Evaluating Transportation Impacts in CEQA: i. Residential projects: 15 percent below the existing VMT per capita ii. Office projects: 15 percent below the existing VMT per employee iii. Retail projects: no net increase in existing VMT	<b>Consistent.</b> As described in further detail in Section 4.17 Transportation, project generated VMT would be 15 percent below the countywide average with implementation of Transportation Demand Management (TDM) measures included in the project.
b. Achieve compliance with off-street electric vehicle requirements in the most recently adopted version of CALGreen Tier 2.	<b>Consistent.</b> The project is working with the City to include the necessary electric vehicle parking spaces to comply with the requirements of CALGreen Tier 2.



Because the project would have stationary source emissions below BAAQMD's stationary source threshold and would be consistent with the requirements for operational emissions in BAAQMD's updated GHG thresholds for land use projects, the project would not generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment. **(Less Than Significant Impact)**

### Overview of Project-Related GHG Emissions

Although the updated BAAQMD GHG thresholds prescribe a qualitative analysis of a project's GHG emissions, it is our understanding that the CEC prefers SPPE Applications to include a quantitative discussion of a project's GHG emissions. The quantification of emissions in the following discussion is included for informational purposes only.

GHG emissions from the proposed project would consist of emissions from vehicle trips to and from the building and emissions related to the generation of electricity used in the data center building. Data centers are an energy-intensive land use, requiring more electricity than other types of development. The primary function of the data center is to house computer servers, which require electricity and cooling 24 hours a day to operate.

GHG emissions generated by the project are summarized in Table 4.8-2.

<b>Table 4.8-2: BDC GHG Emissions</b>	
<b>Source</b>	<b>Annual Emissions (Metric Tons of CO<sub>2</sub>e)</b>
Landscaping	6.6
Electricity Use <sup>1</sup>	0
Water Use	2
Waste Disposed	170
Mobile Emissions	497
Generator Testing and Maintenance	3,287
<b>Total</b>	<b>3,962.6</b>
Notes: <sup>1</sup> Based on a carbon intensity factor of zero due to the City's 2022 CAP requirement for 100% renewable energy for data centers as implemented by Applicant Proposed Design Measure <b>PDM GHG-1</b> . Without <b>PDM GHG-1</b> the indirect emissions from procurement of electricity using 2025 SVP carbon intensity projections would be 86020 Metric Tons of CO <sub>2</sub> e. Source: Table 16 of the Air Quality and GHG Technical Report, Appendix B.	

As shown in Table 4.8-2, the primary source of GHG emissions from the project is generator testing and maintenance. As discussed previously, the project's total operational emissions related to emergency backup generator maintenance and testing of 3,287 metric tons of CO<sub>2</sub>e per year is well below the BAAQMD threshold for stationary sources of 10,000 metric tons per year of CO<sub>2</sub>e for stationary sources. Per 2022 CAP



Action Item B-1-7 and **PDM GHG-1** below, the project would utilize 100% carbon neutral energy, and therefore would result in zero GHG emissions from electricity use.

### **Proposed Efficiency Measures**

#### Overview: Power Usage Effectiveness During Operation

The data center industry utilizes a factor called the Power Utilization Efficiency Factor (PUE) to estimate the efficiency of its data centers. The 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 1.45 (Total 92.8 MW demand of Building on Worst Case Day divided by 64.0 MW Total Critical IT Load). The average annual PUE would be 1.26 (Total 80.7 MW demand of Building average conditions divided by 64.0 MW Design Critical IT Load). These PUE estimates are based on design assumptions and represent the worst case.

As described above, the expected PUE is much lower because the Critical IT that is leased by clients is rarely fully utilized. Martin Properties' experience with operation of other data centers is that the actual annualized PUE will be closer to 1.25.

Both the worst case and average PUE for the project would be considered efficient, as industry surveys state that the average PUE for data centers is 1.67 (although newly constructed data centers typically have average PUEs ranging from 1.1 to 1.4).<sup>36</sup>

#### Energy and Water Use Efficiency Measures in Building Design

Due to the heat generated by the data center equipment, cooling is one of the main uses of electricity in data center operations. In order to reduce GHG emissions and reduce the use of energy related to building operations, the project proposes to implement the following efficiency measures:

- Evaporative cooling instead of mechanical cooling.
- Meet or exceed Title 24 requirements.
- Clean air vehicle parking.
- Low flow plumbing fixtures.
- Landscaping would meet City of Santa Clara requirements for low water use.

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<sup>36</sup> Uptime Institute. Annual Data Center Survey Results - 2019. Available at: <https://datacenter.com/wp-content/uploads/2019/06/data-center-survey-2019.pdf>



**4.8.3.2 Would the project conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?**

**2017 BAAQMD Clean Air Plan**

As discussed in Section 4.3 Air Quality, the project supports the goals of the 2017 Clean Air Plan for protecting public health and the climate and is consistent with 2017 Clean Air Plan control measures of reducing exposure to TACs and reducing DPM emissions by:

- The MBGF will comply with all applicable rules and regulations of the BAAQMD regarding emissions of criteria and toxic pollutants.
- The proposed engines at the MBGF will comply with the applicable federal Tier 4 emissions standards for emergency standby electrical generation CI engines.
- The MBGF will obtain and maintain all required air quality related permits from the BAAQMD, and requirements imposed by the California Energy Commission.
- Implementing BMPs to reduce criteria air pollutants during construction,
- Including a program of 4/40 workhour shifts to reduce vehicle trips,
- Complying with applicable regulations that would result in energy and water efficiency including Title 24 and California Green Building Standards Code,
- Planting new trees in accordance with the City's General Plan Policy 5.3.1-P10 to reduce the urban heat island effect, and
- Complying with the City's construction debris diversion ordinance and state waste diversion requirements to reduce the amount of waste in landfills.

In addition, the project would not disrupt or hinder the implementation of applicable control measures in the 2017 Clean Air Plan.

**Santa Clara Climate Action Plan**

As described previously, the 2022 CAP is the latest update to the City's CAP and was designed to meet the statewide GHG reduction targets for 2030 set by Senate Bill 32. As a Qualified Climate Action Plan, the 2022 CAP allows for tiering and streamlining of GHG analyses under CEQA. Projects that comply with the policies and strategies outlined in the 2022 CAP would have a less than significant GHG impact. A summary of the project's consistency with applicable 2022 CAP measures is provided in Table 4.8-3.



**Table 4.8-3: Summary of Applicable Climate Action Plan Measures and Project Consistency**

<b>Applicable Climate Action Plan Measures</b>		<b>Notes/Comments</b>
<b>Water Conservation</b>		
N-3-3	Water-Efficient landscaping requirements: Expand requirements for water-efficient landscaping practices, including requirements for cooling (trees, green roofs) and drought-tolerant native plants.	The project proposes to integrate water conservation practices, such as efficient landscapes and high-efficiency irrigation systems.
N-3-5	Recycled Water Connection Requirements: Require the use of recycled water for all non-potable uses where recycled water is available, per City Code 13	There is an existing recycled water pipeline located on the east side of the UPRR tracks, approximately 100 feet to the east of the subject property. The project would extend the recycled water line as a primary source of water for landscaping. The data center will be designed to use up to 1 AFY of recycled water provided by the City of Santa Clara.
<b>Materials and Consumption – Increase Waste Diversion</b>		
M-1-1	Compliance with State Solid Waste Ordinance: Comply with state solid waste laws, including AB-1826, AB-341, and SB-1383. These bills require that businesses, public entities, and communities expand recycling and composting infrastructure to meet the state's ambitious landfill waste reduction targets. AB-1826 requires commercial businesses that generate a certain level of organic waste arrange for recycling services for that waste. AB-341 similarly requires that commercial businesses	The proposed project would include recycling services and participate in the City's Construction and Demolition Debris Recycling Program.



**Table 4.8-3: Summary of Applicable Climate Action Plan Measures and Project Consistency**

<b>Applicable Climate Action Plan Measures</b>		<b>Notes/Comments</b>
	and public entities that generate a certain level of weekly waste have a recycling program in place. SB-1383 requires that California reduce waste to landfills by 75% by 2025 and rescue 20% of surplus edible food in phases beginning in 2022.	
<b>Transportation and Land Use</b>		
T-1-2	EV Charging for all New Construction: Implement EV charging requirements as specified in the adopted 2021 Reach Codes.	The project would provide at least four electric vehicles parking spaces (of which one is EV van accessible), and six clean air vehicle parking spaces.
<b>Natural Systems and Water Resources – Increase Tree Canopy Cover</b>		
N-1-3	Urban Forest Partnership: Promote healthy, well-managed urban forests by participating in the County’s Urban Forest Alliance partnership.	The BDC proposes to mitigate for the loss of 33 trees by planting trees in accordance with the City’s General Plan (Policy 5.3.1-P10).
<b>Community Resilience and Well-Being: Prepare for Climate Change</b>		
C-2-1	High-Albedo Parking Lots: As part of conditions of approval, require new parking lots to be surfaced with more sustainable pavement materials (e.g., high-albedo permeable pavement, e-pavement, etc.) to reduce heat gain during extreme heat events, reduce energy consumption related to cooling, and reduce stormwater runoff.	Per City requirements, the proposed surface parking would be paved with sustainable pavement, such as high-albedo permeable pavement or e-pavement.
<b>Electric Fuels to Achieve Net-Zero Carbon Buildings</b>		



**Table 4.8-3: Summary of Applicable Climate Action Plan Measures and Project Consistency**

<b>Applicable Climate Action Plan Measures</b>		<b>Notes/Comments</b>
B-1-5	Reach Codes for New Construction: Implement all-electric codes, with exceptions. The codes would require: The All-electric building electrification with electric vehicle charging reach code ordinance would apply to all new building permit applications per City Ordinance 2034.	The project would comply with the City's Reach Codes and would not use natural gas. The project would provide four electric vehicles parking spaces
B-1-7	Carbon-Neutral Data Centers: Require all new data centers to operate on 100% carbon neutral energy, with offsets as needed. This requirement does not apply to data centers with planning application approval within six months of the CAP adoption date. Use offsets as needed to help ease the transition to carbon neutral energy but ensure that reducing emissions remains the main priority.	Per Applicant Project Design Measure <b>PDM GHG-1</b> , the project would contract with SVP at the 2020 Green Power Standard (i.e., 100% carbon-free electricity) for electricity accounts associated with the project or participate in a clean energy program that accomplishes the same goals of 100% carbon-free electricity as the SVP 2020 Green Power Standard.
<b>Maximize Renewable Energy Generation and Storage Capacity</b>		
B-3-6	Alternative Backup Generators: Provide information and technical assistance to data centers and other large commercial users to transition from diesel to lower-carbon backup generators (e.g., renewable diesel). Consider promoting the use of non-diesel alternatives as alternative back-up power source for data centers when SVP service is unavailable.	As discussed in Section 5 Martin Properties evaluated and determined that alternative backup generation technologies could not feasibly attain the primary reliability objective of the project's backup generation. The project will use renewable diesel fuel as its primary fuel as described in Project Design Measure <b>PDM GHG-2</b> .



As described previously, Action Item B-1-7 of the 2022 CAP requires all new data centers to operate on 100% carbon neutral energy, with offsets as needed. The project includes the following applicant proposed Project Design Measures to ensure compliance with this requirement.

**Applicant Proposed Project Design Measure:**

**PDM GHG-1** In accordance with Action Item B-1-7 in the City of Santa Clara’s 2022 Climate Action Plan, the project owner shall contract with SVP at the 2020 Green Power Standard (i.e., 100% carbon-free electricity) for electricity accounts associated with the project or participate in a clean energy program that accomplishes the same goals of 100% carbon-free electricity as the SVP 2020 Green Power Standard.

**PDM GHG-2** The project owner shall use renewable diesel as the primary fuel for the emergency backup generators to the maximum extent feasible, and only use ultra-low sulfur diesel (ULSD) as a secondary fuel in the event of supply challenges or disruption in obtaining renewable diesel. If testing confirms that use of this fuel will not result in emissions that would cause the project to exceed applicable thresholds after any available mitigation for such emissions has been applied, the project owner shall ensure that renewable fuels are used for a minimum of at least 44 percent of total energy use by the emergency backup generators by December 31, 2024; 52 percent by December 31, 2027; and 60 percent by December 31, 2030. Renewable fuels shall be used for 100 percent of total energy use by the emergency backup generators by December 31, 2045. The project owner shall provide an annual report of the status of procuring and using renewable diesel to the director, or director’s designee, of the city of Santa Clara Electric Utility Department demonstrating compliance with this measure.

For the reasons described in Table 4.8-3, and with implementation of Applicant Proposed Project Design Measures **PDM GHG-1** and **PDM GHG-2**, the project would be consistent with the 2022 CAP and therefore would not result in significant GHG impacts.



## General Plan Policies

In addition to the reduction measures in the 2022 CAP, the City of Santa Clara General Plan has goals and policies to address sustainability (see Appendix 8.13: Sustainability Goals and Policies Matrix in the General Plan) aimed at reducing the City's contribution to GHG emissions. For the proposed project, implementation of policies that increase energy efficiency or reduce energy use would effectively reduce indirect GHG emissions associated with energy generation. The consistency of the proposed project with the Air Quality, Energy, Transportation, and Water Policies of the General Plan is described in Table 4.8-4.

Table 3.8-4: General Plan Sustainability Policies	
Emission Reduction Policies	Project Consistency
Air Quality Policies	
5.10.2-P3 Encourage implementation of technological advances that minimize public health hazards and reduce the generation of air pollutants.	Per Applicant Proposed Design Measures <b>PDM GHG-1</b> and <b>PDM GHG-2</b> , the project would contract with SVP at the 2020 Green Power Standard (i.e., 100% carbon-free electricity) for electricity accounts associated with the project or participate in a clean energy program that accomplishes the same goals of 100% carbon-free electricity as the SVP 2020 Green Power Standard and would use renewable diesel as its primary fuel.
5.10.2-P4 Encourage measures to reduce GHG emissions to reach 30 percent below 1990 levels by 2020.	
Energy Policies	
5.10.3-P1 Promote the use of renewable energy resources, conservation, and recycling programs.	The proposed project would include recycling services and participate in the City’s Construction and Demolition Debris Recycling Program.  The project would utilize lighting controls to reduce energy usage for new exterior
5.10.3-P4 Encourage new development to incorporate sustainable building design, site planning and construction, including encouraging solar opportunities.	



**Table 3.8-4: General Plan Sustainability Policies**

Emission Reduction Policies	Project Consistency
5.10.3-P5 Reduce energy consumption through sustainable construction practices, materials, and recycling.	lighting and air economization for building cooling. Water efficient landscaping and ultra-low flow plumbing fixtures in the building would be installed to limit water consumption.
5.10.3-P6 Promote sustainable buildings and land planning for all new development, including programs that reduce energy and water consumption in new development.	
5.10.3-P8 Provide incentives for LEED certified, or equivalent development.	
5.3.1-P10 Provide opportunities for increased landscaping and trees in the community, including requirements for new development to provide street trees and a minimum 2:1 on- or off-site replacement for trees removed as part of the proposal to help increase the urban forest and minimize the heat island effect.	The project would plant trees that would provide shading throughout the site to reduce the heat island effect.
Transportation Policies	
5.3.1-P14 Encourage TDM strategies and the provision of bicycle and pedestrian amenities in all new development greater than 24 housing units or more than 10,000 non-residential square feet, and for City employees, in order to decrease use of the single-occupant automobile and reduce vehicle miles traveled, consistent with the Climate Action Plan.	The project includes a worker shift program that reduces personal motorized vehicle trips.
5.8.5-P1 Require new development and City employees to implement TDM programs that can include site-design measures, including preferred carpool and	



Table 3.8-4: General Plan Sustainability Policies	
Emission Reduction Policies	Project Consistency
vanpool parking, enhanced pedestrian access, bicycle storage and recreational facilities.	
5.8.5-P5 Encourage TDM programs that provide incentives for the use of alternative travel modes to reduce the use of single-occupant vehicles.	
Water Policies	
5.10.4-P7 Require installation of native and low-water consumption plant species with landscaping new development and public spaces to reduce water usage.	The project would use water efficient landscaping with low water usage plant material to minimize irrigation requirements.

### **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 TDM measures 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. Because all electricity supplied to the project by SVP 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 BAAQMD's updated GHG thresholds for operational emissions which are intended to ensure project's do not interfere with the State's ability to achieve the 2030 GHG emissions target. Additionally, the project would utilize 100% carbon-neutral electricity, resulting zero emissions related to electricity consumption. The project, therefore, would be consistent with the ARB Scoping Plan.

## Refrigerant Management Program

The California Air Resources Board (CARB) has adopted a Refrigerant Management Program that prohibits certain equipment from using refrigerant R-134a by dates specific to classes of equipment pursuant to Title 17, Section 95374.

Since the MDC will not likely take delivery of the air-cooled chillers until after the CARB adopted prohibition date of refrigerant R-134a for air cooled chillers, the air-cooled chillers for the MDC will use refrigerant R 513a, which has a lower Global Warming Potential (GWP). Table 4.8-3 includes the estimated emissions from leakage of refrigerant used in the air-cooled chillers.

**Table 4.8-3 Annual Refrigerant Emissions**

Parameter	Value	Unit
Refrigerant Type:	R-513A	
Refrigerant GWP <sup>1</sup> :	629.76	
Number of Chillers:	48	
Refrigerant Charge Per Chiller <sup>2</sup> :	756.2	lbs
Total Refrigerant Charge:	36,297.6	lbs
Annual Leak Rate <sup>3</sup> :	0.5%	
Annual Emissions R-513A:	181	lbs/yr
Annual Emissions CO <sub>2</sub> e:	114,294	lbs/yr
Annual Emissions CO <sub>2</sub> e:	52	MT/yr

1. Global warming potential for R-513A pulled from IPCC's fourth Assessment Report (AR4) consistent with CARB's Refrigerant Management Program.
2. Refrigerant charge per chiller obtained from York's specification sheet for chiller model YVFA0459JZK46AHVSXX.
3. Annual refrigerant leakage rate provided by Syska Hennessy.



## Conclusion

The project is consistent with the City's 2022 CAP and therefore pursuant to CEQA, the project will not result in significant GHG emission impacts. In addition, although not required to support the less than significant CEQA determination, the project will comply with the

2017 Clean Air Plan, the City's General Plan policies and measures, Plan Bay Area 2040/SB 375, SB 100, and the ARB Scoping Plan. The project, therefore, would not conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of GHGs. **(Less Than Significant Impact)**

### 4.8.4 Mitigation Measures

The Project has proposed Project Design Measures **PDM GHG-1** and **PDM GHG-2** to ensure compliance with the 2022 CAP. With the implementation of these design measures no CEQA mitigation measures are required as the project will not cause significant greenhouse emission environmental impacts.

### 4.8.5 Governmental Agencies

The City of Santa Clara is the only agency with regulatory authority covering the project's greenhouse gas emissions. The City of Santa Clara will administer its authority through its permit review and implementation process.



## **4.9 HAZARDS**

The following discussion is based on a Phase I Environmental Site Assessment (July 29, 20, 2021), a Phase II Site Investigation Report (September, 2021) both prepared by TRC, and a Thermal Plume Analysis (October 2022) prepared Ramboll US Consulting, Inc. The reports are attached as Appendix E of this Application.



## 4.9.1.1

## CEQA Checklist

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
<b><u>Hazards</u></b>				
Would the project:				
1) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2) 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
4) 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, will it create a significant hazard to the public or the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
5) 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
6) Impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
7) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>



## **4.9.2 Environmental Setting**

### **4.9.2.1 Regulatory Framework**

#### **Overview**

The storage, use, generation, transport, and disposal of hazardous materials and waste are highly regulated under federal and state laws. Federal regulations and policies related to development include the Comprehensive Environmental Response, Compensation, and Liability Act, commonly known as Superfund, and the Resource Conservation and Recovery Act. In California, the EPA has granted the enforcement authority over federal hazardous materials regulations to the California Environmental Protection Agency (CalEPA). In turn, local agencies, including the Santa Clara County Department of Environmental Health (SCCDEH) 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 regulations related to construction activities. 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 regulations specific to lead and asbestos investigations and abatement.

#### **Federal and State**

##### ***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), State Water Resources Control Board (SWRCB), and Santa Clara County. The project site is not on the Cortese List.<sup>37</sup>

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<sup>37</sup> CalEPA. "Cortese List Data Resources." Accessed October 10, 2019. <https://calepa.ca.gov/sitecleanup/corteselist>.



### ***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.

### ***Asbestos-Containing Materials***

Friable asbestos is any asbestos containing material (ACM) that, when dry, can easily be crumbled or pulverized to a powder by hand, allowing the asbestos particles to become airborne. Common examples of products that have been found to contain friable asbestos include acoustical ceilings, plaster, wallboard, and thermal insulation for water heaters and pipes. Common examples of non-friable ACMs are asphalt roofing shingles, vinyl floor tiles, and transite siding made with cement. The EPA phased out the use of friable asbestos products between 1973 and 1978. National Emission Standards for Hazardous Air Pollutants guidelines require that potentially friable ACMs be removed prior to building demolition or remodeling that may disturb the ACMs.

### ***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 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.

### **Local**

Other regional agencies responsible for programs regulating emissions to the air, surface water, and groundwater include the Bay Area Air Quality Management District (BAAQMD), which has oversight over air emissions, and the Regional Water Quality Control Board (RWQCB) which regulates discharges and releases to surface waters and groundwater.



### ***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.

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 protocol methodology for managing materials with PCBs in applicable structures planned for demolition to ensure PCBs do not enter municipal storm drain systems.<sup>38</sup> Municipalities throughout the Bay Area are currently modifying demolition permit processes and implementing PCB screening protocols to comply with Provision C.12.f. As of July 1, 2019, buildings constructed between 1955 and 1978 that are proposed for demolition must be screened for the presence of PCBs prior to the issuance of a demolition permit.

#### **4.9.2.2 Existing Conditions**

##### **Historic Uses**

The Site appears used for agricultural purposes from at least 1939 until 1956. The 1948 and 1950 aerial photographs show one small structure and dirt roads on the eastern portion of the property.

From 1956 to 2006 a review of aerial photographs shows the site begins to be developed with two large industrial buildings, several outbuildings, and numerous materials staged outdoors. A rail spur is present along the northeastern border of the property. Sanborn maps describe the southern portion of the property as Larsen Ladder Co. wood ladder manufacturing with an associated spray-painting booth, machine shop, and the northern portion of the property as mill work and lumber piles with an associated refuse burner.

From 2006 to present a review of aerial photographs shows the lumber piles have been removed, and vehicles are parked on the site around the two original industrial buildings.

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<sup>38</sup> California Regional Water Quality Control Board. *San Francisco Bay Region Municipal Regional Stormwater NPDES Permit*. November 2015.



It does not appear that topographic contours in the Site area have significantly changed during the time period reviewed.

### **Current Uses**

The approximately 7.12-acre Site is currently operated by the Gahrahmat Family Limited Partnership II L.P that is leased and operated as a collision repair shop and an airport parking facility.

### **Adjoining Property History**

North adjoining property is agricultural from at least 1939 until at least 1956. From at least 1963 until at least 1982, the property contains a large industrial building. In 1993 and until the present the industrial building is reconstructed, and a surface parking area is constructed on the southern portion of the property.

East adjoining property is agricultural from at least 1939 until at least 1956. The railroad tracks have been present since at least 1889. By 1963 the property contains a large industrial building and several outbuildings, numerous materials staged onsite, and an outdoor aboveground storage tank. An additional industrial building is constructed by 1974. By 1993, site development expands to the north, and a second aboveground storage tank is installed.

South adjoining property is agricultural from at least 1939 until at least 1950. By 1956, Martin Drive is constructed, and the property contains an industrial building, several outbuildings, and materials staged onsite. By 1993, the smaller outbuildings are demolished, and a second industrial building is constructed by 1998. Numerous materials and vehicles are staged onsite.

West adjoining property is agricultural and contains a residential property from at least 1939 until at least 1950. By 1956, the residential property is demolished, and an industrial/agricultural building is constructed in the northeastern corner of the property. By 1968, the building is expanded, and a dirt road connects west adjoining property to the Subject Site. By 1974 a staging area is present along the eastern border of the site south of the industrial building; the rest of the property remains unimproved. By 1993 the original building is demolished, and two large industrial buildings and associated parking areas are constructed.



## **On-Site Sources of Contamination**

The project site and surrounding area has historically been used as agricultural land prior to the current industrial development. For the shallow samples collected during this investigation, analyses detected low concentrations of VOCs as well as diesel and motor oil that did not exceed respective ESLs established by the RWQCB for construction worker or commercial land uses. Analyses also detected a relatively low concentration of the pesticide 4,4'-DDD in the sample collected from SB-7-1.0. Analyses also detected up to 14 mg/kg of arsenic, exceeding the established background value of 11 mg/kg in 1 of the 12 shallow soil samples tested.

In Phase II ESA author's opinion, the presence of arsenic and nickel concentrations are within normal background concentrations and exposure to these relatively low concentrations can be mitigated during and after construction using standard dust mitigation and worker safety measures. Accordingly, the author recommends preparing and implementing a Soil Management Plan (SMP) to summarize existing chemical conditions at the Site, provide worker notification, and present guidance and safety considerations for soil handling and disposal during construction or redevelopment activities. In the event that surplus soil is generated for offsite disposal and in the absence of additional soil characterization for that surplus soil, results of analyses from this investigation indicate that surplus soil would be classified as a nonhazardous waste suitable for offsite disposal at a Class II or III landfill facility subject to facility acceptance.

For the soil vapor samples, analyses detected no VOCs exceeding respective commercial ESLs, except benzene at SB-1. The benzene appears to be localized to the former gasoline UST and vapor concentrations at the other locations did not exceed commercial screening levels. Additional investigation is recommended to delineate the extent of the vapor impacts at SB-1 and possibly to evaluate potential benzene impacts to groundwater from the gasoline UST.

## ***Off-Site Sources of Contamination***

The Phase I Site Assessment identified surrounding properties that were identified using an environmental database search. Eight properties within a one-mile radius of the site with a shared history of agricultural orchard operations have cited historical pesticide use as the source of elevated concentrations of arsenic, lead, and organochlorine pesticides in soil, which has led to ongoing oversight and management as well as land use restrictions.



## **Wildland Fire Hazards**

The project site is located in an urban area and is not within a Very-High Fire Hazard Severity Zone for wildland fires.<sup>39</sup>

### **4.9.3 Environmental Impact Discussion**

On December 17, 2015, the California Supreme Court issued an opinion in “CBIA vs. BAAQMD” holding that CEQA is primarily concerned with the impacts of a project on the environment and generally does not require agencies to analyze the impact of existing conditions on a project’s future users or residents, with certain important exceptions. One of those exceptions is that environmental documents must consider potential noise and safety impacts on projects due to proximity to an airport, pursuant to Public Resources Code 21096.

#### **4.9.3.1 Would the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?**

##### **Construction**

During the construction phase of the project, the only hazardous materials used would be paints, cleaners, solvents, gasoline, motor oil, welding gases, and lubricants. When not in use, any hazardous material would be stored in designated construction staging areas in compliance with local, state, and federal requirements. Any impacts resulting from spills or other accidental releases of these materials would be limited to the site due to the small quantities involved and their infrequent use, hence reduced chances of release. Temporary containment berms would also be used to help contain any spills during the construction of the project.

During construction, all 44 diesel generator fuel tanks would have to be filled. The transportation of the diesel fuel to the site would take several tanker truck trips. Diesel fuel has a long history of being routinely transported and used as a common motor fuel. It is appropriate to rely upon the extensive regulatory program that applies to the shipment of hazardous materials on California highways and roads to ensure safe handling in general transportation (see Federal Hazardous Materials Transportation Law 49 USC § 5101 et seq., DOT regulations 49 C.F.R. subpart H, §§ 172–700, and California

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<sup>39</sup> Sources: 1) State of California Department of Forestry and Fire Protection. *Santa Clara County Fire Hazard Severity Zones in SRA*. Adopted November 7, 2007. and 2) State of California Department of Forestry and Fire Protection. *Santa Clara County Very High Fire Hazard Severity Zones in LRA As Recommended by CAL FIRE*. Adopted October 8, 2008.



Department of Motor Vehicles (DMV) regulations on hazardous cargo). Thus, the transportation of diesel fuel would pose a less than significant risk to the surrounding public.

Therefore, the routine transport, use or disposal of hazardous materials during construction would have a less than significant impact to the public or the environment.  
**(Less Than Significant Impact)**

### **Operations**

During the operational phase of the project, diesel fuel would be stored on-site but the generators would only be filled to 95 percent capacity of its tank. The diesel fuel would be used during emergencies, testing, and maintenance. Each generator would be run once a month for up to 30 minutes with no load on the engine. The no load test would require the tanks to be refilled to 95 percent capacity approximately every three to five months. Each generator would also be required to run for a total of four hours per year, under maximum load, for yearly testing purposes.

MBGF would use industry standard practice for fuel quality and maintenance of stored diesel fuel. Standard practice includes that each engine would have a dual fuel filter system and that the fuel would be replenished after testing. The fuel water separators (a three-bank system) would be the primary fuel filter. The secondary fuel filter, installed just before the fuel would be injected into the engine, would filter the fuel down to particles less than five microns in size. Routine replacement of the engine dual fuel filters would reduce any effects of fuel degradation on engine components and operation. Commercial diesel fuels also contain biocides that prevent microbial growth and additives that help to stabilize the fuel for several months. Additionally, the diesel fuel would be replenished with fresh fuel when needed to maintain 24 hours of emergency electrical capacity for the MDC.

The proposed diesel generators would use selective catalytic reduction (SCR) to meet Tier 4 requirements. The SCR works by injecting a liquid-reductant through a special catalyst into the exhaust stream of the diesel engine to reduce the amount of oxides of nitrogen in the final exhaust stream. The reductant, commonly called diesel exhaust fluid (DEF), is a non-hazardous solution of 67.5 percent water and 32.5 percent automotive grade urea, as is used for SCR on highway-going diesel transport trucks. DEF consumption would vary depending upon the environment, operation, and duty cycle of equipment. On average, DEF consumption would be 3 percent to 5 percent of diesel fuel consumption. DEF will be stored in 2, 55-gallon drums within each generator enclosure and fluid levels would be monitored and refilled as necessary.



With the above listed safety features and precautions, the risk to the off-site public or environment through the routine transport, use or disposal of hazardous materials would have a less than significant impact. **(Less than Significant Impact)**

**4.9.3.2 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?**

**Construction**

As described under the discussion for impact criterion a., project construction would require the limited use of hazardous materials, such as fuels, lubricants, and solvents. The storage and use of hazardous materials during construction could result in the accidental release of small quantities of hazardous materials typically associated with minor spills or leaks. However, hazardous materials would be stored, handled, and used in accordance with applicable regulations. Personnel would be required to follow instructions on health and safety precautions and procedures to follow in the event of a release of hazardous materials. All equipment and materials storage would be routinely inspected for leaks. Records would be maintained for documenting compliance with the storage and handling of hazardous materials.

The limited subsurface investigation conducted during the Phase II Site Investigation found low levels of fuel-related VOCs, arsenic and nickel, but at levels that are acceptable for commercial development. Construction workers could be exposed to contaminated soil and or groundwater during excavation, grading, and construction activities.

The project applicant proposes Project Design Measure **PDM HAZ-1** below to ensure that contaminated soil and or groundwater exposed during construction would result in less than significant impacts to construction workers and the public. With implementation of **PDM HAZ-1** the proposed project would result in a less than significant soil and groundwater contamination impacts. **(Less than Significant Impact)**

**PDM HAZ-1** The project will implement the following measures to reduce potentially significant soil and or groundwater impacts to construction workers to a less than significant level.

- Prior to the issuance of grading permits, shallow soil samples shall be taken in areas where soil disturbance is anticipated to determine if contaminated soils with concentrations above established construction/trench worker thresholds may be present due to historical agricultural use and from historical leaks and spills. The soil sampling



plan must be reviewed and approved by the Santa Clara Fire Department Fire Prevention and Hazardous Materials Division prior to initiation of work. Once the soil sampling analysis is complete, a report of the findings will be provided to the Santa Clara Fire Department Fire Prevention and Hazardous Materials Division and other applicable City staff for review.

- Documentation of the results of the soil sampling shall be submitted to and reviewed by the City of Santa Clara prior to the issuance of a grading permit. Any soil with concentrations above applicable environmental screening levels or hazardous waste limits would be characterized, removed, and disposed of off-site at an appropriate landfill according to all state and federal requirements.
- A Site Management Plan (SMP) will be prepared to establish management practices for handling impacted groundwater and/or soil material that may be encountered during site development and soil-disturbing activities. Components of the SMP will include:
  - a detailed discussion of the site background.
  - a summary of the analytical results.
  - preparation of a Health and Safety Plan by an industrial hygienist.
  - protocols for conducting earthwork activities in areas where impacted soil and/or groundwater are present or suspected.
  - worker training requirements, health and safety measures and soil handling procedures shall be described.
  - protocols shall be prepared to characterize/profile soil suspected of being contaminated so that appropriate mitigation, disposal, or reuse alternatives, if necessary, can be implemented.
  - notification procedures if previously undiscovered significantly impacted soil or groundwater is encountered during construction.
  - notification procedures if previously unidentified hazardous materials, hazardous waste, underground storage tanks are encountered during construction.
  - on-site soil reuse guidelines.
  - 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. Prior to issuance of grading permits, a copy of the SMP must be approved by the Santa Clara County Environmental Health Department, and the Santa Clara Fire Department Fire Prevention and Hazardous Materials Division. Prior to issuance of grading permits, a copy of the SMP must be approved by the Santa Clara County Environmental Health Department, and the Santa Clara Planning Division.

If contaminated soils are found in concentrations above risk-based thresholds pursuant to the terms of the SMP, remedial actions and/or mitigation measures will be taken to reduce concentrations of contaminants to levels deemed appropriate by the selected regulatory oversight agency for ongoing site uses. Any contaminated soils found in concentrations above thresholds to be determined in coordination with regulatory agencies shall be either 1) managed or treated in place, if deemed appropriate by the oversight agency or 2) removed and disposed of at an appropriate disposal facility according to California Hazardous Waste Regulations (CCR, tit. 22, div. 4.5) and applicable local, state, and federal laws.

## **Operations**

The project would not create a significant hazard to the public or environment due to an accidental release of a hazardous material. Although a substantial quantity of diesel fuel would be stored on-site, its storage would be split among many separate tanks, with a portion of it stored in the double-walled belly tank beneath each generator, effectively limiting a worst case spill to the quantity held within one tank. Each tank is capable of holding 6,800 gallons of diesel fuel.

Each generator's integrated fuel tank would be of a double-walled high integrity design. The interstitial space between the inner and outer walls of each tank would be continuously monitored electronically for the presence of leaks through the inner wall. The monitoring system would be electronically linked to an alarm system in the security office that would alert personnel if a leak were detected in any of the inner tanks.

Deliveries of diesel fuel by tanker truck during the project's operation would be scheduled on an as needed basis. Diesel tanker trucks would use wheel chocks to prevent the truck from moving before complete disconnection of the transfer lines. An emergency pump shut-off would be available in case a pump hose breaks during the fueling. In addition, a temporary spill catch basin would be located at the fill port of each belly tank during refilling. With the incorporation the design and handling features described above, the



project would not result in significant soil or groundwater impacts during operations. **(Less Than Significant Impact)**

**4.9.3.3 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?**

While the Scotts Lane Elementary School is located within approximately 0.8 miles southwest of the project site, the project would not emit hazardous emissions in quantities or concentrations that would cause health impacts (See Section 4.1, Air Quality), nor would it handle hazardous or acutely hazardous materials, substances or waste. In addition, the project would comply with all relevant laws and regulations in regard to hazardous materials, as discussed in Sections 4.9.3.1 and 4.9.3.2. While the project site may contain contaminated soil, unknown fill, groundwater and soil vapor from previous on- and off-site uses and spills, implementation of **PD HAZ-1**, which is incorporated into the project, would reduce impacts to less than significant. **(Less than Significant Impact)**

**4.9.3.4 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, will it create a significant hazard to the public or the environment?**

According to a review of the Envirostor and GeoTracker databases, the project site does not have any known, open cases on the hazardous materials sites compiled pursuant to Government Code section 65962.5.

Ground disturbing activities associated with the demolition of existing buildings, the removal of underground utilities, and construction of the project would have the potential to encounter contaminated soil. The contaminated soil could contain residual pesticides and herbicides from agricultural use or fuel-related VOCs from industrial use. While not required to mitigate any impact, if contaminated soils are found, the project would halt construction and the soil would be treated in place or removed to an appropriate disposal facility in accordance with **PD HAZ-1**. Therefore, the construction of the project would create a less than significant impact to the public or the environment. **(Less Than Significant Impact)**



**4.9.3.5 Would the project be 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?**

**Airport Plans**

The proposed project site is within two miles west of the Norman Y. Mineta San José International Airport and is within the area of influence of the Santa Clara County Comprehensive Land Use Plan (CLUP) and the CLUP designation Turning Safety Zone (TSZ) crosses a portion of the site. The ALUC has determined that air accidents are more frequent in TSZs and therefore the CLUP's policies prohibit certain development within the zone. Specifically, the TSZ prohibits above ground storage of fuel, which the ALUC has determined is a hazardous material for airport safety purposes. The TSZ would allow below grade fuel storage tanks.

The City of San Jose recently approved revisions to the San Jose International Airport (SJ Airport) Master Plan. The purpose of the revisions was to conform the plan to changes to the Master Plan that were already made and to encompass future changes under consideration by San Jose.<sup>40</sup> Technically, the ALUC should now undertake a process to conform its CLUP to reflect the approved Master Plan, but it does not appear that process has commenced. Once the ALUC revises the CLUP it should remove the portion of the TSZ designation that overlays the Proposed Site because the TSZ is associated only with airplanes landing and taking off from Runway 11/29. Runway 11/29 has not been in use since 2009 and was officially removed as a runway for conversion to a taxiway in the recent Master Plan. While the CLUP has not been revised to remove the TSZ in conformance with the Master Plan, the purpose of the TSZ crossing the site property is moot. Therefore, the Proposed Site should not be treated as if it were in a special protection zone that would require placing the generators tanks below grade. The project would not result in significant airport-related impacts from the location of the proposed generators on the site with aboveground fuel tanks.

**Thermal Plumes**

A Thermal Plume Analysis was prepared to assist in determining the location and maximum heights at which a thermal plume could be created by the operation of emergency generators and from use the air-cooled roof-top chillers. Using the methodology approved in other data center projects before the Commission the analysis resulted in the following.

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<sup>40</sup> The Master Plan has been amended since 1997 but had not undergone a complete comprehensive revise until 2018.



1. Under worst-case ambient conditions and calculation methodology, predicted vertical velocities are below 5.3 m/s for emergency generators at a height of 121 feet AGL; and
2. Under worst-case ambient conditions and calculation methodology, predicted vertical velocities are below 5.3 m/s for roof-mounted air chillers at a height of 133 feet AGL.

Martin Properties has commissioned an airport consultant to prepare an analysis of established airport procedures to assess the potential for flights at the SJ Airport from encountering either plume at or below the heights identified above. The report will be submitted under separate cover when available. However, work performed in nearby areas has demonstrated that airplanes using the SJ Airport do not fly at such low levels over the site. Therefore, we anticipate would demonstrate that the project's potential thermal plumes would not result in significant impacts to existing SJ Airport operations

**(Less than Significant Impact)**

**4.9.3.6 Would the project impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan?**

The project would be constructed in accordance with current building and fire codes to ensure structural stability and safety in the event of a seismic or seismic-related hazard. In addition, the Fire Department would review the site development plans to ensure fire protection design features are incorporated and adequate emergency access is provided. For these reasons, the proposed project would not impair implementation of or physically interfere with the City's Emergency Operations Plan. **(Less than Significant Impact)**

**4.9.3.7 Would the project expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?**

The project site is not located in or near state responsibility areas or lands classified as very high fire hazard severity zones; therefore, the project would not result in wildfire impacts. **(No Impact)**

**4.9.4 Mitigation Measures**

No mitigation measures are necessary.



#### 4.9.5 Governmental Agencies

#### 4.10 HYDROLOGY AND WATER QUALITY

##### 4.10.1 CEQA Checklist

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
<b><u>Hydrology and Water Quality</u></b>				
Would the project:				
1) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3) 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:	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
- result in substantial erosion or siltation on- or off-site;	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
- substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
- 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	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
- impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
4) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
5) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>



## **4.10.2 Environmental Setting**

### **4.10.2.1 Regulatory Framework**

#### **Water Quality**

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 U.S. 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). These regulations are implemented at the regional level by water quality control boards, which for the Santa Clara area is the San Francisco Bay Regional Water Quality Control Board (RWQCB).

#### ***Federal***

##### **National Flood Insurance Program**

The Federal Emergency Management Agency (FEMA) established the National Flood Insurance Program (NFIP) in order 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 (FIRM) that identify Special Flood Hazard Areas (SFHA). 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.

#### ***State***

##### **Statewide Construction General Permit**

The SWRCB has implemented a 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) and Storm Water Pollution Prevention Plan (SWPPP) must be prepared by a qualified professional prior to commencement of construction. 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.



## ***Regional***

### **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 Stormwater Permit**

The San Francisco Bay RWQCB has issued a Municipal Regional Stormwater NPDES Permit<sup>41</sup> (MRP) 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.

### **Provision C.3 – New Development and Redevelopment**

Under Provision C.3 of the MRP, new and redevelopment projects that create or replace 10,000 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 all new 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 beneficial uses of local rivers, streams, and creeks. Projects may be deemed exempt from these

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<sup>41</sup> MRP Number CAS612008



requirements if they do not meet the size threshold, drain into tidally influenced areas or directly into the Bay, drain into hardened channels, or are infill projects in sub watersheds or catchment areas that are greater than or equal to 65 percent impervious.

### Provision C.12 – PCBs Controls

Provision C.12 of the MRP requires the co-permittee agencies to implement a control program for polychlorinated biphenyls (PCBs) that reduces PCBs loads by a specified amount during the term of the permit, thereby making substantial progress toward achieving the urban runoff PCBs waste load allocation in the Basin Plan by March 2030.<sup>42</sup> The program must include focused implementation of PCBs control measures (source control, treatment control, and pollution prevention strategies) through a collaborative effort. One of the strategies that has been recently adopted by municipalities region-wide is the updating of their building demolition permitting processes to incorporate the management of PCBs in building materials. The goal is to ensure that PCBs are not discharged to storm drains during demolition of buildings that contain PCBs in building materials (such as certain older caulks, paints, and mastics).

The Bay Area Stormwater Management Agencies Association (BASMAA) is assisting Bay Area municipalities to comply with these new stormwater permit building demolition requirements.

### Santa Clara Valley Water District

The Santa Clara Valley Water District (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.

### Impaired Surface Water Bodies

Under Section 303(d) of the 1972 Clean Water Act, states are required to identify impaired surface water bodies and develop total maximum daily loads (TMDLs) for contaminants of concern.<sup>43</sup> The TMDL is the quantity of pollutant that can be safely assimilated by a

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<sup>42</sup> San Francisco Bay RWQCB, Municipal Regional Stormwater Permit, Provision C.12. November 19, 2015.

<sup>43</sup> California State Water Resources Control Board. Total Maximum Daily Load Program. Available at:



water body without violating water quality standards. Listing of a water body as impaired does not necessarily suggest that the water body cannot support the beneficial uses; rather, the intent is to identify the water body as requiring future development of a TMDL to maintain water quality and reduce the potential for future water quality degradation. The Guadalupe River is listed as an impaired waterbody in the U.S. EPA's Section 303(d) Listed Waters for California. The source of impairment is attributed to urban runoff/storm sewers, mine tailings, and illegal dumping. The contaminants listed include diazinon, mercury and trash.<sup>44</sup>

### ***National Flood Insurance Program***

The National Flood Insurance Program (NFIP) makes federally-backed flood insurance available for communities that agree to adopt and enforce floodplain management ordinances to reduce future flood damage. The Federal Emergency Management Agency (FEMA) manages the NFIP and creates Flood Insurance Rate Maps (FIRMs) that designate 100-year flood hazard zones and delineate other flood hazard areas. A 100-year flood hazard zone is the area that has a one in one hundred (i.e., one percent) chance of being flooded in any one year based on historical data.

### ***Santa Clara General Plan***

General Plan policies related to hydrology and water quality and applicable to the project include the following.

Policy 5.10.5-P11: Require that new development meet stormwater and water management requirements in conformance with state and regional regulations.

Policy 5.10.5-P13: Require that development complies with the Flood Damage Protection Code.

Policy 5.10.5-P15: Require new development to minimize paved and impervious surfaces and promote on-site Best Management Practices for infiltration and retention, including grassy swales, pervious pavement, covered retention areas, bioswales, and cisterns, to reduce urban water run-off.

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< [http://www.swrcb.ca.gov/water\\_issues/programs/tmdl/303d\\_lists2006\\_approved.shtml](http://www.swrcb.ca.gov/water_issues/programs/tmdl/303d_lists2006_approved.shtml)>. Accessed October 25, 2019.

<sup>44</sup> U.S. EPA. *California 303(d) Listed Waters for Reporting Year 2010*. December 2010. Available at: <

[http://www.waterboards.ca.gov/water\\_issues/programs/tmdl/2010state\\_ir\\_reports/category5\\_report.shtml](http://www.waterboards.ca.gov/water_issues/programs/tmdl/2010state_ir_reports/category5_report.shtml)> Accessed on October 25, 2019.



Policy 5.10.5-P16: Require new development to implement erosion and sedimentation control measures to maintain an operational drainage system, preserve drainage capacity and protect water quality.

Policy 5.10.5-P17: Require that grading and other construction activities comply with the Association of Bay Area Governments' Manual of Standards for Erosion and Sediment Control Measures and with the California Stormwater Quality Association, Stormwater Best Management Practice Handbook for Construction.

Policy 5.10.5-P18: Implement the Santa Clara Valley Nonpoint Source Pollution Control Program, Santa Clara Valley Urban Runoff Pollution Prevention Program and the Urban Runoff Management Plan.

Policy 5.10.5-P20: Maintain, upgrade and replace storm drains in the City to reduce potential flooding.

Policy 5.10.5-P21: Require that storm drain infrastructure is adequate to serve all new development and is in place prior to occupancy.

### ***Santa Clara City Code***

Chapter 13.20, Storms Drains and Discharges, of City Code is enacted for the protection of health, life, resources and property through prevention and control of unauthorized discharges into watercourses. The primary goal of this chapter is the cleanup of stormwater pollution from urban runoff that flows to creeks and channels, eventually discharging into the San Francisco Bay. The City Code also includes Flood Damage Prevention Code (Chapter 15.45) and requirements for grading and excavation permits and erosion control (Chapter 15.15).

#### **4.10.2.2 Existing Conditions**

##### **Flooding**

According to the FEMA's Flood Insurance Rate Map, the majority of the site is located within Zone AO, described as "Areas with base flood depth of 1 foot," while the western third of the project site appears located within Zone X, described as "Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood." The existing elevation is approximately 46 feet above mean sea level (msl).



## ***Inundation Hazards***

The proposed project site is located approximately  $\frac{3}{4}$  of a mile west of the Guadalupe River and approximately 1-1/4 mile east of the San Tomas Aquino Creek. There are no dams or levee systems in the project area.

In the ocean, seismically-induced waves are caused by displacement of the sea floor by a submarine earthquake and are called tsunamis. Seiches are waves produced in a confined body of water such as a lake or reservoir by earthquake ground shaking or land sliding. Seiches are possible at reservoir, lake or pond sites. The project area is not subject to inundation from a seiche, tsunami, or mudflow.<sup>45</sup>

## ***Storm Drainage***

The City of Santa Clara owns and maintains the municipal storm drainage system in the project vicinity. Stormwater on site currently drains to an on-site catch basin or drains as sheet flow towards the storm drainage system on Lafayette Street. The runoff eventually empties into the Guadalupe River and flows into the San Francisco Bay.

## **Groundwater**

The project site is located within the Santa Clara Valley groundwater basin and the Santa Clara sub-basin.<sup>46,47</sup> The site is within the Santa Clara Plain Confined Area and is not within an area used for in-stream or other groundwater recharge.<sup>48</sup> Based on cone penetration testing performed during the soil borings completed for the Geotechnical Investigation (refer to Appendix D), depth to groundwater in the area can range from approximately 4 to 10 feet below ground surface (bgs) and flows in a northeasterly direction. The depth to groundwater can vary due to factors such as variations in rainfall, temperature, runoff, irrigation, and groundwater withdrawal and/or recharge. The regional topographic gradient is generally north northeast towards the bay.

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<sup>45</sup> Association of Bay Area Governments, *San Francisco Bay Area Hazards*, July 12, 2018.

<sup>46</sup> California Department of Water Resources. *A Comprehensive Groundwater Protection Evaluation for the South San Francisco Bay Basins*. May 2003. Figure 9.

<sup>47</sup> Santa Clara Valley Water District. Groundwater Management Plan. 2012.

<sup>48</sup> Santa Clara Valley Water District. Groundwater Management Plan. 2012.



### 4.10.3 Environmental Impact Discussion

#### 4.10.3.1 Would the project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?

The MDC would create or replace more than 10,000 square feet of impervious surface area and, therefore, is classified as a Regulated Project under the MRP's Provision C.3, meaning it is subject to the LID source control, site design and stormwater treatment control requirements of Provision C.3. The MDC would include stormwater quality best management practices (BMPs) such as directing site runoff into bioswales and replacing a portion of the existing paved parking area with pervious pavement (turf block). In addition, the use of beneficial landscaping (i.e., minimizing irrigation, pesticides and fertilizer application) would be implemented. These measures are consistent with the site design, treatment control and source control requirements of Provision C.3.

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 "purple area", defined as catchments draining to a hardened channel and/or tidal area. According to the MRP, hydromodification controls (HMC) are not required for projects located in purple areas of the HMP Applicability Map. Therefore, MDC will not incorporate HMC into the project's development.

Implementation of the project would disturb approximately 6-1/2 acres. Therefore, requirements under the City's MRP would apply to the project. Construction activities could generate dust, sediment, litter, oil, and other pollutants that could temporarily contaminate water runoff from the site. The City of Santa Clara has developed Standard Permit Conditions based on the RWQCB BMPs to reduce construction-related water quality impacts. The MDC would include Project Design Measure **PDM HYD-1** to avoid or reduce construction-related water quality impacts to less than significant level. (**Less Than Significant Impact**)

**PDM HYD-1:** The project will incorporate the following into the design and these measures should be treated as mitigation incorporated into the project. The following will reduce construction-related water quality impacts:

- 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.



- 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 required to cover all trucks or maintain at least two feet of freeboard.
- All paved access roads, parking areas, and staging areas 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 site shall be filled with rock to knock mud from truck tires prior to entering City streets. A tire wash system may also be employed at the request of the City.

**4.10.3.2 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 project does not propose to pump groundwater or install groundwater extraction wells. In addition, the project site is not within an area used for groundwater recharge. For these reasons, the project would not substantially decrease groundwater supplies or interfere substantially with groundwater recharge. **(Less Than Significant Impact)**

**4.10.3.3 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 project would not alter the course of a stream, river, or other waterway. As discussed above, the MDC would not result in an increase in surface runoff from the site compared to existing conditions. As a result, no off-site flooding would occur. In addition, as discussed Section 4.10.3.1, the project would implement best management practices to reduce stormwater runoff water quality impacts to a less than significant level. **(Less than Significant Impact)**



### **Impervious and Pervious Surfaces**

The MDC drainage infrastructure would include overland stormwater management basins and would connect to the existing City of Santa Clara storm drain system. Bioretention areas would be installed in on-site landscape areas as part of the MDC, which would help to detain stormwater runoff and infiltrate water into the soil. Additional C.3/post-construction measures, such as directing runoff to vegetated swales, would be implemented. On-site drainage facilities would be designed to meet City of Santa Clara standards and would drain to the existing storm drain system.

Table 4.10-1 below shows the differences in impervious and pervious cover between the proposed project and existing conditions. The current site includes 88.0 percent impervious cover and the proposed project would include 88.1 percent impervious cover; therefore, the impervious area amount would remain nearly constant.

**Table 4.10-1: Pervious/Impervious Surfaces**

	Impervious (sf)	Pervious (sf)	Total Area (sf)	Percent Impervious
Existing	274,681	37,522	312,203	88.0
Proposed	274,921	37,282	312,203	88.1

Since the MDC would not lead to a measurable increase in the amount of pervious surface on the site, the MDC would not alter the overall amount of runoff that leaves the site and enters the existing storm drain system. The MDC would, therefore, not contribute runoff water that would exceed the capacity of the existing City of Santa Clara stormwater drainage systems. **(Less than Significant Impact)**

#### **4.10.3.4 Would the project risk release of pollutants due to project inundation in flood hazard, tsunami, or seiche zones?**

##### **Flooding, Tsunami and Seiche**

The project site is located within Flood Zone AO and X. In response, the elevation of the MBGF and the first-floor elevations of the MDC would conform to the City's Flood Damage Prevention Code by being elevated to/above the base flood elevation, ensuring that the proposed facilities do not flood. Hazardous materials on-site would be stored and contained in accordance with regulations to prevent accidental release (refer to Section 4.9 for additional details). For this reason, the project would not risk the release of



pollutants due to project flooding. Additionally, as discussed in Section 4.7.1.2, the project area is not subject to inundation from a seiche, tsunami, or mudflow.

#### Dam Inundation Hazards

The project area is within the dam failure inundation area for Lexington Reservoir (Lenihan Dam).<sup>49</sup> Lexington Reservoir is maintained by the Santa Clara Valley Water District (SCVWD) and the dam is continuously monitored for seepage and settling and inspected when an earthquake occurs. Due to the inspection and monitoring program, the distance from the site, and the nature of the on-site uses, proposed site improvements are not anticipated to result in a new substantial hazard from dam failure. While inundation resulting from dam failure could result in damage to structures, the probability of such a failure is extremely remote. The project, therefore, would not be subject to a significant risk of inundation from dam failure.

For the reasons described above, the project would have a less than significant impact.  
**(Less than Significant Impact)**

#### **4.10.3.5 Would the project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?**

As discussed above, the project would comply with applicable water quality control regulations and would not substantially decrease groundwater supplies or interfere with groundwater recharge. **(Less than Significant Impact)**

#### **4.10.4 Mitigation Measures**

With the implementation of the PDM HYD-1 no mitigation measures are necessary to ensure potential impacts are less than significant.

#### **4.10.5 Government Agencies**

The City of Santa Clara is the only agency with regulatory authority over the hydrology and water quality related effects of the project. The City of Santa Clara will ensure compliance with its requirements during its permit review and implementation process.

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<sup>49</sup> Santa Clara Valley Water District. *Lenihan (Lexington) Dam 2016 Flood Inundation Maps*. 2016. Accessed: March 12, 2021. <https://www.valleywater.org/sites/default/files/Lexington%20Dam%20Inundation%20Map%202016.pdf>



## 4.11 LAND USE AND PLANNING

### 4.11.1 CEQA Checklist

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
<b><u>Land Use and Planning</u></b>				
Would the project:				
1) Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2) 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

### 4.11.2 Environmental Setting

#### 4.11.2.1 Regulatory Framework

##### **General Plan Land Use Designation**

The Land Use Diagram of the 2010-2035 General Plan contains three phases: Phase I: 2010-2015, Phase II: 2015-2023, and Phase III: 2023-2035. The project site is designated as Heavy Industrial and would retain its designation through 2035. The Heavy Industrial classification specifically allows for use of data centers. The maximum FAR is 0.45.

##### **Zoning Designation**

Under the City's current Zoning Ordinance, the Site is zoned MH — Heavy Industrial Zoning. This district is intended to encourage sound heavy industrial development in the City by providing and protecting an environment exclusively for such development, subject to regulations necessary to ensure the purity of the air and the waters in the bay area, and the protection of nearby uses of the land from hazards, noise, or other radiated disturbances. (Zoning Ordinance § 18.50.020.).

The maximum permitted building height within this zone is 70 feet. The City's Zoning Code defines height of buildings as the vertical distance from the adjacent ground elevation "to the highest point of the coping of a flat roof..." (City of Santa Clara 2019, §§ 18.06.010, subd. (h)(1); 18.48.070). The Zoning Administrator has the authority to permit a "minor modification" to the building height regulation so long as the increase does not



exceed 25 percent of the zoning district's permitted maximum height. The height of mechanical equipment and any accompanying screening is subject to architectural committee approval (City of Santa Clara 2019, §§ 18.90.020, subd. (a); 18.48.140, subd.(f)).

The Zoning Ordinance does not have a maximum coverage requirement.

### **Norman Y. Mineta San José International Airport**

The proposed project site is approximately 1/4 mile west of the Norman Y. Mineta San José International Airport (Airport) and is located within the Airport Influence Area (AIA) defined by the Santa Clara County Airport Land Use Commission's Comprehensive Land Use Plan (CLUP) for the Airport.

#### **4.11.2.2 Existing Conditions**

The project area consists primarily of commercial and industrial land uses. The area contains some buildings that are similar in height and scale to the existing buildings on the project site and some buildings that are similar in height and scale to the proposed MDC building.

The nearest residentially zoned properties are approximately 3,000 feet to the south (near the intersection of Main Street and Cabrillo Avenue) and 5,800 feet to the north (at the intersection of Lafayette Street and Laurie Avenue). There are several residences approximately 1,400 feet to the southwest of the project site, located on property zoned for heavy industrial uses and therefore non-conforming uses.

#### **4.11.3 Environmental Impact Discussion**

For purposes of analyzing potential land use impacts, it is not necessary or prudent to separate the potential impacts of the MBGF and the MDC. Therefore, the following analysis uses the term "Project" which encompasses construction and operation of the MBGF, the MDC and all related ancillary facilities.

##### **4.11.3.1 Would the project physically divide an established community?**

The project site is located in a heavy industrial and commercial area surrounded by industrial development and office use. The project would be constructed and operated on a single parcel of land. The parcel boundaries would remain the same, and the project would be consistent with previous uses. No changes are proposed involving construction of new off-site facilities that could physically divide the community (e.g., blocking



roadways or sidewalks) and would not interfere with the movement of residents through a neighborhood. Therefore, project construction, operation and maintenance activities would not physically divide an established community, and no impact would occur. **(No Impact)**

**4.11.3.2 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 Applicable Local Plans, Policies, and Regulations**

***City of Santa Clara General Plan***

The project site is designated Heavy Industrial and would retain its designation until 2035. The Heavy Industrial classification specifically allows data centers. Therefore, the proposed project is consistent with the General Plan.

The proposed FAR of the MDC, 1.5 greater than the maximum FAR of 0.45 identified in the General Plan for the Heavy Industrial land use classification. While the MDC is not strictly consistent with this component of the land use classification, the maximum FAR described in the General Plan is not a policy adopted for the purpose of avoiding or mitigating an environmental effect. Because the FAR is not such a policy, the project's FAR is not deemed a significant environmental impact. The City has approved data centers and other industrial projects with FARs greater than identified by the General Plan designations because the City treats the FAR as a guideline rather than as a strict policy. Specifically, the City has made findings that FAR overages are supported because data centers have very low employee density compared to other uses, which results in less trips, better jobs/housing balance, and economic benefits to the City. Martin Properties has been working closely with the City of Santa Clara and believes that the MDC project FAR will be acceptable to the City of Santa Clara.

Noise and lighting levels associated with the proposed project are not anticipated to adversely affect adjacent properties. The proposed project, therefore, would not introduce a land use to the site that would create a land use compatibility conflict in the project area.

***City of Santa Clara Zoning Code***

The Zoning Code grants the City Zoning Administrator the authority to permit minor modifications of height, area, and yard regulations. A "minor modification" cannot be greater than 25 percent of the dimensions of an area, space, or height, or other requirement provided for in the Zoning Code (City of Santa Clara 2019, § 18.90.020,



subd. (a)). The Zoning Code also provides that where a proposed alteration or variation exceeds 25 percent of any requirement, the modification is deemed to be a variance, which requires approval by the Planning Commission at a noticed public hearing (City of Santa Clara 2019, §§ 18.90.020, subd. (a)(5); 18.108.030).

The proposed site arrangement provides setback areas on all sides of the project site that exceed minimum yard depths specified in the Zoning Code, but not beyond the 25% threshold.

Maximum permitted building height in the MH zoning district is 70 feet (City of Santa Clara 2019, § 18.48.070). As stated above, height of buildings is defined as the vertical distance from the adjacent ground elevation “to the highest point of the coping of a flat roof...” (City of Santa Clara 2019, § 18.06.010, subd. (h)(1)). The data center building would have a typical height of 87.5 feet from adjacent grade to the top of the parapet.<sup>50</sup>

The proposed building height would be a 25 percent exceedance, which is within the 25 percent limit the Zoning Administrator can grant as a minor modification to the regulation. Thus, if the Zoning Administrator grants the minor modification to the regulation to allow the 25 percent exceedance, the project would conform to the regulation limiting height of buildings in the MH zoning district, and no conflict would occur.

The Zoning Code regulates additional development standards for the MH zoning district. The height of mechanical equipment and any accompanying screening is subject to architectural committee approval (City of Santa Clara 2019, § 18.50.140, subd. (f)). The four-story data hall building is composed of admin, data hall, and loading dock masses. The admin portion, located on the south side of the building, is clad with curtain wall and metal panel systems. The data hall portion is clad primarily with EIFS. The top of the parapet at the admin and data hall is at 87.5 feet. The loading dock portion is a single-story mass, also clad in EIFS to match the data hall. Three exterior stairs located on the NE, NW, and SW corners of the building are semi enclosed with a perforated metal rain screen. A rooftop dunnage platform is provided at 94.25 feet for mechanical equipment. A sound attenuating screen topping off at 102.25 feet fully encloses the platform. Access to the platform is provided by a freight elevator on the NE corner of the building. The top of the elevator parapet is at 119.66 feet.

“[T]he height limitations contained in the schedule of district regulations do not apply to spires, belfries, cupolas, antennas, water tanks, ventilators, chimneys, or other mechanical appurtenances usually required to be placed above the roof level and not

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<sup>50</sup> The parapet refers to that part of a perimeter wall immediately adjacent to a roof and extending above the roof. As a roofing term, coping is a protective cover on top of the wall that is typically slanted or curved to shed water.



intended for human occupancy or to be used for any commercial or advertising purposes” (City of Santa Clara 2019, § 18.64.010, subd. (a)). Therefore, the heights and screening for the mechanical equipment and the penthouse elevator would conform to the City’s Special Height Regulations.

A few purposes of a height limit are to preserve a scenic vista, protect the public view of a scenic resource, and to maintain the character of a site and surrounding area. As analyzed in section 4.1 of this Application, the project would not significantly affect a scenic vista or scenic resources, and inclusive of the minor modification in allowable building height, the project would maintain the character of the site and surrounding area without causing a conflict with applicable zoning and other regulations governing scenic quality.

The proposed project, therefore, would not conflict with the City’s General Plan or Zoning Ordinance. For all the reasons listed above, the project would not conflict with any land use plans, policies, or regulations; therefore, the project would have a less than significant impact. **(Less than Significant Impact)**

#### **4.11.4 Mitigation Measures**

No mitigation measures are required.

#### **4.11.5 Governmental Agencies**

The City of Santa Clara is the land use and planning authority and will implement its requirements as part of its permit process.



## 4.12 MINERAL RESOURCES

### 4.12.1 CEQA Checklist

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
<b><u>Mineral Resources</u></b>				
Would the project:				
1) Result in the loss of availability of a known mineral resource that will be of value to the region and the residents of the state?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2) 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

### 4.12.2 Environmental Setting

#### 4.12.2.1 Regulatory Framework

##### 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, after receiving classification information from the State Geologist, to designate lands containing mineral deposits of regional or statewide significance.

#### 4.12.2.2 Existing Conditions

The City of Santa Clara is located in an area zoned MRZ-1 for aggregate materials by the State of California. MRZ-1 zones are areas where adequate information indicates that no significant mineral deposits are present or where it is judged that little likelihood exists for their presence. The area is not known to support significant mineral resources of any type. No mineral resources are currently being extracted in the City. The State Office of Mine



Reclamation's list of mines (AB 3098 list) regulated under the Surface Mining and Reclamation Act does not include any mines within the City.

#### **4.12.3 Environmental Impact Discussion**

For purposes of analyzing potential mineral resource impacts, it is not necessary or prudent to separate the potential impacts of the MBGF and the MDC. Therefore, the following analysis uses the term "Project" which encompasses construction and operation of the MBGF, the MDC and all related ancillary facilities.

##### **4.12.3.1 Would the project result in the loss of availability of a known mineral resource that will be of value to the region and the residents of the state?**

The project site does not contain any known or designated mineral resources. The project, therefore, would not result in the loss of availability of a known mineral resource that would be of value to the region and residents of the state. **(No Impact)**

##### **4.12.3.2 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?**

The project site is not delineated in the General Plan or other land use plan as a locally important mineral resource recovery site. For this reason, the project would not result in the loss of availability of locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan. **(No Impact)**

#### **4.12.4 Mitigation Measures**

No mitigation measures are necessary.

#### **4.12.5 Government Agencies**

No governmental agencies with regulatory authority over mineral resources are affected by the project.



## 4.13 NOISE AND VIBRATION

The following discussion is based, in part, on a Noise and Vibration Report prepared by Salter on October 20, 2022, which is included as Appendix F to this application.

### 4.13.1 CEQA Checklist

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
<b><u>Noise and Vibration</u></b>				
Would the project:				
1) 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2) Generation of excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3) 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

### 4.13.2 Environmental Setting

#### 4.13.2.1 Introduction

##### **Noise**

Noise is sometimes defined as unwanted sound, and the terms noise and sound are used more or less synonymously in this exhibit. The human ear responds to a very wide range of sound intensities. The decibel scale (dB) used to describe sound is a logarithmic rating system which accounts for the large differences in audible sound intensities. Using this scale, changes in noise levels are perceived as follows: 3 dBA as barely perceptible, 5 dBA as readily perceptible, and 10 dBA as a doubling or halving of noise. Therefore, a 70-dB sound level will sound about twice as loud as a 60-dB sound level. People generally cannot detect differences of 1 to 2 dB in a complex acoustical environment.

On the logarithmic scale used to measure noise, a doubling of sound-generating activity (i.e., a doubling of the sound energy) causes a 3-dB increase in average sound produced



by that source, not a doubling of the loudness of the sound (which requires a 10-dB increase). For example, if traffic on a road is causing a 60-dB sound level at a nearby location, a doubling of the number of vehicles on this same road would cause the sound level at this same location to increase to 63 dB. Such an increase might not be discernible in a complex acoustical environment.

When addressing the effects of noise on people, it is necessary to consider the frequency response of the human ear, or those frequencies that people hear the best. Sound measuring instruments are therefore often designed to "weight" sounds based on the way people hear. The frequency weighting most often used to evaluate environmental noise is A weighting because it best reflects how humans perceive sound. Measurements from instruments using this system, and associated noise levels, are reported in "A weighted decibels," or dBA.

For any noise source, several factors affect the efficiency of sound transmission traveling from the source, which in turn affects the potential noise impact at off-site locations. Important factors include distance from the source, frequency of the sound, absorbency and roughness of the intervening ground (or water) surface, the presence or absence of obstructions and their absorbency or reflectivity, and the duration of the sound.

Although a measured A-weighted noise level will adequately indicate the level of environmental noise at any instant in time, community noise levels typically vary continuously. Several noise descriptors have been developed to characterize community noise by accounting for the total acoustical energy content of the noise over defined periods of time. The noise descriptors used in this evaluation that consider noise levels over time are the Equivalent Sound Level (Leq), the Community Noise Equivalent Level (CNEL), and the Day-Night Sound Level (Ldn). These metrics are described below.

The Leq is the sound level corresponding to a steady-state sound level containing the same total energy as a time-varying signal over a given sample period. That is, an Leq is a single number representing the level of a constant sound containing the same amount of sound energy as the varying sound levels over a specific period. Thus, the Leq is the "energy average" noise level for the measurement time interval. The Leq can be measured for any time period but is typically measured for one hour. It is the energy sum of all the events and background noise levels that occur during that time period.

The CNEL is the predominant noise descriptor in use in California for land use compatibility assessments and represents a time-weighted 24-hour average noise level based on hourly Leqs measured (or calculated) in A-weighted decibels. Time-weighted refers to the fact that the CNEL adds a 5-dBA penalty to noise occurring during evening hours from 7 PM to 10 PM, and a 10-dBA penalty to sounds occurring between the hours



of 10 PM to 7 AM, to account for the increased sensitivity to noise events that occur during the late evening and nighttime periods.

The Ldn is similar to the CNEL but does not include the 5-dBA penalty to the evening hours between 7 PM and 10 PM. The Ldn is widely used in the US to compensate for the increased undesirability of noise during sleep periods.

### **Groundborne Vibration Fundamentals**

Equipment that strikes the ground or uses vibration to compact soil produces vibrational waves, called groundborne vibration, that radiate along the surface of the earth and downward into the earth, potentially resulting in effects that range from annoyance to structural damage. As vibrations travel outward from the source, they excite the particles of rock and soil through which they pass and cause them to oscillate by a few ten-thousandths to a few thousandths of an inch. Differences in subsurface geologic conditions and distance from the source of vibration will result in different vibration levels characterized by different frequencies and intensities. In all cases, vibration amplitudes will decrease with increasing distance. The maximum rate or velocity of particle movement is the commonly accepted descriptor of the vibration “strength.” This is referred to as the peak particle velocity (ppv) and is typically measured in inches per second.

Vibration energy spreads out as it travels through the ground, causing the vibration level to diminish with distance away from the source. High frequency vibrations reduce much more rapidly than low frequencies, so that low frequencies tend to dominate the spectrum at distances from the source. Discontinuities in the soil strata can also cause diffractions or channeling effects that affect the propagation of vibration over long distances. When vibration encounters a building, a ground-to-foundation coupling loss will usually reduce the overall vibration level, however, under certain circumstances, the ground-to-foundation coupling may also amplify the vibration level due to structural resonances of the floors and walls.

Vibration in buildings, such as from nearby construction activities, may cause windows, items on shelves, and pictures on walls to rattle. Although groundborne vibration is sometimes noticeable in outdoor environments, it is almost never annoying to people who are outdoors. The primary concern from vibration is that it can be intrusive and annoying to building occupants and vibration-sensitive land uses.



#### 4.13.2.2 Regulatory Framework

##### **State and Local**

###### ***California Department of Transportation (Caltrans)***

The California Department of Transportation (Caltrans) has published several documents characterizing assessment procedures and impact criteria related to traffic noise and groundborne vibration. Caltrans published the “*Technical Noise Supplement*” in 2013, which describes the measurement, modeling, and noise impact assessment procedures for evaluating noise from traffic. The document states the following, “Changes in noise levels are perceived as follows: 3 dBA as barely perceptible, 5 dBA as readily perceptible, and 10 dBA as a doubling or halving of noise.”

Caltrans has also provided guidance on the evaluation and impact criteria related to groundborne vibration, as documented in the “*Transportation and Construction Vibration Guidance Manual*”<sup>51</sup>. The manual provides guidelines to assess the potential for annoyance and potential damage to structures, see Table 4.13-1.

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51 California Department of Transportation (Caltrans). 2020. Transportation and Construction Vibration Manual. Available online at: <https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/env/tcvgm-apr2020-a11y.pdf>



**Table 4.13-1 Reaction of People and Damage to Buildings, PPV (in/sec)**

Vibration Level Peak Particle Velocity PPV (in/sec)	Human Reaction	Effect on Buildings
0.006-0.019	Threshold of perception, possibility of intrusion	Vibrations unlikely to cause damage of any type
0.08 in/sec	Vibrations readily perceptible	Recommended upper level of vibration to which ruins and ancient monuments should be subjected
0.10 in/sec	Level at which continuous vibration begins to annoy people	Virtually no risk of “architectural” (i.e., not structural) damage to normal buildings
0.20 in/sec	Vibrations annoying to people in buildings	Threshold at which there is a risk to “architectural” damage to normal dwelling – houses with plastered walls and ceilings
0.4–0.6 in/sec	Vibrations considered unpleasant by people subjected to continuous vibrations and unacceptable to some people walking on bridges	Vibrations at a greater level than normally expected from traffic but would cause “architectural” damage and possibly minor structural damage. At 0.5 PPV possible cosmetic structural damage to buildings built of reinforced concrete, steel or timber.

### ***Santa Clara General Plan***

The City of Santa Clara General Plan contains goals and policies that are designed to control noise within the city. In addition, the General Plan identifies noise and land use compatibility standards for various land uses. Table 4.13-2 includes acceptable noise levels for various land uses.

The City of Santa Clara General Plan Noise Element also includes goals to minimize impacts in the community; to protect sensitive land uses from noise intrusion; and to consider noise levels in consideration of land use proposals. General Plan Noise Element policies intended to implement those policies that apply to the analysis of impacts associated with proposed project are presented below.

*Policy 5.10.6-P1. Review all land use development proposal for consistency with the General Plan compatibility standards and acceptable noise exposure levels defined on Table 8.*

*Policy 5.10.6-P2. Incorporate noise attenuation measures for all projects that have noise exposure levels greater than General Plan “normally acceptable” levels, as defined on Table 8.*



*Policy 5.10.6-P3. New development should include noise control techniques to reduce noise to acceptable levels, including site layout (setbacks, separation and shielding), building treatments (mechanical ventilation system, sound-rated windows, solid core doors and baffling) and structural measures (earthen berms and sound walls).*

*Policy 5.10.6-P4. Encourage the control of noise at the source through site design, building design, landscaping, hours of operation and other techniques.*

*Policy 5.10.6-P5. Require noise-generating uses near residential neighborhoods to include solid walls and heavy landscaping along common property lines, and to place compressors and mechanical equipment in sound-proof enclosures.*

**Table 4.13-2 - General Plan Noise Standards**

Noise and Land Use Compatibility (Ldn & CNEL)									
Land Use	50	55	60	65	70	75	80	85	
Residential									
Educational									
Recreational									
Commercial									
Industrial									
Open Space									
	Compatible								
	Require Design and insulation to reduce noise levels								
	Incompatible. Avoid land use except when entirely indoors and interior noise level of 45 Ldn can be maintained.								
Source: City of Santa Clara General Plan Appendix 8.14 Noise. Table 8.14-1									

## **Santa Clara City Code (SCCC)**

The City's noise ordinance is codified in Chapter 9.10, Regulation of Noise and Vibration, of the SCCC. The noise ordinance requires protection from unnecessary, excessive, and unreasonable noise or vibration from fixed sources in the community. Specifically, SCCC Section 9.10.40 states that it is unlawful for a fixed noise source on an originating property to produce sound levels on any other property that exceed the maximum sound levels shown in Table 4.13-3.



**Table 4.13-3 - City of Santa Clara Noise Limits**

Receiving Zone Zoning Category	Time Period	Noise Level (dBA)
<i>Category 1 and Category 2</i>		
Single Family and duplex residential (R1, R2); Multiple-family residential, public space (R3, B)	7 AM to 10 PM	55
	10 PM to 7 AM	50
<i>Category 3</i>		
Commercial Office (C, O)	7 AM to 10 PM	65
	10 PM to 7 AM	60
<i>Category 4</i>		
Light Industrial (MI, MP)	Anytime	70
Heavy Industrial (MH)	Anytime	75
Source: SCCC Section 9.10.040 Notes: Except as otherwise provided in this chapter, the noise or sound standards for the various zone districts as presented in the above table shall apply to all such properties within a specified zone, as designated on the most recent update of the official zoning map of the City. For planned development, agricultural or mixed zoning site, the most restrictive noise standard for the comparable zone district, as determined by the Director of Planning and Inspection, shall apply.		

Section 9.10.060(c) states that if the measured ambient noise level differs from those levels set forth in SCCC Section 9.10.040, the allowable noise standard should be “adjusted in five dBA increments in each category as appropriate to encompass or reflect said ambient noise level”.

Section 9.10.070(a) exempts “emergency generators and pumps or other equipment necessary to provide services during an emergency.”

SCCC Section 9.10.050 provides vibration standards and states that, “it shall be unlawful for any person to operate or cause, permit, or allow the operation of, any fixed source of vibration of disturbing, excessive, or offensive vibration on property owned, leased, occupied, or otherwise controlled by such person, such that the vibration originating from such source is above the vibration perception threshold of an individual at the closest property line point to the vibration source on the real property affected by the vibration.”

#### **4.13.2.3 Existing Conditions**

To characterize the background noise environment in the project vicinity, Salter measured the ambient sound levels at two locations near the project site. Long-term, 24-hour measurements were taken at one location on the northern boundary of the project site and at one location near the southern boundary of the project site from September 28, 2022 to September 30, 2022. The long-term sound level measurement locations are



shown in Figure 2 and summarized on Table 6 of the Noise and Vibration Report, Appendix F.

The noise environment at the project site is controlled by traffic on Martin Avenue, surrounding industrial uses, train passbys, and aircraft noise from SJC Airport. Ambient noise measured was 68 dbA DNL at the northern location and 75 dBA DNL at the southern location.

### **4.13.3 Environmental Impact Discussion**

#### **4.13.3.1 Would the project generate 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?**

##### **Temporary Noise Increase from Construction**

Construction of the project would not occur within 300 feet of residential properties. Additionally, the project construction is anticipated to occur during the allowed times in the Santa Clara City Code of 7 AM to 6 PM on weekdays, and 9 AM to 6 PM on Saturdays. Salter estimated construction noise levels at the nearest properties. See Noise and Vibration Report for additional detail relating to the methodology and assumptions used in the assessment of construction noise. Based on the analysis in the Noise and Vibration Report the estimated construction noise levels were found to be less than the general noise assessment criteria from Federal Transit Administration. Therefore, temporary noise impacts due to construction are expected to be less-than-significant and no mitigation is required (**Less Than Significant**)

##### **Permanent Noise Increase During Data Center Operation**

###### ***Increase in Operations Traffic***

As discussed in Section 4.17, Transportation there are currently approximately 1,464 trips per day to the project site. With future use as a data center, the daily trips will be reduced to 463. Therefore, permanent noise impacts due to traffic are expected to be less-than-significant and no mitigation is needed. (**No Impact**)

###### ***Rooftop Chillers***

To provide cooling for the data center, the project will include 48 chillers as shown in Appendix B of the Noise and Vibration Report. The main portion of the data center building is approximately 85 feet tall, with the top of the chillers approximately 19 feet above the rooftop. The basis-of-design for the chillers is the York YVFA0459. Preliminary sound



data for the chillers is included in Appendix F of the Noise and Vibration Report. For this “worst-case” analysis, it was assumed that all chillers will be operating simultaneously at 100% load during nighttime hours. Note that this assumption captures the “worst-case” noise levels. Actual chiller operation could vary depending on ambient temperatures and equipment redundancies. These potential noise reductions have not been included in this analysis.

Based on the chiller locations, noise levels surrounding the site are shown in Table 8 at the receiver locations shown in Figure 3 of the Noise and Vibration Report. None of the modeled noise levels exceed the City of Santa Clara noise standards and would not exceed measured ambient levels. Therefore, permanent noise impacts from the rooftop chillers are expected to be less-than-significant and no mitigation is needed. **(Less Than Significant Impact)**

### **Generators**

On the east side of the building, there will be 44 emergency generators. The generators will be stacked vertically in twenty-two groups of two. In the event of a power outage, four of these generators will be used to support life safety services within the building, and the remaining 40 will be used to support critical IT. When operated during an emergency, the generators are exempt from the Noise Ordinance. However, when periodically tested, the generators are subject to all applicable noise requirements.

During the periodic testing, generators will be tested in groups of two to three, during the hours of 7 AM to 5 PM. The basis-of-design for the generators is the Caterpillar Model 3516E, which includes an enclosure that limits noise levels to 75 dBA at 23 feet. At this level, noise levels at the closest adjacent property to the east are expected to be approximately 68 dBA. Noise levels at all other surrounding properties will be less than this level and below measured ambient noise levels and the City of Santa Clara noise standards. Therefore, permanent noise impacts from the periodic testing of the emergency generators are expected to be less-than-significant and no mitigation is needed. **(Less Than Significant)**

#### **4.13.3.2 Would the project generate excessive groundborne vibration or groundborne noise levels?**

### **Construction Vibration**

Groundborne vibration generated by construction equipment spreads through the ground and diminishes in magnitude with increases in distance. The effects of ground vibration may be imperceptible at the lowest levels, detectable at moderate levels, and have the



potential to result in building damage at the highest levels. Groundborne vibration levels associated with various types of construction equipment are summarized in Table 4.13-4.

**Table 4.13-4 - Vibration Source Amplitudes for Construction Equipment**

Equipment	Reference PPV at 25 ft (in/sec)
Vibratory roller	0.210
Large bulldozer	0.089
Caisson drilling	0.089
Loaded Trucks	0.076
Jackhammer	0.035
Small bulldozer	0.003
Sources: Caltrans Transportation and Construction Vibration Guidance Manual April 2020.	

Steady state groundborne vibration is readily perceptible at 0.08 PPV in/sec. At 0.20 PPV in/sec there is a risk for “architectural” damage to normal dwellings (houses with plastered walls and ceilings).

The equipment that generates the most vibration is the vibratory roller, which could be used adjacent to the property line. The nearest building is the building on the industrially zoned lot located due west of the 651 Martin project site, which is approximately 85-feet from the property line. At a distance of 85-feet from the vibratory roller, Caltrans<sup>52</sup> estimates that the reference vibration level of PPV 0.210 in/sec will be reduced to PPV 0.055 in/sec. This is below the Caltrans limit of PPV 0.08 in/sec. Therefore, temporary vibration impacts from construction equipment are expected to be less-than- significant and no mitigation is required. **(Less Than Significant Impact)**

**4.13.3.3 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 Santa Clara County Airport Land Use Commission (ALUC) Comprehensive Land Use Plan (CLUP) for SJC Airport establishes expected noise from airport operations in the form of noise contours (Figure 5). The MDC site lies with between the 65dB and 70dB

<sup>52</sup> Caltrans Equation 12.  $PPV_{equipment} = PPV_{ref}(25/D)^n$  in inches/second, where D is the distance from equipment to building in feet and n is the attenuation rate through ground, suggested to be 1.1.



(CNEL) contours. Table 4-1 of the CLUP describes the noise compatibility of land uses, specifically identifying that industrial land uses within the 65dB and 70dB contours are “generally acceptable”. The CLUP defines generally acceptable as “Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements.” The MDC site is designated for industrial use, and the data center building will utilize normal conventional construction. The MDC is a compatible use consistent with the CLUP. Therefore, there would be a less than significant impact. **(Less than Significant Impact)**

#### **4.13.4 Mitigation Measures**

No mitigation measures are necessary to ensure that the project does not result in significant noise or vibration impacts.

#### **4.13.5 Government Agencies**

The City of Santa Clara has regulatory authority over noise within its limits and will review and enforce noise-related requirements as part of its permit review and implementation process.



## 4.14 POPULATION AND HOUSING

### 4.14.1 CEQA Checklist

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
<b><u>Population and Housing</u></b>				
Would the project:				
1) 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)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

### 4.14.2 Environmental Setting

#### 4.14.2.1 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 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. The City of Santa Clara Housing Element is currently being updated. A Draft of the Housing Element was sent to the California Department of Housing and Community Development (HCD) on August 22, 2022 for review and comment.



## **Regional and Local**

### ***Plan Bay Area 2040***

Plan Bay Area 2040 is a long-range transportation, land-use, and housing plan intended to support a growing economy, provide more housing and transportation choices, and reduce transportation-related pollution and GHG emissions in the Bay Area.<sup>53</sup> Plan Bay Area 2040 promotes compact, mixed-use residential and commercial neighborhoods near transit, particularly within identified Priority Development Areas (PDAs).<sup>54</sup>

ABAG allocates regional housing needs to each city and county within the nine-county San Francisco Bay Area, based on statewide goals. ABAG also develops forecasts for population, households, and economic activity in the Bay Area. ABAG, MTC, and local jurisdiction planning staff created the Regional Forecast of Jobs, Population, and Housing, which is an integrated land use and transportation plan through the year 2040 (upon which Plan Bay Area 2040 is based).

#### **4.14.2.2 Existing Conditions**

The project is proposed in the City of Santa Clara in Santa Clara County. Nearby cities include San Jose, Campbell, Sunnyvale, and Mountain View. As discussed further below Martin Properties estimates that local workers from the greater Bay Area are not likely to temporarily (during construction) or permanently (during operations) move closer to the project. Therefore the City of Santa Clara and neighboring cities comprise the primary study area for population and housing-related impacts and the San Jose-Sunnyvale-Santa Clara Metropolitan Statistical Area (MSA), which covers San Benito and Santa Clara counties, as the setting for labor supply for the project.

#### **Population Growth**

The City of Santa Clara has an estimated land area of 18.4 square miles. The current Housing Element of the Comprehensive General Plan for the City of Santa Clara is currently being updated but has not yet been adopted. The operative version of the Housing Element (adopted December 2014) forecasts population and housing estimates in three phases, reflecting the near (2010-2015), mid (2015-2023), and long term (2023-2035) horizons. By 2035, the general plan would allow for an additional 32,400 residents (Santa Clara 2014, pg. 2-4). The estimated 2021 population for the city was 129,122

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<sup>53</sup> Association of Bay Area Governments. *Plan Bay Area 2040 Final*. July 2017.

<sup>54</sup> Association of Bay Area Governments and Metropolitan Transportation Commission. "Project Mapper." <http://projectmapper.planbayarea.org/>.



people.<sup>55</sup> Table 4.14-1 shows the historical and projected populations for the cities within proximity of the project site, plus Santa Clara County as a whole. Population projections between 2020 and 2040 show growth ranging from 7.8 to 48.2 percent, or 0.4 to 2.4 percent on average per year in the cities within and around the project site.

**Table 4.14-1**  
**HISTORICAL AND PROJECTED POPULATIONS<sup>56</sup>**

Area	2010	2020	2030	2040	Projected Population Change 2020-2040 Percent (%)	Projected Population Change 2020-2040 Percent per Year (%/yr)
Santa Clara	114,115	131,665	142,425	159,500	21.1	1.0
San Jose	958,585	1,028,210	1,189,660	1,377,145	33.9	1.7
Campbell	39,349	43,700	46,170	47,120	7.8	0.4
Sunnyvale	145,225	149,935	162,975	222,210	48.2	2.4
Mountain View	76,360	111,725	119,445	138,980	24.4	1.2
Santa Clara County	1,781,642	1,986,340	2,217,750	2,538,320	27.8	1.4

## Housing

**Table 4.14-2** presents housing supply data for the project area. Year 2021 housing estimates indicated 31,972 vacant housing units within Santa Clara County representing a vacancy rate of 4.6 percent.

<sup>55</sup> State of California, Department of Finance, *E-1 Population Estimates for Cities, Counties and the State with Annual Percent Change — January 1, 2021 and 2022*. Sacramento, California, May 2022. <https://dof.ca.gov/forecasting/demographics/estimates-e1/>

<sup>56</sup> Association of Bay Area Governments (ABAG). Projections 2040 by Jurisdiction. Data last updated May 1, 2019. Available online at: <https://data.bayareametro.gov/Demography/Projections-2040-by-Jurisdiction/grqz-amra>



**Table 4.14-2**  
**HOUSING SUPPLY ESTIMATES IN THE PROJECT AREA**

	2021 Total	2021 Vacant	Vacancy (%)
Santa Clara	52,000	3,609	6.9
San Jose	344,112	13,967	4.1
Campbell	18,427	1,098	5.9
Sunnyvale	62,491	3,176	5.1
Mountain View	38,916	3,308	8.5
Santa Clara County	688,035	31,972	4.6

### Labor Supply

**Table 4.14-3** presents the California Employment Development Department 2018-2028 Occupational Employment Projections for the project's construction occupations in the MSA.

**Table 4.14-3**  
**PROJECTED EMPLOYMENT GROWTH<sup>57</sup>**

San Jose-Sunnyvale-Santa Clara MSA	Year 2018	Year 2028	Percent Change
Construction Trades Workers	38,350	41,380	7.9
Computer and Information Systems Managers	14,110	15,760	11.7

### 4.14.3 Environmental Impact Discussion

For purposes of analyzing potential population and housing impacts, it is not necessary or prudent to separate the potential impacts of the MBGF and the MDC. Therefore, the following analysis uses the term "Project" which encompasses both construction and operation of the MBGF, the MDC and all related ancillary facilities.

#### 4.14.3.1 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 demolish the four (4) separate single-story structures that currently exist onsite and encompass a total of approximately 77,220 square feet. The MDC is anticipated to require a total of 19-21 employees, with approximately 10-14 tenant

<sup>57</sup> Employment Development Department, State of California (CA EDD). Labor Market Information Division, 2016-2026 Occupational Employment Projections, San Jose-Sunnyvale-Santa Clara Metropolitan Statistical Area, (San Benito and Santa Clara Counties), data last update July 7, 2022. <https://data.edd.ca.gov/Employment-Projections/Long-Term-Occupational-Employment-Projections/4yzm-uyfq>



employees or other visitors visiting the MDC daily. The MBGF would not have any dedicated employees. The project would be a low employment generating use and substantially less than the number of employees currently working at the existing building on site. Therefore, approval of the project would not substantially increase jobs in the City. The proposed project would not induce substantial population growth in the City or substantially alter the City's job/housing ratio. Therefore, the Project would result in a less than significant impact. **(Less than Significant Impact)**

**4.14.3.2 Would the project displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?**

The existing 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)**

**4.14.4 Mitigation Measures**

No mitigation measures are necessary to ensure that population and housing impacts are less than significant.

**4.14.5 Government Agencies**

The only agency with regulatory authority related to growth and housing is the City of Santa Clara. The project is consistent with the City of Santa Clara requirements for land use development at the site.



## 4.15 PUBLIC SERVICES

### 4.15.1 CEQA Checklist

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
<b><u>Public Services</u></b>				
Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, the 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:				
1) Fire Protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2) Police Protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3) Schools	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
4) Parks	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
5) Other Public Facilities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

### 4.15.2 Environmental Setting

#### 4.15.2.1 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.<sup>58</sup>

#### **4.15.2.2 Existing Conditions**

##### **Fire Service**

Fire protection services for the project site are provided by the City of Santa Clara Fire Department (SCFD). The SCFD consists of 10 stations consisting of eight engines, two trucks, two ambulances, one rescue/light unit, one hazardous materials unit, and one command vehicle.<sup>59</sup> The closest fire station to the project site is Station 2, located at 1900 Walsh Avenue, which is approximately 0.7 miles east of the project site.

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<sup>58</sup> Santa Clara County. *Santa Clara County Countywide Trails Master Plan Update*. November 1995.

<sup>59</sup> City of Santa Clara Fire Department. "About Us." <https://www.santaclaraca.gov/services/emergency-services> Accessed on March 12, 2021.



The SCFD responds to all emergencies within six minutes, 90 percent of the time.<sup>60</sup>

### **Police Service**

Police protection services are provided by the City of Santa Clara Police Department (SCPD). The SCPD consists of 239 full-time employees and a varying number of part-time or per diem employees, community volunteers, Police Reserves and Chaplains. Police headquarters are located at 601 El Camino Real, approximately 1-1/2 miles southeast of the project site.<sup>61</sup>

The General Plan identifies a public service goal to maintain the SCPD response time average of three minutes for all areas of the City.<sup>62</sup>

### **Parks, Schools, and Libraries**

The nearest public parks to the project site are Larry J. Marsalli Park located at 1425 Lafayette Street, approximately 0.7 miles south of the project site; Rotary Park located at 1490 Don Avenue, approximately 0.9 miles southwest of the project site; Civic Center Park Located at the corner of Lincoln and El Camino Real, approximately 1 mile south of the project site; Warburton Park, located at 2250 Royal Drive, approximately 1.2 miles southwest of the project site; and Montague Park located at 3595 McGregor Lane, approximately 1.3 miles north of the project site.

The nearest public schools to the project site are Scotts Lane Elementary School, located at 1925 Scott Boulevard, approximately 0.8 miles southwest of the project site; Bowers Elementary School, located at 2755 Barkley Avenue, approximately 1.4 miles southwest of the project site; Bracher Elementary School, located at 2700 Chromite Drive, approximately 1.5 miles west of the site; and Cabrillo Middle School, located at 2550 Cabrillo Avenue, approximately 1.6 miles southwest of the site.

The nearest library to the project site is the Northside Branch Library, located at 695 Moreland Way, approximately 1.8 miles north of the site.

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<sup>60</sup> Ibid

<sup>61</sup> City of Santa Clara Police Department. "About Us." <https://www.santaclaraca.gov/our-city/departments-g-z/police-department/about-us/fact-sheet> Accessed on March 14, 2021.

<sup>62</sup> City of Santa Clara. *City of Santa Clara 2010-2035 General Plan*. Section 5.9.3. November 2010.



### **4.15.3 Environmental Impact Discussion**

For purposes of analyzing potential Aesthetic related impacts, it is not necessary or prudent to separate the potential impacts of the MBGF and the MDC. Therefore, the following analysis uses the term “Project” which encompasses both construction and operation of the MBGF, the MDC and all related ancillary facilities.

#### **4.15.3.1 Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, the 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 SCFD. The proposed project may result in an incremental increase in the need for fire services associated with increased building area but would not require the construction of new facilities or stations.

The project would be constructed in conformance with current building and fire codes, and the SCFD 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 impact, in order to maintain acceptable service ratios, response times or other performance objectives for fire protection services.  
**(Less than Significant Impact)**

#### **4.15.3.2 Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, the 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 SCPD. The MDC may result in an incremental increase in the need for police services associated with increased building area and employees but would not require the construction of new facilities or stations.

The Police Department 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)**



**4.15.3.3 Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, the 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 area 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. The project, therefore, would not require new or expanded school facilities, the construction of which could cause environmental impacts. **(No Impact)**

**4.15.3.4 Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, the 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 area or result in the use of public facilities in the area by new residents. Some Mees at the project site may visit local parks; however, this use would not create the need for any new facilities or adversely impact the physical condition of existing facilities. **(Less than Significant Impact)**

**4.15.3.5 Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, the 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 area or result in the use of public facilities in the area by new residents. Some MDC employees at the project site may visit nearby libraries; however, this would not create the need for any new facilities or adversely impact the physical condition of existing facilities. **(No Impact)**

**4.15.4 Mitigation Measures**

No mitigation is necessary since the project does not adversely affect public services.



#### **4.15.5 Government Agencies**

The City of Santa Clara and its divisions have regulatory authority over public services within the project area and will ensure compliance with any of its requirements through its permit review process.



## 4.16 RECREATION

### 4.16.1 CEQA Checklist

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
<b><u>Recreation</u></b>				
1) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility will occur or be accelerated?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2) 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

### 4.16.2 Environmental Setting

#### 4.16.2.1 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.

##### **Local**

The City of Santa Clara Parks & Recreation Department provides parks and recreational services in the City. The Department is responsible for maintaining and programming the various parks and recreation facilities and works cooperatively with public agencies in coordinating all recreational activities within the City. Overall, as of June 2017, the Department maintains and operates Central Park (45.04-acre community park), 25



neighborhood parks (122.67 acres), four mini parks (2.59 acres), public open space (56.21 acres total: 16.13 acres improved and 40.08 acres unimproved), recreational facilities (23.8 acres total: 14.76 acres improved and 9.04 acres unimproved, excluding Santa Clara Golf and Tennis Club/BMX), recreational trails (7.59 acres), and joint use facilities (48.52 acres) throughout the City, totaling approximately 257.3 improved acres. In general, community parks total over 15 acres, neighborhood parks range between one to 15 acres, and mini parks are typically less than one acre in size.

The Department of Parks and Recreation also maintains a strong recreational program that supports a wide variety of activities. The Community Recreation Center is the hub of the City's recreational programs. The area in Central Park, west of Saratoga Creek, contains group and individual picnic facilities, playgrounds, restroom facilities, an amphitheater, two lighted tennis courts, basketball courts, and the Veterans Memorial. East of the creek is the world-famous George F. Haines International Swim Center, open space, a lake, large group picnic areas, restroom facilities, a lawn bowling green, an exercise course, the Bob Fatjo Sports Center, which includes the Tony Sanchez Field as well as a lighted softball field, and the Santa Clara Tennis Center, which includes eight lighted tennis courts as well as a practice wall.<sup>63</sup>

In addition to the parklands and facilities within Central Park, the City currently has a gymnastics center, a bicycle track, a dog park, a golf and tennis club, a youth activity center, a teen center, a senior center, and a skate park. The City's recreational system is augmented by local school facilities, which are available to the general public after school hours.

#### **4.16.3 Environmental Impact Discussion**

For purposes of analyzing potential recreation related impacts, it is not necessary or prudent to separate the potential impacts of the MBGF and the MDC. Therefore, the following analysis uses the term "Project" which encompasses both construction and operation of the MBGF, the MDC and all related ancillary facilities.

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<sup>63</sup> City of Santa Clara. Parks: Central Park. <http://santaclaraca.gov/Home/Components/ServiceDirectory/ServiceDirectory/318/2654> Accessed on October 6, 2022.



**4.16.3.1      Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility will occur or be accelerated?**

The proposed project would not increase employment substantially. Some MDC employees may use nearby parks and recreational facilities; however, this would not have an impact on these facilities such that adverse physical effects would result. **(Less than Significant Impact)**

**4.16.3.2      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 require the construction or expansion of recreational facilities. **(Less than Significant Impact)**

**4.16.4      Mitigation Measures**

No mitigation measures are necessary to ensure that recreation impacts are less than significant.

**4.16.5      Government Agencies**

The only agency with regulatory authority related to recreation is the City of Santa Clara. The project is consistent with the City of Santa Clara requirements for land use development at the site.



## 4.17 TRANSPORTATION

This section is based on a traffic technical memo prepared by Kimley-Horn to analyze the project's potential impacts to traffic dated October 6, 2022 (See Appendix G).

### 4.17.1 CEQA Checklist

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
<b><u>Transportation</u></b>				
Would the project:				
1) Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2) Conflict or be inconsistent with CEQA Guidelines § 15064.3, subdivision (b) regarding vehicle miles travelled?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
4) Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

### 4.17.2 Environmental Setting

#### 4.17.2.1 Regulatory Framework

##### **State and Local**

In 2018, the California state legislature, in approving SB 743, directed the Office of Planning and Research to develop guidelines for assessing transportation impacts based on VMT. In response to SB 743, CEQA guidelines were significantly amended regarding the methods by which lead agencies are to evaluate a project's transportation impacts.

Under SB 743, over 50 percent of development within the State could forego transportation analysis and mitigation entirely. This includes affordable housing, projects within ½-mile of transit, projects generating fewer than 110 trips per day, and local serving projects. Based upon the City of Santa Clara VMT threshold, adopted pursuant to SB 743, a project which consist of changing an existing land use that resulted in fewer than



a 110-net number of daily trips are presumed to have a less than significant impact with respect to VMT

#### **4.17.2.2 Existing Conditions**

The Project is located at 651 Martin Avenue in Santa Clara, California. The project consists of redeveloping the existing 35,800 square feet of general light industrial and 41,400 square feet of automobile care center and construct a 467,200 square foot of data center with 25,615 square foot generation yard and 24,105 square foot substation area.

Similar to other data centers' sites, the MDC will be operational 24 hours, 7 days a week. Table 4.17-1 summarizes the anticipated headcount of personnel and visitors that would be on-site throughout a typical day. It is anticipated that on an average day there will be 33-35 people at the building throughout the day, with 17-30 people in the building at the same time.

**Table 4.17-1 Anticipate Average Daily Headcount**

Type	Daily Persons	Persons Per Shift
Operational	14	2-9 <sup>1</sup>
Security	5	2-5 <sup>2</sup>
Janitor	2	1-2
Tenant Personnel	10-12	10-12
Visitors	2	2
<b>Total</b>	<b>33-37</b>	<b>17-30</b>

#### **4.17.3 Environmental Impact Discussion**

##### **4.17.3.1 Would the project conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?**

A trip generation analysis was conducted to determine the change in the number of trips the project will generate. The trip generation was determined based on average rates from the Institute of Transportation E Trip Generation Manual, 11th Edition. The ITE Trip Generation Manual, 11th Edition is a standard reference used by jurisdictions throughout the country for the estimation of trip generation potential of proposed projects. This manual provides trip rates based on land use. For the existing land uses, ITE Land Use 110: General Light Industrial for the light industrial use and ITE 942: Automobile Care Center for the automobile care center. It should be noted that Trip Generation Manual, 11th Edition does not provide daily rates for Automobile Care Center, therefore ten times



the total PM hour volumes were assumed. This percentage was based on the hourly distribution for a similar land use ITE Land Use 943: Automobile Parts and Service Center.

For the proposed land uses ITE Land Use 160: Data Center for the data center building. It is anticipated that the generator yard or substation area will not generate any additional trips from the data center building. Table 14.7-2 presents the trip generation for the project. The project is expected to generate a net new -1,011 daily trips, -68 trips in the AM peak hour, and -110 trips in the PM peak hour.

**Table 4.17-2 - Project Trip Generation**

ITE Land Use Code		Land Use	Size	Daily Trips		AM Peak			PM Peak		
						Rate	In%	Out%	Rate	In%	Out%
110		General Light Industrial	1,000 Sq Ft	4.87		0.74	88%	12%	0.65	14%	86%
160		Data Center	1,000 Sq Ft	0.99		0.11	55%	45%	0.09	30%	70%
411		Public Park	Acre(s)	0.78		0.02	59%	41%	0.11	55%	45%
710		General Office Building	1,000 Sq Ft	10.84		1.52	88%	12%	1.44	17%	83%
942		Automobile Care Center	1,000 Sq Ft	*		2.25	66%	34%	3.11	48%	52%
Scenario	ITE Land Use Code	Land Use	Size	Units	Daily Trips <sup>1</sup>	AM Peak			PM Peak		
						Total	In	Out	Total	In	Out
Existing	110	General Light Industrial	35.800	1,000 Sq Ft	174	26	23	3	23	3	20
	942	Automobile Care Center	41.400	1,000 Sq Ft	1,290	93	61	32	129	62	67
<b>Total Existing Trips</b>				<b>1,464</b>		<b>119</b>	<b>84</b>	<b>35</b>	<b>152</b>	<b>65</b>	<b>87</b>
Proposed	160	Data Center	467.200	1,000 Sq Ft	463	51	28	23	42	13	29
<b>Total Proposed Trips</b>				<b>463</b>		<b>51</b>	<b>28</b>	<b>23</b>	<b>42</b>	<b>13</b>	<b>29</b>
<b>Total Net New Trips</b>				<b>-1,001</b>		<b>-68</b>	<b>-56</b>	<b>-12</b>	<b>-110</b>	<b>-52</b>	<b>-58</b>

Source: ITE Trip Generation, 11th Edition

<sup>1</sup> ITE *Trip Generation, 11th Edition* does not provide daily rates for ITE Land Use 942 (Automobile Care Center), therefore ten times the total PM peak hour trips.

Beyond the trip generation analysis, no level of service assessment has been conducted or warranted due to the findings above and a shift in CEQA analysis requirements to vehicle miles traveled (VMT) metrics that took place in July 2020. Transit, roadway, bicycle, and pedestrian facilities are not expected to change and therefore will not be impacted due to the project. For all these reasons, the project will not cause transportation-related impacts **(No Impact)**.



**4.17.3.2 Would the project conflict or be inconsistent with CEQA Guidelines § 15064.3, subdivision (b) regarding vehicle miles travelled?**

The City's Transportation Guidance provides guidance on when a project may be exempt from performing VMT analysis if the project meets at least one screening criteria based on:

- Small Project
- Local Serving Retail Project
- Local Serving Public Project
- 100% Affordable Housing Project
- Transit Supportive Project

It should be noted that each land use of a mixed-use project is considered separately. Project information was evaluated to determine if the Project would be exempt from a VMT analysis and is summarized in Table 4.17-3. Based on current project information given for this analysis, a VMT analysis is required for the data center and office uses. Detailed evaluation for each criterion is discussed in the following sections.

**Table 4.17-3 Project CEQA Screening**

<b>CEQA Land Use Screening Criteria</b>	<b>Project Exempt?</b>
Small Project	No
Local Serving Retail Project	N/A
Local Serving Public Project	N/A
100% Affordable Housing Project	N/A
Transit Supportive Project	No

**Small Project**

Small projects are defined as projects that generate fewer than 110 average daily trips. For projects where there is a change use, the total project trips are considered without any credit for existing land use replacement. As shown in Table 4.17-2, the proposed use alone exceeds the 110 daily trip threshold.

**Local Serving Retail Project**

Local Serving Retail Projects are defined as projects that are of 50,000 square feet or less or retail land use. The project does not include any retail land uses; therefore, this criterion does not apply.



### **Local Serving Public Project**

Local Serving Public Projects are projects such as fire stations, neighborhood parks, libraries, and community centers. The project does not include any of these uses; therefore, this criterion does not apply.

### **100% Affordable Housing**

Project components which consist of 100 percent restricted affordable housing may be exempt. This criterion is not applicable to the Project since this project does not propose any affordable housing.

### **Transit Supportive Project**

Locations near major transit stops or high-quality transit corridors will have a less-than-significant impact on VMT and may be exempt. This screening may apply for the following project characteristics:

- The Project is located within ½-mile of an existing Major Transit Stop or an existing transit stop along a High-Quality Transit Corridor
- For Office/R&D projects, a minimum Floor Area Ratio of 0.75
- For Residential projects, a minimum density of 35 units/acre
- Project promotes multimodal transportation networks
- Project includes transit-oriented design elements
- No excess parking: the project does not include more parking for use by residents, customers, or employees of the project than required by the City Code
- No loss of affordable dwelling units: the project does not replace affordable residential units with a smaller number of affordable units, and any replacement units are at the same level of affordability

The Project site is not near any major transit stops or high-quality transit corridor and this criterion does not apply.

### **VTA VMT Evaluation Tool**

The Santa Clara Valley Transportation Authority (VTA) in conjunction with Santa Clara County cities, developed the VTA VMT Evaluation Tool. This tool allows city staff, consultants, and developers to measure VMT for land use projects within Santa Clara County. Table 4.17-4 shows that the target VMT for the Project is 15 percent below the county average. The construction of the project alone would not reduce VMT for the parcel to below the target threshold. Therefore, consistent with the data center use of the project, the evaluation incorporates an alternative work schedule for employees reflecting a 4-40



work schedule (40 hours in 4 days). With the implementation of the 4-40 work schedule the project VMT is anticipated to be below the target threshold.

**Table 4.17-4 VA VMT Estimation**

	<b>VMT per Worker</b>
County Average VMT	16.64
Target 15% Below County Average	14.14
Existing Parcel Without Project	15.82
Estimated VMT With Project	15.60
Estimated VMT with Project and 4-40 Work Schedule	13.26

The project would not conflict or be inconsistent with CEQA Guidelines § 15064.3, subdivision (b) regarding vehicle miles travelled and therefore would not result in a significant transportation related impact. **(Less Than Significant Impact)**

**4.17.3.3 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)?**

A review of the detailed project site plan was conducted as part of the traffic memo to identify any issues related to access, internal circulation, pedestrian crossings, and truck circulation. Vehicles may access the site from either the western or eastern driveways. For pedestrian traffic, the site is accessible via the sidewalk along Martin Avenue and within the site. Bicyclists may access the site through Class III bicycle route along De la Cruz Boulevard and planned bicycle lanes along Lafayette Street and De la Cruz Boulevard. There are no existing or planned bicycle facilities along Martin Avenue. There is currently no transit service located within 0.25 mile of the site. The nearest bus route is Route 59 which runs along Scott Boulevard, with a bus stop approximately 0.8 miles away from the project. Transit riders may use the sidewalks along Martin Avenue to access the site. Overall, the review of the site plan found no deficiencies related to site access. In addition, the Project does not conflict with any pedestrian, bicycle, or transit plans. **(Less Than Significant Impact)**

**4.17.3.4 Would the project result in inadequate emergency access?**

As mentioned above, a review of the project site plan was performed by Kimley-Horn as part of the traffic memo to determine whether adequate site access would be provided. The project will not change the physical configuration of the surrounding road network or



existing curb locations, and therefore will not affect emergency vehicle access. **(No impact)**

#### **4.17.4 Mitigation Measures**

No mitigation measures are necessary as the project will not negatively affect transportation related resources.

#### **4.17.5 Government Agencies**

The City of Santa Clara has regulatory authority over the transportation infrastructure that could be affected by the project and will ensure compliance with any requirements during its permit review and implementation process.



## 4.18 UTILITIES AND SERVICE SYSTEMS

### 4.18.1 CEQA Checklist

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
<b><u>Utilities and Service Systems</u></b>				
Would the project:				
1) Require or result in the relocation or construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2) Have insufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3) Result in a determination by the wastewater treatment provider which serves or may serve the project that it does not have adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
4) Generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
5) Be noncompliant with federal, state, and local management and reduction statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

## 4.18.2 Environmental Setting

### 4.18.2.1 Regulatory Framework

#### State

#### ***State Water Code***

Pursuant to the State Water Code, water suppliers providing water for municipal purposes to more than 3,000 customers or supplying more than 3,000 acre-feet (approximately 980 million gallons) of water annually must prepare and adopt an urban water management



plan (UWMP) and update it every five years. As part of a UWMP, water agencies are required to evaluate and describe their water resource supplies and projected needs over a 20-year planning horizon, water conservation, water service reliability, water recycling, opportunities for water transfers, and contingency plans for drought events. The City of Santa Clara adopted its most recent UWMP in November 2021.

A Water Supply Assessment (WSA) is required pursuant to State Water Code Section 10910 if the project meets certain requirements outlined in Section 10912. A WSA is required for:

- A residential development of more than 500 units;
- A hotel or motel having more than 500 rooms;
- A commercial office building employing 1,000 people or having more than 250,000 sq. feet of floor space;
- An industrial, manufacturing or industrial park planned to house more than 1,000 employees or having more than 650,000 sq. feet of floor space;
- A mixed-use project that contains one or more of the criteria above; or
- Any project that has a water demand equal to or greater than the amount of water required by a 500 dwelling unit development.

### ***Assembly Bill 939***

The California Integrated Waste Management Act of 1989, or AB 939, established the Integrated Waste Management Board, required the implementation of integrated waste management plans, and mandated that local jurisdictions divert at least 50 percent of solid waste generated (from 1990 levels), beginning January 1, 2000, and divert at least 75 percent by 2010. Projects that would have an adverse effect on waste diversion goals are required to include waste diversion mitigation measures.

### ***Assembly Bill 341***

AB 341 sets forth the requirements of the statewide mandatory commercial recycling program. Businesses that generate four or more cubic yards of garbage per week and multi-family dwellings with five or more units in California are required to recycle. AB 341 sets a statewide goal for 75 percent disposal reduction by the year 2020.

### ***Senate Bill 1383***

SB 1383 establishes targets to achieve a 50 percent reduction in the level of the statewide disposal of organic waste from the 2014 level by 2020 and a 75 percent reduction by



2025. The bill grants CalRecycle the regulatory authority required to achieve the organic waste disposal reduction targets and establishes an additional target that at least 20 percent of currently disposed edible food is recovered for human consumption by 2025.

#### **4.18.2.2 Existing Conditions**

##### **Water Service**

###### ***Potable Water***

Water services to the site are provided by the City of Santa Clara Department of Water and Sewer Utilities. The water system consists of more than 335 miles of water mains, 27 active water wells and seven storage tanks with 28.8 million gallons of water storage capacity.<sup>64</sup> Drinking water is provided by an extensive underground aquifer (accessed by the City's wells) and by two wholesale water importers: the Santa Clara Valley Water District (imported from the Sacramento-San Joaquin Delta) and the San Francisco Hetch-Hetchy System (imported from the Sierra Nevada). About 30 percent of the City's water comes from these imported treated water supplies. The remaining 70 percent is pumped from the City's system of 26 active water wells.<sup>65</sup> The three sources are used interchangeably or are blended together. In 2015, the Water Utility had approximately 25,715 water service connections with an average potable water demand of 16.8 million gallons per day (MGD) potable water and an average demand of 3.2 MGD recycled water demand.<sup>66</sup>

###### ***Recycled Water***

Tertiary treated (or 'recycled') water serves as a fourth source of water supply and comprises approximately 16 percent of the City's overall water supply.<sup>67</sup> Recycled water is supplied from South Bay Recycled Water, which provides advanced tertiary treated water from the San Jose—Santa Clara Regional Wastewater Facility (formerly known as the San Jose/Santa Clara Water Pollution Control Plant). The City of Santa Clara recycles approximately one percent of its water through non-potable uses by businesses, industries, parks, and schools along pipeline routes. The City's recycled water program delivers recycled water throughout the City for landscaping, parks, public services and

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<sup>64</sup> City of Santa Clara. *2015 Urban Water Management Plan, City of Santa Clara Water Utility*. Page 12. Adopted November 2016. Accessed: March 11, 2020. Available at: <http://santaclaraca.gov/index.aspx?page=1984>.

<sup>65</sup> *Ibid.*

<sup>66</sup> *Ibid.*

<sup>67</sup> City of Santa Clara. *Water Utility*. Updated July 2012. Accessed: March 12, 2021. <https://www.santaclaraca.gov/our-city/departments-g-z/water-sewer-utilities/water-utility>



businesses. The nearest recycled water lines are located near the northeast corner of the site on the other side of the existing railway line.<sup>68</sup>

### ***Wastewater***

Wastewater from the City of Santa Clara is treated at the San José – Santa Clara Regional Wastewater Facility (RWF). The RWF is owned jointly by the two cities and is operated by the City of San José’s Department of Environmental Services. The facility is one of the largest advanced wastewater treatment facilities in California and serves over 1,400,000 people in San José, Santa Clara, Milpitas, Campbell, Cupertino, Los Gatos, Saratoga, and Monte Sereno.<sup>69</sup> The Regional Wastewater Facility provides primary, secondary, and tertiary treatment of wastewater and has the capacity to treat 167 million gallons of wastewater a day. Approximately 10 percent of the RWF’s effluent is recycled for non-potable uses and the remainder flows into San Francisco Bay. The NPDES permit for RWF includes wastewater discharge requirements.

Wastewater from the existing buildings on-site currently discharges to either a 12 or 15-inch sanitary sewer line that flows to a 30-inch line and is eventually conveyed to the RWF. Sanitary sewer lines that serve the project site are maintained by the City of Santa Clara Sewer Utility.

### ***Storm Drainage***

The City of Santa Clara owns and maintains the municipal storm drainage system which serves the project site. In the existing condition, stormwater discharges the site via existing storm drain laterals into the site into the public storm drain system at three locations; the southeast corner of the 651 Martin Avenue property, the southwest corner of the 651 Martin Avenue property and near the center of the property along the Martin Avenue frontage. The proposed project will not be utilizing any of the existing storm drain laterals to the site and is proposing new storm drain connections to the public storm drain system.

The on-site drainage system is comprised of overland release flows, and an underground pipe network to convey the anticipated peak flows that eventually discharge to the Guadalupe River, which ultimately flows to the San Francisco Bay.

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<sup>68</sup> City of Santa Clara. *Recycled Water System Map*. City of Santa Clara, California. Updated July 2012. Accessed: March 21, 2021. Available at: <http://santaclaraca.gov/home/showdocument?id=14883>.

<sup>69</sup> City of Santa Clara. *San Jose-Santa Clara Regional Wastewater Facility*.



## ***Solid Waste***

Solid waste collection in the City of Santa Clara is provided by Mission Trail Waste System through a contract with the City. The City has an arrangement with the owners of Newby Island Sanitary Landfill (NISL), located in San José, to provide disposal capacity for the City of Santa Clara through 2024. Recycling services are provided through Stevens Creek Disposal and Recycling.

## ***Electricity and Natural Gas Services***

Electric service is provided to the site by Silicon Valley Power and natural gas is provided by Pacific Gas and Electric (PG&E).

### **4.18.3 Environmental Impact Discussion**

#### **4.18.3.1 Would the project require or result in the relocation or construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects**

The MBGF would not require new connections to utilities. The MDC would utilize existing connections to connect the City's stormwater, electric, telecommunications, and waste systems to the extent feasible. The MDC would incrementally increase the demand on existing facilities in the City of Santa Clara.

As described below, the proposed project will use slightly less water than the existing project. Similarly, the proposed project will discharge sewage to the sanitary sewer in quantities that are equal to or less than those of the existing development. Therefore, the MDC will not increase the demand on the City's sewer system or wastewater treatment plant.

As described in Section 2.3.8,2, as part of the MDC, Martin Properties will construct a new on-site switching station to SVP specifications and an on-site MDC owned substation to provide 60kV service to the site. The switching station will ultimately be owned and operated by SVP as part of its 60kV loop system. The proposed switching station will be located along Martin Ave to the and cut-in to the existing 60kV line passing nearby. The station will be configured as a loop with two radial taps to the MDC substation. Reliability is maintained such that, if there is a fault along any section of the Loop, electric service is still supplied from the receiving station at the other of the 60kV loop. The impacts associated with construction of the substation have been incorporated into the



construction assumptions for the project that have been analyzed throughout this SPPE application.

Because the MDC would use existing connections to utilities where feasible and has analyzed the new recycled water pipeline described in Section 2.3.8.1, and the new substation described in Section 2.3.8.2, as part of this application which has found no significant environmental impacts, the project will not result in less than significant impacts. **(Less than Significant Impact)**

**4.18.3.2 Would the project have insufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?**

**Site Grading and Construction.** Grading and construction of the MDC including the MBGF is estimated to utilize 1.75-acre feet of water over the 24-month construction period for Phase I and Phase II.

**MDC Operation.** The MDC could require water when outside air temperatures approach design to augment its adiabatic cooling system. The data center will be designed to use up to 0.8 AFY of recycled water when supply for cooling when it is available and provided by the City of Santa Clara, and a potable water connection will be provided as a back-up source to the recycled water system in the interim period.

Total potable water use at full buildout of the MDC is estimated to be approximately 2 AFY. Landscaping for the site is estimated to use up to 1 AFY.

Currently the activities at the site have a historic water use of approximately 3.2 AFY. Since the total maximum water at the site is very near historical use, there will be a sufficient supply of water for peak use. **(Less than Significant Impact)**

**4.18.3.3 Would the project result in a determination by the wastewater treatment provider which serves or may serve the project that it does not have adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?**

The RWF has the capacity to treat 167 million gallons of wastewater per day.<sup>70</sup> Currently, the RWF is operating under a 120 million gallon per day dry weather effluent flow constraints. The MDC will not increase the wastewater discharge above the existing site

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<sup>70</sup> City of San José. San José-Santa Clara Regional Wastewater Facility. Accessed: November 8, 2019. Available at: <http://sanjoseca.gov/index.aspx?nid=1663>.



use. Since the MDC will not result in new or increased wastewater discharge, the RWF would still operate below the required 120 million gallons per day constraint and would not increase the need for wastewater treatment beyond the capacity of the RWF. **(Less than Significant Impact)**

**4.18.3.4 Would the project generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?**

The Newby Island Landfill, located in San José, has an agreement with the City to provide disposal capacity through 2024. On a tons-per-day basis, the Newby Island Landfill has spare daily capacity of 860 tons. There are no specific solid waste generation rates for public storage facilities. On a day-to-day basis, it can be assumed that waste generation is minimal and associated with the on-site office. Nevertheless, when customers clean out their storage facilities, it is likely that some waste is generated.

Based on data from CalRecycle, a generic manufacturing/warehouse facility would generate approximately 1.42 pounds of solid waste per 100 square feet of building area per day.<sup>71</sup> Using this rate, the MDC would generate approximately 6,674 pounds of waste per day. This is a very conservative estimate and represents approximately 0.3 percent of Newby Island's excess daily capacity. In addition, the City of Santa Clara continues to exceed its waste diversion goal of 50 percent, which would result in an even smaller contribution.

If the Newby Island Landfill is not available to accept waste after 2024, the City shall prepare a contract with another landfill with capacity, such as Guadalupe Mines in San José, which is not anticipated to close until 2048. Because the project can be served by a landfill with capacity and would not result in a significant increase in solid waste or recyclable materials, the project's impacts related to solid waste would be less than significant. **(Less than Significant Impact)**

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<sup>71</sup> CalRecycle. "Estimated Solid Waste Generation Rates". Accessed March 12, 2021. <https://www2.calrecycle.ca.gov/WasteCharacterization/General/Rates>



**4.18.3.5 Would the project be noncompliant with federal, state, and local management and reduction statutes and regulations related to solid waste?**

The construction and operation of the project would comply with federal, state, and local regulations related to diversion of materials from disposal and appropriate disposal of solid waste. **(Less than Significant Impact)**

**4.18.4 Mitigation Measures**

No mitigation measures are necessary because the project will not cause adverse effects on existing utilities and service systems.

**4.18.5 Government Agencies**

The City of Santa Clara has regulatory authority over the utilities and service systems analyzed in this section and will impose requirements as necessary as part of its permit review and implementation process.



## 4.19 WILDFIRE

### 4.19.1 CEQA Checklist

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
<b><u>Wildfire</u></b>				
If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:				
1) Substantially impair an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	<input type="checkbox"/>	<input type="checkbox"/>		<input checked="" type="checkbox"/>

### 4.19.2 Environmental Setting

The project site is not located in or near state responsibility areas or lands classified as very high fire hazard severity zones.<sup>72</sup>

<sup>72</sup> State of California Department of Forestry and Fire Protection. Santa Clara County Fire Hazard Severity Zones in SRA. Adopted November 7, 2007.



#### **4.19.2.1 Environmental Impact Discussion**

The project site is not located in or near state responsibility areas or lands classified as very high fire hazard severity zones; therefore, the project would not result in wildfire impacts. **(No Impact)**



## SECTION 5.0     ALTERNATIVES

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### 5.1     EVALUATION CRITERIA

The primary goal of the MDC is to be a state-of-the-art data center that provides greater than 99.999 percent reliability (fine nines of reliability). The MDC has been designed to reliably meet the increased demand of digital economy, its customers and the continued growth. The MDC's purpose is to provide its customers with mission critical space to support their servers, including space conditioning and a steady stream of high-quality power supply. Interruptions of power could lead to server damage or corruption of the data and software stored on the servers by Martin Properties' clients. The MDC will be supplied electricity by SVP through a new distribution substation constructed on the MDC site and owned and operated by SVP.

To ensure a reliable supply of high-quality power, the MBGF was designed to provide backup electricity to the MDC only in the event electricity cannot be supplied from SVP and delivered to the MDC building. To ensure no interruption of electricity service to the servers housed in the MDC building, the servers will be connected to uninterruptible power supply (UPS) systems that store energy and provide near-instantaneous protection from input power interruptions. However, to provide electricity during a prolonged electricity interruption, the UPS systems will require a flexible and reliable backup power generation source to continue supplying steady power to the servers and other equipment. The MBGF provides that backup power generation source.

The MDC's Project Objectives are as follows:

- Develop a state-of-the-art data center large enough to meet projected growth;
- Develop the Data Center on land that has been zoned for data center use at a location acceptable to the City of Santa Clara;
- Develop a Data Center that can be constructed in two phases which can be timed to match projected growth;
- To incorporate the most reliable and flexible form of backup electric generating technology into the MBGF considering the following evaluation criteria.
  - **Reliability.** The selected backup electric generation technology must be extremely reliable in case of an emergency loss of electricity from the utility.
    - The MBGF must provide a higher reliability than 99.999 percent in order for the MDC to achieve an overall reliability of equal to or greater than 99.999 percent reliability.
    - The MBGF 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 units fail due to external or internal failure, the system will have redundancy to continue to operate without interruption.
    - The MDC must have on-site means to sustain power for 24-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 and approvals are required.
- **Technical Feasibility.** The selected backup electric generation technology must utilize systems that are compatible with one another.

As part of the preliminary planning and design of the MDC and the MBGF, Martin Properties considered alternatives to the proposed backup generators and use of a smaller capacity system. For completeness purposes, a discussion of the No Project Alternative is also included.

## **5.2 REDUCED CAPACITY SYSTEM**

Martin Properties considered a backup generating system with less emergency generators but like the No Project Alternative discussed below, any generating capacity less than the total demand of the data center at maximum occupancy would not allow Martin Properties to provide the critical electricity that would be needed during an emergency. It is important to note that in addition to the electricity that is directly consumed by the servers themselves, the largest load of the data center is related to cooling the rooms where the servers are located. In order for the servers to reliably function, they must be kept within temperature tolerance ranges. The industry standard is to design and operate a building that can meet those ranges even during a loss of electricity provided by the existing electrical service provider. Therefore, in order for Martin Properties to provide the reliability required by its clients it was necessary to provide a backup generating system that could meet the maximum load of the MDC during full occupancy and include redundancy as described in Section 2.2.3. A reduced capacity system would not fulfill the basic project objectives of the MBGF.

## **5.3 BACKUP ELECTRIC GENERATION TECHNOLOGY ALTERNATIVES**

Martin Properties considered using potentially available alternative technologies: gas-fired turbines; flywheels; gas-fired reciprocating internal combustion engines, batteries; fuel cells; and alternative fuels. As discussed below, none of the technologies considered could meet the overall Project Objectives because they were commercially or technically infeasible and/or would not meet the necessary standard of reliability during an emergency.



### 5.3.1 Flywheels

Flywheel energy storage systems use electric energy input which is stored in the form of kinetic energy. Kinetic energy can be described as “energy of motion,” in this case the motion of a spinning mass, called a rotor. The rotor spins in a nearly frictionless enclosure. When short-term backup power is required because utility power fluctuates or is lost, the inertia allows the rotor to continue spinning and the resulting kinetic energy is converted to electricity.

Martin Properties has concluded that flywheel technology would not be a viable option and could not meet the Project Objectives for the following reasons:

- Flywheel technology does not perform within the required reliability levels of Martin Properties and is prone to system failure.
- Flywheel technology requires an extensive amount of maintenance to keep each energy storage system functioning.
- Flywheel systems cannot provide sufficient time duration (e.g. 24 hours or more) as a backup generation as the fly wheel motion can typically only sustain 10-30sec outages at a time.

### 5.3.2 Gas-Fired Turbines

Martin Properties considered using natural gas-fired turbines instead of diesel generators to supply backup power for the MDC. This technology option was rejected because it would not meet the project objectives. Natural gas turbines have the advantage of better emission of NOx and CO than diesel. However, as an emergency backup choice, it has the following deficiencies:

- 1) The gas infrastructure is more likely to have curtailment of the natural gas supplies during due natural disasters and other emergency loss of utility power.
- 2) Onsite storage or delivery of natural gas to address the curtailment issues during an emergency is impossible to support long duration of backup (24 hours or longer time) due to the volume required.
- 3) The natural gas turbine is better suited for continuous operation instead of standby mode, which makes maintenance challenging.
- 4) The natural gas turbine needs minimum loads (30%), so additional load banks are required on site, leading to the change of design in terms of reliability and the use of more fuel than is necessary and leading to the wasting of electricity through the load bank.
- 5) Typical turbine engines have larger system sizes (4MW-50MW), while the smaller ones such as micro-turbines of 2.5MW will use twice the physical footprint and cost twice as much as the proposed generation technology.

Therefore, natural gas turbines are not considered reliable enough to meet the extremely high reliability requirements of a mission critical data center like the MDC. A fixed fuel source such as a natural gas pipeline introduces another potential point of failure or load curtailment. Taking into account the natural gas outages from maintenance and repair by



the utility, interruption due to construction accidents within the system, long-term damage and interruption during an earthquake, or outages caused by problems within the greater distribution system are higher probability occurrences than being able to obtain diesel fuel for longer than 24-hour outages. Therefore, this alternative was rejected as not being able to meet the Project Objectives.

### **5.3.3 Gas-Fired Reciprocating Engines**

Martin Properties considered using natural gas-fired reciprocating engines instead of diesel generators to supply emergency backup power for the MDC. This technology option was rejected because it would not meet the Project Objectives. While natural gas engines could achieve start up times sufficient to work with the UPS systems design and there are 2.5MW/3.1MW engines available, this lacks sufficient resilience to accept large block transfer of load associated with restart sequences when transferring from utility grid to backup generation. Therefore, natural gas reciprocating engines are not considered technically feasible or reliable enough to meet the industry standard or needs of the MDC. As discussed above, storage of sufficient natural gas on site to maintain emergency backup electricity demands of the MDC during an outage would not be tenable given the volume of natural gas that would be required.

### **5.3.4 Battery Storage**

Martin Properties considered using batteries alone as a source of emergency backup power. The primary reason batteries alone were rejected was the limited duration of battery power. Batteries can provide power quickly, which is the reason Martin Properties has incorporated them into the overall backup electrical system design through the use of the UPS. As described in Section 2.2.4.2, batteries in the UPS System would be initiated at the first sign of electricity interruption. However, the current state of battery technology does not allow for very long durations of discharge at building loads as high as planned for the MDC. Maximum discharging time is about 5 hours when doubled up from one ISO container to two, which needs more physical space. In addition, Lithium-ion batteries have more restrictive California fire code regulations. Renewable non-Lithium-ion batteries such as ZnMnO<sub>2</sub> are not commercially feasible for data centers yet. Once the standalone batteries are completely discharged, the only way they can be recharged without onsite generation is if the utility electrical system is back up and running. Since it is not possible to predict the duration of an electricity outage, batteries are not a viable option for emergency electrical power. Therefore, because battery storage cannot provide the duration that may be necessary during an emergency, this technology option was rejected as technically and commercially infeasible and unable to allow the MDC to meet its Project Objectives.

The proposed diesel generators provide 24 hours of backup electricity without the need for refueling. In order to provide for the same 24-hour capacity, approximately 10 ISO



containers representing approximately 10 times the amount of real estate would be required. The site will not accommodate the number of batteries necessary.

### **5.3.5 Fuel Cells – Backup Replacement**

Martin Properties is very familiar with fuel cell technology as it has considered fuel cells at its current data centers. Fuel cells can provide both primary and off grid power. The fuel cells utilized by Bloom Energy and others are solid Oxide Fuel Cells (SOFC) that operate at a high temperature of 750 Deg C, they need to stay hot to provide power. As a choice of backup, fuel cells need to run continuously in dual modes, as a primary source, or a standby mode when the grid is off (islanding mode). The fuel cells have additional ultra-capacitors to cope with the 10-20 second load transfer time to match up with diesel generation technology.

The fuel cell has the following technical issues that negatively affect its ability to be utilized as an emergency backup generation option.

- 1) It needs to run continuously to provide base load electricity to stay hot. This is why large data centers (Equinix, Apple, Yahoo) use Bloom Energy as primary source and maintain their existing emergency diesel generation fleet as backup.
- 2) Fuel cells require approximately 3 times more space than the emergency generators proposed for the MBGF and stacking is challenging and difficult and expensive to design to applicable codes.
- 3) Fuel cells rely on natural gas as feed stock, so the issues with natural gas infrastructure and onsite storage described above also limit reliability.

There are fuel cell technologies (Proton Exchange Membrane) that utilize liquid hydrogen as a fuel. This type of fuel cell is mostly used for mobile sources and can start cold quicker similar to a combustion engine. Martin Properties understands that there are pilot programs to scale this type of fuel cell to larger sizes. However, the issues that affect the Project Objectives of this technology include:

- 1) The technology is not yet commercially available at sizes necessary for a large data center.
- 2) The footprint is projected to be about twice the size of the proposed emergency generators.
- 3) Onsite storage of 24 hours of liquid hydrogen will take significant additional space not available at the site.
- 4) The potential for on-site and offsite impacts of a large release of liquid hydrogen which would be stored at pressure (6000 PSI) at the project site would be likely unacceptable within Santa Clara.

### **5.3.6 Fuel Cells – Primary Generation/Grid Backup**

Martin Properties has evaluated generating primary electricity with fuel cells on-site and relying on the electricity grid for emergency backup electricity. One example of primary



power is that Equinix has partnered with Bloom Energy over the last 5 years to deploy over 45 MW of fuel cell technology at various sites around the country using fuel cells as base load. There are other sites, such as Home Depot where Bloom Energy fuel cells provide primary electricity. However, we are unaware of any data center fuel cell application where fuel cells provide the full electricity needs for the data center without the bulk of the primary power being delivered by a utility.

There are two primary reasons that this solution cannot achieve the Martin Properties' MDC Project Objectives. The first is that it is unlikely that Silicon Valley Power (SVP) would procure and reserve the amount of electricity necessary to power the MDC in perpetuity as a backup source on a moment's notice. The magnitude of electricity for such an event after full buildout of the MDC would render such an option infeasible.

As currently designed, the MBGF will provide an N+1 protection scheme for the MDC. In other words, the primary electricity will be provided by the extremely reliable AVP electric system and if that system fails, the diesel-fired emergency generators would provide the electricity that the MDC requires. Utilizing fuel cells as the primary generation and relying on the grid as backup in the event of fuel cell failure would also provide an N+1 protection scheme. However, this alternative would provide lower reliability during an earthquake - the design natural disaster for California projects. During an earthquake, it is possible that the natural gas system cannot deliver the fuel to the fuel cells at the same time that the SVP electrical system is experiencing an outage. In that case, in order to provide the same reliability as the proposed design, emergency backup generators would still be necessary (N+2) to provide electricity to the MDC during the design natural disaster case. Therefore, in order to have the same reliability, the same number and size of emergency backup generators would be required.

Therefore the use of fuel cells as primary generation would not replace the proposed emergency backup generators in order to meet the Project Objectives.



## **SECTION 6.0     AGENCY AND CONTACT INFORMATION**

---

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Planning & Grants  
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Wendy Stone

Program Manager

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[westone@SantaClaraCA.gov](mailto:westone@SantaClaraCA.gov)



## **SECTION 7.0      NOTIFICATION LIST**

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Appendix H provides a list of site addresses, including owner's address if different from the site address, with a 1000 feet radius of the site including a map of the radius provided by the City of Santa Clara.



## SECTION 8.0 LIST OF PREPARERS

---

### **DayZen LLC**

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### **Ramboll US Consulting, Inc.**

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Emily Weissinger, PE, Senior Managing Consultant

### **First Carbon Solutions**

Jason Brandman, Vice President, Director

Bernhard Warzecha, Senior Biologist/Project Manager

### **Kimley-Horn and Associates**

Mike Mowery, PE

Elizabeth Chau, PE

### **Salter**

Valerie Smith, PE, Vice President

### **PaleoWest**

John J. Eddy, M.A., RPA, Bay Area Team Lead

Abigail Heller-Leib, M.A., RPA, Senior Archaeologist



## **SECTION 9.0      ACRONYMS AND ABBREVIATIONS**

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AB	Assembly Bill
ABAG	Association of Bay Area Governments
AFY	Acre-feet per year
AIA	Airport Influence Area
ALUC	Airport Land Use Commission
ACM	Asbestos containing material
amsl	above mean sea level
ATCM	Air Toxics Control Measure
BAAQMD	Bay Area Air Quality Management District
BACT	Best Available Control Technology
BASMAA	Bay Area Stormwater Management Agencies Association
BES	Bulk Electric System
bgs	below ground surface
BPIP-PRIME	Building Profile Input Program – Plume Rise Model Enhancements
BMPs	Best Management Practices
Btu	British thermal units
CAA	Clean Air Act
CalARP	California Accidental Release Prevention
CalEEMod	California Emissions Estimator Model
CalEPA	California Environmental Protection Agency
CALGreen	California Green Building Standards Code
Cal/OSHA	California Division of Occupational Safety and Health
CAP	City of Santa Clara Climate Action Plan
CARB	California Air Resources Board
CAAQS	California Ambient Air Quality Standards
CBC	California Building Standards Code
CDFW	California Department of Fish and Wildlife
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CGS	California Geologic Survey



CH <sub>4</sub>	Methane
CHRIS	California Historical Resources Information System
CLUP	Comprehensive Land Use Plan
CMP	Congestion Management Program
CO	Carbon monoxide
CO <sub>2</sub>	Carbon dioxide
CO <sub>2e</sub>	Carbon dioxide equivalents
CNEL	Community Noise Equivalent Level
CUPA	Certified Unified Program Agency
dBA	A-weighted decibels
DNL	Day-Night Average Sound Level
DPF	Diesel particulate filters
DPM	Diesel particulate matter
DTSC	Department of Toxic Substances Control
EJ	Environmental justice
EIR	Environmental Impact Report
EPA	United States Environmental Protection Agency
FAA	Federal Aviation Administration
FAR	Floor area ratio
FDA	Food and Drug Administration
FEMA	Federal Emergency Management Agency
FIRMs	Flood Insurance Rate Maps
g/bhp-hr	grams/brake horse-power hour
GHGs	Greenhouse gas emissions
GPM	Gallons per minute
GWh	Gigawatt hours
H <sub>2</sub> S	Hydrogen sulfide
HAPs	Hazardous Air Pollutants
HFCs	Hydrofluorocarbons
HRA	Health risk assessment
HREC	Historical recognized environmental conditions
ISZ	Inner Safety Zone



km	Kilometer
L <sub>max</sub>	Maximum A-weighted noise level
LBGF	Lafayette Backup Generating Facility
LDC	Lafayette Data Center
LID	Low Impact Development
LOS	Level of service
MBTA	Migratory Bird Treaty Act
MEIR	Maximum exposed individual residential receptor
MEIS	Maximum exposed individual sensitive receptor
MEIW	Maximum exposed individual worker receptor
MGD	million gallons per day
MMTCO <sub>2e</sub>	Million metric tons of carbon dioxide equivalents
MND	Mitigated Negative Declaration
mpg	Miles per gallon
MPO	Metropolitan Planning Organizations
MRP	Municipal Regional Permit
msl	mean sea level
MTC	Metropolitan Transportation Commission
MVA	megavolt amps
MW	Megawatts
N <sub>2</sub> O	Nitrous oxide
NAAQS	National Ambient Air Quality Standards
NAD83	North American Datum of 1983
NAHC	Native American Heritage Commission
NED	National Elevation Dataset
NFIP	National Flood Insurance Program
NISL	Newby Island Sanitary Landfill
NO <sub>2</sub>	Nitrogen dioxide
NOD	Notice of Determination
NOI	Notice of Intent
NO <sub>x</sub>	Nitrogen oxides
NPDES	National Pollutant Discharge Elimination System

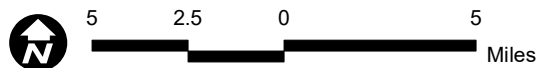
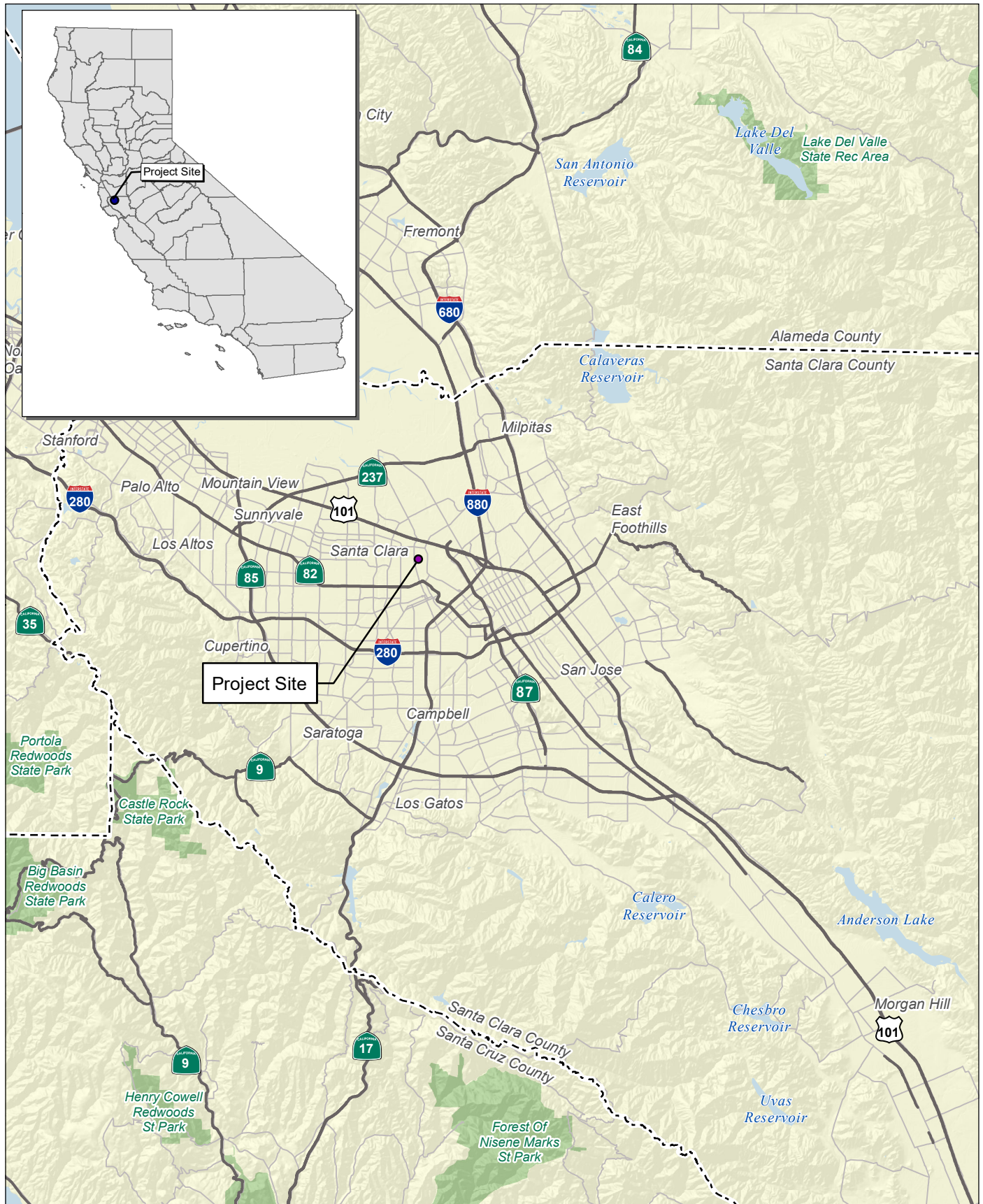


NSPS	New Source Performance Standards
NWIC	Northwest Information Center
O <sub>3</sub>	Ozone
OEHHA	California Office of Environmental Health Hazard Assessment
OPR	Governor's Office of Planning and Research
Pb	Lead
PCBs	Polychlorinated biphenyls
PDA	Priority Development Areas
PFCs	Perfluorocarbons
PG&E	Pacific Gas and Electric
PM <sub>2.5</sub>	Sub 2.5-micron particulate matter
PM <sub>10</sub>	Sub 10-micron particulate matter
PMI	Point of maximum impact
PMVMRM	Plume Molar Volume Molar Ratio Method
POC	Precursor organic compounds
ppm	parts per million
PPV	Peak Particle Velocity
PUE	Power Usage Effectiveness
PV	Photovoltaics
RECs	Recognized environmental conditions
REL	Reference Exposure Level
RHNA	Regional Housing Need Allocation
ROG	Reactive organic
RPS	Renewable Portfolio Standard
RWF	Santa Clara Regional Wastewater Facility
RWQCB	Regional Water Quality Control Board
SB	Senate Bill
SCCDEH	Santa Clara County Department of Environmental Health
SCFD	City of Santa Clara Fire Department
SCPD	City of Santa Clara Police Department
SCS	Sustainable Communities Strategy
SVCWD	Santa Clara Valley Water District



SFBAAB	San Francisco Bay Area Basin
SFHA	Special Flood Hazard Areas
SHMA	Seismic Hazards Mapping Act
SF <sub>6</sub>	Sulfur hexafluoride
SMARA	Surface Mining and Reclamation Act
SMP	Site Management Plan
SO <sub>x</sub>	Sulfur oxides
SO <sub>2</sub>	Sulfur dioxide
SPPE	Small Power Plant Exemption
SVP	Silicon Valley Power
SWPPP	Storm Water Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TACs	Toxic air contaminants
TCRs	Tribal Cultural Resources
TDM	Transportation Demand Management
TMDLs	Total maximum daily loads
TPZ	Traffic Pattern Zone
TSZ	Turning Safety Zone
USFWS	United States Fish and Wildlife Service
UTM	Universal Transverse Mercator
UWMP	Urban Water Management Plan
VMT	vehicle miles traveled
VOC	Volatile organic compounds
VRP	Visibility reducing particulate
VSD	Virtually safe dose
WSA	Water Supply Assessment





**Figure 1-1**  
**Regional Location Map**





Source: Bing Aerial Imagery.

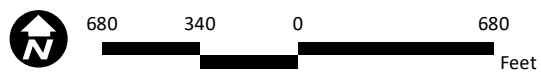


Figure 1-2  
Site Vicinity Map



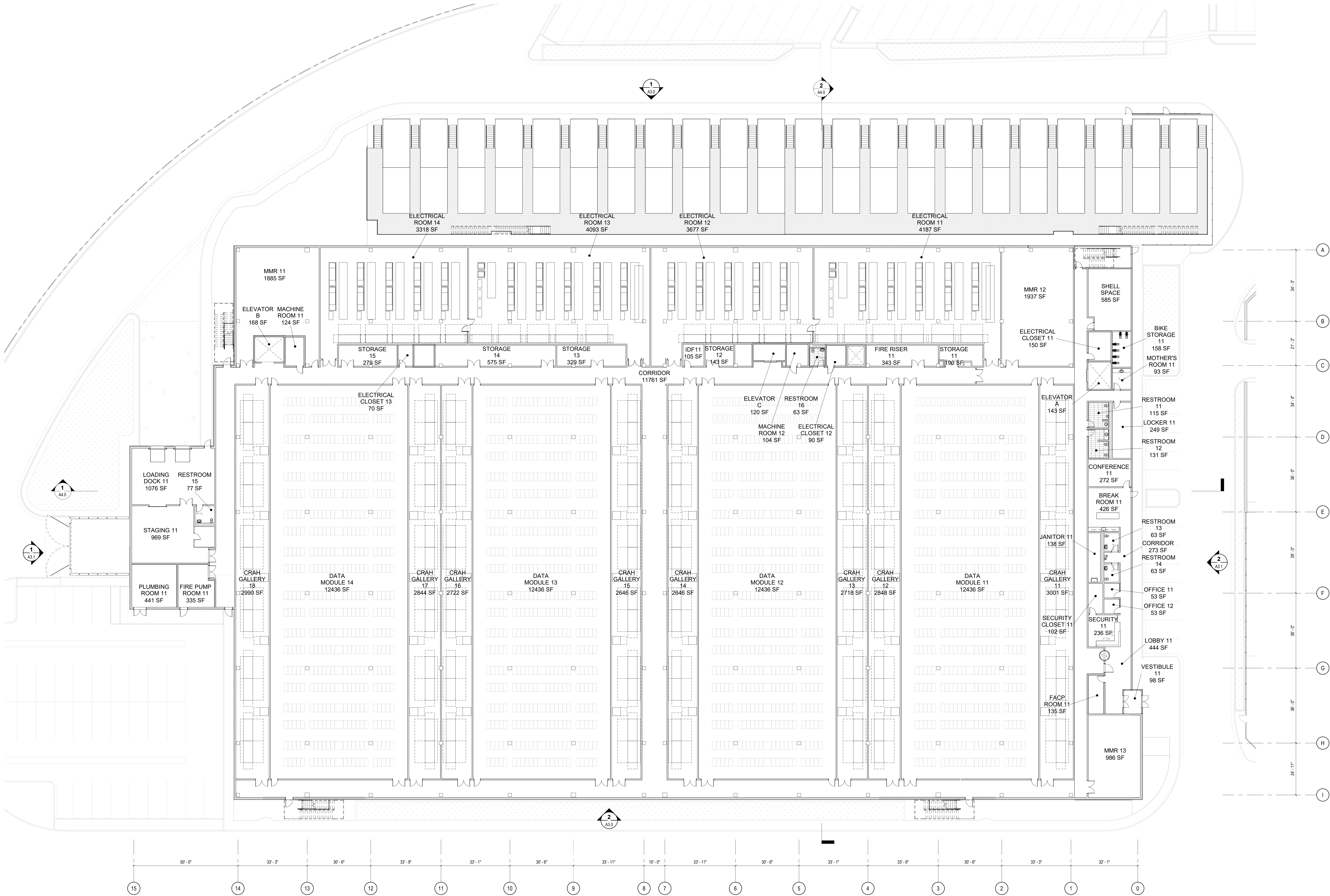
# APPENDIX A

Site Architectural and Civil Drawings









1 FLOOR PLAN - LEVEL 1  
1/16" = 1'-0"

GENERAL NOTES

OWNER

MARTIN AVENUE  
PROPERTIES

CONTRACTOR

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Suite 400  
San Francisco, CA 94104  
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PROGRESS SET  
NOT FOR CONSTRUCTION

No.	Description	Date
-----	-------------	------

651 MARTIN  
AVENUE

651 MARTIN AVENUE  
SANTA CLARA, CA  
95050  
APN: 224-04-071

LEVEL 01 FLOOR PLAN

A1.1

SCALE: Scale as Noted

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MARTIN AVENUE  
PROPERTIES

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PROGRESS SET  
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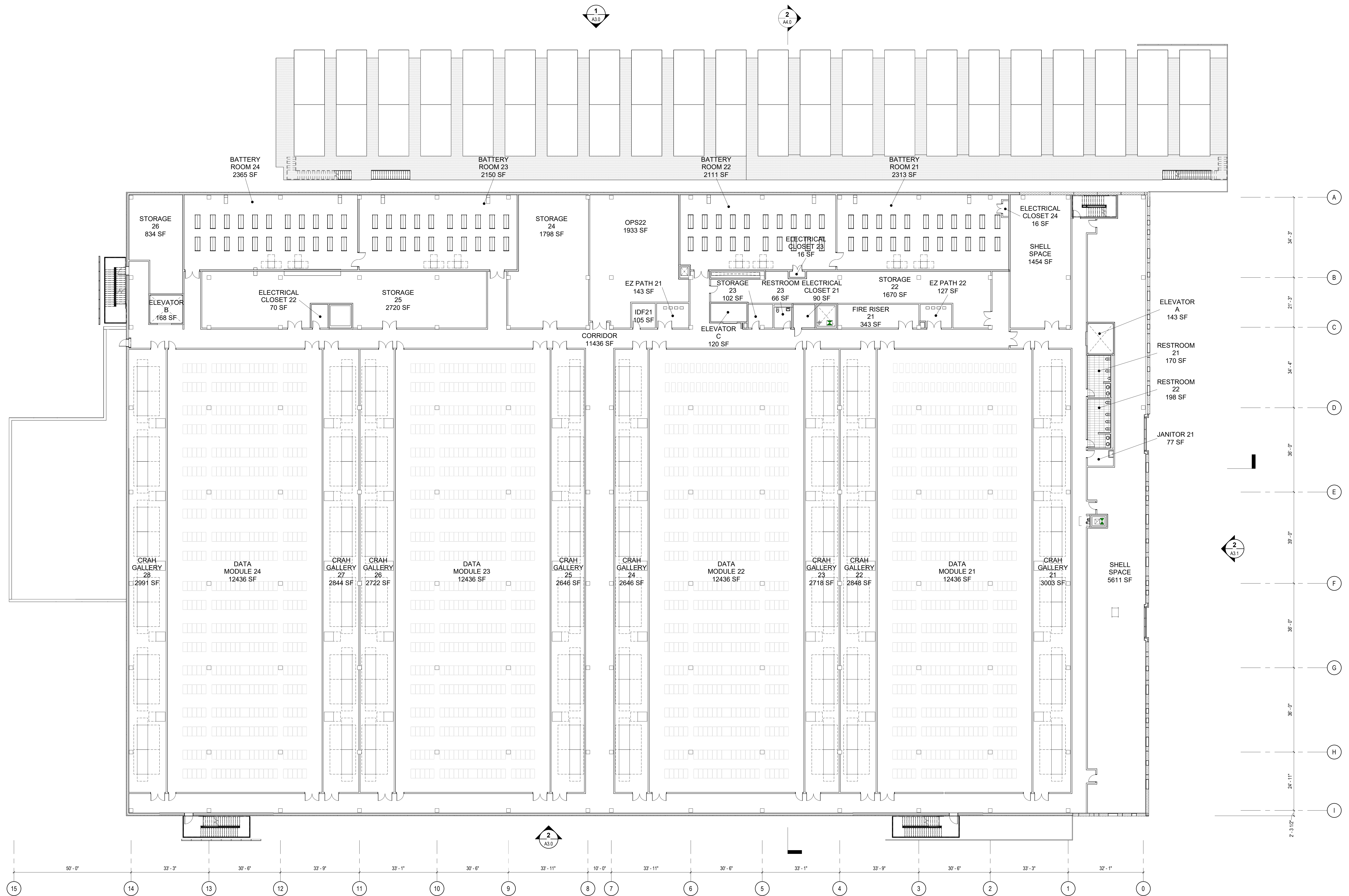
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AVENUE**

51 MARTIN AVENUE  
SANTA CLARA, CA  
95050  
APN: 224-04-071

LEVEL 02 FLOOR PLAN

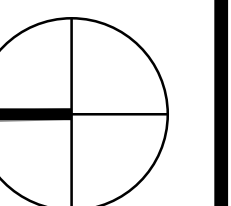
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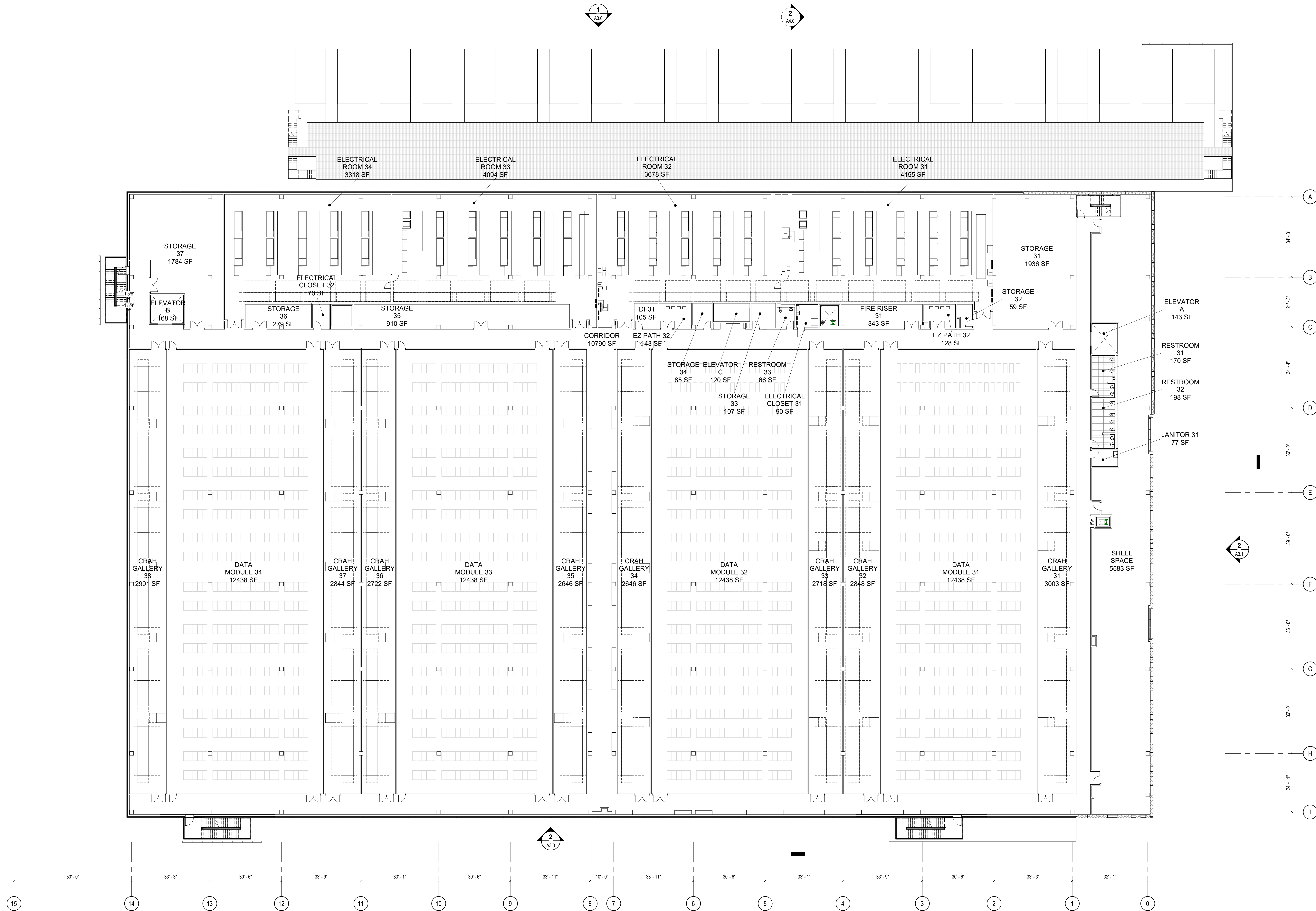


1 FLOOR PLAN - LEVEL 2  
1/16" = 1'-0"

### GENERAL NOTES







1 FLOOR PLAN - LEVEL 3  
1/16" = 1'-0"

GENERAL NOTES

OWNER

MARTIN AVENUE  
PROPERTIES

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-----	-------------	------

**651 MARTIN  
AVENUE**

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LEVEL 03 FLOOR PLAN

**A1.3**

SCALE: Scale as Noted

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**651 MARTIN  
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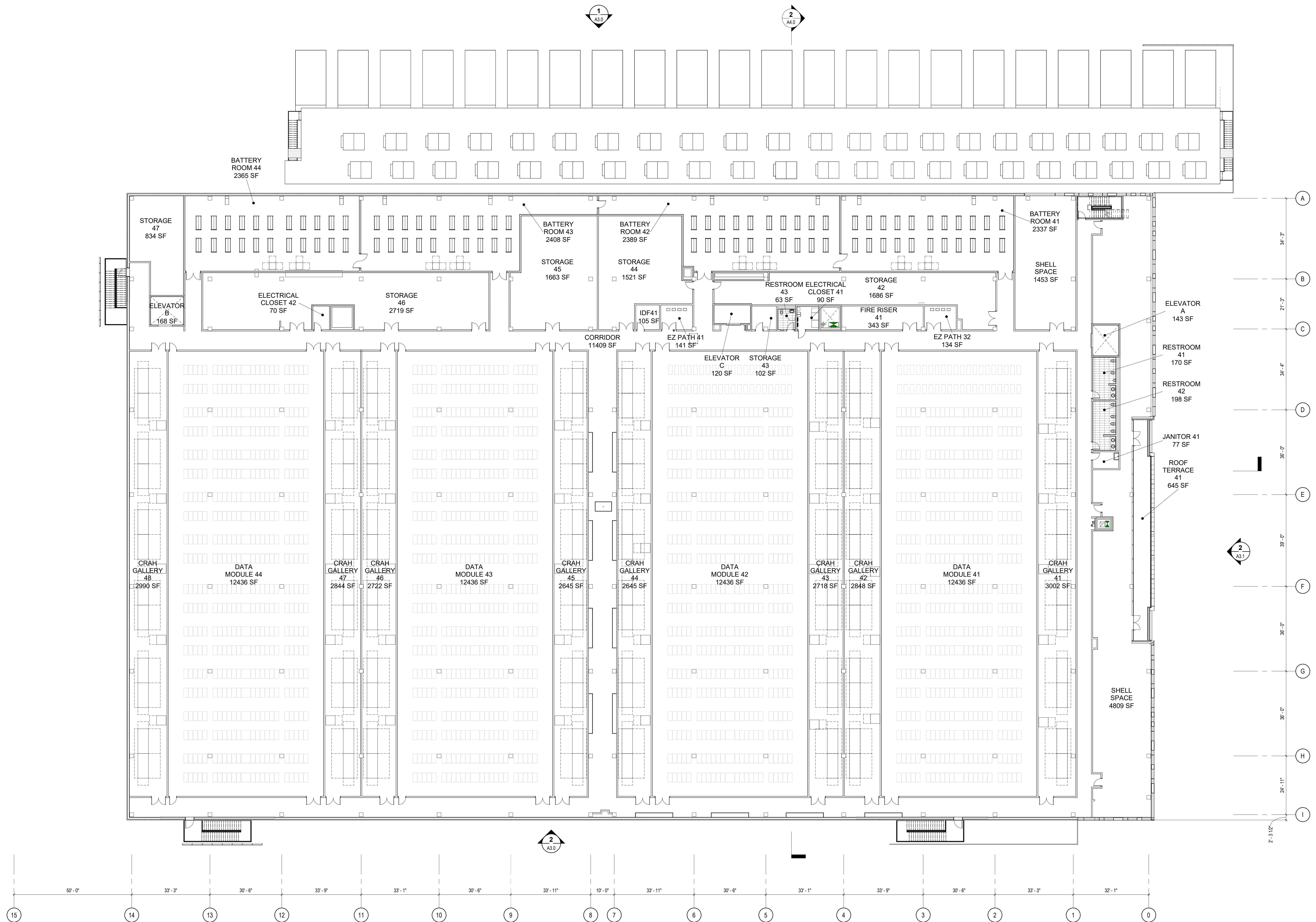
51 MARTIN AVENUE  
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95050  
APN: 224-04-071

LEVEL 04 FLOOR PLAN

### A1.4

SCALE: Scale as Noted

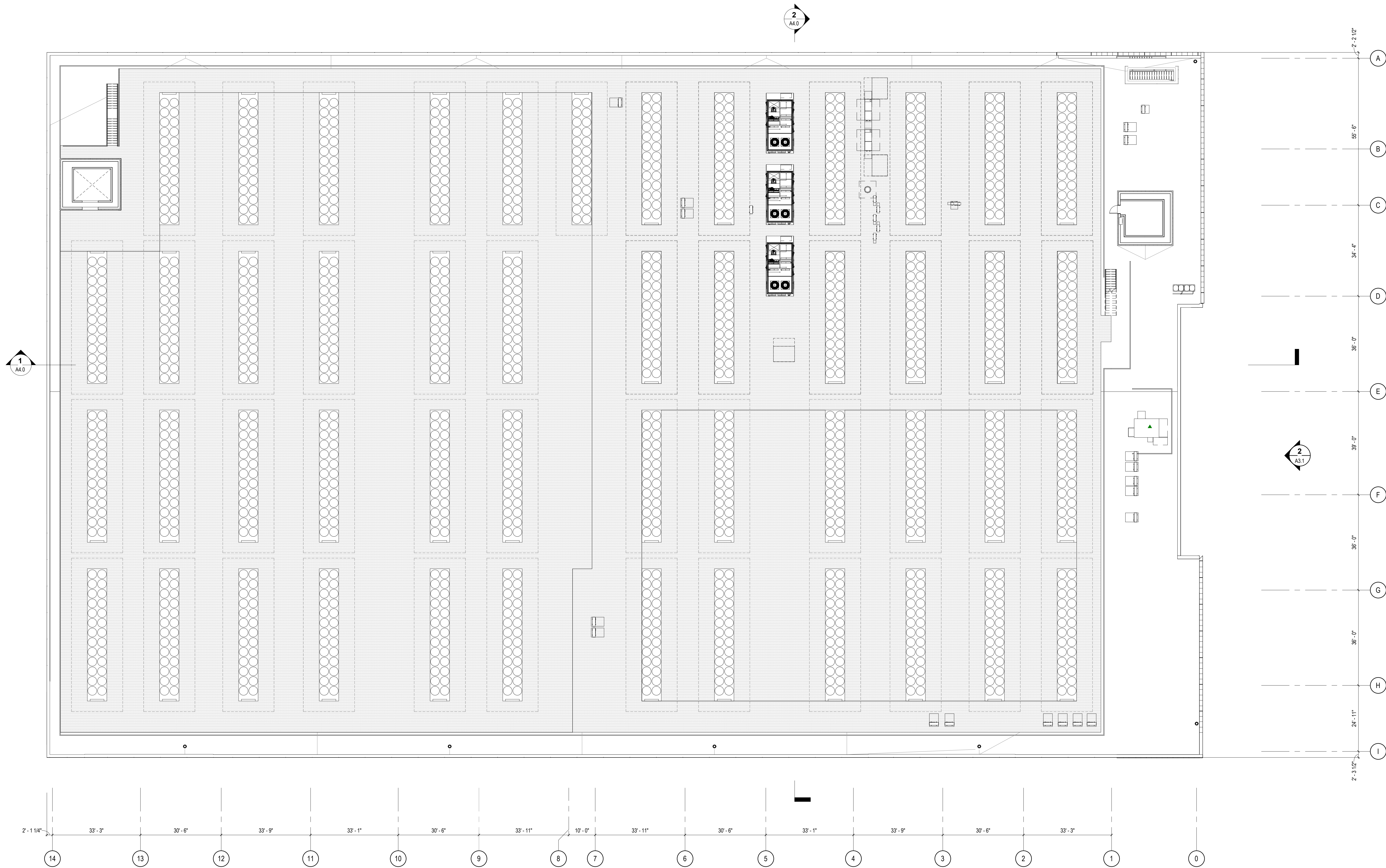
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1 FLOOR PLAN - LEVEL 4  
1/16" = 1'-0"

### GENERAL NOTES





1 OVERALL ROOF PLAN  
1/16" = 1'-0"

GENERAL NOTES

OWNER

MARTIN AVENUE  
PROPERTIES

CONTRACTOR

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No.	Description	Date
-----	-------------	------

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AVENUE

651 MARTIN AVENUE  
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APN: 224-04-071

ROOF LEVEL FLOOR PLAN

A1.5

SCALE: Scale as Noted











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NOTE: NOT ALL SPACES ARE PROGRAMMED.  
AREAS LIKELY TO REDUCE

### AREA LEGEND

	ADMIN		LOADING DOCK
	BACK OF HOUSE		LOBBY
	CIRCULATION		STORAGE
	COMMON AREA		VANTAGE FACILITY OPS
	DATA HALL MODULE		
	DATA MODULE SUPPORT		

ADMIN		DATA MODULE SUPPORT			
LEVEL 1	BREAK ROOM 11	426 SF	LEVEL 1	ELECTRICAL CLOSET 11	169 SF
LEVEL 1	CONFERENCE 11	273 SF	LEVEL 1	ELECTRICAL CLOSET 12	70 SF
LEVEL 1	OFFICE 11	53 SF	LEVEL 1	ELECTRICAL CLOSET 13	70 SF
LEVEL 1	OFFICE 12	53 SF	LEVEL 1	ELECTRICAL ROOM 11	419 SF
LEVEL 1	RECEPTION 11	161 SF	LEVEL 1	ELECTRICAL ROOM 12	419 SF
LEVEL 2	SHELL SPACE	961 SF	LEVEL 1	ELECTRICAL ROOM 13	430 SF
LEVEL 2	SHELL SPACE	144 SF	LEVEL 1	ELECTRICAL ROOM 14	381 SF
LEVEL 3	SHELL SPACE	144 SF	LEVEL 1	ELECTRICAL ROOM 15	196 SF
LEVEL 4	ROOF TERRACE #1	660 SF	LEVEL 1	MIMR 12	182 SF
LEVEL 4	SHELL SPACE	480 SF	LEVEL 1	MIMR 13	986 SF
LEVEL 4	SHELL SPACE	1453 SF	LEVEL 2	BATTERY ROOM 21	213 SF
		2064 SF	LEVEL 2	BATTERY ROOM 22	213 SF
BACK OF HOUSE			LEVEL 2	BATTERY ROOM 23	210 SF
LEVEL 1	FACP ROOM 11	136 SF	LEVEL 2	BATTERY ROOM 24	236 SF
LEVEL 1	FACP ROOM 11	136 SF	LEVEL 2	ELECTRICAL CLOSET 21	70 SF
LEVEL 1	FIRE RISER #1	343 SF	LEVEL 2	ELECTRICAL CLOSET 22	70 SF
LEVEL 1	IDF#1	105 SF	LEVEL 2	ELECTRICAL CLOSET 23	16 SF
LEVEL 1	MAINT. ROOM 11	104 SF	LEVEL 2	ELECTRICAL CLOSET 24	70 SF
LEVEL 1	MACHINE ROOM 12	134 SF	LEVEL 2	EXPATH 21	143 SF
LEVEL 1	PLUMBING ROOM 11	441 SF	LEVEL 2	EXPATH 22	107 SF
LEVEL 1	PLUMBING ROOM 21	441 SF	LEVEL 2	ELECTRICAL CLOSET 31	70 SF
LEVEL 1	DP#1	105 SF	LEVEL 2	ELECTRICAL CLOSET 32	70 SF
LEVEL 1	DP#2	105 SF	LEVEL 3	ELECTRICAL ROOM 31	419 SF
LEVEL 3	FIRE RISER #1	343 SF	LEVEL 3	ELECTRICAL ROOM 32	419 SF
LEVEL 3	FIRE RISER #2	343 SF	LEVEL 3	ELECTRICAL ROOM 33	405 SF
LEVEL 3	FIRE RISER #3	343 SF	LEVEL 3	ELECTRICAL ROOM 34	381 SF
LEVEL 3	IDF#1	105 SF	LEVEL 3	EXPATH 32	108 SF
		2064 SF	LEVEL 3	EXPATH 32	143 SF
CIRCULATION			LEVEL 4	BATTERY ROOM 41	2337 SF
LEVEL 1	CORRIDOR	11761 SF	LEVEL 4	BATTERY ROOM 42	2369 SF
LEVEL 1	CORRIDOR	273 SF	LEVEL 4	BATTERY ROOM 43	2369 SF
LEVEL 1	ELEVATOR A	168 SF	LEVEL 4	BATTERY ROOM 44	2365 SF
LEVEL 1	ELEVATOR B	168 SF	LEVEL 4	ELECTRICAL CLOSET 41	90 SF
LEVEL 1	ELEVATOR C	120 SF	LEVEL 4	ELECTRICAL CLOSET 42	42 SF
LEVEL 1	ELEVATOR D	120 SF	LEVEL 4	EXPATH 32	134 SF
LEVEL 1	VESTIBULE 11	96 SF	LEVEL 4	EXPATH 41	141 SF
LEVEL 2	CORRIDOR	11436 SF			






LEVEL 2	ELEVATOR A	140 SF			
LEVEL 2	ELEVATOR B	168 SF			
LEVEL 2	ELEVATOR C	120 SF			
LEVEL 2	STAIR A	180 SF			
LEVEL 3	CORRIDOR	10730 SF			

LEVEL 3	ELEVATOR A	143 SF	LOBBY		
LEVEL 3	ELEVATOR B	168 SF	LEVEL 1	LOBBY 11	444 SF
LEVEL 3	ELEVATOR C	120 SF			444 SF

[illegible]

LEVEL 4	RESTROOM 41	170 SF	VANTAGE FACILITY OPS	
LEVEL 4	RESTROOM 42	198 SF	LEVEL 1	SECURITY 11 236 SF
LEVEL 4	RESTROOM 43	63 SF	LEVEL 1	SECURITY CLOSET 11 102 SF
		2525 SF	LEVEL 2	OPS22 1933 SF
DATA HALL MODULE				2271 SF
LEVEL 1	CRAH GALLERY 11	3001 SF		446001 SF

DATA	MODE	LEVEL	TIME
LEVEL.1	ORAN GALLERY 11		3001 SF
LEVEL.1	ORAN GALLERY 12		2848 SF
LEVEL.1	ORAN GALLERY 13		2718 SF
LEVEL.1	ORAN GALLERY 14		2968 SF
LEVEL.1	ORAN GALLERY 15		2848 SF
LEVEL.1	ORAN GALLERY 16		2722 SF
LEVEL.1	ORAN GALLERY 17		2822 SF
LEVEL.1	ORAN GALLERY 18		2922 SF
LEVEL.1	DATA MODE 11		1636 SF
LEVEL.1	DATA MODE 12		1636 SF
LEVEL.1	DATA MODE 13		1636 SF
LEVEL.1	DATA MODE 14		1636 SF
LEVEL.2	ORAN GALLERY 21		3003 SF
LEVEL.2	ORAN GALLERY 22		2848 SF
LEVEL.2	ORAN GALLERY 23		2718 SF
LEVEL.2	ORAN GALLERY 24		2968 SF
LEVEL.2	ORAN GALLERY 25		2848 SF
LEVEL.2	ORAN GALLERY 26		2722 SF
LEVEL.2	ORAN GALLERY 27		2822 SF
LEVEL.2	DATA MODE 21		1636 SF
LEVEL.2	DATA MODE 22		1636 SF
LEVEL.2	DATA MODE 23		1636 SF
LEVEL.2	DATA MODE 24		1636 SF
LEVEL.3	ORAN GALLERY 31		3003 SF
LEVEL.3	ORAN GALLERY 32		2848 SF
LEVEL.3	ORAN GALLERY 33		2718 SF
LEVEL.3	ORAN GALLERY 34		2968 SF
LEVEL.3	ORAN GALLERY 35		2848 SF
LEVEL.3	ORAN GALLERY 36		2722 SF
LEVEL.3	ORAN GALLERY 37		2822 SF
LEVEL.3	ORAN GALLERY 38		2922 SF
LEVEL.3	DATA MODE 31		1636 SF
LEVEL.3	DATA MODE 32		1636 SF
LEVEL.3	DATA MODE 33		1636 SF
LEVEL.3	DATA MODE 34		1636 SF
LEVEL.4	ORAN GALLERY 41		3003 SF
LEVEL.4	ORAN GALLERY 42		2848 SF
LEVEL.4	ORAN GALLERY 43		2718 SF
LEVEL.4	ORAN GALLERY 44		2968 SF
LEVEL.4	ORAN GALLERY 45		2848 SF
LEVEL.4	ORAN GALLERY 46		2722 SF
LEVEL.4	ORAN GALLERY 47		2822 SF
LEVEL.4	ORAN GALLERY 48		2922 SF
LEVEL.4	DATA MODE 41		1636 SF
LEVEL.4	DATA MODE 42		1636 SF
LEVEL.4	DATA MODE 43		1636 SF
LEVEL.4	DATA MODE 44		1636 SF

WINNER	
	MARTIN AVENUE PROPERTIES
CONTRACTOR	
	1450 Vineyard Blvd. Redwood City CA 94063 650.474.1450
ARCHITECT	
	130 East Randolph Suite 300 Chicago, IL 60601 312.683.2900
LANDSCAPE	
	1345 Pauline Drive Sunnyvale, CA 95051-9023
CIVIL	
	1570 Oakland Road San Jose, CA 95131 408.857.9220
STRUCTURAL	
	6111 Johnson Ct Suite 100 Fremont, CA 94508 408.857.9220

MEP, FP, FA



PROGRESS SET  
NOT FOR CONSTRUCTION

No.	Description	Date

**651 MARTIN  
AVENUE**

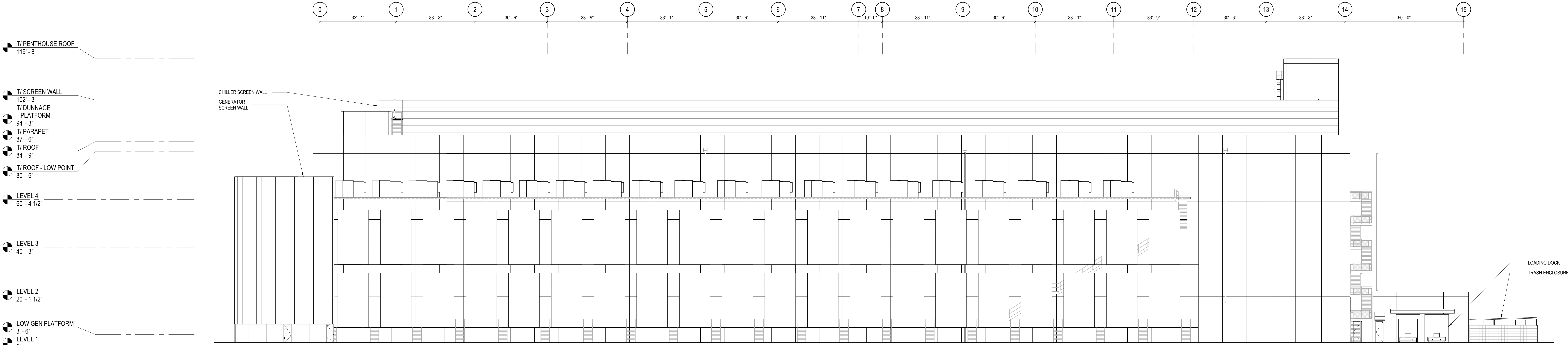
651 MARTIN AVENUE  
SANTA CLARA, CA  
95050  
APN: 224-04-071

## AREA CALCULATIONS

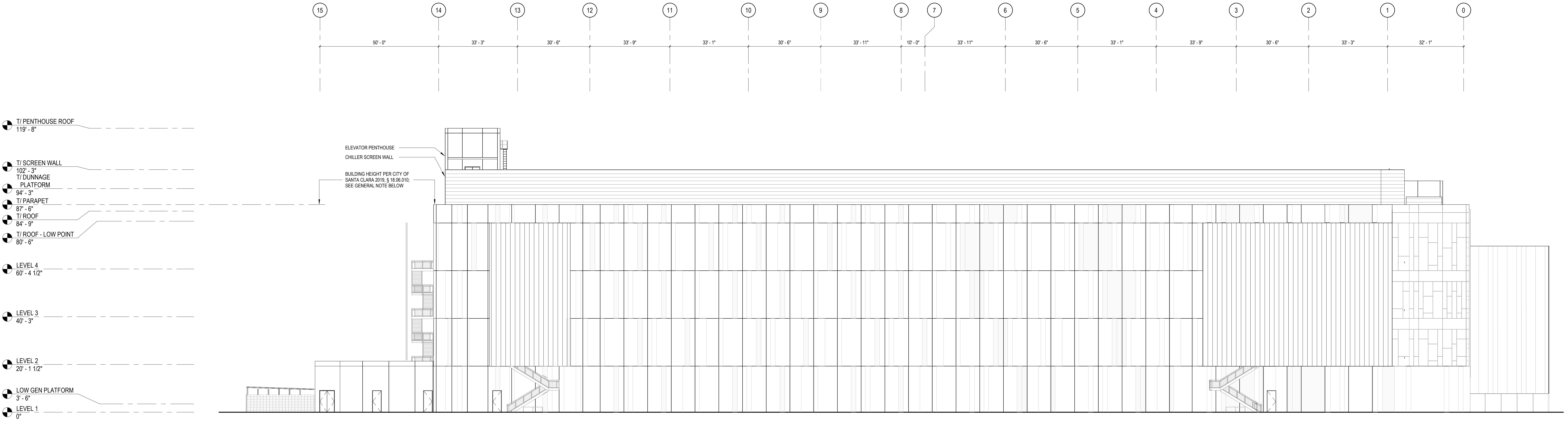
## A2.0

SCALE: Scale as Noted





1 ELEVATION DIAGRAM - EAST  
1/16" = 1'-0"



2 ELEVATION DIAGRAM - WEST  
1/16" = 1'-0"

#### GENERAL NOTES

##### BUILDING HEIGHT EXCEEDANCE

MAXIMUM PERMITTED BUILDING HEIGHT IN THE ML ZONING DISTRICT IS 70 FEET (CITY OF SANTA CLARA 2019, § 18.48.070). AS STATED ABOVE, HEIGHT OF BUILDINGS IS DEFINED AS THE VERTICAL DISTANCE FROM THE ADJACENT GROUND ELEVATION "TO THE HIGHEST POINT OF THE COPING OF A FLAT ROOF..." (CITY OF SANTA CLARA 2019, § 18.06.010, SUBD. (H)(1)). THE DATA CENTER BUILDING WOULD HAVE A TYPICAL HEIGHT OF 87.5 FEET FROM ADJACENT GRADE TO THE TOP OF THE PARAPET.

THE PROPOSED BUILDING HEIGHT WOULD BE A 25 PERCENT EXCEEDANCE, WHICH IS WITHIN THE 25 PERCENT LIMIT THE ZONING ADMINISTRATOR CAN GRANT AS A MINOR MODIFICATION TO THE REGULATION. THUS, IF THE ZONING ADMINISTRATOR GRANTS THE MINOR MODIFICATION TO THE REGULATION TO ALLOW THE 25 PERCENT EXCEEDANCE, THE PROJECT WOULD CONFORM TO THE REGULATION LIMITING HEIGHT OF BUILDINGS IN THE ML ZONING DISTRICT, AND NO CONFLICT WOULD OCCUR.

OWNER

MARTIN AVENUE  
PROPERTIES

CONTRACTOR

**DPR**  
CONSTRUCTION  
1450 Veterans Blvd.  
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CA 94063  
650.4174.1450

ARCHITECT

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NAGLE  
HARTRAY  
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LANDSCAPE

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CIVIL

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425 California Street  
Suite 400  
San Francisco, CA  
94104  
415.288.9000

PROGRESS SET  
NOT FOR CONSTRUCTION

No.	Description	Date
-----	-------------	------

**651 MARTIN  
AVENUE**

651 MARTIN AVENUE  
SANTA CLARA, CA  
95050  
APN: 224-04-071

FULL BUILDING EXTERIOR  
ELEVATIONS

**A3.0**

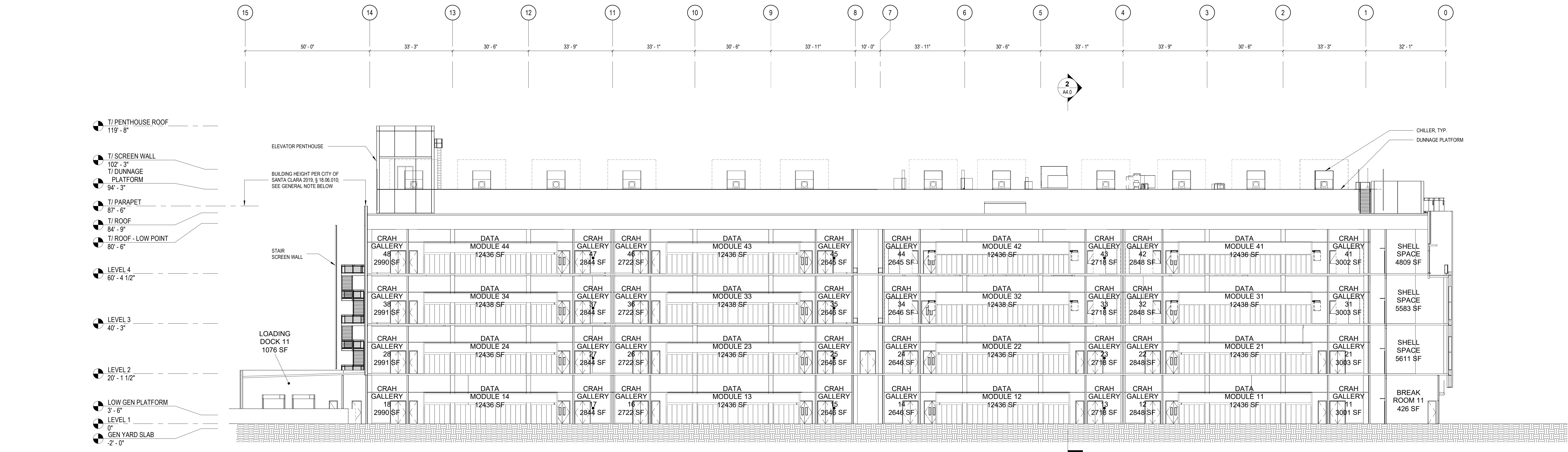
SCALE: Scale as Noted

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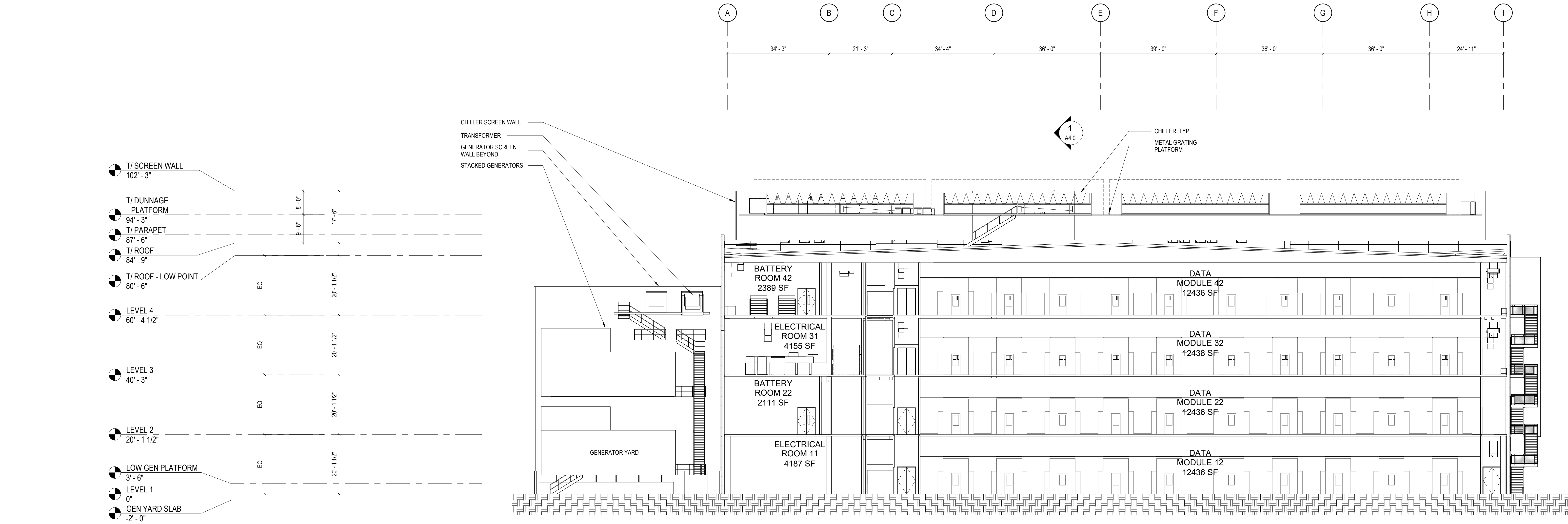








1 FULL BUILDING SECTION - N/S  
1/16" = 1'-0"



2 FULL BUILDING SECTION E/W  
1/16" = 1'-0"

## GENERAL NOTES

### BUILDING HEIGHT EXCEEDANCE

MAXIMUM PERMITTED BUILDING HEIGHT IN THE ML ZONING DISTRICT IS 70 FEET (CITY OF SANTA CLARA 2019, § 18.48.070). AS STATED ABOVE, HEIGHT OF BUILDINGS IS DEFINED AS THE VERTICAL DISTANCE FROM THE ADJACENT GROUND ELEVATION "TO THE HIGHEST POINT OF THE COPING OF A FLAT ROOF..." (CITY OF SANTA CLARA 2019, § 18.06.010, SUBD. (H)(1)). THE DATA CENTER BUILDING WOULD HAVE A TYPICAL HEIGHT OF 87.5 FEET FROM ADJACENT GRADE TO THE TOP OF THE PARAPET.

THE PROPOSED BUILDING HEIGHT WOULD BE A 25 PERCENT EXCEEDANCE, WHICH IS WITHIN THE 25 PERCENT LIMIT THE ZONING ADMINISTRATOR CAN GRANT AS A MINOR MODIFICATION TO THE REGULATION. THUS, IF THE ZONING ADMINISTRATOR GRANTS THE MINOR MODIFICATION TO THE REGULATION TO ALLOW THE 25 PERCENT EXCEEDANCE, THE PROJECT WOULD CONFORM TO THE REGULATION LIMITING HEIGHT OF BUILDINGS IN THE ML ZONING DISTRICT, AND NO CONFLICT WOULD OCCUR.

OWNER

MARTIN AVENUE  
PROPERTIES

CONTRACTOR

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94104  
415.288.9000

PROGRESS SET  
NOT FOR CONSTRUCTION

No.	Description	Date
-----	-------------	------

**651 MARTIN  
AVENUE**

651 MARTIN AVENUE  
SANTA CLARA, CA  
95050  
APN: 224-04-071

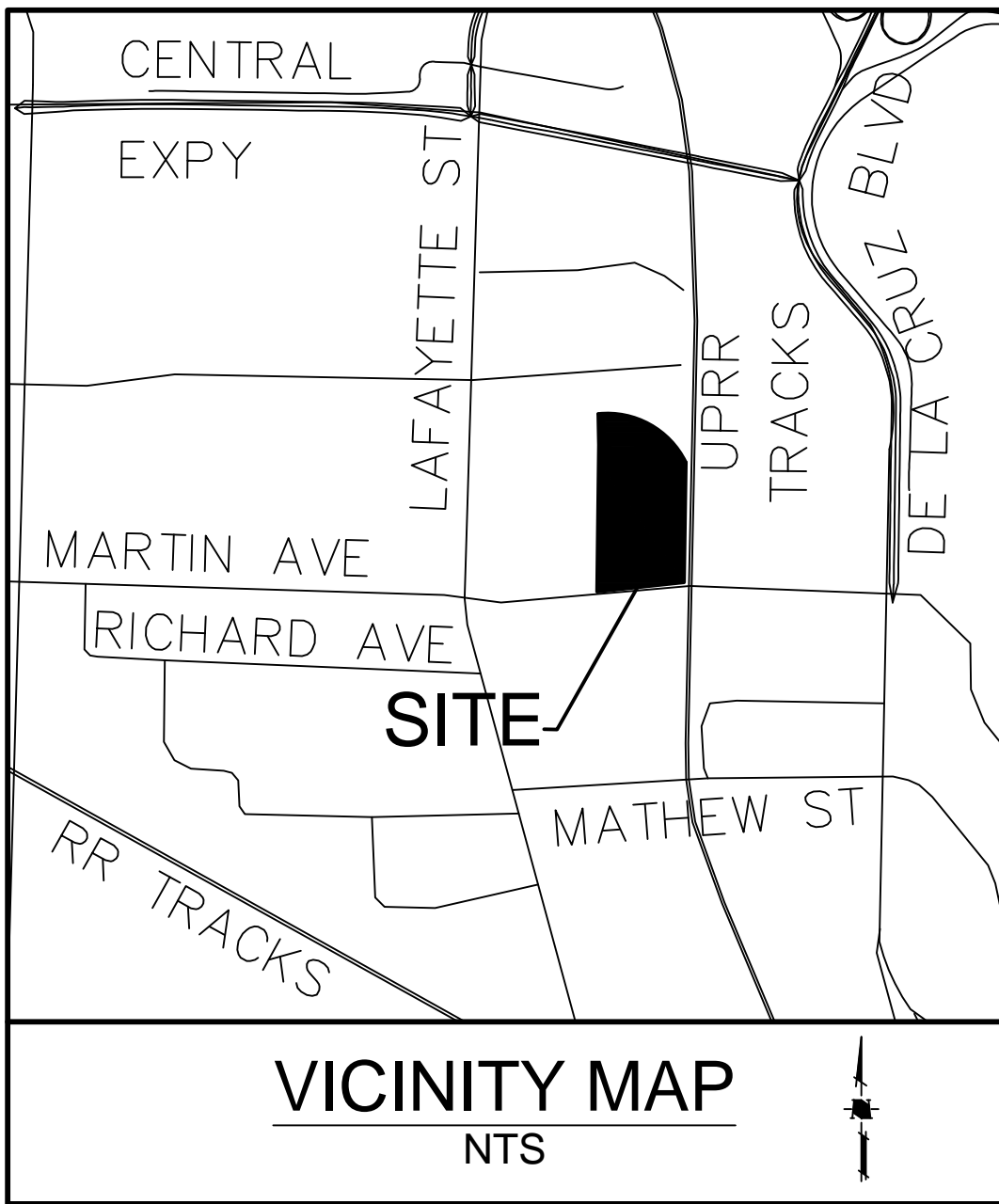
FULL BUILDING SECTIONS

**A4.0**

SCALE: Scale as Noted

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MARTIN AVENUE  
PROPERTIES

**DPR**  
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94104  
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**651 MARTIN  
AVENUE**

ISSUED FOR PCC REVIEW

**C1**

SCALE: Scale as Note

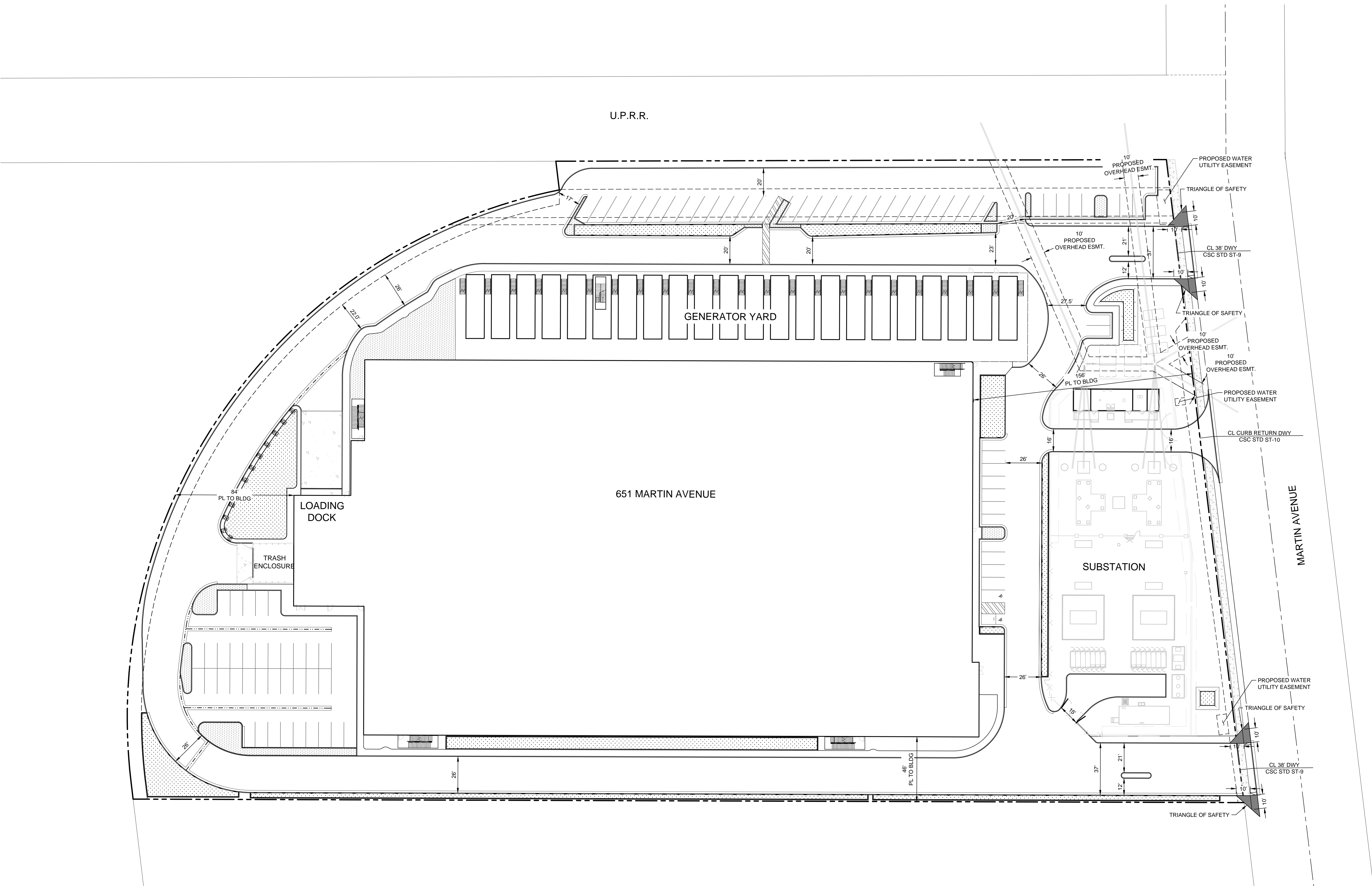
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PROJECT BOUNDARY	-----
EASEMENT	-----
CURB AND GUTTER	=====
SIDEWALK	=====
CENTERLINE	-----
SANITARY SEWER	-----SS(E)
STORM DRAIN LINE	-----SD(E)
WATER MAIN	-----W(E)
GAS	-----G (E)
FIBER OPTIC	-----FO(E)
TELECOMMUNICATION	-----TV(E)
COMCAST	-----COMCAST(E)
OVERHEAD	OH(E) OH(E)

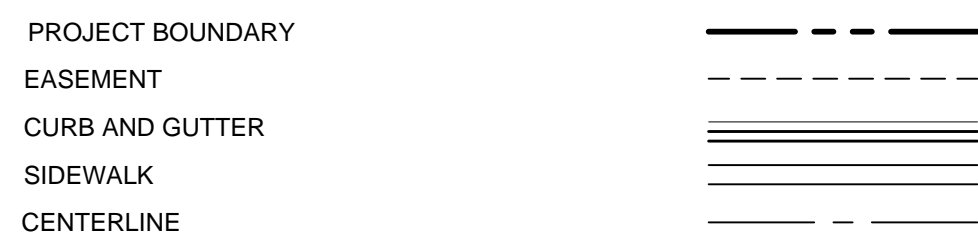
ASPH	ASPHALT
CONC	CONCRETE
DI	DRAIN INLET
E/EX	EXISTING
ELEC	ELECTRIC
ESMT.	EASEMENT
FO	FIBER OPTICS
G	GAS
PL	PROPERTY LINE
P.U.E	PUBLIC UTILITY EASEMENT
OH	OVERHEAD UTILITY
SS	SEWER
SD	STORMWATER DRAIN
W	WATER

1. ALL EXISTING STRUCTURES TO BE REMOVED.
2. ALL EXISTING TREES ONSITE TO BE REMOVED.
3. ALL EXISTING OVERHEAD UTILITIES ARE TO REMAIN UNLESS OTHERWISE NOTED.



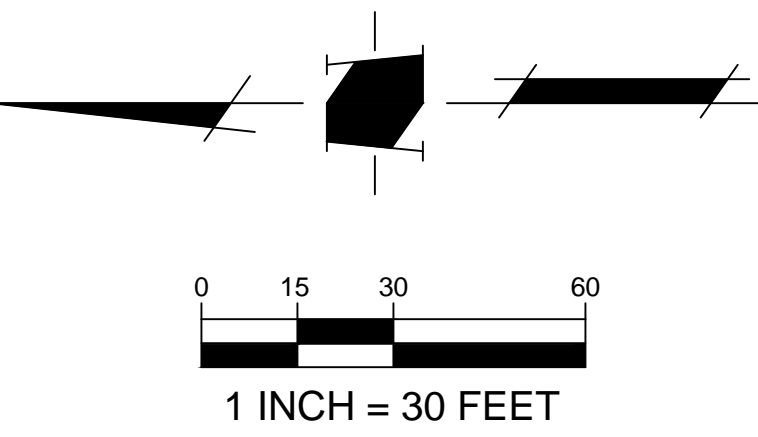
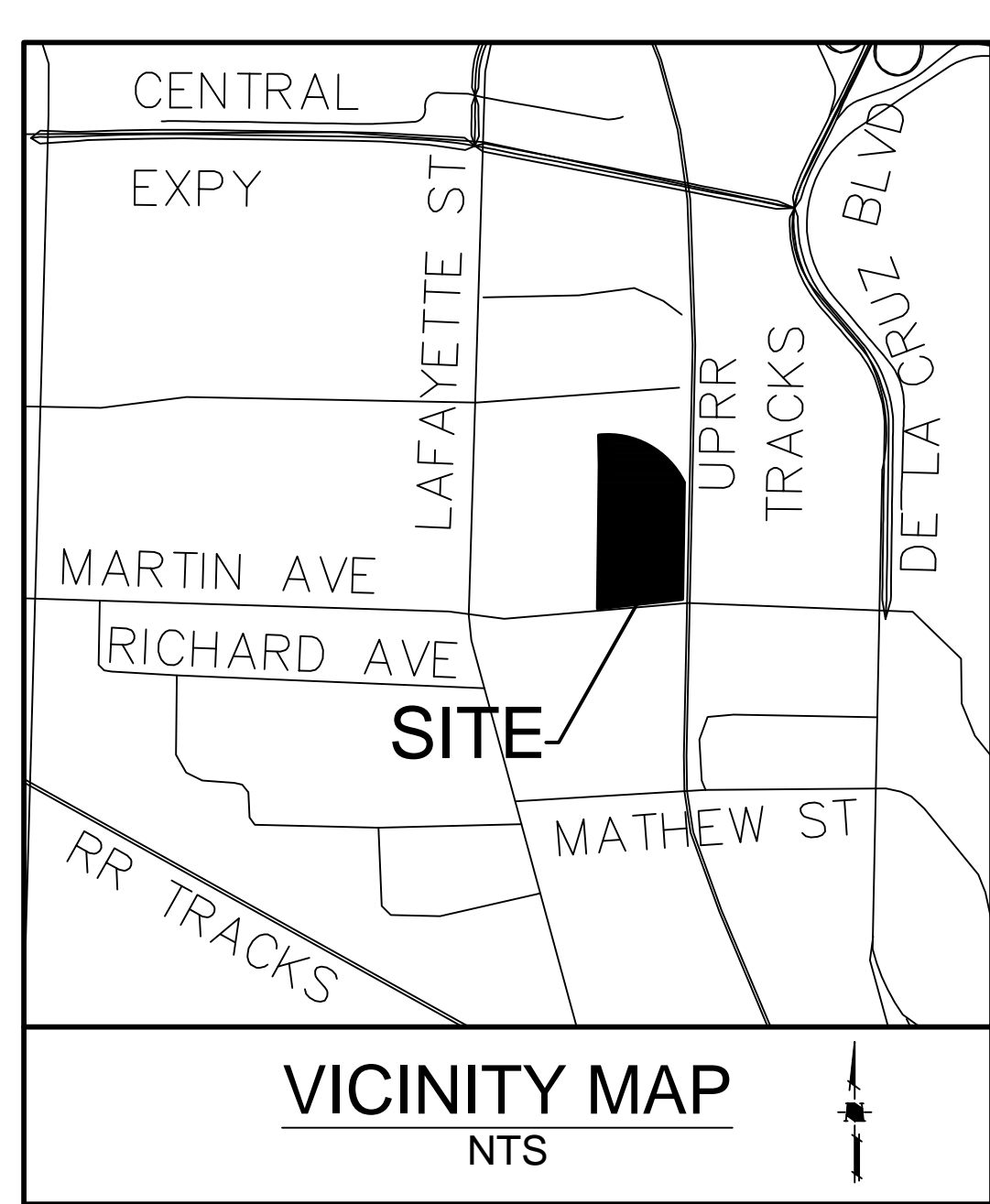


LEGEND



ABBREVIATIONS

BLDG	BUILDING
CL	CENTERLINE
CSC	CITY OF SANTA CLARA
DWY	DRIVEWAY
ESMT.	EASEMENT
PL	PROPERTY LINE
STD	STANDARD



OWNER

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425 California Street  
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415.288.9060  
A member company of SH Group, Inc.

PROGRESS SET  
NOT FOR  
CONSTRUCTION

F No.	ISSUED FOR PCC REVIEW Description	11-14-2022 Date
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651 MARTIN  
AVENUE

651 MARTIN AVENUE  
SANTA CLARA, CA  
95050  
APN: 224-04-071

ISSUED FOR PCC REVIEW

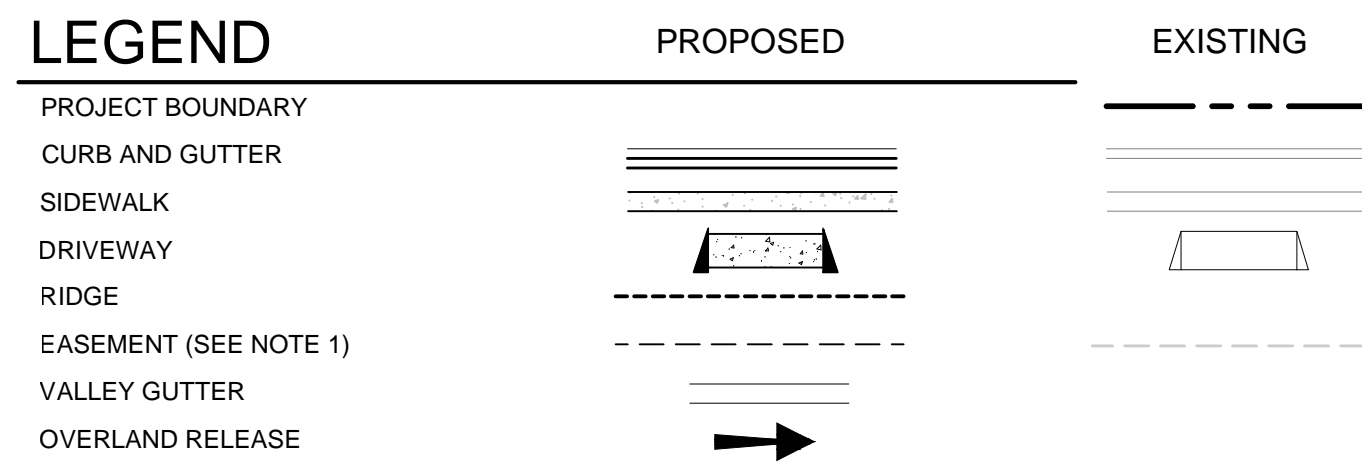
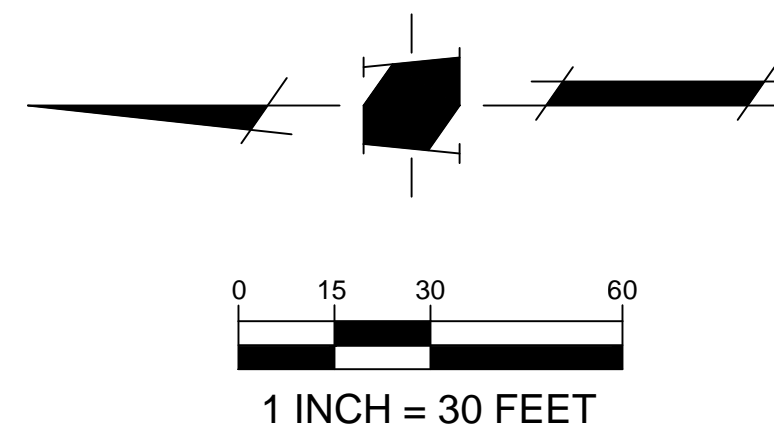
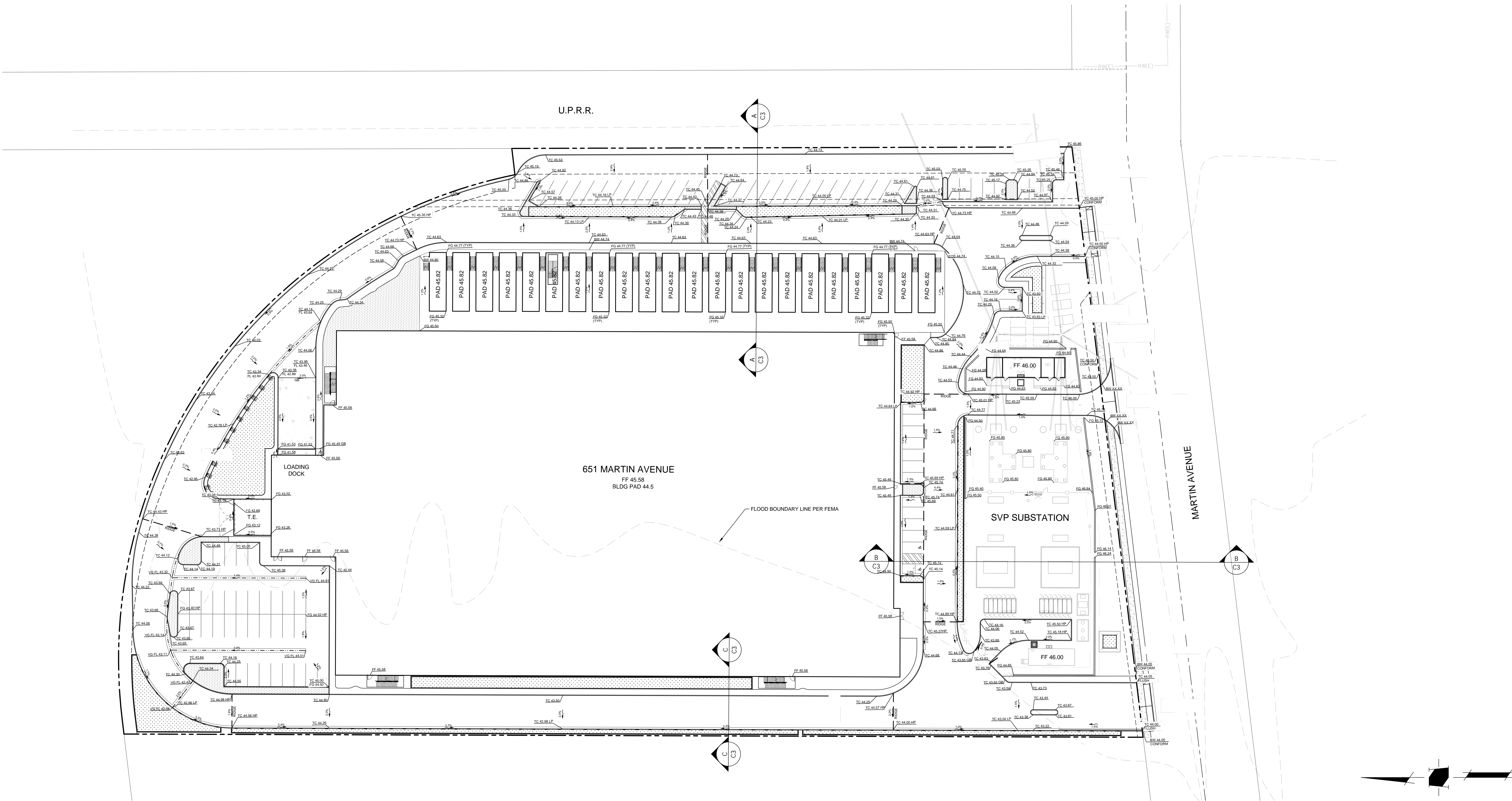
SITE PLAN

C2

SCALE: Scale as Noted

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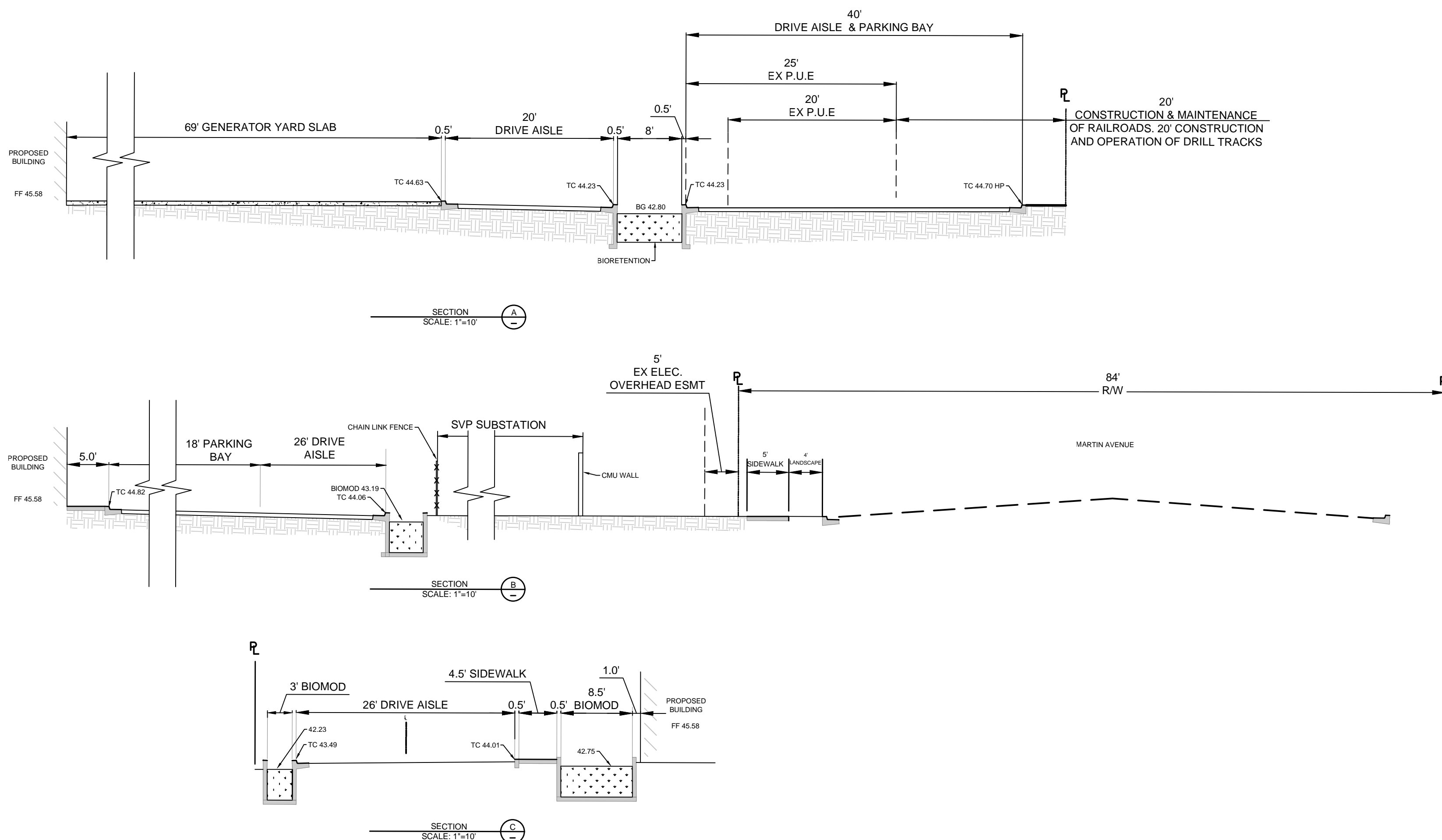


**NOTES**

- EXISTING EASEMENTS ARE LABELED ON SHEET C1.
- SEE SHEET C5 FOR CURB OPENING INTO BIORETENTION BASINS.

**ABBREVIATIONS**

BW	BACK OF WALK
EOS	EDGE OF SURFACE
FF	FINISH FLOOR
FG	FINISH GRADE
FL	FLOW LINE
HP	HIGH POINT
LP	LOW POINT
TC	TOP OF CURB
TYP	TYPICAL
VG	VALLEY GUTTER



OWNER	MARTIN AVENUE PROPERTIES
CONTRACTOR	DPR CONSTRUCTION 1450 Veterans Blvd. Redwood City CA 94063 650.474.1450
ARCHITECT	SHEEHAN NAGLE HARTRAY ARCHITECTS 130 East Randolph Suite 3100 Chicago, IL 60601 312.633.2300
LANDSCAPE	REDA VASCULITE 1345 Pauline Drive San Jose, CA 95087 408.481.9020
CIVIL	HMH 1570 Oakland Road San Jose, CA 95131 408.487.2200
STRUCTURAL	PEOPLES ASSOCIATES 6111 Johnson Ct. Suite 100 Pleasanton, CA 94588 408.957.9220
MEP, FP, FA	SYSKA HENNESSY 425 California Street Suite 400 San Francisco, CA 94104 415.288.9060

PROGRESS SET  
NOT FOR  
CONSTRUCTION

## 651 MARTIN AVENUE

651 MARTIN AVENUE  
SANTA CLARA, CA  
95050  
APN: 224-04-071

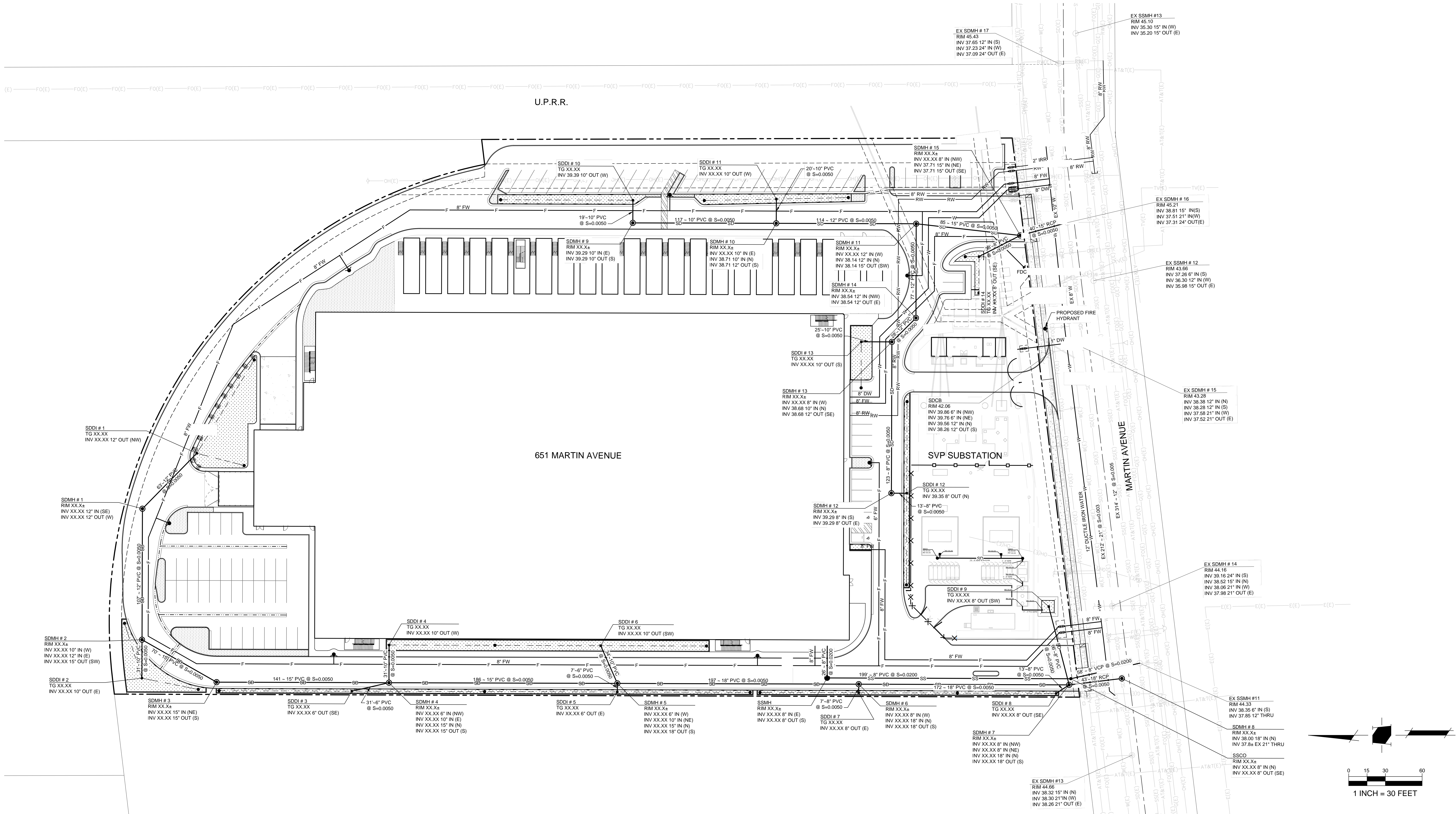
ISSUED FOR PCC REVIEW

GRADING & DRAINAGE PLAN

C3

SCALE: Scale as Noted  
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LEGEND	PROPOSED	EXISTING
PROJECT BOUNDARY		
STORM DRAIN MANHOLE		
SANITARY SEWER MANHOLE		
CURB INLET		
CATCH BASIN/BUBBLER		
FLOW DRAINAGE		
EASEMENT		
CURB AND GUTTER		
SIDEWALK		
VALLEY/GUTTER		
CENTERLINE		
SANITARY SEWER		
STORM DRAIN LINE		
DRIVEWAY		
GRADE BREAK		
CONCRETE DRAINAGE SWALE		
SCREEN WALL		
DOMESTIC WATER (DW)		
GAS		
TELECOM		
SVP TRENCH		
AT&T-ELECTRICAL		
ELECTRICAL UTILITY		
RECYCLE WATER		
FIRE WATER		
FIRE HYDRANT		

### PUBLIC WATER SYSTEM NOTES

- WATER SYSTEM CONSTRUCTION SHALL CONFORM TO THE PROJECT PLANS, AND TO THE CITY OF SANTA CLARA WATER AND SEWER UTILITIES STANDARD DRAWINGS AND SPECIFICATIONS. COPIES ARE AVAILABLE ON THE CITY'S WEBSITE.
- INFORMATION ON MATERIALS PROPOSED TO BE USED IN CONSTRUCTING WATER SYSTEM FACILITIES SHALL BE SUBMITTED TO WATER AND SEWER UTILITIES FOR REVIEW AND APPROVAL PRIOR TO THE BEGINNING OF ANY CONSTRUCTION OF WATER FACILITIES.
- A PRE-CONSTRUCTION MEETING SHALL BE HELD WITH THE CITY WATER AND SEWER UTILITIES IN ATTENDANCE PRIOR TO ANY WORK BEING ALLOWED TO BEGIN ON THE PUBLIC WATER SYSTEM. CALL 915-2093 BETWEEN 7:00 AM AND 4:00 PM MONDAY THROUGH FRIDAY EXCEPT HOLIDAYS. NOTIFY THE CITY WATER INSPECTOR A MINIMUM OF ONE WORKING DAY PRIOR TO REQUIRED INSPECTIONS.
- WATER FACILITIES SHALL BE CONSTRUCTED AS SHOWN ON THE APPROVED PLANS. ALL CHANGES MUST BE APPROVED BY THE WATER INSPECTOR PRIOR TO BEING CONSTRUCTED. A REVISED DRAWING MUST BE APPROVED BY THE ENGINEER.
- CLEARANCES:
  - ONE FOOT MINIMUM VERTICAL CLEARANCE FOR OPEN TRENCH CONSTRUCTION BETWEEN WATER AND GRAVITY MAINS UNLESS OTHERWISE NOTED ON THE PLANS.
  - TWO FEET MINIMUM VERTICAL CLEARANCE FOR OPEN TRENCH CONSTRUCTION BETWEEN WATER AND RECYCLED WATER MAINS AND SERVICES AND OTHER FACILITIES UNLESS OTHERWISE NOTED ON THE PLANS.
  - FIVE FEET MINIMUM VERTICAL CLEARANCE FOR HORIZONTAL DIRECTION BORING CONSTRUCTION BETWEEN WATER AND RECYCLED WATER MAINS AND SERVICES AND OTHER FACILITIES UNLESS OTHERWISE NOTED ON THE PLANS.
  - TEN FEET MINIMUM HORIZONTAL CLEARANCE BETWEEN WATER AND RECYCLED WATER MAINS AND SERVICES AND SANITARY MAINS AND SERVICES.
  - FIVE FEET MINIMUM HORIZONTAL CLEARANCE BETWEEN WATER AND STORM MAINS AND LATERALS AND OTHER GENERAL UTILITIES AND FACILITIES.
- DESTRUCTION OF WATER MAINS AND SERVICES CANNOT BEGIN UNTIL SITE IS AT SUB GRADE.
- CITY OR CITY ASSIGNED CONTRACTOR WILL PERFORM ALL TAPS TO THE WATER MAIN. CONTRACTOR IS RESPONSIBLE FOR INSTALLING THE TAPPING SLEEVE AND VALVE, AND PREPARING THE SITE FOR CITY OR CITY ASSIGNED CONTRACTOR TO PERFORM TAP.
- WATER MAINS SHALL BE AWWA C900, C905 OR 14 MINIMUM STANDARD PRESSURE CLASS 200 FOR POLY(VINYL CHLORIDE) (PVC), PRESSURE PIPE, AWWA C150, C151, C104 STANDARD PRESSURE CLASS 300 FOR DUCTILE IRON (DI) PRESSURE PIPE, OR TYPE K COPPER AS SHOWN ON THE PLANS. RECYCLED WATER MAINS SHALL CONFORM TO CITY WATER MAIN STANDARDS WITH THE FOLLOWING EXCEPTIONS: RECYCLED WATER P.V.C. MAINS SHALL BE PURPLE AND LABELED RECYCLED WATER. DIP SHALL BE ENCASED IN PURPLE POLY WRAP.
- THE CONTRACTOR SHALL RESTRAIN ALL PIPE JOINTS, FITTINGS AND DEADENDS USING MECHANICALLY RESTRAINED DEVICES IN ACCORDANCE WITH CITY REQUIREMENTS.
- ALL PUBLIC WATER MAINS AND SERVICES SHALL HAVE A MINIMUM OF FOUR INCHES (4") OF SAND BEDDING UNDER PIPE AND 12" OF SAND BEDDING OVER TOP OF PIPE. SAND SHALL CONFORM TO WATER AND SEWER UTILITIES STANDARD DRAWING NUMBER 23. THE REMAINING TRENCH SHALL BE BACKFILLED AND COMPACTED PER CITY OF SANTA CLARA DEPARTMENT OF PUBLIC WORKS STANDARDS AND COMPACTED TO 95% RELATIVE DENSITY.

- CONTRACTOR SHALL DISINFECT AND FLUSH ALL NEW AND REPAIRED PORTIONS OF THE PUBLIC WATER SYSTEM ACCORDING TO WATER AND SEWER UTILITIES SPECIFICATIONS. CONTRACTOR MUST COMPLY WITH THE CITY'S NON-POINT SOURCE CONTROL PROGRAM. THE INITIAL BACTERIOLOGICAL TEST SHALL BE PERFORMED BY THE CITY AT THE CITY'S COST. SUBSEQUENT TESTS REQUIRED DUE TO FAILED INITIAL BACTERIOLOGICAL SAMPLES SHALL BE PERFORMED BY THE CITY AT DEVELOPER'S EXPENSE.
- PRESSURE TEST SHALL BE PERFORMED BY THE CONTRACTOR AT 200 PSI FOR A MINIMUM OF TWO HOURS.
- THE CONTRACTOR IS RESPONSIBLE FOR KEEPING A SET OF CURRENT, THOROUGH, AND ACCURATE AS-BUILT DRAWINGS AT THE PROJECT SITE. THEY SHALL INCLUDE CENTER TO CENTER DIMENSIONS BETWEEN FITTINGS, VALVES, SERVICES, DEADENDS, TIE-BACKS, CHANGES IN PIPE TYPE, ETC. AND SHALL INCLUDE A DIMENSION REFERENCING A TRACABLE FEATURE ON THE EXISTING WATER SYSTEM. THE UPDATED AS-BUILT DRAWINGS SHALL BE AVAILABLE FOR THE INSPECTOR'S REVIEW AT ALL TIMES. THE PROJECT WILL NOT BE CONSIDERED FOR ACCEPTANCE NOR ANY METERS ALLOWED TO BE TURNED ON UNTIL THE AS-BUILT DRAWINGS ARE COMPLETED, TURNED IN TO THE INSPECTOR, VERIFIED, AND ACCEPTED.
- ALL WATER USE SHALL BE METERED EXCEPT FOR USE IN DISINFECTION AND FLUSHING OF WATER MAINS.
- NO WATER VALVES ON THE EXISTING SYSTEM NOR ANY NEW VALVE CONNECTED TO THE EXISTING SYSTEM SHALL BE OPENED OR CLOSED BY ANYONE EXCEPT AUTHORIZED WATER AND SEWER UTILITIES PERSONNEL. MAINTAIN, SECURE, AND PROTECT ANY EXISTING WATER SYSTEM FACILITY IN PLACE UNTIL THE PROPOSED WATER SYSTEM IS COMPLETED AND ACTIVATED.
- PARTS FROM ABANDONED CITY FACILITIES, INCLUDING METERS AND VALVES, SHALL BE RETURNED TO THE WATER AND SEWER UTILITIES INSPECTOR.
- WATER AND SEWER UTILITIES WILL PLACE A HOLD ON THE FINAL INSPECTION ON ALL OR PART OF THE DEVELOPMENT UNTIL:
  - AN ACCURATE AND COMPLETE SET OF FIELD AS-BUILT DRAWINGS FOR THE PUBLIC WATER SYSTEM HAS BEEN SUBMITTED TO AND APPROVED BY THE WATER DEPARTMENT.
  - PUNCH LIST ITEMS HAVE BEEN CORRECTED.
  - ANY WATER OR PUBLIC UTILITY EASEMENTS REQUIRED FOR THE PROJECT ARE RECORDED WITH THE COUNTY.
- CONTRACTOR SHALL SUBMIT AN ACCURATE SET OF RECORD DRAWINGS IN PDF AND AUTOCAD FORMAT TO WATER AND SEWER UTILITIES PRIOR TO FINAL ACCEPTANCE.

### NOTES

- EXISTING EASEMENTS ARE LABELED ON SHEET C1.
- VERTICAL CLEARANCES AT ALL NEW UTILITY CROSSINGS SHALL BE A MINIMUM 12 INCHES. IF LESS THAN 12-INCHES USE CITY OF SANTA CLARA STANDARD DETAIL FOR CONCRETE SADDLE (M-3 OR M-4).
- ALL SCOPE OF WORK IN THE PUBLIC RIGHT OF WAY BE PER CSC ENFORCEMENT PERMIT (SEPARATE PERMIT).
- UNDERGROUND FIRE SERVICE SHOWN IN FOR SCHEMATIC PURPOSES ONLY. CONTRACTOR SHALL SUBMIT UNDERGROUND FIRE SERVICE PLANS PREPARED BY A LICENSED UNDERGROUND FIRE SERVICE DESIGNER TO CSCFD FOR REVIEW/APPROVAL.
- SVP DOMESTIC WATER LINE SHALL BE 1" TYPE L RIGID COPPER TUBING AND SHALL FOLLOW UG1000 STANDARDS FOR INSTALLATION.
- ALL UTILITIES SHALL MAINTAIN A MINIMUM 12" OF VERTICAL CLEARANCE FROM WATER SERVICE CROSSING WITH OTHER UTILITIES, AND ALL REQUIRED MINIMUM HORIZONTAL CLEARANCES FROM WATER SERVICES:
  - 10' FROM SANITARY SEWER UTILITIES
  - 10' FROM RECYCLED WATER UTILITIES
  - 8' FROM STORM DRAIN UTILITIES
  - 5' FROM FIRE AND OTHER WATER UTILITIES
  - 3' FROM ABANDONED WATER SERVICES
  - 5' FROM GAS UTILITIES
  - 5' FROM THE EDGE OF THE PROPOSED OR EXISTING DRIVEWAY.
- SANITARY SEWER, WATER AND RECYCLED WATER UTILITIES SHALL MAINTAIN A MINIMUM HORIZONTAL CLEARANCE OF 10' FROM EXISTING AND PROPOSED TREES. IF TREE ROOT BARRIERS ARE INSTALLED, CLEARANCE FROM TREES REDUCES TO 5' (CLEARANCE MUST BE FROM THE EDGE OF TREE ROOT BARRIER TO EDGE OF WATER FACILITIES).
- NO STRUCTURES (FENCING, FOUNDATION, BIOTRATATION SWALES, ETC.) ALLOWED OVER SANITARY SEWER AND/OR WATER UTILITIES AND EASEMENTS.
- EASEMENTS ALONG PROJECT FRONTAGE WILL BE FINALIZED DURING PREPARATION OF CONSTRUCTION DOCUMENTS.
- CATHODIC PROTECTION SHALL BE PROVIDED ON ALL NEW DOMESTIC WATER AND FIRE SERVICE LINES. SEE CATHODIC PROTECTION PLANS.

OWNER

MARTIN AVENUE  
PROPERTIES

CONTRACTOR

**DPR**  
CONSTRUCTION  
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CA 94063  
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LANDSCAPE

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CIVIL

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415.288.9060

PROGRESS SET  
NOT FOR  
CONSTRUCTION

F	ISSUED FOR PCC REVIEW	11-14-2022
No.	Description	Date

**651 MARTIN  
AVENUE**

651 MARTIN AVENUE  
SANTA CLARA, CA  
95050  
APN: 224-04-071

ISSUED FOR PCC REVIEW

UTILITY PLAN

C4

SCALE: Scale as Noted

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**I. PROPERTY INFORMATION:**

**I.A. PROPERTY ADDRESS:**

651 MARTIN AVENUE

SANTA CLARA, CA 95050

**I.B. PROPERTY OWNER:**

MARTIN AVENUE PROPERTIES, LLC

II.A. CONTACT:  
SIMON CASEY

II.B. PHONE NUMBER OF CONTACT:

II.C. EMAIL:  
SCASEY@VANTAGE-DC.COM

II.D. ADDRESS:  
2820 NORTHWESTERN PARKWAY  
SANTA CLARA, CA 95051

1. CREATE NEW PERVIOUS AREAS:
  - a. LANDSCAPING
2. CLUSTER STRUCTURES/PAVEMENT.
3. PLANT TREES ADJACENT TO AND IN PARKING AREAS AND ADJACENT TO OTHER IMPERVIOUS AREAS.
4. PARKING:
  - a. NOT PROVIDED IN EXCESS OF CODE.

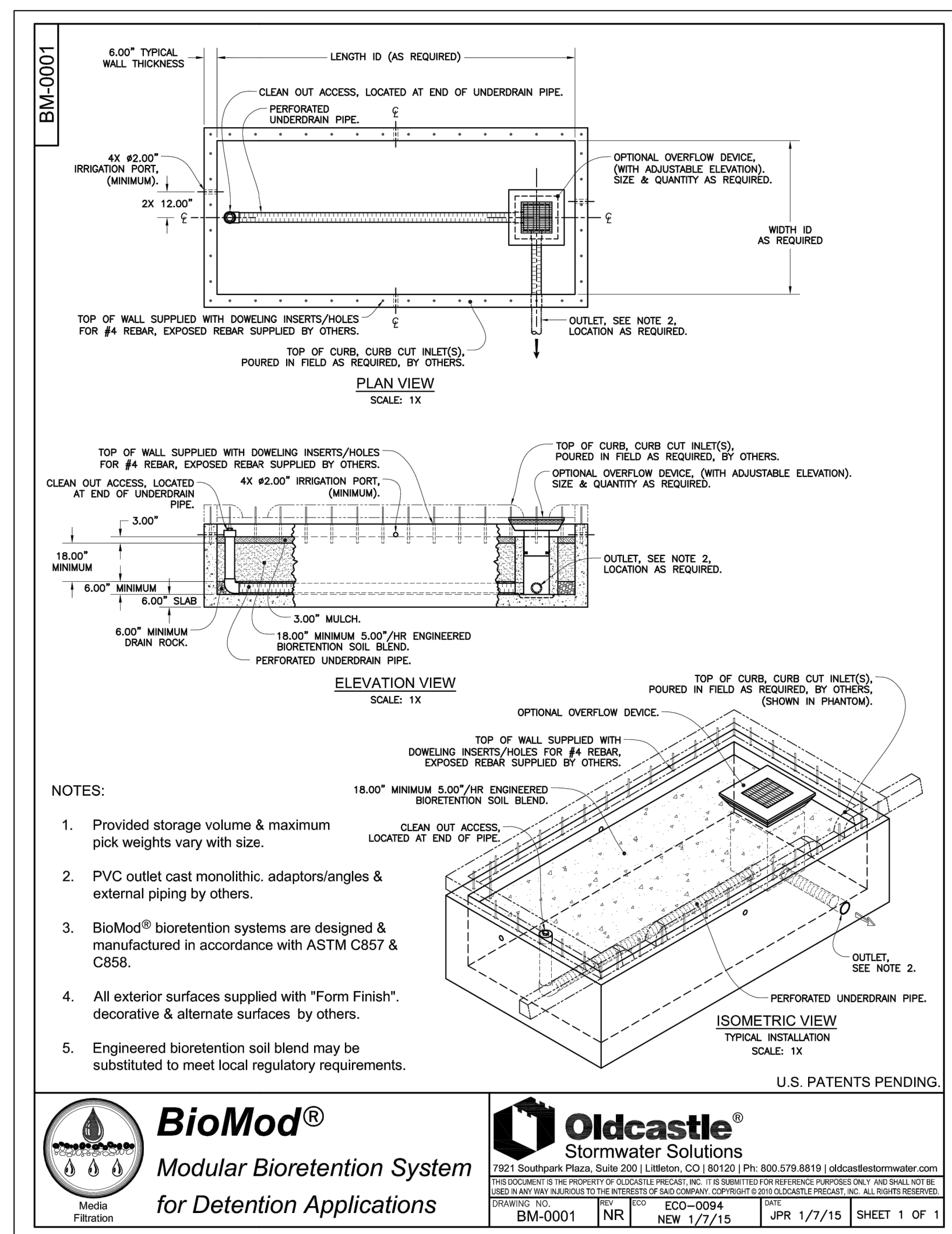
1. CONNECT THE FOLLOWING FEATURES TO SANITARY SEWER:
  - a. COVERED TRASH/ RECYCLING ENCLOSURES.
  - b. COVERED LOADING DOCKS AND MAINTENANCE BAYS.
2. BENEFICIAL LANDSCAPING.
3. USE OF WATER EFFICIENT IRRIGATION SYSTEMS.
4. MAINTENANCE (PAVEMENT SWEEPING, CATCH BASIN CLEANING, GOOD HOUSEKEEPING).
5. STORM DRAIN LABELING.

- BIORETENTION SOIL MIX SHALL MEET THE REQUIREMENTS AS OUTLINED IN APPENDIX C OF THE C.3 STORM WATER HANDBOOK AND SHALL BE A MIXTURE OF FINE SAND AND COMPOST MEASURED ON A VOLUME BASIS OF 60-70% SAND AND 30-40% COMPOST. CONTRACTOR TO REFER TO APPENDIX C FOR SAND AND COMPOST MATERIAL SPECIFICATIONS. CONTRACTOR MAY OBTAIN A COPY OF THE C3 HANDBOOK AT : [HTTP://WWW.SANJOOSEGA.GOV/INDEX.ASPX?NID=1761](http://www.sanjoosega.gov/index.aspx?nid=1761)

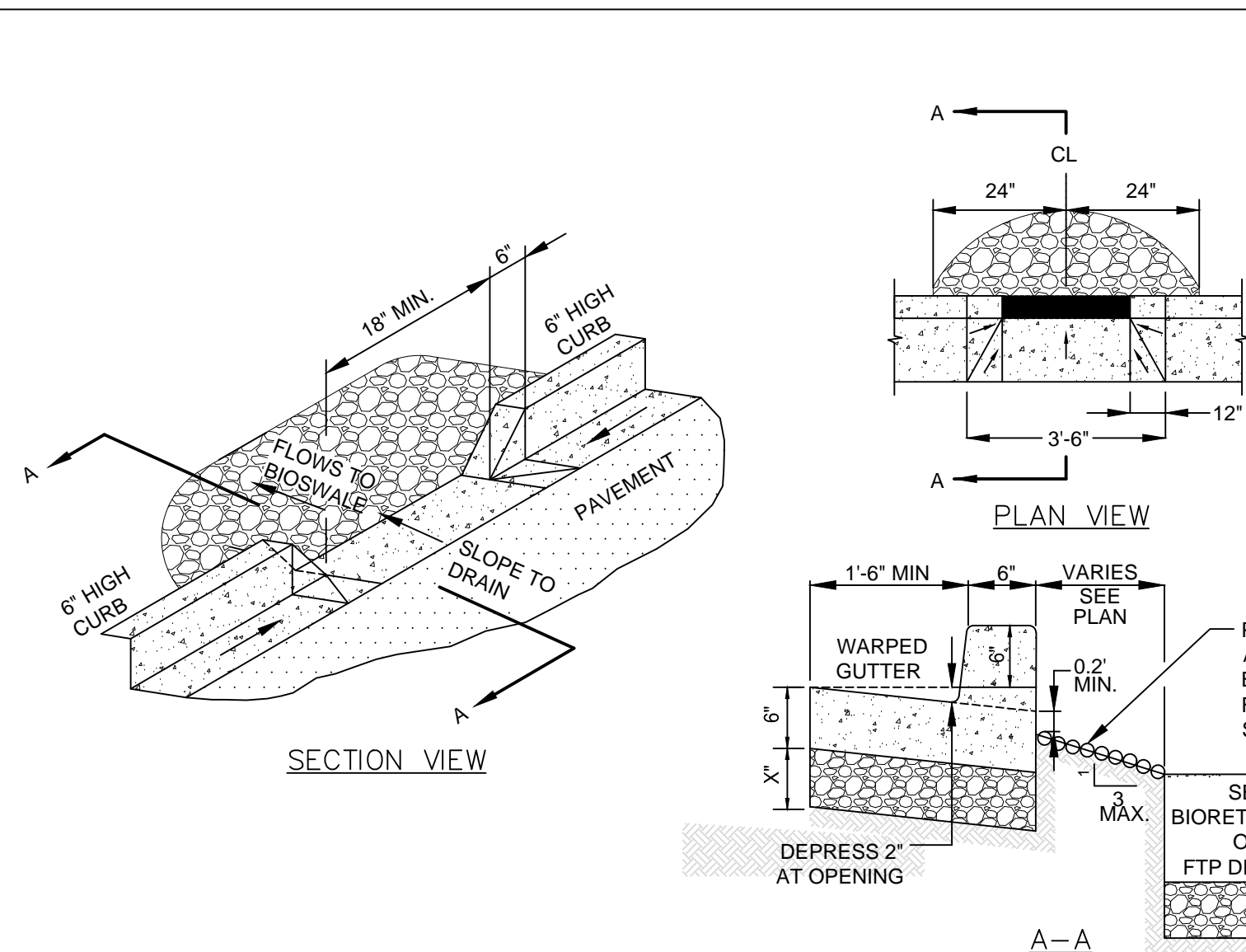
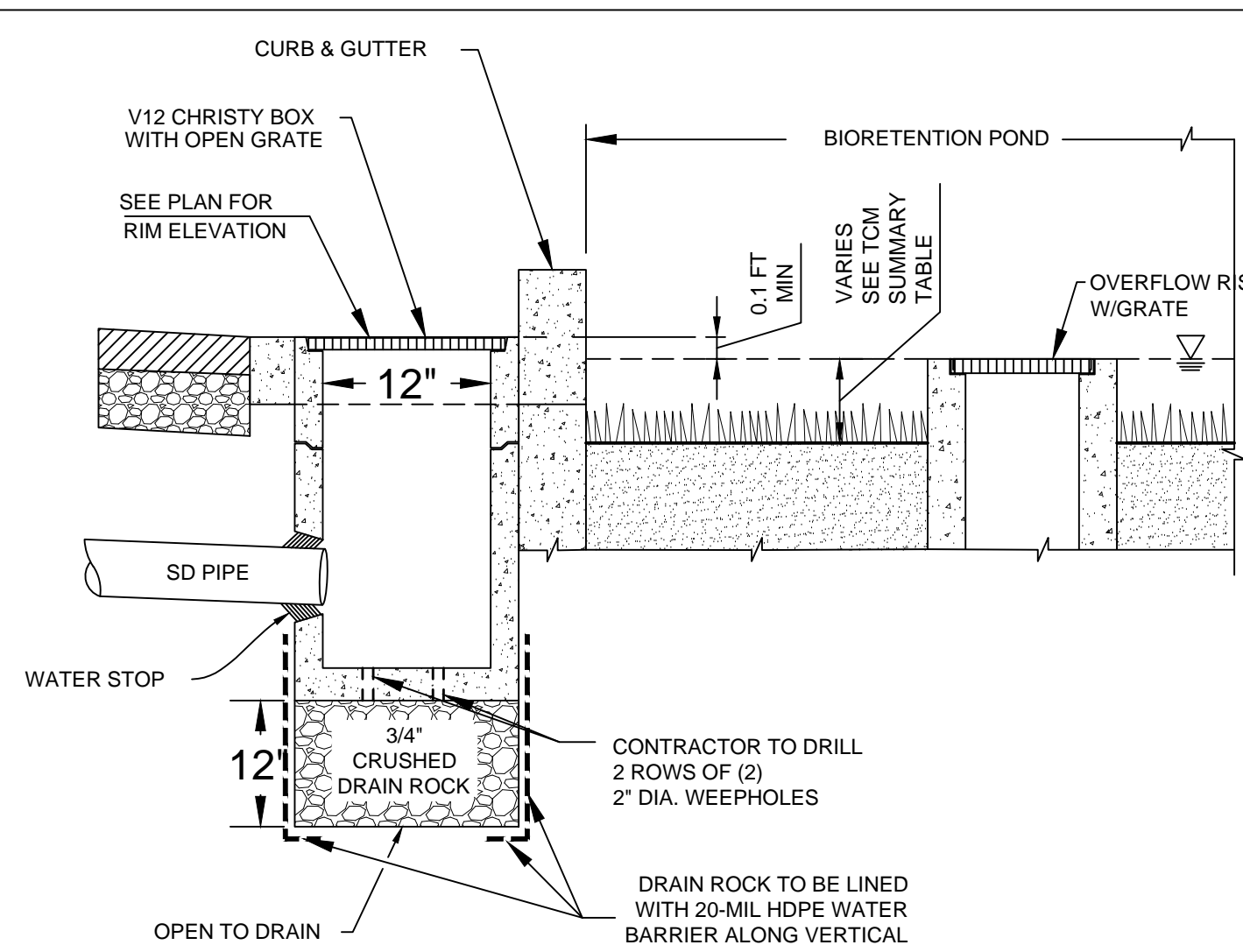
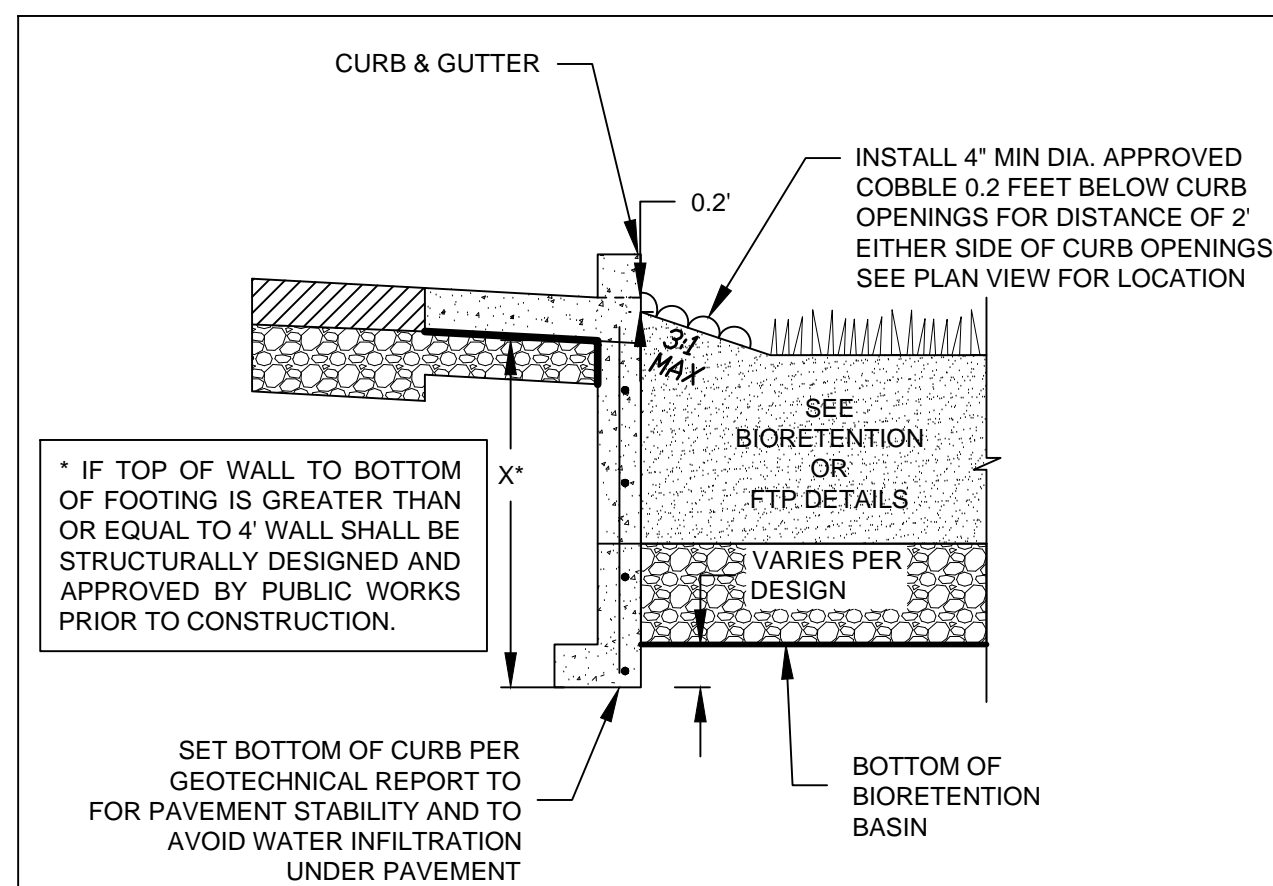
- PRIOR TO ORDERING THE BIOTREATMENT SOIL MIX OR DELIVERY TO THE PROJECT SITE, CONTRACTOR SHALL PROVIDE A BIOTREATMENT SOIL MIX SPECIFICATION CHECKLIST, COMPLETED BY THE SOIL MIX SUPPLIER AND CERTIFIED TESTING LAB.

1. SEE GRADING PLAN FOR BASIN FOOTPRINT AND DESIGN ELEVATIONS.
2. PLACE 3 INCHES OF COMPOSTED, NON-FLOATABLE MULCH IN AREA BETWEEN STORMWATER PLANTINGS.
3. SEE LANDSCAPE PLAN FOR MULCH, PLANT MATERIALS AND IRRIGATION REQUIREMENTS
4. CURB CUTS SHALL BE A MINIMUM 18" WIDE AND SPACED AT MAXIMUM 10' INTERVALS AND SHOULD DIRECT STORMWATER TO DRAIN INTO THE BASIN. CURB CUTS SHALL ALSO NOT BE PLACED LINE WITH OVERFLOW CATCH BASIN. SEE GRADING PLAN FOR MORE DETAIL ON LOCATIONS OF CURB CUTS.
5. A MINIMUM 0.2% DROP BETWEEN STORM WATER ENTRY POINT (I.E. CURB OVERFLOW, FLUSH CURB, ETC.) AND ADJACENT LANDSCAPE FINISHED GRADE.
6. DO NOT COMPACT NATIVE SOIL / SUBGRADE AT BOTTOM OF BASIN. LOOSEN SOIL TO 12" DEPTH.

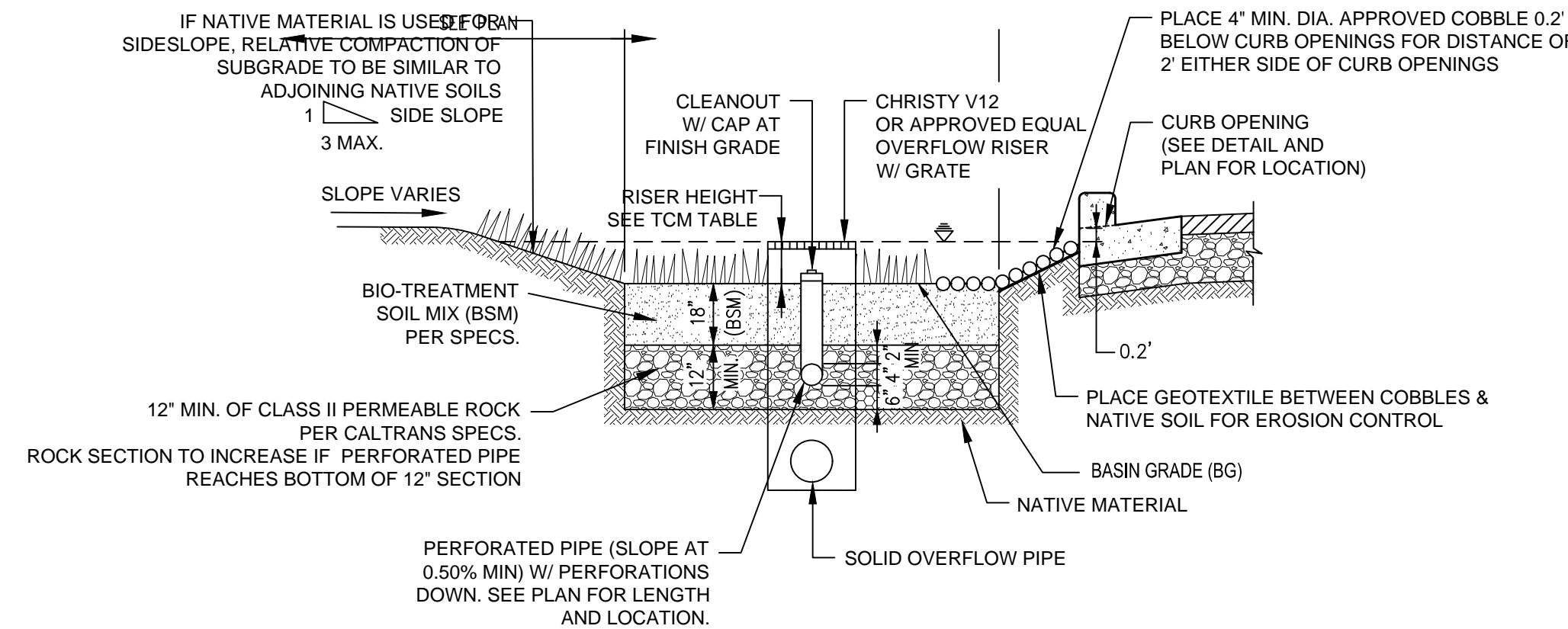
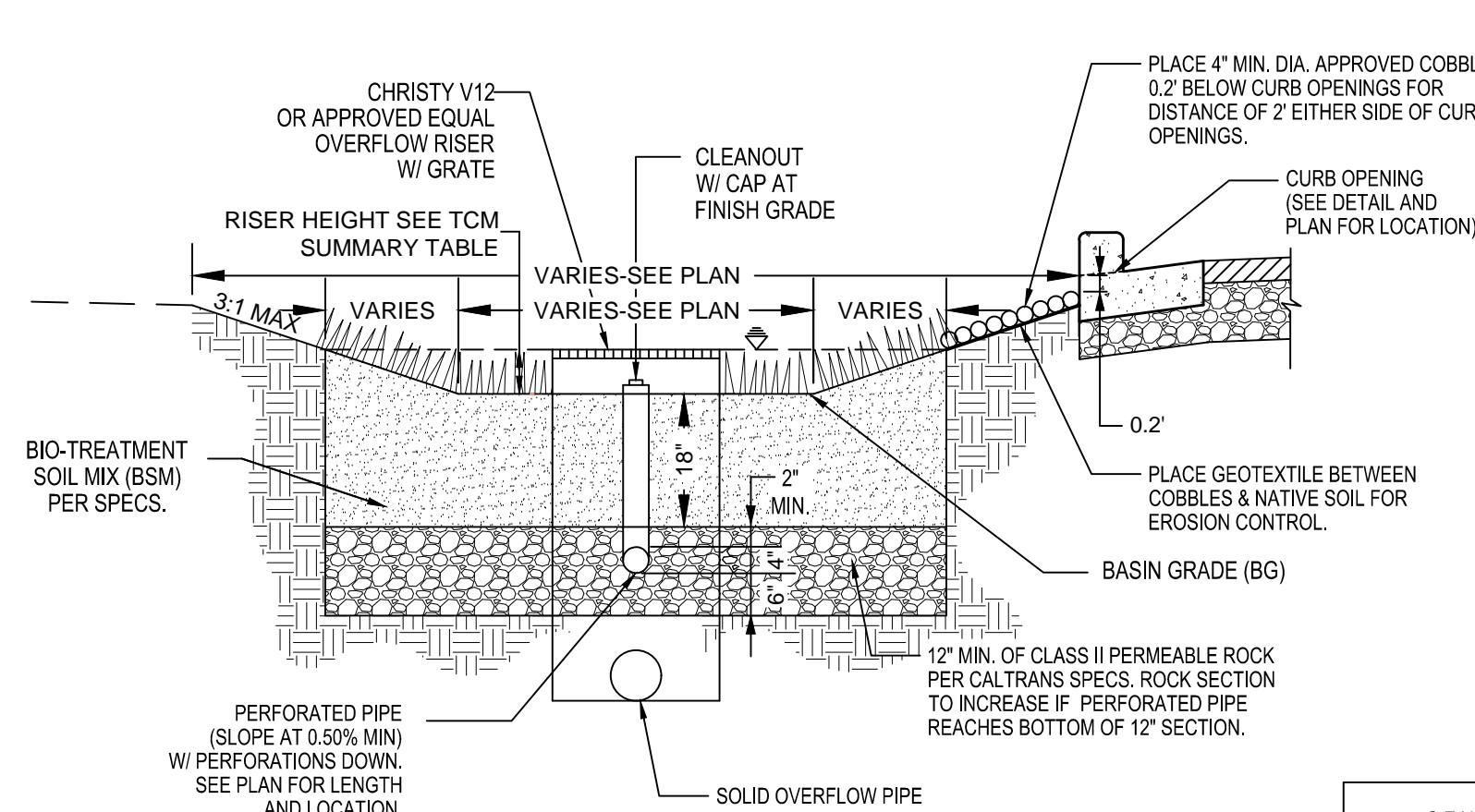
<b>a. Total Site Area:</b> 237.2 <b>acre</b>	<b>b. Total Project Area Disturbed:</b> 237 <b>acre</b> (including clearing, grading, or excavating)			
<b>Impervious Area<sup>1</sup> (IA)</b>	<b>Pre-Project (Existing) IA (ft<sup>2</sup>)</b>	<b>Existing IA Retained As-is (ft<sup>2</sup>)</b>	<b>Existing IA Replaced with New IA Created (ft<sup>2</sup>)</b>	<b>Total Post- Project IA (ft<sup>2</sup>)</b>
Roof	81,782	0	81,782	38,745
Surface Parking	70,944	0	16,527	0
Sidewalks, streets, etc.	121,855	0	121,985	15,912
<b>c. Total Impervious Area</b>	<b>232,681</b>	<b>0</b>	<b>230,294</b>	<b>54,657</b>
<b>d. Total new and replaced impervious area</b>			274,921	274,921
<b>PerVIOUS Area (P-A)</b>	<b>Pre-Project (Existing) PA (ft<sup>2</sup>)</b>			<b>Total Post- Project PA (ft<sup>2</sup>)</b>
Landscaping <sup>2</sup>	37,522			37,282
PerVIOUS Paving	0			0
Other (e.g., Green Roof)	0			0
<b>e. Total Pervious Area</b>	<b>37,522</b>			<b>37,282</b>
<b>f. Total Area (A+P-A)</b>	<b>312,203</b>			<b>312,203</b>
<b>g. Percent Replacement of IA in Redevelopment Projects</b> (Total Existing IA Replaced with New - Total Existing IA) x 100% = <b>30.19</b>				





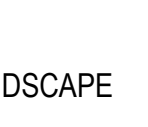



- STANDING WATER SHALL NOT REMAIN IN THE TREATMENT MEASURES FOR MORE THAN FIVE DAYS, TO PREVENT MOSQUITO GENERATION. SHOULD ANY MOSQUITO ISSUES ARISE, CONTACT THE DISTRICT CLARIFIED SEWER DIVISION (CLARIFIED SEWER DISTRICT). MOSQUITO LARVICIDES SHALL BE APPLIED ONLY WHEN ABSOLUTELY NECESSARY, AS INDICATED BY THE DISTRICT AND ONLY BY A LICENSED PROFESSIONAL OR THE DISTRICT CONTRACTOR. CONTACT INFORMATION FOR THE DISTRICT IS PROVIDED BELOW.
- DO NOT USE PESTICIDES OR OTHER CHEMICAL APPLICATIONS TO TREAT DISEASED PLANTS. CONTROL WEEDS OR REMOVED PLANTS GROWING IN THE DISTRICT. DISTRICTS MAY USE (BIOLOGICAL, PHYSICAL AND CULTURAL CONTROLS) TO TREAT A PEST PROBLEM. PRUNE PLANTS PROPERLY AND AT THE APPROPRIATE TIME OF YEAR. DISTRICTS MAY USE IRRIGATION FOR LANDSCAPE PLANTS. DO NOT OVER WATER.



1	CURB ADJACENT TO BIORETENTION N.T.S.	2	BUBBLER BOX DETAIL N.T.S.	3	CURB OPENING N.T.S.
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4	BIORETENTION BASIN W/O LINER N.T.S.	5	BIORETENTION BASIN W/O LINER N.T.S.
---	--	---	--

OWNER	<p>MARTIN AVENUE PROPERTIES</p>
CONTRACTOR	<p> 1450 Veterans Blvd. Redwood City, CA 94063 650.474.1450</p>
ARCHITECT	<p> 130 East Randolph Suite 3100 Chicago, IL 60601 312.833.2930</p>
LANDSCAPE	<p> 1345 Pauline Drive Sunnyvale, CA 94087 408.481.3020</p>
CIVIL	<p> 1570 Oakland Road San Jose, CA 95131 408.487.2203</p>
STRUCTURAL	<p> 6111 Johnson Ct Suite 400 Pleasanton, CA 94588 408.951.9220</p>
MEP, FF, PA	<p> 425 California Street Suite 400 San Francisco, CA 415.288.9600</p>

PROGRESS SET  
NOT FOR  
CONSTRUCTION

F	ISSUED FOR PCC REVIEW	11-14-2022
No.	Description	Date

**651 MARTIN  
AVENUE**

651 MARTIN AVENUE  
SANTA CLARA, CA  
95050  
APN: 224-04-071

ISSUED FOR PCC REVIEW

## STORMWATER CONTROL PLAN NOTES & DETAILS

## C5A

SCALE: Scale as Note

© 2022 SHEEHAN MABLE HARTWAY ARCHITECTS, LTD.





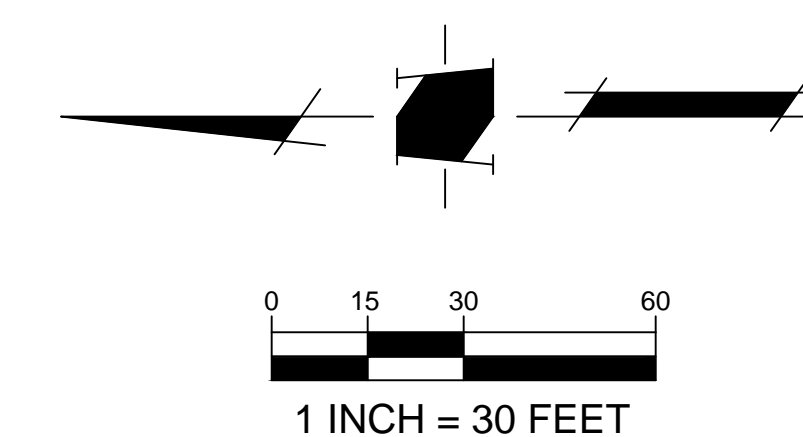


[illegible]

651 MARTIN AVENUE  
SANTA CLARA, CA  
95050  
APN: 224-04-071

FIRE ACCESS &amp; HYDRANT PLAN

SCALE: Scale as Noted



PROJECT BOUNDARY

PROJECT BOUNDARY

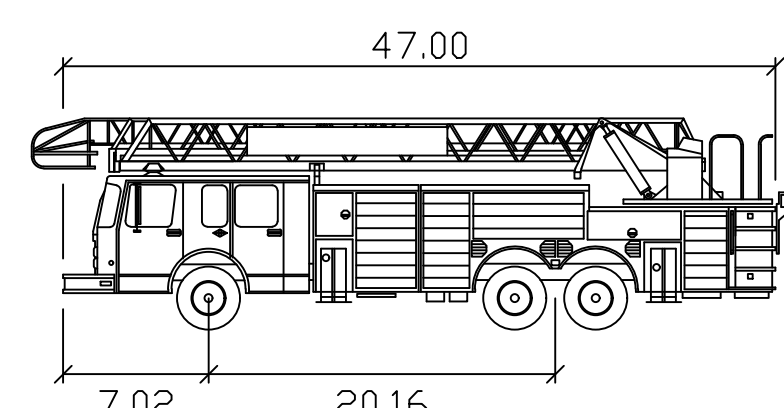
FIRE ACCESS ROAD  
(EVAE-SEE NOTE 4)

FIRE ACCESS TURNING RADIUS

1. EXISTING EASEMENTS ARE LABELED ON SHEET C1.
2. SECURITY GATES SHALL BE EQUIPPED WITH OPTICON SWITCH OR APPROVED ALTERNATIVE FOR FIRE DEPARTMENT ACCESS.
3. PROJECT DESIGN TEAM WILL SUBMIT AN AMM AS NECESSARY TO MEET ALL CSE PD REQUIREMENTS.
4. EVSE SHOWDOWN IS PROPOSED AND SHALL BE DECIDED BY SECURITY INSTITUTE.
5. ALL TREES ALONG AERIAL ACCESS ROAD(S) SHALL HAVE MATURE HEIGHTS OF NOT GREATER THAN 30 FEET.
6. PAINT ALL CURBS RED ALONG EMERGENCY VEHICLE ACCESS EASEMENT (PAVE) LANES.
  - 7. AERIAL ACCESS PROVIDED:
    - EXTERIOR PERIMETER: 1455 ft
    - AERIAL ACCESS PROVIDED: 692 ft
    - COVERAGE: 46%
8. FIRE ACCESS ROADS SHALL HAVE A MINIMUM UNOBSTRUCTED VERTICAL CLEARANCE OF NOT LESS THAN 13 FEET 6 INCHES.
9. ALL FIRE DEPARTMENT ACCESS ROADS SHALL BE AN ALL-WEATHER SURFACE DESIGNED TO SUPPORT THE IMPOSED LOAD OF FIRE APPARATUS WITH A GROSS VEHICLE WEIGHT OF 75,000-POUNDS.
10. THE GRADE FOR EMERGENCY APPARATUS ACCESS ROADS SHALL NOT EXCEED 10 PERCENT TO FACILITATE FIRE-GROUND OPERATIONS.
11. EACH ONSITE FIRE HYDRANT SHALL BE CAPABLE OF FLOWING AT LEAST 1500 GPM ON SITE. FIRE HYDRANT SHALL BE MAINTAINED (2018 CPC29.1). PIPING SHALL BE DESIGNED TO ACCOMMODATE THE FLOW.
12. PERMANENT BLUE REFLECTIVE STRIP BUTTONS SHALL BE LOCATED AT THE INTERSECTION OF THE ACCESS ROADS, DIRECTLY IN FRONT OF THE EQUIPMENT STORAGE BUILDING.
13. ELECTRIC METERS, SERVICE SWITCHES AND OTHER UTILITY EQUIPMENT SHALL BE CLEARLY AND LEGIBLY MARKED TO IDENTIFY THE UNIT OR SPACE THAT IT SERVES. IDENTIFICATION SHALL BE MADE IN AN APPROVED MANNER VISIBLY TO THE PUBLIC. (2018 CPC29.1)

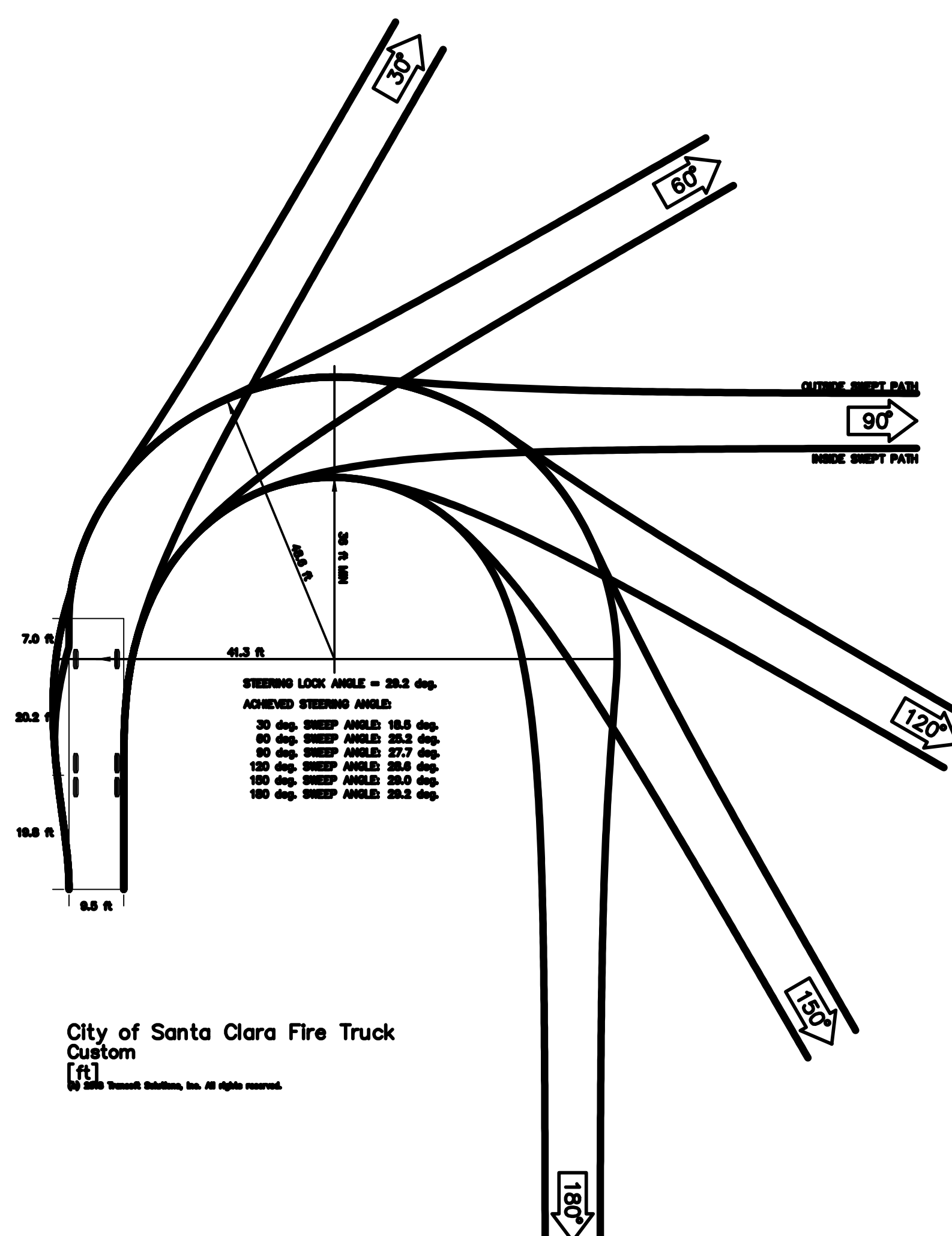
PER CFC 2019 APPENDIX B	
SECTION B104.1	
TOTAL FLOOR AREA (SF)	488,175
TABLE B105.1(2)	
TOTAL FIRE-FLOW (GPM)	6,000
TABLE B105.2	
REDUCED FIRE-FLOW (GPM)	1,500

PER CFC 2019 APPENDIX C, TABLE C102.1	
MINIMUM NUMBER OF HYDRANTS	6
AVERAGE SPACING BETWEEN HYDRANTS (FT)	250
MAXIMUM DISTANCE FROM ANY POINT ON STREET OR ROAD FRONTAGE TO EXTERIOR WALL OF THE BUILDING(FT)	150



City of Santa Clara Fire Truck

Width	: 9.50 ft
Track	: 8.00 ft
Overall Length	: 47.00 ft
Wheelbase	: 20.16 ft
Lock to Lock Time	: 6.0 s
Steering Angle	: 29.2°

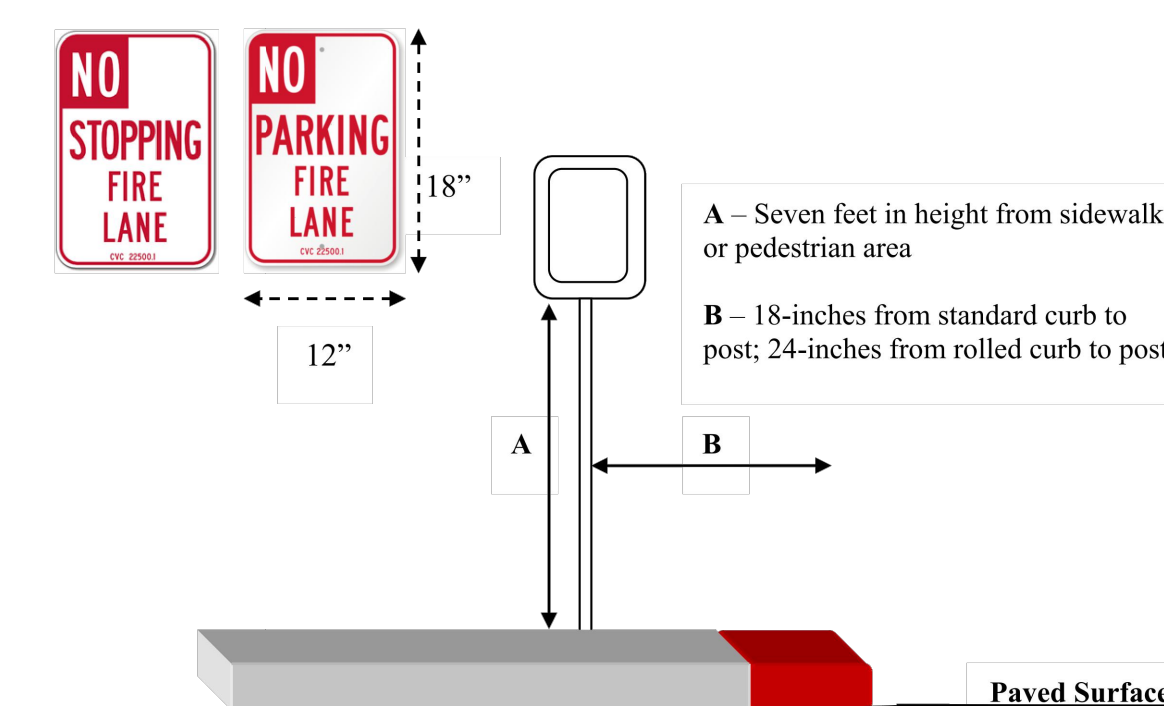


**FIGURE 8 – Fire Lane Identification**

**STANDARD CURB DETAIL:**

**ROLLED CURB DETAIL:**


**SIGN INSTALLATION DETAILS:**



**Note:** Signs may be mounted on existing posts, fences or buildings, if post, fence, or building is no more than 24-inches from the curb or edge of road surface.

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Revision Date: 10/24/2

	<h1 style="margin: 0;">City of Santa Clara</h1> <p style="margin: 0; color: #A52A2A;">The Center of What's Possible</p>	<h2 style="margin: 0;">Water &amp; Sewer Utilities Department</h2> <h3 style="margin: 0;">Non Single Family - Hydraulic Modeling Request Form for Fire Flow Data</h3> <p style="margin: 0;">1500 Warburton Avenue Santa Clara, CA 95050</p>
<b>APPLICANT INFORMATION (BY APPLICANT)</b>		
APPLICANT NAME: Michael Sheehy		DATE: 9/1/2021
APPLICANT COMPANY: HMH Civil Engineers		
APPLICANT ADDRESS: 1570 Oakland Road 1500 Warburton Avenue Santa Clara, CA 95050		
APPLICANT PHONE NO: (669) 295-2319	ALTERNATE PHONE NO: ---	
APPLICANT EMAIL: msheehy@hnmca.com		
<b>PROJECT INFORMATION (BY APPLICANT)</b>		
PROJECT NAME: Vantage Data Center		
PROJECT ADDRESS: 651 Martin Avenue, Santa Clara, CA 95050		
<div style="border: 1px solid black; padding: 5px; display: inline-block;"> <b>Proposed Data Center Building (4-stories, ~ 470,000 sf)</b> </div>		
PROJECT DESCRIPTION:		
	Proposed	
AP#- 224-04-071	BUILDING TYPE (CALIFORNIA BUILDING CODE): IA	
NO. OF HYDRANT(S) TO BE FLOWED: ONE (1)		
FLOW HYDRANT (S) NO.: 269	STATIC & RESIDUAL HYDRANT (S) NO.: 268, 270	
<b>PROJECT MODELING DATA (SITY TO PROVIDE TO APPLICANT)</b>		
FLOW HYDRANT (S) NO.: 269	STATIC & RESIDUAL HYDRANT (S) NO.: 268, 270	
RESIDUAL PRESSURE (PSI): 47.55	STATIC PRESSURE (PSI): 57.61	
	TEST FLOW (GPM): 2000	
<div style="display: flex; justify-content: space-between; align-items: center;"> <div> <b>Jonathan Machorro</b>  <small>Digitally signed by Jonathan Machorro DN: cn=Jonathan Machorro, o=City of Santa Clara, ou=City of Santa Clara, email=jm@cityofsc.org</small> </div> <div>DATE: _____</div> </div>		
APPROVED BY DESIGNING ENGINEER: <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	SIGNATURE: <b>Nelson Lulu</b> <small>Digitally signed by Nelson Lulu DN: cn=Nelson Lulu, o=City of Santa Clara, ou=City of Santa Clara, email=nlulu@cityofsc.org</small>	
APPROVED BY UTILITIES ENGINEER: <input type="checkbox"/> YES <input type="checkbox"/> NO	SIGNATURE: _____ DATE: _____	

Notes:

1. The fire flow request by applicant will be analyzed using the City's hydraulic modeling program. This will determine the projected available fire flow capacity and residual pressure from public fire hydrants.
2. Results are typically available 2-3 weeks after the application has been submitted.
3. The hydraulic modeling fee for a non-single family home fire flow request is \$1,522. Email [Water@craftsdaacra.gov](mailto:Water@craftsdaacra.gov) for instructions on submitting payment.
4. Upon proof of payment, email application to [Water@craftsdaacra.gov](mailto:Water@craftsdaacra.gov) or deliver in person to the Water & Sewer Utilities Department at the City.
5. Upon submittal of form, City will provide applicant with an utility map so that applicant can identify desired hydrant and hydrant to be flowed.



