

Draft Environmental Impact Report

Memorex Data Center

Prepared by the
City of Santa Clara

1200 MEMOREX DR.



In Consultation with



June 2021

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SUMMARY

The City of Santa Clara, as the Lead Agency, has prepared this Draft Environmental Impact Report (EIR) for the Memorex Data Center in compliance with the California Environmental Quality Act (CEQA) and the CEQA Guidelines.

As described in CEQA Guidelines Section 15121(a), an EIR is an informational document that assesses potential environmental impacts of a proposed project, as well as identifies mitigation measures and alternatives to the proposed project that could reduce or avoid adverse environmental impacts (CEQA Guidelines 15121(a)). As the CEQA Lead Agency for this project, the City of Santa Clara is required to consider the information in the EIR along with any other available information in deciding whether to approve the project. The basic requirements for an EIR include discussions of the environmental setting, significant environmental impacts including growth-inducing impacts, cumulative impacts, mitigation measures, and alternatives. It is not the intent of an EIR to recommend either approval or denial of a project.

Summary of the Project

The 9.18-acre project site is located at 1200 Memorex Drive. The site is currently developed with three buildings: a three-story approximately 300,000 square foot building, a two-story approximately 46,000 square foot building, and a one-story approximately 2,950 square foot building. Roughly 100,000 square feet of active outdoor uses are located on the eastern portion of the site.

The project proposes to demolish the existing improvements on the site to construct a four-story 472,920 square foot data center building with an attached six-story 87,520 square foot ancillary use office and storage component, for a combined square footage of 560,440. The structure would have a height of 85 feet to the top of building, with rooftop metal screening reaching a height of 99 feet. The data center portion of the building would house computer servers for private clients in a secure and environmentally controlled structure and would be designed to provide 60 megawatts (MW) of information technology (IT) power. The ancillary use portion of the building would be used for office (roughly 51,000 square feet) and storage uses.

The project would also construct a 150 megavolt amps (MVA) electrical substation on the eastern portion of the site. The substation would have three 50 MVA transformers, one of which would be redundant and would only become active if one of the other transformers fails. The substation capacity would be a nominal 100 MVA.

A 60 kilovolt (kV) overhead transmission line would be extended to the site to connect the substation to the existing electrical grid. The transmission line would form a loop, with the route starting on the east side of Lafayette Street and heading west on Shulman Avenue to Memorex Drive. From there, the route would continue west to Ronald Street and then head south to Di Giulio Avenue to connect to the proposed substation. The route would then head east from the substation to Lafayette Street and turn north towards Mathew Street to close the loop. The portion of the transmission line located on Di Giulio Street may be undergrounded, if determined to be feasible by the City.

Summary of Significant Impacts and Mitigation Measures

The following table is a summary of the significant environmental impacts identified and discussed in the EIR, and the mitigation measures proposed to avoid or reduce those impacts. The project description and full discussion of the impacts and mitigation measures can be found in Section 2.0 Project Information and Description and Section 3.0 Environmental Setting, Impacts, and Mitigation of this EIR.

Summary of Significant Impacts and Mitigation Measures	
Impact	Mitigation Measure
Biological Resources	
Impact BIO-1: Tree removal during the nesting season could impact protected raptors and/or other protected migratory birds. Any loss of fertile bird eggs, or individual nesting birds, or any activities resulting in nest abandonment during construction would constitute a significant impact. (Less Than Significant Impact with Mitigation Incorporated)	<p>MM BIO-1.1: Construction shall be scheduled to avoid the nesting bird season to the extent feasible. The nesting season for most birds, including most raptors, in the San Francisco Bay Area extends from February 1 through August 31.</p> <p>If it is not possible to schedule construction activities between September 1 and January 31, then pre-construction surveys for nesting birds shall be completed by a qualified ornithologist to ensure no nest shall be disturbed during project implementation. This survey shall be completed no more than 14 days prior to the initiation of grading, tree removal, or other demolition or construction activities during the early part of the breeding season (February through April) and no more than 30 days prior to the initiation of these activities during the late part of the breeding season (May through August).</p> <p>During this survey, the ornithologist shall inspect all trees and other possible nesting habitats within and immediately adjacent to the construction area for nests. If an active nest is found sufficiently close to work areas to be disturbed by construction, the ornithologist, in consultation with CDFW, shall determine the extent of a construction-free buffer zone to be established around the nest to ensure that nests of bird species protected by the MBTA or Fish and Game Code shall not be disturbed during project construction.</p> <p>A final report of nesting birds, including any protection measures, shall be submitted to the Director of Community Development prior to the start of grading or tree removal.</p>

Impact BIO-5: Trees to be retained on-site may be injured during project construction activities including demolition and site grading. Additionally, trees adjacent to the proposed overhead transmission line may require substantial pruning to ensure clearance. **(Less Than Significant Impact with Mitigation Incorporated)**

MM BIO-5.1: Barricades – Prior to initiation of construction activity, temporary barricades would be installed around all trees in the construction area. Six-foot high, chain link fences would be mounted on steel posts, driven two feet into the ground, at no more than 10-foot spacing. The fences shall enclose the entire area under the drip line of the trees or as close to the drip line area as practical. These barricades will be placed around individual trees and/or groups of trees.

MM BIO-5.2: Root Pruning (if necessary) – During and upon completion of any trenching/grading operation within a tree’s drip line, should any roots greater than one inch in diameter be damaged, broken or severed, root pruning to include flush cutting and sealing of exposed roots should be accomplished under the supervision of a qualified Arborist to minimize root deterioration beyond the soil line within 24 hours.

MM BIO-5.3: Pruning – Pruning of the canopies to include removal of deadwood should be initiated prior to construction operations. Such pruning will provide any necessary construction clearance, will lessen the likelihood or potential for limb breakage, reduce ‘windsail’ effect and provide an environment suitable for healthy and vigorous growth.

MM BIO-5.4: Fertilization – Fertilization by means of deep root soil injection should be used for trees to be impacted during construction in the spring and summer months.

MM BIO-5.5: Mulch – Mulching with wood chips (maximum depth of three inches) within tree environments should be used to lessen moisture evaporation from soil, protect and encourage adventitious roots and minimize possible soil compaction.

Cultural Resources

Impact CUL-1: The project would demolish the existing improvements on site and therefore would have a significant and unavoidable impact on a historical resource. **(Significant and Unavoidable Impact with Mitigation Incorporated)**

MM CUL-1.1: Historic American Buildings Survey (HABS) Recordation. Prior to project implementation, the historical resource will be recorded to Historic American Buildings Survey (HABS) standards established by the National Park Service, as detailed below:¹

- A HABS written report will be completed to document the physical history and description of the historical resource, the historic context for its construction and use, and its historic significance. The report will follow the standard outline format described in the *Historic American Buildings Survey Guidelines for Historical Reports* in effect at the time of recording. The report shall be prepared by a professional who meets the Secretary of the Interior's Professional Qualifications Standards for Architectural History.
- Large-format, black and white photographs of the historical resource will be taken and processed for archival permanence in accordance with Historic American Building Survey (HAB), Historic American Engineering Record (HAER), and HALS (Historic American Landscapes Survey) Photography Guidelines in effect at the time of recording. The photographs shall be taken by a professional with HABS photography experience. The number and type of views required will be determined in consultation with the local jurisdiction.
- Existing drawings, where available, will be reproduced on archival paper. If existing drawings are not available, a full set of measured drawings depicting existing conditions will be prepared. The drawings shall be prepared by a professional who meets the Secretary of the Interior's Professional Qualification Standards for Architecture or Historic Architecture.
- The HABS documentation, including the written report, large-format photographs, and drawings, shall be submitted to appropriate

¹ National Park Service, "HABS Guidelines," accessed April 8, 2020, <https://www.nps.gov/hdp/standards/habsguidelines.htm>.

repositories, such as the Santa Clara County Historical & Genealogical Society (SCCHGS), Silicon Valley Historical Association, Sourisseau Academy for State and Local History at San José State University, and/or the Computer History Museum in Mountain View. The documentation shall be prepared in accordance with the archival standards outlined in the Transmittal Guideline for Preparing HABS/HAER/HALS Documentation in effect at the time of recording. A professional who meets the Secretary of the Interior's Professional Qualifications Standards for Architectural History shall manage production of the HABS documentation.

MM CUL-1.2: Video Documentation. Video documentation of the subject property will supplement HABS documentation by recording the exterior and interior of the industrial complex at 1200 – 1310 Memorex Drive, as it appears, prior to project implementation. Using visuals in combination with active narration, the documentation shall include as much information as possible about the spatial arrangement, circulation patterns, historic use, current condition, construction methods, and material appearance of the historic resource. The documentation shall be conducted by a professional videographer, preferably one with experience recording architectural resources, and produced in conjunction with a qualified professional who meets the standards for history, architectural history, or architecture (as appropriate) set forth by the Secretary of the Interior's Professional Qualification Standards.

It is recommended that the video documentation be preserved in an electronic format that is cross-platform and nonproprietary. Like HABS documentation, archival copies of the video documentation shall be submitted to appropriate repositories, such as the SCCHGS, Silicon Valley Historical Association, Sourisseau Academy for State and Local History at San José State University, and/or the Computer History Museum in Mountain View. It may also be shared online via a freely accessible platform such as YouTube.

MM CUL-1.3: Interpretive Display. Interpretive displays vary widely in size, style, construction, and information capacity. Specifications for a particular interpretive display should consider a number of factors, including but not limited to the nature of the resource, the intended audience, and the location of the display. Although typically located at the subject property, offsite interpretive displays may be appropriate in certain cases, such as when the property is not publicly accessible for security or other reasons. In all instances, interpretive displays should be conducted by an architectural historian or historian who meets the Secretary of the Interior’s Professional Qualification Standards, in coordination with an exhibit designer.

Both onsite and offsite interpretive displays may be appropriate mitigation measures for the demolition of the industrial complex at 1200 – 1310 Memorex Drive. Onsite displays should be located in a prominent space, such as a lobby, where they may be viewed by employees and visitors to the property. Displays should be permanent and should address the history and architectural features of the industrial complex at 1200 – 1310 Memorex Drive and its operation during the property’s period of significance.

Because of the nature of the proposed replacement project, however, the subject property may not be easily accessible by the public, and an offsite interpretive display may be recommended in place of or in addition to the onsite display. An offsite interpretive display should be located in a place with a connection to the subject property or its historical context. For example, the Computer History Museum in Mountain View may be an appropriate location for an interpretive display because of the substantial, contextual connection between the museum’s mission and the subject property’s significance within the development of the modern computer industry. The Computer History Museum also holds hundreds of Memorex Corporation artifacts and records in its repository, which would complement an interpretive display related to the subject property.

MM CUL-1.4: Oral History Collection. Oral history is a method of gathering and preserving the memories of people and communities, including personal commentaries of historical significance. Best practices for performing oral interviews are outlined by the Oral History Association (OHA), which was founded in 1966 and serves as the principal membership organization for those involved in the field of oral history.

The project will prepare an oral history collection that focuses on the operation of the Memorex Corporation between 1961 and 1971, when the subject property served as the company headquarters. To the extent feasible, at least one former employee of the Memorex Corporation who was employed at the subject property shall be interviewed. A list of guests at the Memorex at Fifty reunion, hosted at the Computer History Museum in Mountain View in 2011, may serve as a preliminary list of potential narrators.

Oral history audio and visual files collected as part of a mitigation effort for the 1200 – 1310 Memorex Drive will be conducted by a professional oral historian and preserved in an accessible, electronic format and submitted to appropriate repositories, such as the Santa Clara County Historical & Genealogical Society (SCCHGS), Silicon Valley Historical Association, Sourisseau Academy for State and Local History at San José State University, Oral History Center at the Bancroft Library in Berkeley, and/or the Computer History Museum, which currently houses more than one hundred oral history interviews related to the development of the modern computer industry. In the event that no appropriate narrators are identified, or in the event that all potential narrators decline to participate, a memorandum will be prepared to document the project methodology and efforts.

Impact CUL-2: The project may result in impacts to unknown subsurface cultural resources. **(Less Than Significant Impact with Mitigation Incorporated)**

MM CUL-2.1: In the event that prehistoric or historical resources are encountered during excavation and/or grading of the site, all activity within a 50-foot radius of the find will be stopped, the Director of Community Development will be notified, and the archaeologist will examine the find and make appropriate recommendations prior to issuance of building permits. If the find is deemed significant, a Treatment Plan will be prepared and provided to the Director of Community Development. The key elements of a Treatment Plan shall include the following:

- Identify 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 field strategy used to record, recover, or avoid the finds (photogs, 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.).
- Report structure, including a technical and layman'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,
- Appendices: site records, update site records, correspondence, consultation with Native Americans, etc.

Impact CUL-3: The project could disturb human remains, should they be encountered on the site. **(Less Than Significant Impact with Mitigation Incorporated)**

MM CUL-3.1: In the event that human remains are discovered during excavation and/or grading of the site, all activity within a 50-foot radius of the find will be stopped. The Santa Clara County Coroner will be notified and shall make a determination as to whether the remains are of Native American origin or whether an investigation into the cause of death is required. If the remains are determined to be Native American, the Coroner will notify the Native American Heritage Commission (NAHC) immediately. Once the NAHC identifies the most likely descendants, the descendants will make recommendations regarding proper burial, which will be implemented in accordance with Section 15064.5(e) of the CEQA Guidelines.

Geology and Soils

Impact GEO-6: Paleontological resources could be encountered during construction. **(Less Than Significant Impact with Mitigation Incorporated)**

MM GEO-6.1: In the event paleontological resources are discovered all work shall be halted within 50 feet of the find and a Paleontological Resource Mitigation Plan shall be prepared by a qualified paleontologist to address assessment and recovery of the resource. A final report documenting any found resources, their recovery, and disposition shall be prepared in consultation with the Community Development Director and filed with the City and local repository.

Hazards and Hazardous Materials

Impact HAZ-2: Construction workers could be exposed to contaminated soil and/or groundwater during excavation, grading, and construction activities. Future users of the site could be exposed to hazardous soil vapor. **(Less Than Significant Impact with Mitigation Incorporated)**

MM HAZ-2.1: For on-site construction activities, the project shall implement the approved Soil Management Plan prepared for the site under the oversight of the Regional Water Quality Control Board.

MM HAZ-2.2: For off-site construction activities associated with the underground transmission line, a qualified environmental specialist shall collect shallow soil samples within the areas of proposed construction activities and have the samples analyzed to determine if contaminated soil is present with concentrations above established construction/trench worker and residential thresholds. Once the soil sampling analysis is complete, a report of the findings will be provided to the Director of Community Development for review. The report shall indicate whether any off-site contaminated soils found during sampling are related to the known on-site contamination, or whether they are from a different off-site contamination source.

If contaminated soils are found in concentrations above established regulatory environmental screening levels, and are determined to be related to the known on-site contamination, the project shall incorporate the off-site contamination into the approved Soil Management Plan for the site. If the off-site contamination is determined to be unrelated to the known on-site contamination, the applicant shall enter into the Santa Clara County Department of Environmental Health's (SCCDEH) Voluntary Cleanup Program (VCP) to formalize regulatory oversight for remediation of contaminated soil to ensure the site is safe for construction workers and the public after development. The project applicant must remove contaminated soil in order to achieve detection levels acceptable to the SCCDEH. With approval of the SCCDEH, some of the contaminated soil may be allowed to be left in-place buried under hardscape and/or several feet of clean soil.

The project applicant shall prepare and implement a Removal Action Plan, Soil Mitigation Plan or other similar report describing the remediation process and to document the removal and/or capping of contaminated soil. All work and reports produced shall be performed under the regulatory oversight and approval of the SCCDEH.

	Noise
Impact NOI-1: To avoid impacts related to construction noise, the project will be required to implement a construction noise control plan. (Less than Significant Impact with Mitigation Incorporated)	<p>MM NOI-1.1: The project shall implement a construction noise control plan to regulate the hours of construction, reduce construction noise levels emanating from the site, and minimize disruption and annoyance at existing noise-sensitive receptors in the project vicinity. The control plan would include the following controls:</p> <ul style="list-style-type: none"> • Construction activities shall be limited to hours between 7:00 a.m. and 6:00 p.m. on weekdays and 9:00 a.m. and 6:00 p.m. on Saturdays. No construction is permitted on Sundays or Holidays. • Construct temporary noise barriers, where feasible, to screen stationary noise-generating equipment from adjacent properties. Temporary noise barrier fences would provide a 5 dBA noise reduction if the noise barrier interrupts the

line-of-sight between the noise source and receiver and if the barrier is constructed in a manner that eliminates any cracks or gaps.

- Equip all internal combustion engine-driven equipment with intake and exhaust mufflers that are in good condition and appropriate for the equipment.
- Unnecessary idling of internal combustion engines should be strictly prohibited.
- Locate stationary noise-generating equipment, such as air compressors or portable power generators, as far as possible from sensitive receptors as feasible. If they must be located near receptors, adequate muffling (with enclosures where feasible and appropriate) shall be used reduce noise levels at the adjacent sensitive receptors. Any enclosure openings or venting shall face away from sensitive receptors.
- Utilize "quiet" air compressors and other stationary noise sources where technology exists.
- Construction staging areas shall be established at locations that will create the greatest distance between the construction-related noise sources and noise-sensitive receptors nearest the project site during all project construction.
- Control noise from construction workers' radios to a point where they are not audible at existing residential uses to the north of the project site.
- The contractor shall prepare a detailed construction plan identifying the schedule for major noise-generating construction activities. The construction plan shall identify a procedure for coordination with adjacent residential land uses so that construction activities can be scheduled to minimize noise disturbance.
- Designate a "disturbance coordinator" who would be responsible for responding to any complaints about construction noise. The disturbance coordinator will determine the cause of the noise complaint (e.g., bad muffler, etc.) and will require that reasonable measures

be implemented to correct the problem.
Conspicuously post a telephone number for the disturbance coordinator at the construction site and include in it the notice sent to neighbors regarding the construction schedule.

Impact NOI-2: To avoid impacts related to operation of the proposed data center, the project will be required to incorporate noise reduction measures into the project design.
(Less than Significant Impact with Mitigation Incorporated)

MM NOI-1.2: The building shall include a rooftop screen wall reaching 14 feet in height above the roof, meeting a minimum surface weight of three pounds per square foot (such as one-inch-thick wood, ½-inch laminated glass, masonry block, concrete, or one-inch metal). The screen wall shall extend along the full length of the building's southern façade, a minimum distance of 225 feet north of the southwestern corner of the building along the western façade, and a minimum distance of 135 feet north of the southeastern corner of the building along the eastern façade.

MM NOI-1.3: Each chiller shall meet a sound power level goal of 100 dBA or less.

MM NOI-1.4: Each generator shall meet a design goal of 70 dBA or less at a lateral distance of 23 feet and a height of five feet above ground under full load. Generators shall be tested one at a time during daytime hours only.

MM NOI-1.4: Each generator shall be equipped with an exhaust silencer so that noise from the exhaust would not exceed 63 dBA at a lateral distance of 23 feet and a height of five feet above ground.

Transportation

Impact TRN-1: The project's vehicle miles traveled (VMT) per employee would be above the relevant significance threshold.
(Less than Significant Impact with Mitigation Incorporated)

MM TRN-2.1: The project shall implement a TDM program sufficient to demonstrate that VMT associated with the project would be reduced to 14.14 or less per employee. The TDM program may include, but is not limited to, the following measures which have been determined to be a feasible method for achieving the required VMT reduction:

- Provide commute trip reduction marketing and education for all eligible employees.
 - Implement marketing campaign targeting all project employees and visitors that encourages the use of transit, shared rides, and active modes. Marketing strategies may include new

employee orientation on alternative commute options, event promotions, and publications. Providing information and encouragement to use transit, share ride modes, and active modes, reducing drive-alone trips and thereby reducing VMT.

- Provide a subsidized or discounted transit program for all eligible employees.
 - This strategy requires the project employer to subsidize transit passes for participating employees.
- Provide a rideshare program for all eligible employees.
 - Organize a program to match individuals interested in carpooling who have similar commute patterns. Strategy encourages the use of carpooling, reducing the number of vehicle trips and thereby reducing VMT.

The TDM program shall be submitted and approved by the Director of Community Development and shall be monitored annually to gauge its effectiveness in meeting the required VMT reduction. The TDM program shall establish an appropriate estimate of initial vehicle trips generated by the occupant of the proposed project and shall conduct driveway traffic counts annually to measure peak-hour entering and exiting vehicle volumes. The volumes will be compared to trip thresholds established in the TDM program to determine whether the required reduction in vehicle trips is being met. In addition to monitoring driveway volumes, a survey will be developed as part of the TDM program to determine actual mode splits for employees. The survey will also gather information on usage of individual TDM program components. The results of the annual vehicle counts and survey will be reported in writing to the Director of Community Development.

If TDM program monitoring results show that the trip reduction targets are not being met, the TDM program shall be updated to identify replacement and/or additional feasible TDM measures to be implemented. The updated TDM program shall be subject to the same approvals and monitoring requirements listed above.

If monitoring and reporting demonstrates that the project is non-compliant (i.e, did not fulfill the requirements of the TDM program, meet the drive-alone reduction targets, etc.), the City as the enforcing agency may impose penalties including fines and/or permit limitations.

Summary of Alternatives to the Proposed Project

CEQA requires that an EIR identify alternatives to a project as it is proposed. CEQA Guidelines Section 15126.6 specifies that the EIR should identify alternatives which “would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project.” Below is a summary of the project alternatives analyzed in this EIR. A full analysis of the project alternatives is provided in Section 7.0 Alternatives.

Alternatives Considered but Rejected

The following alternatives were considered but rejected and described in detail in Section 7.3.1 Project Alternatives Considered but Rejected:

- Location Alternative – development of the project on an alternative site.
- Adaptive Reuse of the Historical Resource – reuse of the existing structures on the site through renovations that avoid demolition.
- Preservation Alternative - Retain Portion of Historical Resource – retain a portion of the historical resource on the site, but not enough to avoid the significant impact.

Analyzed Alternatives

The following were evaluated as alternatives to the project and described in detail in Section 7.3 Project Alternatives:

- No Project Alternative as required by CEQA – no new development, with continued operation of the existing uses on the project site.
- Preservation Alternative - Retain Historical Resource – retain the majority of the character defining features of the historical resource while demolishing other portions of the existing development not considered character defining features, allowing for the construction of the data center facility without a significant impact.

The CEQA Guidelines state that an EIR shall identify an environmentally superior alternative. The environmentally superior alternatives to the proposed project are the No Project Alternative and the Preservation Alternative - Retain Historical Resource Alternative, as further detailed in Section 7.4 Environmentally Superior Alternative.

SECTION 1.0 INTRODUCTION

1.1 PURPOSE OF THE ENVIRONMENTAL IMPACT REPORT

The City of Santa Clara, as the Lead Agency, has prepared this Draft Environmental Impact Report (EIR) for the Memorex Data Center in compliance with the California Environmental Quality Act (CEQA) and the CEQA Guidelines.

As described in CEQA Guidelines Section 15121(a), an EIR is an informational document that assesses potential environmental impacts of a proposed project, as well as identifies mitigation measures and alternatives to the proposed project that could reduce or avoid adverse environmental impacts (CEQA Guidelines 15121(a)). As the CEQA Lead Agency for this project, the City of Santa Clara is required to consider the information in the EIR along with any other available information in deciding whether to approve the project. The basic requirements for an EIR include discussions of the environmental setting, significant environmental impacts including growth-inducing impacts, cumulative impacts, mitigation measures, and alternatives. It is not the intent of an EIR to recommend either approval or denial of a project.

1.2 EIR PROCESS

1.2.1 Notice of Preparation and Scoping

In accordance with Section 15082 of the CEQA Guidelines, the City of Santa Clara prepared a Notice of Preparation (NOP) for this EIR. The NOP was circulated to local, state, and federal agencies on July 17, 2020. The standard 30-day comment period concluded on August 17, 2020. The NOP provided a general description of the proposed project and identified possible environmental impacts that could result from implementation of the project. The City of Santa Clara also held a public scoping meeting on July 27, 2020 to discuss the project and solicit public input as to the scope and contents of this EIR. Due to Covid-19 restrictions, the meeting was held virtually through Zoom Video Communications, Inc. Appendix A of this EIR includes the NOP and comments received on the NOP.

1.2.2 Draft EIR Public Review and Comment Period

Publication of this Draft EIR will mark the beginning of a 45-day public review period. During this period, the Draft EIR will be available to the public and local, state, and federal agencies for review and comment. Notice of the availability and completion of this Draft EIR will be sent directly to every agency, person, and organization that commented on the NOP, as well as the Office of Planning and Research. Written comments concerning the environmental review contained in this Draft EIR during the 45-day public review period should be sent to:

Tiffany Vien
City of Santa Clara
1500 Warburton Avenue
Santa Clara, CA 95050
408.615.2466
TVien@santaclaraca.gov

1.3 FINAL EIR/RESPONSES TO COMMENTS

Following the conclusion of the 45-day public review period, the City of Santa Clara will prepare a Final EIR in conformance with CEQA Guidelines Section 15132. The Final EIR will consist of:

- Revisions to the Draft EIR text, as necessary;
- List of individuals and agencies commenting on the Draft EIR;
- Responses to comments received on the Draft EIR, in accordance with CEQA Guidelines (Section 15088);
- Copies of letters received on the Draft EIR.

Section 15091(a) of the CEQA Guidelines stipulates that no public agency shall approve or carry out a project for which an EIR has been certified which identifies one or more significant environmental effects of the project unless the public agency makes one or more written findings. If the lead agency approves a project despite it resulting in significant adverse environmental impacts that cannot be mitigated to a less than significant level, the agency must state the reasons for its action in writing. This Statement of Overriding Considerations must be included in the record of project approval.

1.3.1 Notice of Determination

If the project is approved, the City of Santa Clara will file a Notice of Determination (NOD), which will be available for public inspection and posted within 24 hours of receipt at the County Clerk's Office and available for public inspection for 30 days. The filing of the NOD starts a 30-day statute of limitations on court challenges to the approval under CEQA (CEQA Guidelines Section 15094(g)).

1.4 JURISDICTION

As described previously, the City of Santa Clara is the Lead Agency under CEQA for the proposed project. The California Energy Commission (CEC) sometimes acts as the Lead Agency for large data center projects where the proposed backup power generating capacity is 50 MW or more. This is because the CEC regulates thermal power plants with 50 MW or more of power generating capacity and considers backup generators for data centers to be thermal power plants. The CEC determines the power generating capacity of data center projects based on the total electricity demand of the project that would require backup power from thermal power generating sources (i.e., diesel-fueled generators) in the event of a power outage. Although the overall electricity demand of the proposed project exceeds 50 MW, the project is designed in a manner so that only 48 MW of the project would require backup power from thermal power generating sources in the event of an outage. As a result, the project does not fall under the jurisdiction of the CEC. This was confirmed by the CEC in a letter issued after completion of a review of the project design. The letter, referring to the project as MDC, short for Memorex Data Center, stated "... (a)s the total backup generation capability of the facility would be less than CEC's 50 MW jurisdictional threshold, staff concludes that MDC is not subject to either the CEC's licensing or exemption process, and instead would be subject to local government permitting."²

² California Energy Commission. Jurisdictional Determination - Memorex Data Center. September 30, 2020.

SECTION 2.0 PROJECT INFORMATION AND DESCRIPTION

2.1 PROJECT LOCATION

The 9.18-acre project site is located at 1200 Memorex Drive. A regional map, vicinity map, and aerial photograph showing the site and surrounding land uses are shown on Figures 2.1, 2.2, and 2.3, respectively.

2.2 PROJECT DESCRIPTION

2.2.1 Existing Development

The 9.18-acre project site is located at 1200 Memorex Drive. The site is zoned ML-Light Industrial and has a General Plan designation of Light Industrial. The site is currently developed with three buildings: a three-story approximately 300,000 square foot building, a two-story approximately 46,000 square foot building, and a one-story approximately 2,950 square foot building. Roughly 100,000 square feet of active outdoor uses are located on the eastern portion of the site. Existing uses on the site are light industrial in nature and include operations such as aluminum plating, metal cleaning/polishing, a machine shop, construction contractors, a brewery, material storage, vehicle storage, and hauling. The vehicle storage and hauling operations are primarily located in the outdoor areas on the site.

2.2.2 Proposed Development

The project proposes to demolish the existing improvements on the site to construct a four-story 472,920 square foot data center building with an attached six-story 87,520 square foot ancillary use office and storage component, for a combined square footage of 560,440. The structure would have a height of 85 feet to the top of building, with rooftop metal screening reaching a height of 99 feet. The data center portion of the building would house computer servers for private clients in a secure and environmentally controlled structure and would be designed to provide 60 megawatts (MW) of information technology (IT) power. The ancillary use portion of the building would be used for office (roughly 51,000 square feet) and storage uses. The proposed site plan is shown on Figure 2.4.

Three floors of the data center portion of the building would consist of production data hall space, which requires backup power generation, while one floor would consist of development data hall space, which does not require backup power generation. Standby backup emergency electrical generators would be installed to provide an uninterrupted power supply to the production data hall space. A total of 24 three-MW diesel-fueled engine generators would be located on the south side of the building, with 16 primary generators providing 48 MW of backup power generation capacity and eight additional generators providing redundancy for the primary generators. The generators would be housed within a ground-level generator yard, with 22 of the generators double-stacked and two of the generators single-stacked. One additional 500-kW diesel-fueled generator would be located on the south side of the building to provide backup power generation for the ancillary use portion of the building. Mechanical cooling equipment would be located on the roof with metal panel perimeter screening above the building parapet.

The project would also construct a 150 megavolt amps (MVA) electrical substation on the eastern portion of the site. The substation would have three 50 MVA transformers, one of which would be redundant and would only become active if one of the other transformers fails. The substation capacity would be a nominal 100 MVA. The substation would have an all-weather asphalt surface underlain by an aggregate base.

2.2.2.1 Electric Transmission Line

A 60 kilovolt (kV) overhead transmission line would be extended to the site to connect the substation to the existing electrical grid. As shown on Figure 2.5, the transmission line would form a loop, with the route starting on the east side of Lafayette Street and heading west on Shulman Avenue to Memorex Drive. From there, the route would continue west to Ronald Street and then head south to Di Giulio Avenue to connect to the proposed substation. The route would then head east from the substation to Lafayette Street and turn north towards Mathew Street to close the loop. The transmission line would be supported by 15 utility poles, 10 of which would be steel poles up to 85 feet in height with a diameter of four feet, and five of which would be wood poles up to 57 feet in height with a diameter of 21 inches. The portion of the transmission line located on Di Giulio Street may be undergrounded, if determined to be feasible by the City (refer to Figure 2.5). The underground portion would be located in the street right-of-way and would be approximately 900 feet long and with a trench that is four feet wide and 12-15 feet deep. Under this scenario, the overhead portion of the transmission line would be supported by up to 10 steel poles with no wood poles. The impacts of both transmission line scenarios are analyzed in this EIR.

Under both the overhead and partial overhead/partial underground transmission line scenarios, the project would require easements through several properties. The properties requiring easements are listed in Table 2.2-1, below.

Table 2.2-1: Transmission Line Easements			
Overhead-Only Route			
Site Address	APN	Zoning	Easement Size
2380 Lafayette St.	224-63-020	MH – Heavy Industrial	1,200 sq. ft.
965 Shulman Ave.	224-63-005	ML – Light Industrial	500 sq. ft.
2191 Ronald St.	224-67-023	ML – Light Industrial	900 sq. ft.
2222 Ronald St.	224-66-005	ML – Light Industrial	400 sq. ft.
2122 Ronald St.	224-66-003	ML – Light Industrial	200 sq. ft.
1040 Di Giulio Ave.	224-05-093	ML – Light Industrial	1,500 sq. ft.
2206 Lafayette St.	224-67-042	ML – Light Industrial	500 sq. ft.
2222 Lafayette St.	224-67-048	ML – Light Industrial	100 sq. ft.
2234 Lafayette St.	224-67-028	ML – Light Industrial	100 sq. ft.
2265 Lafayette St.	224-03-080	MH – Heavy Industrial	1,200 sq. ft.
Partial Overhead/Partial Underground Scenario			
2380 Lafayette St.	224-63-020	MH – Heavy Industrial	1,200 sq. ft.
965 Shulman Ave.	224-63-005	ML – Light Industrial	500 sq. ft.

Table 2.2-1: Transmission Line Easements			
2191 Ronald St.	224-67-023	ML – Light Industrial	900 sq. ft.
2222 Ronald St.	224-66-005	ML – Light Industrial	400 sq. ft.
2122 Ronald St.	224-66-003	ML – Light Industrial	200 sq. ft.
2206 Lafayette St.	224-67-042	ML – Light Industrial	1,100 sq. ft.
2222 Lafayette St.	224-67-048	ML – Light Industrial	100 sq. ft.
2234 Lafayette St.	224-67-028	ML – Light Industrial	100 sq. ft.
2265 Lafayette St.	224-03-080	MH – Heavy Industrial	1,200 sq. ft.

2.2.2.2 *Site Access and Parking*

The site currently has four driveways on Memorex Drive and three driveways on Ronald Street/Di Giulio Avenue, all of which would be removed by the project. Access to the site would be provided by two new driveways on Memorex Drive and one new driveway on Di Giulio Avenue. The project would result in a net decrease in driveways accessing the site, reducing curb cuts and eliminating hazards associated with site distances from current driveways located near intersections and roadway bends. The project proposes to provide 113 parking spaces in surface parking lots located on the eastern portion of the site. Five parking spaces would be ADA accessible, and 11 parking spaces would be dedicated for clean air vehicles. Electric vehicle charging stations would be located adjacent to the clean air vehicle spaces.

2.2.2.3 *Building Height and Floor Area Ratio*

The project would construct a building with a maximum height of 85 feet, with additional screening extending to a height of 99 feet, which would exceed the maximum height of 70 feet allowed under the ML – Light Industrial zoning district regulations. The project is requesting a Zoning Administrator Modification to allow a building height above what is allowed in the Zoning Ordinance.

2.2.2.4 *Landscaping and Stormwater Control*

Currently, landscaping on the site is sparse. Mature trees are located on the site's frontage with Memorex Drive, and additional trees and shrubbery are located along portions of the site's perimeter. Trees and ornamental landscaping would be planted along the perimeter of the project site, and in landscaped islands between parking lot aisles. Although the project would remove 36 of the 38 existing trees and landscaping on the site, the project would plant 226 replacement trees that would meet or exceed required replacement ratios, resulting in an increase in trees and landscaping on the site. The proposed landscaping plan is shown on Figure 2.6.

Stormwater runoff from the site's impervious surfaces would be directed to treatment systems before being collected in a series of pipes sized for a 10-year storm event in accordance with the City's design requirements. The biotreatment basins would be located throughout the surface parking on the eastern section of the site, along the southern and northern site boundaries, and along the central section of the northern site boundary. These pipes would ultimately leave the site, connecting to the existing City storm drainage pipes in Memorex Drive and/or Di Giulio Avenue.

2.2.2.5 Construction

It is anticipated that construction would begin in the spring (April) of 2021 and be completed in the spring (March) of 2023, a total of 23 months or 506 workdays (average of 22 work days per month). This schedule assumes that the entire project would be constructed in the following phases: demolition and site preparation, grading, trenching and foundations, exterior and interior building construction, paving, and architectural coating. Subsequent to building completion, as server space is sold to customers, the server racks and support equipment would be installed in the building.

The project would require excavation to depths of up to 12 feet for the on-site construction work and 12-15 feet for trenching related to the potential underground portion of the transmission line along Di Giulio Avenue.

2.3 PROJECT OBJECTIVES

Pursuant to CEQA Guidelines Section 15124, the EIR must identify the objectives sought by the proposed project. The project applicant has stated the following objectives:

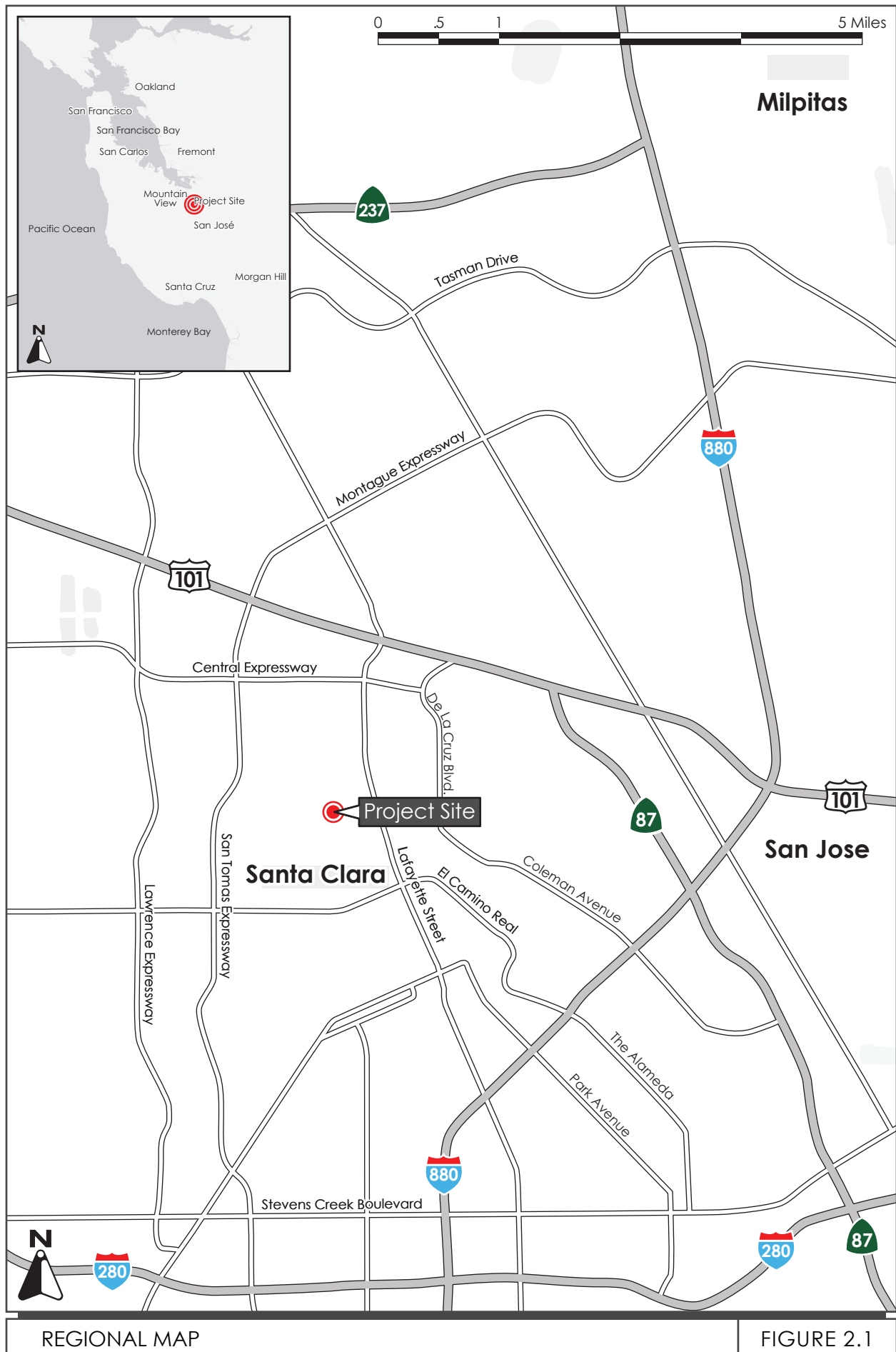
1. Redevelop the 9.18-acre site with a state of the art data center capable of supporting at least 60 MW of IT power in an environmentally controlled structure with redundant subsystems (cooling, power, network links, storage, fire suppression, etc.) along with sufficient ancillary office and storage space to accommodate the needs of future tenants (estimated to require up to 472,920 square feet of data center space and 87,520 square feet of ancillary space). The data center shall be located near a reliable large power source, and emergency response access, and being located such that it can be protected, to the maximum extent feasible, from security threats, natural disasters, and similar events. The project shall include backup power generation facilities that provide sufficient generation capacity, reliability, and redundancy to meet the needs of future tenants.
2. Provide operational electric power to the proposed data center via an electric substation, and provide other utility infrastructure to serve the project, including water, storm drainage, sanitary sewer, electric, natural gas, and telecommunications. Extend a 60 kilovolt (kV) overhead transmission line to connect the substation to the existing electrical grid.
3. Meet high sustainability and green building standards by designing the data center to meet US Green Building Code LEED and Cal-Green standards for any new construction.
4. Incorporate the most reliable and flexible form of backup electric generating technology considering the following evaluation criteria.
 - Commercial Availability and Feasibility. The selected backup electric generation technology must currently be in use and proven as an accepted industry standard for technology. 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.
 - Reliability. The selected backup electric generation technology must be extremely reliable in the case of an emergency loss of electricity from the utility.

- Industry Standard. The selected backup electric generation technology must be considered industry standard or best practice.
5. Construct a high-quality data center that is marketable and produces a reasonable return on investment for the project applicant and its investors and is able to attract investment capital and construction financing.

2.4 USES OF THE EIR

This EIR would provide decision-makers in the City of Santa Clara, other public agencies, and the general public with relevant environmental information to use in considering the project. If the proposed project is approved, the EIR could be used by the City in conjunction with appropriate discretionary approvals including, but not limited to, the following:

- Architectural Approval
- Zoning Administrator Modification
- Issuance of Demolition, Grading, Building, and Occupancy permits.
- Tree Removal Permits



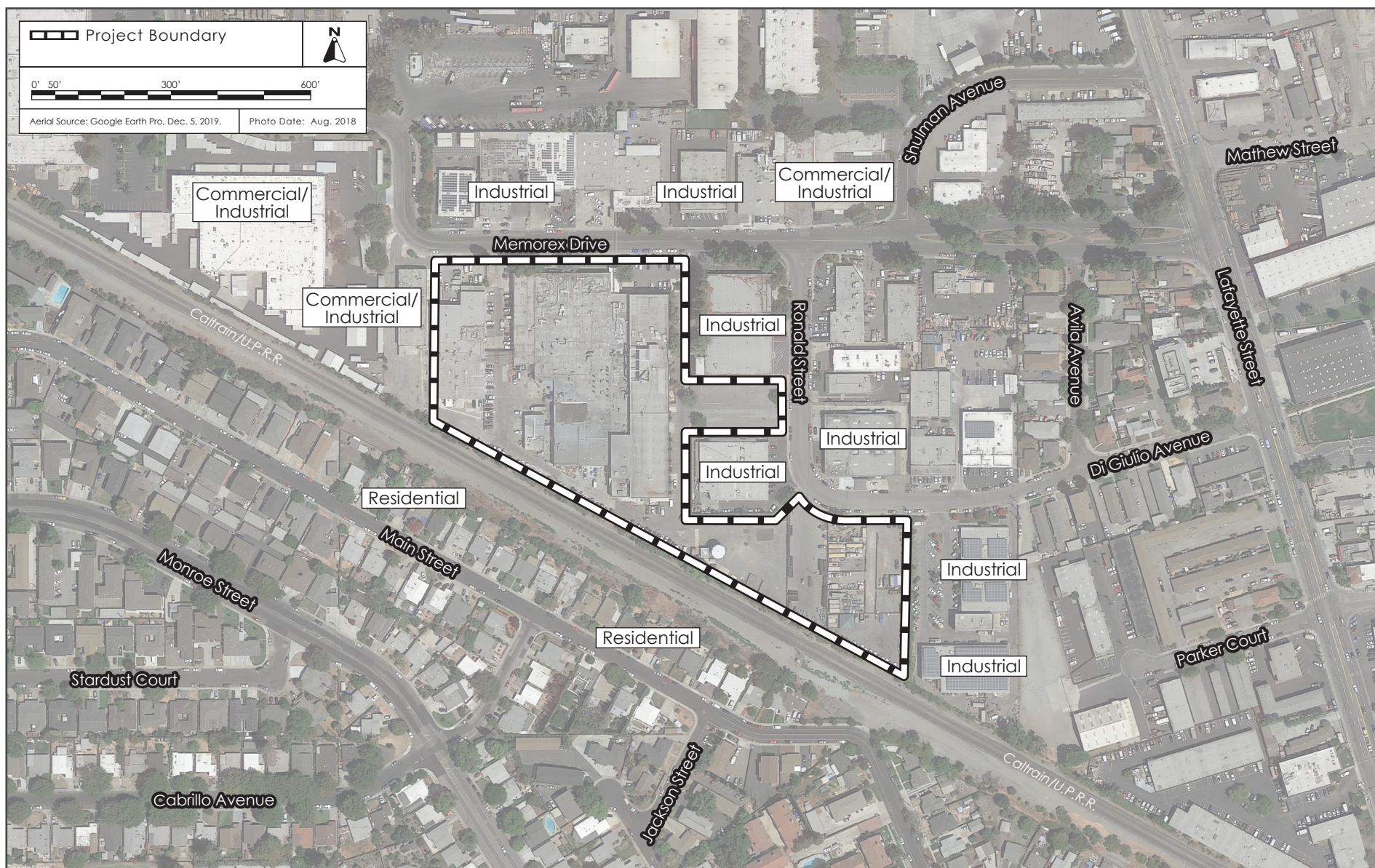
REGIONAL MAP

FIGURE 2.1



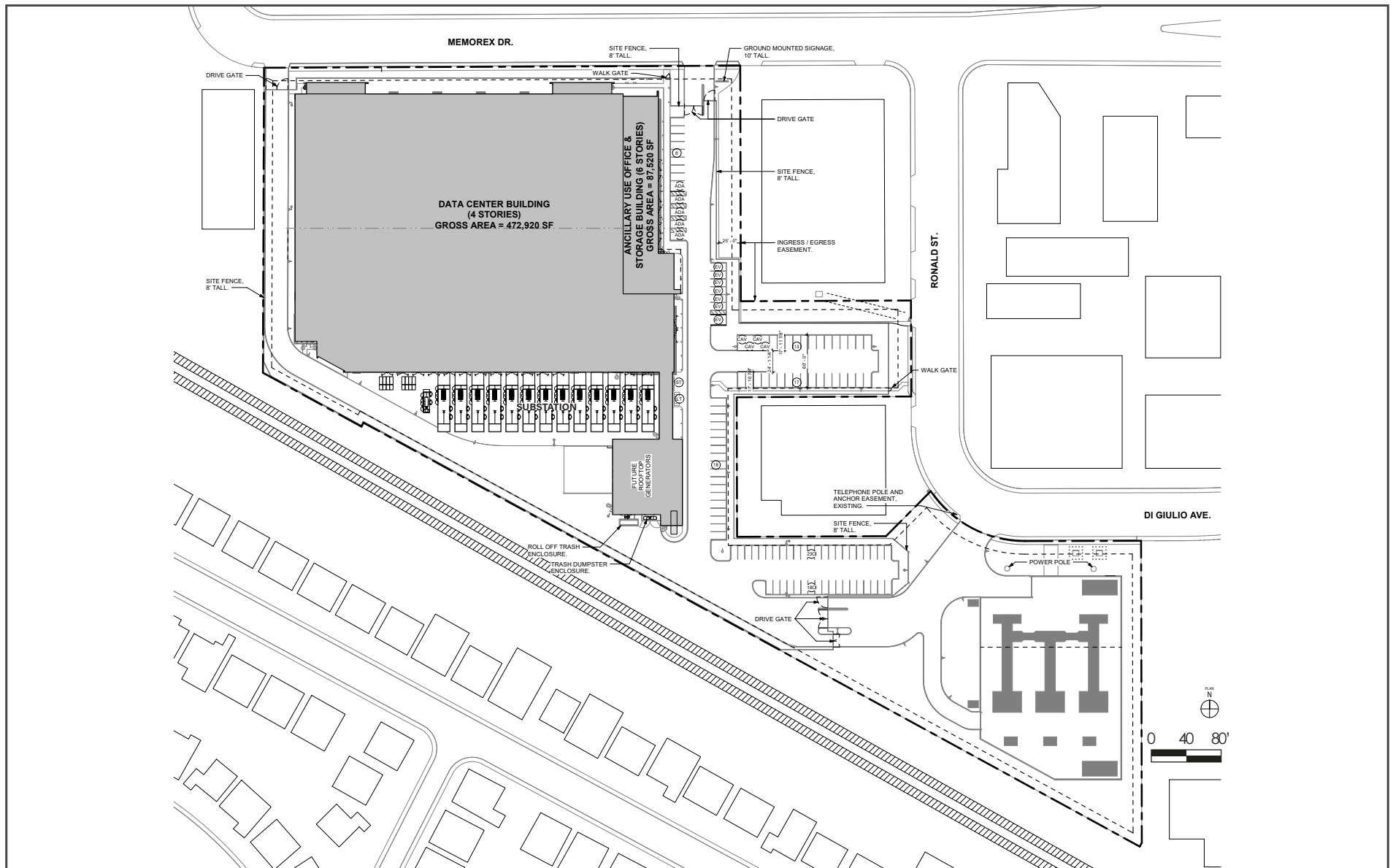
VICINITY MAP

FIGURE 2.2



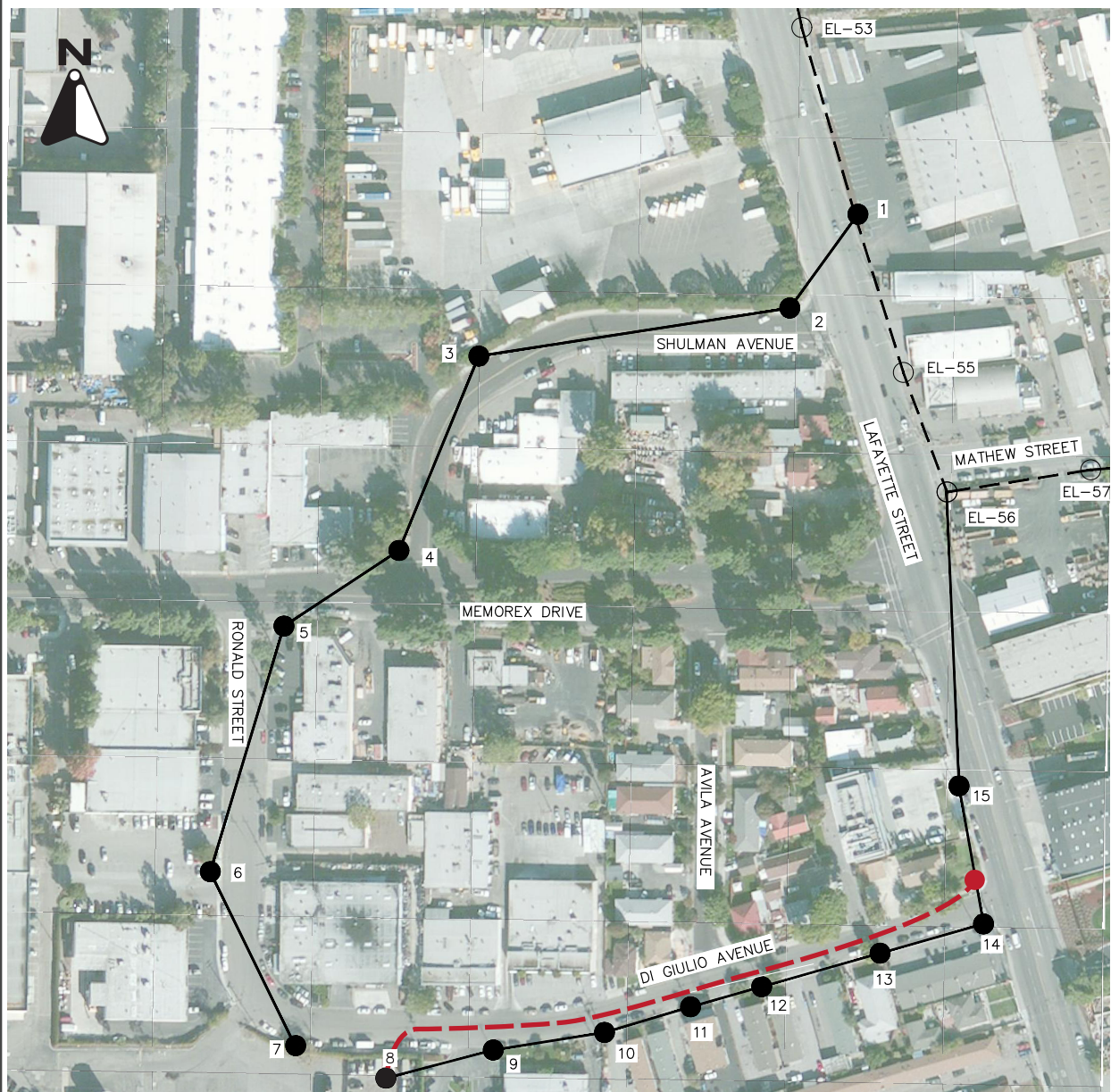
AERIAL PHOTOGRAPH AND SURROUNDING LAND USES

FIGURE 2.3



SITE PLAN

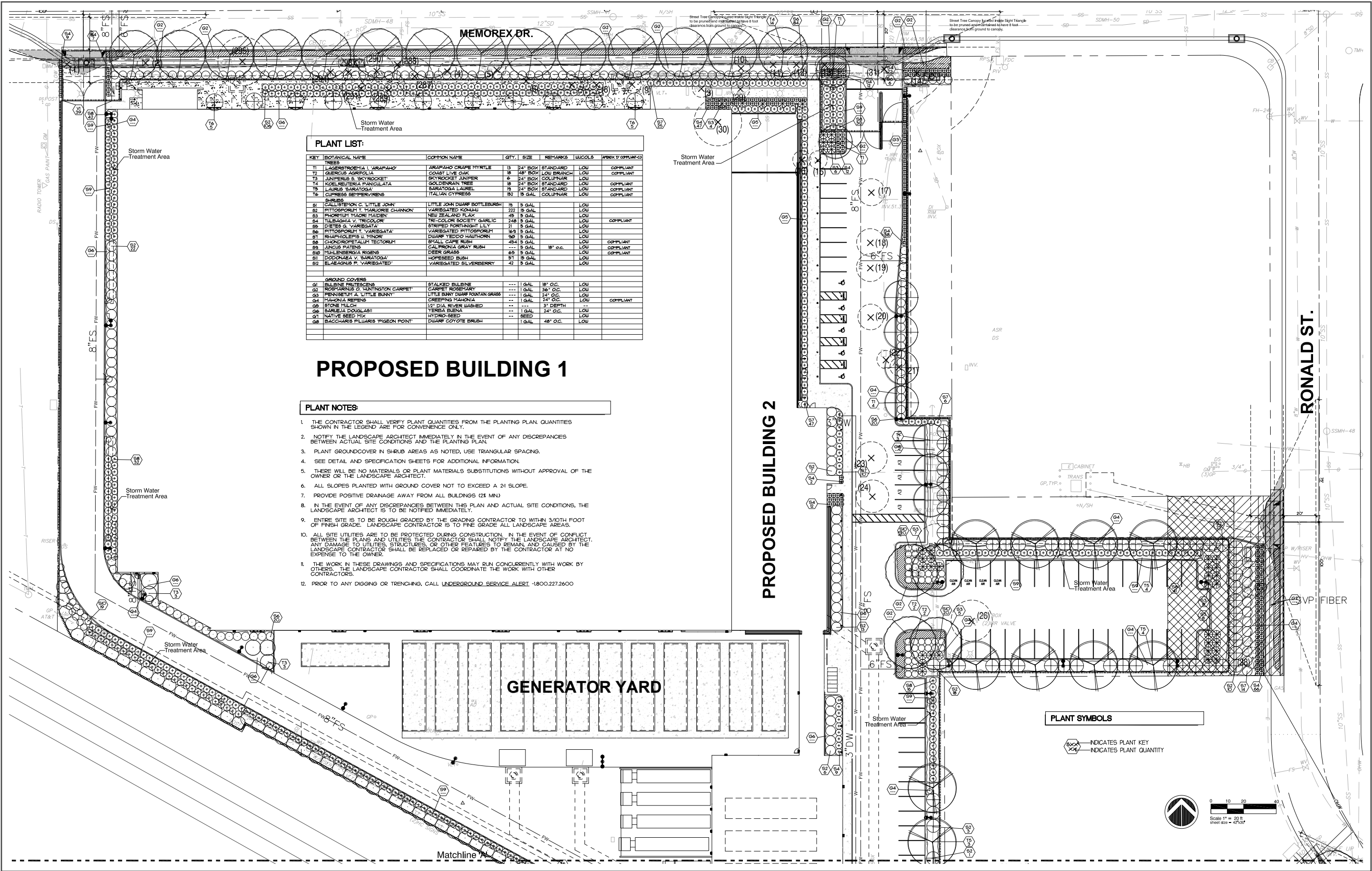
FIGURE 2.4



LEGEND

- Overhead Transmission Line
- - - Potential Underground Transmission Line

Source: Electrical Consultants, Inc., October 27, 2020.



LANDSCAPE PLAN

FIGURE 2.6

SECTION 3.0 ENVIRONMENTAL SETTING, IMPACTS, AND MITIGATION

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

3.1	Aesthetics	3.11	Land Use and Planning
3.2	Agriculture and Forestry Resources	3.12	Mineral Resources
3.3	Air Quality	3.13	Noise
3.4	Biological Resources	3.14	Population and Housing
3.5	Cultural Resources	3.15	Public Services
3.6	Energy	3.16	Recreation
3.7	Geology and Soils	3.17	Transportation
3.8	Greenhouse Gas Emissions	3.18	Tribal Cultural Resources
3.9	Hazards and Hazardous Materials	3.19	Utilities and Service Systems
3.10	Hydrology and Water Quality	3.20	Wildfire

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 measures are identified. “Mitigation measures” are measures that will minimize, avoid, or eliminate a significant impact (CEQA Guidelines Section 15370). Each impact is numbered to correspond to the checklist question being answered. For example, Impact BIO-1 answers the first checklist question in the Biological Resources section. Mitigation measures are also numbered to correspond to the impact they address. For example, MM BIO-1.3 refers to the third mitigation measure for the first impact in the Biological Resources section.
- **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)). This EIR uses the list of projects approach.

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 3.0-1 identifies the approved (but not yet constructed or occupied) and pending projects in the project vicinity (within one mile) that are evaluated in the cumulative analysis.

Table 3.0-1: Cumulative Projects List		
Name and Location	Description	Distance to Proposed Project
1444 Madison Street Residential Project	Rezone site from Medium-density Multiple Dwelling to Planned Development and construct three new single-family dwellings.	3,400 feet
1627 Monroe Street Residential Project	Develop a vacant single-family residential property to construct three single-family homes	2,270 feet south
1900 Warburton Avenue Residential Townhouse Project	Rezone site from General Office to Planned Development and develop 12 three-story townhouse units.	2,400 feet southwest
2232 El Camino Real Mixed Use Project (SummerHill)	Rezone from Community Commercial to Planned Development and construct a four-story mixed-use development with 17,909 square feet of ground floor retail space, 151 senior apartment units, and parking structure.	4,170 feet southwest
2330 Monroe Street Affordable Housing Project	General Plan Amendment and rezone site from Single Family residential to Planned Development and construct three-story building with 65 residential affordable units.	3,332 feet west

Table 3.0-1: Cumulative Projects List		
Name and Location	Description	Distance to Proposed Project
575 Benton Street Mixed-Use Project (Prometheus)	Construct 355 apartment units including eight live-work units, 650 parking spaces, 1,601 square feet of leasing office space, 346 square feet pet spa area, 1,528 square feet of bike amenity space, an amenity roof deck with 4,341 square feet of club room and a fitness center, three private courtyards and a public courtyard facing The Alameda.	4,940 feet southeast
651 Walsh Avenue Data Center Project	Demolish an existing warehouse building and construct a 435,050 square-foot, four-story data center, generator yard, electric substation, and surface parking lot.	3,400 feet northeast
917 Warburton Avenue Residential Project	Construct six, two-story single family detached homes.	1,930 feet southeast
1890 El Camino Real Residential Project (Anatara Villas)	Construct 56 condominium units over a podium parking structure.	3,680 feet southwest
1375, 1385, and 1399 El Camino Real (Catalina I Residential Development Project)	Construct 54 townhouse units, including eight live-work units.	3,340 feet south
1433 – 1493 El Camino Real (Catalina II Residential Development Project)	Demolish existing commercial buildings and construct five, three-story buildings with 39 townhomes.	3,170 feet south
1313 Franklin Street (Downtown Gateway)	Construct a building with 44 condominium units and 14,477 square feet of ground retail.	4,800 feet southeast
2600, 2788, and 2800 San Tomas Expressway and 2400 Condensa Street (NVIDIA)	Construct three eight-story, 1,950,000 square foot office/research and development	4,225 feet northwest

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.

Table 3.0-2: Geographic Considerations in Cumulative Analysis	
Resource Area	Geographic Area
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
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 Creek 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

3.1 AESTHETICS

3.1.1 Environmental Setting

3.1.1.1 *Regulatory Framework*

State

Streets and Highway Code Sections 260 through 263

The California Scenic Highway Program (Streets and Highway Code, Sections 260 through 263) is managed by the California Department of Transportation (Caltrans). The program is intended to protect and enhance the natural scenic beauty of California highways and adjacent corridors through special conservation treatment. There are no state-designated scenic highways in Santa Clara.

Interstate 280 from the San Mateo County line to SR 17 is an Eligible State Scenic Highway, yet not officially designated.

Local

Santa Clara General Plan

General Plan policies applicable to aesthetics include, but are not limited to, the following listed below.

Policies	Description
General Land Use	
5.3.1-P3	Support high quality design consistent with adopted design guidelines and the City's architectural review process.
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-P28	Encourage undergrounding of new utility lines and utility equipment throughout the City.

City Code

The City Code includes regulations associated with protection of the City's visual character. The Code includes regulations for the maintenance of property or premises, to promote a sound and attractive community appearance that is in character with the City. The City Code also includes an Architectural Review process, as outlined in Zoning Ordinance Chapter 18.76. The Architectural Review process is intended to serve the following purposes:

- Encourage the orderly and harmonious appearance of structures and properties;
- Maintain the public health, safety, and welfare;
- Maintain property and improvement values throughout the City;
- Encourage the physical development of the City that is consistent with the General Plan and other City regulations; and

- Enhance the aesthetic appearance, functional relationships, neighborhood compatibility and excellent design quality.

No building permit shall be issued, and no structure, building, or sign shall be constructed or undergo exterior alternations until such plans and drawings have been approved by the City's architectural review process.

Architectural Review Process – Community Design Guidelines

The City's architectural review process requires that the Director of Community Development or a designee review plans and drawings submitted for design, aesthetic considerations, and consistency with zoning standards, generally prior to submittal for building permits. The review takes place at a publicly noticed Development Review Hearing and the hearing officer follows the City's Community Design Guidelines. The intent of these guidelines for architectural review is to provide a manual of consistent development standards in the interest of continued maintenance and enhancement of the high-quality living and working environment in the City.

3.1.1.2 *Existing Conditions*

The 9.18-acre subject project site is developed with three buildings: a three-story, approximately 350,037 square foot building, a two-story, approximately 45,986 square foot building, and a one-story, approximately 2,944 square foot building. The buildings are concentrated in the northwestern portion of the site adjacent to Memorex Drive and consist of a mix of architectural styles and materials typical of light industrial warehouse uses, including cinderblocks, stucco, and large windows. The site currently has four driveways on Memorex Drive and three driveways on Ronald Street/Di Giulio Avenue. Trees and ornamental landscaping are located along a portion of the Memorex Drive frontage of the property, as well as the eastern property boundary.

The site is within a fully developed area in Santa Clara with flat topography. Views of the eastern and western foothills from public viewpoints are partially blocked by existing industrial structures in the area. Views of the project site can be seen in Photos One to Four.

3.1.1.3 *Surrounding Land Uses*

A one-story office machine shop, two-story warehouse, and two-story industrial facility are located directly east of the project site. A one-story commercial building and two, one-story industrial buildings are located to the west of the project site. The Union Pacific Railroad (UPRR) tracks are located south of the project site, beyond which are one- and two-story single-family residences. Multiple one-story industrial buildings are located north of the project site. The project area consists primarily of industrial land uses, with the exception of residential uses located south of the UPRR tracks. Buildings in the area range from one to two stories and vary in scale. The Norman Y. Mineta San José International Airport is located approximately 0.65 miles east of the site. Aircraft, along with truck and other vehicle traffic, are readily apparent in the area. Views of the surrounding land uses can be seen in Photos Five and Six.

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.



Photo 1: Existing Building on Western Portion of Site.



Photo 2: Existing Building on Central Portion of Site.



Photo 3: Existing Building on Central Portion of Site.



Photo 4: Existing Building on Southeastern Portion of Site.



Photo 5: Surrounding Industrial Use to North.



Photo 6: Railroad South of Site.

3.1.2 Impact Discussion

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

- 1) Have a substantial adverse effect on a scenic vista?
- 2) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?
- 3) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings?³ If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?
- 4) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

3.1.2.1 *Project Impacts*

Impact AES-1:	The project would not have a substantial adverse effect on a scenic vista. (No Impact)
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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.

Impact AES-2:	The project would not substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway. (No Impact)
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The site is not visible from a scenic highway. The project, therefore, would not substantially damage scenic resources within a state scenic highway.

Impact AES-3:	The project is located in an urbanized area and would not conflict with applicable zoning and other regulations governing scenic quality. (Less than Significant Impact)
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Aesthetic values are subjective. Opinions as to what constitutes a degradation of visual character differs among individuals. One of the best methods for assessing what constitutes a visually acceptable standard for new buildings are 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.

The current character of the project area is built-up with single- and multi-story industrial buildings and has few landscaped areas. As described in Section 3.1.1.2 *Existing Conditions*, the project site

³ Public views are those that are experienced from publicly accessible vantage points.

consists of three industrial buildings, a one-story commercial building and two, one-story industrial buildings. The project proposes to demolish the existing improvements on the site to construct a four-story 472,920 square foot data center building with an attached six-story 87,520 square foot ancillary use office and storage component, for a combined square footage of 560,440, along with the associated substation, generator equipment yard, paved parking areas and landscaping. The data center building would be approximately 85 feet in height, with additional screening features extending to a height of 99 feet. Rooftop screening would screen roof mounted mechanical equipment from view along the public right-of-way. The east facade of the building would include large ribbon windows arranged horizontally, spandrel glass (opaque glass used as a facade material intended to give the appearance of a window), and metal panels. The remainder of the building includes small portions of glazing and ribbon windows, but would mainly consist of precast concrete wall assembly and metal panels.

The generator equipment yard would be located in the southwestern portion of the site adjacent to the southern façade of the data center building. An eight-foot tall, wrought iron fence would surround the property perimeter.

An electrical substation with an all-weather asphalt surface underlain by an aggregate base and surrounded by a 12-foot precast concrete wall would be located on the southeastern portion of the site.

The project would remove 36 existing trees. Landscaping consisting of trees, shrubs, and groundcover would be planted throughout the site, including along portions of the building's perimeter and property boundaries.

The project would construct a building with a maximum height of 85 feet, with additional screening features extending to a height of 99 feet, which would exceed the maximum height of 70 feet allowed under the ML – Light Industrial zoning district regulations. The project is requesting a Zoning Administrator Modification to allow a building height above what is allowed in the Zoning Ordinance. While the project would be larger in mass and scale to nearby development, the project location is largely industrial. The project would be subject to the City's design review process and would conform to current community design guidelines and landscaping standards for the Light Industrial (ML) 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. The project, therefore, would not conflict with applicable zoning and other regulations governing scenic quality.

Overhead Transmission Line

The project would include an approximately 0.6 mile off-site 60kV transmission line extension that forms a loop from Lafayette Street to the project site and back. Overhead utility poles roughly 40 feet in height currently exist along proposed route of the transmission line. The utility poles proposed by the project would consist of 10 steel poles up to 85 feet in height with a base diameter of four feet, and five wood poles up to 57 feet in height with a base diameter of 21 inches. The proposed poles would in some cases replace existing poles in the locations they are proposed. Although the proposed steel poles are larger in size than existing poles in the project area, they would be consistent with the dominant visual character of the area, which has been established by the existing buildings, streets,

light standards, trees, overhead transmission lines, and other urban elements in the project area. Utility lines are an accepted use in the zoning districts through which the proposed transmission line would pass. The proposed transmission line, therefore, not conflict with applicable zoning and other regulations governing scenic quality.

Impact AES-4: The project would not create a new source of substantial light or glare which would adversely affect day or nighttime views in the area. **(Less than Significant Impact)**

The project would include light fixtures along the site perimeter, as well as along the perimeter of the generator equipment yard, and outdoor security lighting along the data center 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 project would consist primarily of precast concrete and would not be a significant source of glare during daytime hours. The exterior surface on the southern and western portions of the building would consist primarily of precast concrete wall assembly and metal panels with minimal windows. Therefore, residents south of the site would not experience bright lighting from the project at night.

Building materials and lighting plans would be reviewed through the City's architectural review process by 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.

3.1.2.2 Cumulative Impacts

Impact AES-C: The project would not result in a cumulatively considerable contribution to a cumulatively significant aesthetics impact. **(Less than Significant Cumulative Impact)**

The geographic area for cumulative aesthetic impacts is limited, given the flat topography of the area, to the project site and adjacent properties in which the project site would be visible. The project site is not located along or visible from a designated state scenic highway or a scenic vista. The final design of the project and all future projects would be reviewed through the City's architectural review process, which will ensure projects conform to the City's adopted Community Design Guidelines. For these reasons, the project would not result in a significant cumulative aesthetic impact.

3.2 AGRICULTURE AND FORESTRY RESOURCES

3.2.1 Environmental Setting

3.2.1.1 *Regulatory Framework*

State

Farmland Mapping and Monitoring Program

The California Department of Conservation's Farmland Mapping and Monitoring Program (FMMP) assesses the location, quality, and quantity of agricultural land and conversion of these lands over time. Agricultural land is rated according to soil quality and irrigation status. The best quality land is called Prime Farmland. In CEQA analyses, the FMMP classifications and published county maps are used, in part, to identify whether agricultural resources that could be affected are present on-site or in the project area.⁴

California Land Conservation Act

The California Land Conservation Act (Williamson Act) enables local governments to enter into contracts with private landowners to restrict parcels of land to agricultural or related open space uses. In return, landowners receive lower property tax assessments. In CEQA analyses, identification of properties that are under a Williamson Act contract is used to also identify sites that may contain agricultural resources or are zoned for agricultural uses.⁵

Fire and Resource Assessment Program

The California Department of Forestry and Fire Protection (CAL FIRE) identifies forest land, timberland, and lands zoned for timberland production that can (or do) support forestry resources.⁶ Programs such as CAL FIRE's Fire and Resource Assessment Program and are used to identify whether forest land, timberland, or timberland production areas that could be affected are located on or adjacent to a project site.⁷

3.2.1.2 *Existing Conditions*

The project site is not designated as farmland or the subject of a Williamson Act contract.⁸ According to the Santa Clara County Important Farmlands 2016 Map, the project site is designated

⁴ California Department of Conservation. "Farmland Mapping and Monitoring Program." Accessed October 8, 2020. <http://www.conservation.ca.gov/dlrp/fmmp/Pages/Index.aspx>.

⁵ California Department of Conservation. "Williamson Act." <http://www.conservation.ca.gov/dlrp/lca>.

⁶ Forest Land is land that can support 10 percent native tree cover and allows for management of forest resources (California Public Resources Code Section 12220(g)); Timberland is land not owned by the federal government or designated as experimental forest land that is available for, and capable of, growing trees to produce lumber and other products, including Christmas trees (California Public Resources Code Section 4526); and Timberland Production is land used for growing and harvesting timber and compatible uses (Government Code Section 51104(g)).

⁷ California Department of Forestry and Fire Protection. "Fire and Resource Assessment Program." Accessed September 26, 2020. <http://frap.fire.ca.gov/>.

⁸ Agricultural lands in California can be protected from development and reserved for agricultural purposes or open-space conservation under the California Land Conservation Act, commonly known as the Williamson Act.

as *Urban and Built-Up Land*.⁹ *Urban and Built-Up Land* is defined as land with at least six structures per 10 acres and utilized for residential, institutional, industrial, commercial, landfill, golf course, and other urban-related purposes.

The project site and surrounding properties are designated for and developed (or planned to be developed) with urban uses. The project site is currently developed with an industrial building. There are no agricultural or forest lands in the vicinity of the project site.

3.2.2 **Impact Discussion**

For the purpose of determining the significance of the project's impact on agriculture and forestry resources, 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?
- 2) Conflict with existing zoning for agricultural use, or a Williamson Act contract?
- 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))?
- 4) Result in a loss of forest land or conversion of forest land to non-forest use?
- 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?

3.2.2.1 ***Project Impacts***

Impact AG-1:	The project would not convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use. (No Impact)
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As discussed in Section 3.2.1.2 *Existing Conditions*, the project site is not designated as farmland pursuant to the Farmland Mapping and Monitoring Program. The project site and surrounding properties are designated for and developed with urban uses. For these reasons, the project would not convert designated farmland to non-agricultural use. **(No Impact)**

⁹ California Department of Conservation. *Santa Clara County Important Farmland 2016 Map*. September 2018.

Impact AG-2: The project would not conflict with existing zoning for agricultural use, or a Williamson Act contract. **(No Impact)**

The site is zoned *ML – Light 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)**

Impact AG-3: The project would not conflict with existing zoning for, or cause rezoning of, forest land, timberland, or timberland zoned Timberland Production. **(No Impact)**

The site is zoned *ML – Light 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)**

Impact AG-4: The project would not result in a loss of forest land or conversion of forest land to non-forest use. **(No Impact)**

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)**

Impact AG-5: The project would not 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. **(No Impact)**

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)**

3.2.2.2 Cumulative Impacts

Impact AG-C: The project would not result in a cumulatively considerable contribution to a cumulatively significant agricultural and forestry resources impact. **(No Impact)**

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

3.3 AIR QUALITY

The following discussion is based in part on an Air Quality and GHG Emissions Assessment prepared for the project by Atmospheric Dynamics in March 2021. A copy of the report is attached as Appendix B.

3.3.1 Environmental Setting

3.3.1.1 *Background Information*

Criteria Pollutants

Air quality in the Bay Area is assessed related to six common air pollutants (referred to as criteria pollutants), including ground-level ozone (O₃), nitrogen oxides (NO_x), particulate matter (PM), carbon monoxide (CO), sulfur oxides (SO_x), and lead.¹⁰ Criteria pollutants are regulated because they result in health effects. An overview of the sources of criteria pollutants and their associated health are summarized in Table 3.3-1. The most commonly regulated criteria pollutants in the Bay Area are discussed further below.

Table 3.3-1: Health Effects of Air Pollutants		
Pollutants	Sources	Primary Effects
Ozone (O ₃)	Atmospheric reaction of organic gases with nitrogen oxides in sunlight	<ul style="list-style-type: none">• Aggravation of respiratory and cardiovascular diseases• Irritation of eyes• Cardiopulmonary function impairment
Nitrogen Dioxide (NO ₂)	Motor vehicle exhaust, high temperature stationary combustion, atmospheric reactions	<ul style="list-style-type: none">• Aggravation of respiratory illness• Reduced visibility
Fine Particulate Matter (PM _{2.5}) and Coarse Particulate Matter (PM ₁₀)	Stationary combustion of solid fuels, construction activities, industrial processes, atmospheric chemical reactions	<ul style="list-style-type: none">• Reduced lung function, especially in children• Aggravation of respiratory and cardiorespiratory diseases• Increased cough and chest discomfort• Reduced visibility
Toxic Air Contaminants (TACs)	Cars and trucks, especially diesel-fueled; industrial sources, such as chrome platers; dry cleaners and service stations; building materials and products	<ul style="list-style-type: none">• Cancer• Chronic eye, lung, or skin irritation• Neurological and reproductive disorders

High O₃ levels are caused by the cumulative emissions of reactive organic gases (ROG) and NO_x. These precursor pollutants react under certain meteorological conditions to form high O₃ levels. Controlling the emissions of these precursor pollutants is the focus of the Bay Area's attempts to

¹⁰ The area has attained both state and federal ambient air quality standards for CO. The project does not include substantial new emissions of sulfur dioxide or lead. These criteria pollutants are not discussed further.

reduce O₃ levels. The highest O₃ levels in the Bay Area occur in the eastern and southern inland valleys that are downwind of air pollutant sources.

PM is a problematic air pollutant of the Bay Area. PM is assessed and measured in terms of respirable particulate matter or particles that have a diameter of 10 micrometers or less (PM₁₀) and fine particulate matter where particles have a diameter of 2.5 micrometers or less (PM_{2.5}). Elevated concentrations of PM₁₀ and PM_{2.5} are the result of both region-wide emissions and localized emissions.

Toxic Air Contaminants

TACs are a broad class of compounds known to have health effects. They include but are not limited to criteria pollutants. TACs are found in ambient air, especially in urban areas, and are caused by industry, agriculture, diesel fuel combustion, and commercial operations (e.g., dry cleaners). TACs are typically found in low concentrations, even near their source (e.g., diesel particulate matter [DPM] near a freeway).

Diesel exhaust is the predominant TAC in urban air and is estimated to represent about three-quarters of the cancer risk from TACs. Diesel exhaust is a complex mixture of gases, vapors, and fine particles. Medium- and heavy-duty diesel trucks represent the bulk of DPM emissions from California highways. The majority of DPM is small enough to be inhaled into the lungs. Most inhaled particles are subsequently exhaled, but some deposit on the lung surface or are deposited in the deepest regions of the lungs (most susceptible to injury).¹¹ Chemicals in diesel exhaust, such as benzene and formaldehyde, have been previously identified as TACs by the California Air Resources Board (CARB).

Sensitive Receptors

Some groups of people are more affected by air pollution than others. CARB has identified the following persons who are most likely to be affected by air pollution: children under 16, the elderly over 65, athletes, and people with cardiovascular and chronic respiratory diseases. These groups are classified as sensitive receptors. Locations that may contain a high concentration of these sensitive population groups include residential areas, hospitals, daycare facilities, elder care facilities, and elementary schools.

3.3.1.2 *Regulatory Framework*

Federal and State

Clean Air Act

At the federal level, the United States Environmental Protection Agency (EPA) is responsible for overseeing implementation of the Clean Air Act and its subsequent amendments. The federal Clean Air Act requires the EPA to set national ambient air quality standards for the six common criteria pollutants (discussed previously), including PM, O₃, CO, SO_x, NO_x, and lead.

¹¹ California Air Resources Board. "Overview: Diesel Exhaust and Health." Accessed November 3, 2020. <https://www.arb.ca.gov/research/diesel/diesel-health.htm>.

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. The EPA and the CARB have adopted ambient air quality standards establishing permissible levels of these pollutants to protect public health and the climate. Violations of ambient air quality standards are based on air pollutant monitoring data and are determined for each air pollutant. Attainment status for a pollutant means that a given air district meets the standard set by the EPA and/or CARB.

Risk Reduction Plan

To address the issue of diesel emissions in the state, CARB developed the Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles. In addition to requiring more stringent emission standards for new on-road and off-road mobile sources and stationary diesel-fueled engines to reduce particulate matter emissions by 90 percent, the plan involves application of emission control strategies to existing diesel vehicles and equipment to reduce DPM (in addition to other pollutants). Implementation of this plan, in conjunction with stringent federal and CARB-adopted emission limits for diesel fueled vehicles and equipment (including off-road equipment), will significantly reduce emissions of DPM and NO_x.

Regional

2017 Clean Air Plan

The Bay Area Air Quality Management District (BAAQMD) is the agency primarily responsible for assuring that the federal and state ambient air quality standards are maintained in the San Francisco Bay Area. Regional air quality management districts, such as BAAQMD, must prepare air quality plans specifying how state and federal air quality standards will be met. BAAQMD's most recently adopted plan is the Bay Area 2017 Clean Air Plan (2017 CAP). The 2017 CAP focuses on two related BAAQMD goals: protecting public health and protecting the climate. To protect public health, the 2017 CAP describes how BAAQMD will continue its progress toward attaining state and federal air quality standards and eliminating health risk disparities from exposure to air pollution among Bay Area communities. To protect the climate, the 2017 CAP includes control measures designed to reduce emissions of methane and other super-greenhouse gases (GHGs) that are potent climate pollutants in the near-term, and to decrease emissions of carbon dioxide by reducing fossil fuel combustion.¹²

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. Jurisdictions in the San Francisco Bay Area Air Basin utilize the thresholds and methodology for assessing air quality impacts developed by BAAQMD within their CEQA Air Quality Guidelines. The guidelines include information on legal requirements, BAAQMD rules, methods of analyzing impacts, and recommended mitigation measures.

¹² BAAQMD. *Final 2017 Clean Air Plan*. April 19, 2017. <http://www.baaqmd.gov/plans-and-climate/air-quality-plans/current-plans>.

Community Air Risk Evaluation Program

Under the Community Air Risk Evaluation (CARE) program, BAAQMD has identified areas with high TAC emissions, and sensitive populations that could be affected by them, and uses this information to establish policies and programs to reduce TAC emissions and exposures. Impacted communities identified to date are located in Concord, Richmond/San Pablo, San José, eastern San Francisco, western Alameda County, Vallejo, San Rafael, and Pittsburg/Antioch. The main objectives of the program are to:

- Evaluate health risks associated with exposure to TACs from stationary and mobile sources;
- Assess potential exposures to sensitive receptors and identify impacted communities;
- Prioritize TAC reduction measures for significant sources in impacted communities; and
- Develop and implement mitigation measures to improve air quality in impacted communities.

Local

Santa Clara General Plan

General Plan policies applicable to air quality include, but are not limited to, the following listed below.

Policies	Description
Stationary Source Control Measures	
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 greenhouse gas emissions to reach 30 percent below 1990 levels by 2020.
5.10.2-P5	Promote regional air pollution preventing plans for local industry and businesses.
5.10.2-P6	Require “Best Management Practices” for construction dust abatement.
Transportation Demand Management	
5.8.5-P1	Require new development and City employees to implement transportation demand management programs that can include site-design measures, including preferred carpool and vanpool parking, enhanced pedestrian access, bicycle storage and recreational facilities.

3.3.1.3 *Existing Conditions*

The Bay Area is considered a non-attainment area for ground-level O₃ and PM_{2.5} under both the federal Clean Air Act and state Clean Air Act. The area is also considered nonattainment for PM₁₀ under the state act, but not the federal act. The area has attained both state and federal ambient air quality standards for CO. As part of an effort to attain and maintain ambient air quality standards for O₃ and PM₁₀, BAAQMD has established thresholds of significance for these air pollutants and their

precursors. These thresholds are for O₃ precursor pollutants (ROG and NO_x), PM₁₀, and PM_{2.5}, and apply to both construction period and operational period impacts.

Climate and Topography

Topography can restrict horizontal dilution and mixing of pollutants by creating a barrier to air movement. The South Bay has significant terrain features that affect air quality. The Santa Cruz Mountains and Diablo Range on either side of the South Bay restrict horizontal dilution, and this alignment of the terrain also channels winds from the north to south, carrying pollution from the northern Peninsula toward Santa Clara.

The combined effects of moderate ventilation, frequent inversions that restrict vertical dilution and terrain that restricts horizontal dilution give Santa Clara a relatively high atmospheric potential for pollution compared to other parts of the San Francisco Bay Air Basin and provide a high potential for transport of pollutants to the east and south.

Existing Air Pollutant Levels

BAAQMD monitors air pollution at various sites within the Bay Area. The nearest official monitoring station to the City of Santa Clara is located at 158 East Jackson Street in San José, approximately 3.3 miles southeast of the site. Pollutant monitoring results for the years 2016 to 2018 at the San José monitoring station are shown in Table 3.3-2.

Table 3.3-2: Ambient Air Quality Standards Violations and Highest Concentrations				
Pollutant	Standard	Days Exceeding Standard		
		2016	2017	2018
SAN JOSÉ STATION				
Ozone	State 1-hour	0	3	0
	Federal 8-hour	0	4	0
Carbon Monoxide	Federal 8-hour	0	0	0
	State 8-hour	0	0	0
Nitrogen Dioxide	State 1-hour	0	0	0
PM ₁₀	Federal 24-hour	0	0	0
	State 24-hour	0	6	4
PM _{2.5}	Federal 24-hour	0	6	15
Source: BAAQMD. Air Pollution Summaries (2016-2018). Available at: http://www.baaqmd.gov/about-air-quality/air-quality-summaries .				

The Bay Area, as a whole, does not meet state or federal ambient air quality standards for ground level O₃ and PM_{2.5}, nor does it meet state standards for PM₁₀. The Bay Area is considered in attainment or unclassified for all other pollutants.

Sensitive Receptors

The closest sensitive receptors are existing residences approximately 140 feet south of the site, adjacent to the railroad that runs along the southern boundary of the site.

Odors

Common sources of odors and odor complaints include wastewater treatment plants, transfer stations, coffee roasters, painting/coating operations, and landfills. Significant sources of offending odors are typically identified based on complaint histories received and compiled by BAAQMD. Typical large sources of odors that result in complaints are wastewater treatment facilities, landfills including composting operations, food processing facilities, and chemical plants. Other sources, such as restaurants, paint or body shops, and coffee roasters typically result in localized sources of odors.

The project site is in an industrial area and is not surrounded by facilities that produce substantial odors.

3.3.2 Impact Discussion

For the purpose of determining the significance of the project's impact on air quality, would the project:

- 1) Conflict with or obstruct implementation of the applicable air quality plan?
- 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?
- 3) Expose sensitive receptors to substantial pollutant concentrations?
- 4) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

3.3.2.1 *Thresholds of Significance*

Impacts from the Project

As discussed in CEQA Guidelines Section 15064(b), the determination of whether a project may have a significant effect on the environment calls for judgment on the part of the lead agency and must be based to the extent possible on scientific and factual data. The City of Santa Clara has considered the air quality thresholds updated by BAAQMD in May 2017 and regards these thresholds to be based on the best information available for the San Francisco Bay Area Air Basin and conservative in terms of the assessment of health effects associated with TACs and PM_{2.5}. The BAAQMD CEQA Air Quality thresholds used in this analysis are identified in Table 3.3-3 below.

Table 3.3-3: BAAQMD Air Quality Significance Thresholds			
Pollutant	Construction Thresholds	Operation Thresholds	
	Average Daily Emissions (pounds/day)	Average Daily Emissions (pounds/day)	Annual Average Emissions (tons/year)
Criteria Air Pollutants			
ROG, NO _x	54	54	10
PM ₁₀	82 (exhaust)	82	15
PM _{2.5}	54 (exhaust)	54	10
CO	Not Applicable	9.0 ppm (eight-hour) or 20.0 ppm (one-hour)	
Fugitive Dust	Dust Control Measures/Best Management Practices	Not Applicable	
Health Risks and Hazards for New Sources (within a 1,000-foot Zone of Influence)			
Health Hazard	Single Source	Combined Cumulative Sources	
Excess Cancer Risk	10 per one million	100 per one million	
Hazard Index	1.0	10.0	
Incremental Annual PM _{2.5}	0.3 µg/m ³	0.8 µg/m ³ (average)	
Notes: ROG = reactive organic gases, NO _x = nitrogen oxides, PM ₁₀ = course particulate matter or particulates with an aerodynamic diameter of 10 micrometers (µm) or less, PM _{2.5} = fine particulate matter or particulates with an aerodynamic diameter of 2.5µm or less, µm/m ³ = micrograms per cubic meter.			

3.3.2.2 Project Impacts

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

2017 BAAQMD Clean Air Plan

The BAAQMD CEQA Air Quality Guidelines set forth criteria for determining consistency with the Clean Air Plan. In general, a project is considered consistent if, a) the plan supports the primary goals of the Clean Air Plan; b) includes relevant control measures; and c) does not interfere with implementation of Clean Air Plan control measures. The project supports the goals of the 2017 BAAQMD CAP of protecting public health and protecting the climate and is consistent with BAAQMD CAP transportation, building, natural and working lands, and water control measures by:

- Implementing standard measures to reduce criteria air pollutant emissions during construction,
- 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 tree ordinance 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.
- Obtaining and maintaining all required air quality related permits from the BAAQMD.
- Complying with all applicable rules and regulations of the BAAQMD regarding emissions of toxic pollutants.
- Complying with the applicable federal Tier 2 emissions standards for emergency standby electrical generation engines.

Stationary equipment to be installed on the project site will be subject to the permit requirements of BAAQMD, which incorporate BAAQMD measures to reduce emissions from stationary sources such as the diesel-fueled emergency backup generators. Emissions of non-attainment air pollutants from the proposed project are addressed under Impact AIR-2. Additionally, exposure of sensitive receptors to TAC and PM_{2.5} emissions associated with the project is addressed under Impact AIR-3. As noted in those discussions, the project would result in air quality impacts that are less than significant with the incorporation of standard measures and mitigation. The project would not conflict with implementation of the 2017 CAP. **(Less than Significant Impact)**

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

Construction Criteria Pollutant Emissions

The California Emissions Estimator Model (CalEEMod) was used to predict criteria pollutant emissions from project construction and operation at full build-out. The project land use types and size, and anticipated construction schedule were input to CalEEMod. Construction period emissions were modeled based on an equipment list and schedule information provided by the project applicant. Construction is scheduled to begin in the spring (April) 2021 and be completed in the spring (March) of 2023, a total of 23 months or 506 workdays (average of 22 work days per month).¹³ Refer to Appendix B for details about the modeling, data inputs, and assumptions. Table 3.3-4 summarizes the average daily emissions of ROG, NO_x, PM₁₀ exhaust, and PM_{2.5} exhaust that would occur during construction of the project. Emissions were calculated for the entire construction period, then divided by the total number of construction work days to determine the average daily emissions.

¹³ Construction emissions associated with the transmission line are included in this calculation.

Table 3.3-4: Construction Emissions				
	ROG	NO_x	PM₁₀ Exhaust	PM_{2.5} Exhaust
	(lbs./day)			
Average Daily Emissions	13.1	22.7	0.75	0.60
<i>BAAQMD Thresholds</i>	<i>54</i>	<i>54</i>	<i>82</i>	<i>54</i>
Exceeds Threshold?	No	No	No	No
Note: It is estimated that the construction duration of the project would be 506 workdays.				

Construction activities, particularly during site preparation and grading, would temporarily generate fugitive dust in the form of PM₁₀ and PM_{2.5}. Sources of fugitive dust would include disturbed soils at the construction site and trucks carrying uncovered loads of soils. Unless properly controlled, vehicles leaving the site would deposit dirt/mud on local streets, which could be an additional source of airborne dust after it dries. BAAQMD considers construction emission impacts that are below the thresholds of significance (such as those of the project) less than significant if BMPs are implemented. The amount of dust generated would be highly variable and would be dependent on the size of the area disturbed at any given time, amount of activity, soil conditions, and meteorological conditions. Nearby areas could be adversely affected by dust generated during construction activities. Nearby land uses are primarily commercial, and office uses that are separated by roadways or open areas.

The BAAQMD CEQA Air Quality Guidelines consider these impacts to be less than significant if best management practices are employed to reduce these emissions. The following measures are included in the project, consistent with BAAQMD best management practices, to reduce construction dust generation and other particulate matter:

Standard Permit Conditions:

- All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day.
- All haul trucks transporting soil, sand, or other loose material off-site shall be covered.
- All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.
- All vehicle speeds on unpaved roads shall be limited to 15 miles per hour (mph).
- All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.
- Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to five minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations [CCR]). Clear signage shall be provided for construction workers at all access points.
- All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation.

- Post a publicly visible sign with the telephone number and person to contact at the Lead Agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The Air District's phone number shall also be visible to ensure compliance with applicable regulations.

Operational Emissions

The primary emission sources associated with operation of the proposed project would be from the testing and maintenance of the 24 diesel-fueled 3-MW emergency backup generators supporting the data center, and the smaller 500-kW house engine supporting ancillary building uses.

There would also be emissions from traffic and area sources associated with operation of the data center facilities. Emissions from these sources are described below. The 24 3-MW generators would be housed in either double stack or single stack enclosures as described previously and located within the generator yard located adjacent to southwest side of the building.

Emergency Generator Emissions

During normal facility operation, the generators would not be operated other than for periodic testing and maintenance requirements. The generator engines would be fueled using ultra low sulfur diesel fuel with a maximum sulfur content of 15 ppm. The 24 3-MW diesel engines would meet U.S. EPA Tier 4 emission standards while the 500-kW house engine would meet U.S. EPA Tier 2 emission standards. The engines would be fueled using ultra low sulfur diesel fuel with a maximum sulfur content of 15 parts per million (ppm), which minimizes both particulate matter and sulfur dioxide (SO₂) emissions.

The backup generators would have maintenance testing performed throughout the year to ensure performance when needed during a power failure. The operations of these generators are limited to 50 hours per year of non-emergency use (i.e. testing and maintenance) by the State's Air Toxic Control Measure for Stationary Compression Ignition Engines. The project proposes a weekly testing schedule that would result in roughly 18 hours of operation per generator per year, all at zero percent load with the exception of an annual load bank test that would reach up to 100 percent load. However, for purposes of estimating emissions and potential air quality impacts from the engines, it was assumed that each engine could be operated for 50 hours per year (maximum operation hours allowed by the State's Air Toxic Control Measure and BAAQMD for testing and maintenance) at a maximum load of 100 percent. The emissions were calculated with CalEEMod and are shown in Table 3.3-5.

Diesel Fuel Storage Emissions

Diesel fuel for each emergency generator would be stored in tanks under each generator housing unit. Diesel fuel has a very low vapor pressure, and emissions of ROG (VOC) from fuel storage would be negligible, with average daily emissions of less than 0.3 pounds per day from all tanks combined.

Total Project Emissions

Total annual emissions from the emergency generators, mobile and area sources are summarized in Table 3.3-5.

Table 3.3-5: Operational Emissions				
	ROG	NO _x	PM ₁₀	PM _{2.5}
	(tons/year)			
Existing Emissions				
Existing Land Uses	2.39	3.03	2.34	0.67
Project Emissions				
Emergency Generators ¹	0.82	8.76	0.12	0.12
Other Direct/Indirect Emissions ²	2.54	1.16	0.63	0.21
Project Total	3.36	9.92	0.75	0.33
Net Increase	0.97	6.89	-1.59	-0.34
<i>BAAQMD Threshold</i>	<i>10</i>	<i>10</i>	<i>15</i>	<i>10</i>
<i>Significant?</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>

¹ Maintenance and readiness testing scenario.

²Area, mobile, energy, waste, and water, from CalEEMod

As shown in Table 3.3-5, the project would not result in significant emissions during operation. As described previously, operation of each generator is limited to a maximum of 50 hours per year of non-emergency use (i.e. testing and maintenance) by the State's Air Toxic Control Measure for Stationary Compression Ignition Engines.¹⁴ The maintenance and readiness emissions were estimated based on a conservative scenario where the engines would operate for 50 hours/year at 100 percent load (worst case). Under normal project conditions, the engines would operate for 18 hours per generator per year, all at zero percent load with the exception of an annual load bank test that would reach up to 100 percent load. This would result in lower emissions than reported in Table 3.3-5. **(Less than Significant Impact)**

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

The proposed project would be a source of air pollutant emissions during project construction and during operation of emergency generators for testing and maintenance purposes. The proposed generators are diesel fueled, so they would emit DPM, which is a toxic air contaminant (TAC). The generators are also a source of PM_{2.5}, which has known adverse health effects.

¹⁴ Similar to the State's Air Toxic Control Measure for Stationary Compression Ignition Engines, this EIR does not evaluate the project's emissions under emergency conditions, which would require substantial speculation in regards to the nature, extent, and duration of the emergency and its effect on project operations. CEQA does not require analysis of emergency events, nor worst-case events that may never occur, or very rarely over a project's lifespan. The evaluation of emissions generated by typical project operations under normal conditions in the EIR is, therefore, appropriate for the analysis of air quality impacts.

The BAAQMD CEQA Air Quality Guidelines considers exposure of sensitive receptors to air pollutant levels that result in an unacceptable cancer risk or hazard to be significant. BAAQMD recommends a 1,000-foot zone of influence around project boundaries.

Since the proposed project would emit DPM from the generator engines over the project lifetime, an analysis was performed to assess what ambient concentrations would result from their operation, and to quantify potential long-term health risks at the closest sensitive receptors. Construction DPM health risk impacts were combined with operational DPM health risk impacts (summed) to calculate a total project impact on health risk. DPM concentrations and potential cancer risks from operation of the generators were evaluated at existing residences in the vicinity of the proposed data center site. The closest sensitive receptors to the proposed project site are residences approximately 140 feet southwest of the project boundary. The maximum average annual off-site DPM concentrations were used to calculate potential increased cancer risks from the project. Average annual DPM concentrations were used as being representative of long-term (30-year) exposures for calculation of cancer risks.

The maximum modeled annual DPM and PM_{2.5} concentration from operation and construction was 0.041 µg/m³. Based on the maximum modeled DPM concentrations that assume operation for 50 hours per year per generator, maximum increased cancer risks and non-cancer health impacts were calculated using BAAQMD recommended methods (see Table 3.3-6). The maximum increased cancer risk at the maximally exposed individual (MEI) receptor, located roughly 140 feet from the project site on Main St. across the railroad tracks from the southeast corner of the site, would be 7.44 per million. The maximum hazard index would be less than 0.01 from construction and operation of the proposed emergency generators and would be below the BAAQMD maximum hazard index significance threshold of 1.0.¹⁵

Table 3.3-6: Health Risk Assessment			
Source	Maximum Cancer Risk (per million)	Hazard Index	PM_{2.5} concentration (µg/m³)
Construction	4.86	0.0028	0.041
Operation	4.27	0.00098	0.0049
<i>Combined Construction and Operation¹</i>	7.44	0.0038	--
<i>BAAQMD Threshold</i>	<i>10</i>	<i>1.0</i>	<i>0.3</i>
¹ Construction and operational health risks were combined for a total project risk. Construction cancer risks were based on two years of activity and included infant exposure (3 rd trimester through two years of age) while operational risks started at the beginning of year two (2) and included child and adult exposure for the remaining 28 years.			

The project would not have a significant impact to community risk caused by the construction or operational activities and would not expose sensitive receptors to substantial pollutant concentrations. **(Less than Significant Impact)**

¹⁵ Bay Area Air Quality Management District. California Environmental Quality Act Air Quality Guidelines. May 2017.

Impact AIR-4: The project would not result in other emissions (such as those leading to odors) adversely affecting a substantial number of people. **(Less than Significant Impact)**

The project would generate localized emissions of diesel exhaust during construction equipment operation, and routine maintenance of emergency generators of the site. The odor emissions may be noticeable from time to time by adjacent receptors; however, the odors would be localized and temporary. **(Less Than Significant Impact)**

3.3.2.3 Cumulative Impacts

Impact AIR-C: The project would not result in a cumulatively considerable contribution to a cumulatively significant air quality impact. **(Less than Significant Cumulative Impact)**

Cumulative Air Pollutant Emissions

By its very nature, air pollution is largely a cumulative impact. The geographic area for cumulative air quality impacts is the San Francisco Bay Area Air Basin. Past, present, and future development projects contribute to the region's adverse air quality impacts. No single project is sufficient in size, by itself, to result in nonattainment of ambient air quality standards. Instead, a project's individual emissions contribute to existing cumulatively significant adverse air quality impacts.

In developing thresholds of significance for air pollutants, BAAQMD considered the emission levels for which a project's individual emissions would be cumulatively considerable. If a project exceeds the identified project-level criteria pollutant significance thresholds, its emissions would be cumulatively considerable, resulting in significant adverse air quality impacts to the region's existing air quality conditions. The project's criteria air pollutant emissions would be below BAAQMD thresholds and would, therefore, not result in a cumulatively considerable net increase in criteria pollutants (refer to Sections 3.2.2.2 and 3.2.2.3). The project would not contribute substantially to existing or projected violations of BAAQMD standards for these regional air pollutants or local carbon monoxide emissions. **(Less Than Significant Cumulative Impact)**

Cumulative Health Risks

Community health risk assessments typically evaluate all substantial sources of TACs that can affect sensitive receptors that are located within 1,000 feet of the project site (i.e. influence area). These sources include rail line, freeways or highways, busy surface streets, and stationary sources identified by BAAQMD. A review of the project area indicates that traffic on the existing roadways within 1,000 feet of the project site have an average daily traffic (ADT) much less 10,000 vehicles.

There are stationary sources that were identified within the 1,000-foot influence area using the BAAQMD's stationary source geographic information systems (GIS) map tool.¹⁶ This tool identified 11 sources within 1,000 feet of the boundaries of the project and are listed in Table 3.3-7, below.

In addition to the stationary sources that were identified with the BAAQMD GIS tool, rail lines are located adjacent to the southern project site boundary. Rail activity on these lines currently generates TAC and PM_{2.5} emissions from locomotive exhaust. These rail lines are used for Caltrain passenger and Union Pacific Railroad freight service with trains using diesel fueled locomotives. The Peninsula Corridor Electrification Project is a key component of the Caltrain Modernization Program that would electrify the Caltrain Corridor from San Francisco to San Jose. Under this program, diesel-locomotive hauled trains would begin to be converted to Electric Multiple Unit (EMU) trains beginning in 2022.

Currently all of Caltrain's trains use diesel locomotives. As part of the program to modernize operation of the Caltrain rail corridor between San Jose and San Francisco, Caltrain is planning to switch from diesel locomotives to use of electric trains in the near future.¹⁷ Nearly all of the trains in the future are planned to be EMU trains, which are self-propelled electric rail vehicles. Electrified service is anticipated to begin in 2022.¹⁸

Based on the normal Caltrain schedule, there are 92 trains passing the project site during the weekdays, 32 trains during the weekend, and four trains that only run on Saturday. On an annual average basis there would be a total of 75 daily trains using diesel locomotives. Electrification of Caltrain would eliminate DPM emissions from most of these trains and would increase the total number of weekday trains from 92 to 114. In addition to the Caltrain trains, there are about four freight trains that also use this rail line on a daily basis.¹⁹

Caltrain plans that 2022 service between San Jose and San Francisco would use a mixed fleet of EMUs and diesel locomotives, with approximately 75 percent of the service being electric and 25 percent being diesel. Caltrain's diesel-powered locomotives would continue to be used to provide service between the San Jose Diridon Station and Gilroy. It is expected that all of the San Jose to San Francisco fleet would be EMUs by 2026 to 2029.²⁰

Starting in 2022 with Caltrain electrification, there would be 24 daily weekday trips and four daily weekend trips using trains with diesel locomotives²¹. On an annual average basis this would be a total of 18 daily trains using diesel locomotives. Use of these diesel trains by Caltrain between San Francisco and San Jose would be phased out from 2026 to 2029 and replaced by EMUs. All trains used for freight service were assumed to use diesel powered locomotives.

¹⁶ BAAQMD, <https://baaqmd.maps.arcgis.com/apps/webappviewer/index.html?id=2387ae674013413f987b1071715daa65>

¹⁷ Caltrain, 2014. *Peninsula Corridor Electrification Project. Final Environmental Impact Report*. December 2014.

¹⁸ Caltrain, 2020. *See Caltrain.org*, accessed October 23, 2020.

¹⁹ *See FTA Rail Crossings at https://safetydata.fra.dot.gov/OfficeofSafety/PublicSite/Crossing/Xingqyloc.aspx* accessed October 29, 2020.

²⁰ Caltrain 2015. *Short Range Transit Plan: FY2015-2024*. October 1, 2015

²¹ Caltrain 2015. *Short Range Transit Plan: FY2015-2024*. October 1, 2015.

In calculating cancer risks from DPM emissions from rail line diesel locomotives, a 30-year exposure period is used per BAAQMD health risk guidance.²² In this case, based on the anticipated year the project would become operational, the exposure period would be from 2024 through 2053. It was assumed that the configuration of diesel trains described above, an average of 18 trains per day, would be in operation for the entire 30-year exposure period. Rail line DPM emissions from diesel trains were conservatively calculated using emissions for 2024. Modeled concentrations from the rail lines for 2024 were used to calculate potential increased cancer risks at the project site and construction maximally exposed individual (MEI) assuming almost continual exposure (350 days per year for 24 hours per day) over the 30-year exposure period. Use of 2024 emissions is conservative in that after 2025 there would be fewer Caltrain diesel trains in service until such time as all Caltrain diesel trains between San Francisco and San Jose are replaced by EMUs. The freight trains were assumed to continue to use diesel locomotives over the entire 2024 to 2053 period. DPM emissions from diesel-fueled locomotives will be reduced over time due to regulatory requirements for reduced particulate matter emissions from diesel locomotives.

DPM and PM_{2.5} emissions from trains on the rail line were calculated using EPA emission factors for locomotives²³ and CARB adjustment factors to account for fuels used in California.²⁴ Dispersion modeling of locomotive emissions was conducted using the EPA's AERMOD dispersion model. Based on the rail line modeling, the maximum annual PM_{2.5} and DPM concentrations occurred at a single-family home just south of the rail line. The maximum cancer risk at this location from rail traffic is 28.4 in one million and the maximum PM_{2.5} concentration was 0.04 µg/m³. Potential non-cancer health effects due to chronic exposure to DPM were computed as a hazard index (HI) of less than 0.01.

Table 3.3-7 shows the cancer and non-cancer risks at the project MEI associated with each source affecting the project site.

²² BAAQMD, 2016. *BAAQMD Air Toxics NSR Program Health Risk Assessment (HRA) Guidelines*. January 2016.

²³ *Emission Factors for Locomotives*, USEPA 2009 (EPA-420-F-09-025)

²⁴ *Off-road Modeling, Change Technical Memo*, Changes to the Locomotive Inventory, CARB July 2006.

Table 3.3-7: Cumulative Health Risk Assessment			
Source	Maximum Cancer Risk (per million)	Hazard Index	PM_{2.5} concentration (µg/m³)
Plant 2206 Streamline Circuits		0.0034	0.0024
Plant 4400 FMG Enterprises Inc	0.0413	0.0001	--
Plant 4712 Byington Steel Treating, Inc	--	--	0.0000
Plant 5269 M's Refinishing	0.9813	0.0271	--
Plant 8313 Mission Trail Waste Systems ¹	0.2480	0.0013	0.35 ¹
Plant 16964 Bay Area Surgical Group	2.6855	0.0053	0.0034
Plant 17000 Choice Auto Body	--	0.0001	--
Plant 17041 Process Stainless Lab, Inc	--	0.0003	--
Plant 19686 Microsoft Corporation	--	--	0.1049
Plant 21965 West Coast Auto Body	--	--	--
Plant 22660 1200 Partners	2.3845	0.0076	0.0029
CALTRAIN/Union Pacific Rail Line	28.4	<0.01	0.04
<i>Project Combined Construction and Operation</i>	7.44	0.0038	0.041
<i>Combined Sources²</i>	42.18	<1.0	0.55
<i>BAAQMD Threshold – Combined Sources</i>	<i>100</i>	<i>10.0</i>	<i>0.8</i>
¹ Mission Trail Waste Systems PM _{2.5} concentration was 21.35 µg/m ³ but the distance to the MEI exceeded BAAQMD 1,000-foot radius requirements. This facility's PM emissions of 1.8 tpy were modeled at the MEI to calculate the value listed in the table. ² The combined source level is an overestimate because the maximum impact from each source is assumed to occur at the same location.			

The sum of impacts from combined sources (i.e., all sources within 1,000 feet of the project) would be below the BAAQMD risk thresholds when added to the MEI impacts. Therefore, the impact from combined community risk would be considered less than significant. **(Less than Significant Cumulative Impact)**

3.4 BIOLOGICAL RESOURCES

3.4.1 Environmental Setting

3.4.1.1 *Regulatory Framework*

Federal and State

Endangered Species Act

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

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

Migratory Bird Treaty Act

The federal Migratory Bird Treaty Act (MBTA) prohibits killing, capture, possession, or trade of migratory birds except in accordance with regulations prescribed by the Secretary of the Interior. Hunting and poaching are also prohibited. The taking and killing of birds resulting from an activity is not prohibited by the MBTA when the underlying purpose of that activity is not to take birds.²⁵ Nesting birds are considered special-status species and are protected by the USFWS. The CDFW also protects migratory and nesting birds under California Fish and Game Code Sections 3503, 3503.5, and 3800. The CDFW defines taking as causing abandonment and/or loss of reproductive efforts through disturbance.

Sensitive Habitat Regulations

Wetland and riparian habitats are considered sensitive habitats under CEQA. They are also afforded protection under applicable federal, state, and local regulations, and are generally subject to regulation by the United States Army Corps of Engineers (USACE), Regional Water Quality Control Board (RWQCB), CDFW, and/or the USFWS under provisions of the federal Clean Water Act (e.g., Sections 303, 304, 404) and State of California Porter-Cologne Water Quality Control Act.

²⁵ United States Department of the Interior. “Memorandum M-37050. The Migratory Bird Treaty Act Does Not Prohibit Incidental Take.” Accessed October 20, 2020. <https://www.doi.gov/sites/doi.gov/files/uploads/m-37050.pdf>.

Fish and Game Code Section 1602

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

Regional and Local

Santa Clara Valley Habitat Plan/Natural Community Conservation Plan

The Santa Clara Valley Habitat Plan/Natural Community Conservation Plan (Habitat Plan) covers approximately 520,000 acres, or approximately 62 percent of Santa Clara County. It was developed and adopted through a partnership between Santa Clara County, the Cities of San José, Morgan Hill, and Gilroy, Santa Clara Valley Water District (Valley Water), Santa Clara Valley Transportation Authority (VTA), USFWS, and CDFW. The Habitat Plan is intended to promote the recovery of endangered species and enhance ecological diversity and function, while accommodating planned growth in southern Santa Clara County. The Santa Clara Valley Habitat Agency is responsible for implementing the plan. The City of Santa Clara is not located within nor a Habitat Plan participant.

Santa Clara General Plan

The General Plan includes several land use and conservation policies designed to protect biological resources in the City, specifically trees. These policies include the following:

Policy 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.

Policy 5.10.1-P4: Protect all healthy cedars, redwoods, oaks, olives, bay laurel and pepper trees of any size, and all other trees over 36 inches in circumference measured from 48 inches above-grade on private and public property as well as in the public right-of-way.

3.4.1.2 Existing Conditions

The site is currently developed with three buildings: a three-story approximately 350,037 square foot building, a two-story approximately 45,986 square foot building, and a one-story approximately 2,944 square foot building. Roughly 100,000 square feet of active outdoor uses are located on the eastern portion of the site. Existing uses on the site are light industrial in nature and include operations such as aluminum plating, metal cleaning/polishing, a machine shop, construction contractors, a brewery, material storage, vehicle storage, and hauling. The vehicle storage and hauling operations are primarily located in the outdoor areas on the site.

Currently, landscaping on the site is sparse. Mature trees are located along the site's frontage on Memorex Drive, and additional trees and shrubbery are located along portions of the site's perimeter.

Wildlife habitats in such developed urban areas are low in species diversity. Species that use the habitat on the site are predominantly urban adapted birds, such as rock doves, mourning doves, house sparrows, finches, and starlings.

Special Status Species

Special status plant and wildlife species are not present on the highly urbanized project site, although raptors (birds of prey) could use the trees on-site for nesting or as a roost. Raptors are protected by the Federal Migratory Bird Treaty Act (MBTA) (16 U.S.C. Section 703, et seq.).

Trees

There are 38 trees on the project site, 30 in good health, seven in poor health and one in fair health.²⁶ Table 4.4-1 below includes the species and number of trees on the site.

Table 4.4-1: Existing Tree Summary				
Common Name	Species	Number of Trees Present	Overall Health	Status
Canary Island Pine	<i>Pinus Canariensis</i>	8	Good	To be removed
Red Maple	<i>Acer P. 'Red Sunset'</i>	14	Good	13 to be removed, 1 to be saved
Ornamental Pear	<i>Pyrus C. 'Capital'</i>	1	Good	To be removed
Crape Myrtle	<i>Lagerstroemia</i>	2	Good	To be removed
Brush Box	<i>Lophostemon</i>	1	Good	To be removed
Juniper	<i>Juniperus</i>	1	Poor	To be removed
Bottle Brush	<i>Callistemon</i>	5	Poor	To be removed
Sumac	<i>Rhus</i>	1	Fair	To be removed
Liquidamber	<i>Liquidamber</i>	1	Good	To be removed
Cedar	<i>Cedar</i>	1	Poor	To be removed
Southern Magnolia	<i>Magnolia</i>	2	Good	1 to be removed, 1 to remain
Evergreen Pear	<i>Pyrus</i>	1	Good	To be removed

City policy is to protect all healthy cedars, redwoods, oaks, olives, bay laurel and pepper trees of any size and all other trees over 36 inches in circumference (approximately 11 inches in diameter) as measured from 48 inches above the ground surface. The City's Design Guidelines also require that mature trees removed or proposed for removal be replaced on-site, at a minimum, with a 24- or 36-inch box. Other standards may apply in cases where particular planting requirements must be met. This includes providing specimen size material for protected trees and installing appropriately sized trees, such as less than or equal to 15 gallons where there are physical limitations.

²⁶ Reed Associates. Arborist Report. April 9, 2020.

3.4.2 Impact Discussion

For the purpose of determining the significance of the project's impact on biological resources, 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 (CDFW) or United States Fish and Wildlife Service (USFWS)?
- 2) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the CDFW or USFWS?
- 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?
- 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 native wildlife nursery sites?
- 5) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?
- 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?

3.4.2.1 *Project Impacts*

Impact BIO-1:	As mitigated, the project would not have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS. (Less than Significant Impact with Mitigation Incorporated)
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As previously discussed, special status plant and wildlife species are not expected on the developed site. Urban adapted raptors (birds of prey), however, could use the trees on the site for nesting. Potential construction impacts to nesting raptors are discussed below.

Potential Construction Impacts to Nesting Birds

If tree-nesting birds, including raptors, were to nest on the site or on the location of off-site improvements, construction activities associated with the project could result in the abandonment of active nests or direct mortality to these birds. Nesting birds are protected by the California Fish and Game Code 3503, which reads, "It is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by this code or any regulation made pursuant thereto." Construction disturbance during the breeding season could result in the incidental loss of fertile eggs or nestlings, or could otherwise lead to nest abandonment. Nest abandonment and/or loss of reproductive effort caused by disturbance are considered "take" by the CDFW, and therefore would constitute a significant impact.

Migratory birds, including nesting raptors, are protected under the Migratory Bird Treaty Act and the California Fish and Game Code Sections 3503, 3503.5, and 2800. Migratory birds, especially raptors, utilize mature trees for nesting and foraging habitat. If any migratory birds were to nest on site, construction of the proposed project may result in a loss of fertile eggs or nestlings, or lead to nest abandonment in raptor habitat.

The CDFW defines “taking” as causing abandonment and/or loss of reproductive efforts through disturbance.

Although unlikely at this location, tree removal during the nesting season could impact protected raptors and/or other protected migratory birds. Any loss of fertile bird eggs, or individual nesting birds, or any activities resulting in nest abandonment during construction would constitute a significant impact.

Mitigation Measure:

MM BIO-1.1: Construction shall be scheduled to avoid the nesting bird season to the extent feasible. The nesting season for most birds, including most raptors, in the San Francisco Bay Area extends from February 1 through August 31.

If it is not possible to schedule construction activities between September 1 and January 31, then pre-construction surveys for nesting birds shall be completed by a qualified ornithologist to ensure no nest shall be disturbed during project implementation. This survey shall be completed no more than 14 days prior to the initiation of grading, tree removal, or other demolition or construction activities during the early part of the breeding season (February through April) and no more than 30 days prior to the initiation of these activities during the late part of the breeding season (May through August).

During this survey, the ornithologist shall inspect all trees and other possible nesting habitats within and immediately adjacent to the construction area for nests. If an active nest is found sufficiently close to work areas to be disturbed by construction, the ornithologist, in consultation with CDFW, shall determine the extent of a construction-free buffer zone to be established around the nest to ensure that nests of bird species protected by the MBTA or Fish and Game Code shall not be disturbed during project construction.

A final report of nesting birds, including any protection measures, shall be submitted to the Director of Community Development prior to the start of grading or tree removal.

The project, with implementation of the above mitigation measure, would reduce impacts to nesting birds (if present) by avoiding construction during nesting bird season or completing pre-construction nesting bird surveys to minimize and/or avoid impacts to nesting birds. **(Less than Significant Impact with Mitigation Incorporated)**

Impact BIO-2: The project would not have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the CDFW or USFWS. **(Less than Significant Impact)**

Because the site is fully developed, no natural or sensitive habitats are present on the project site. As a result, no substantial impacts to natural plant communities or habitats would occur as a result of the proposed project. **(Less than Significant Impact)**

Impact BIO-3: The project would not have a substantial adverse effect on state or federally protected wetlands through direct removal, filling, hydrological interruption, or other means. **(No Impact)**

The project is located in a developed industrial area and would not directly affect any federally protected wetlands. **(No Impact)**

Impact BIO-4: The project would not interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites. **(No Impact)**

The project is located in a developed industrial area and would not interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, impede the use of native wildlife nursery sites. **(No Impact)**

Impact BIO-5: As mitigated, the project would not conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance. **(Less than Significant Impact with Mitigation Incorporated)**

The project would remove 36 trees on-site, 16 of which are considered protected trees by the City. The project proposes to plant new landscaping around the perimeter of the site, along the street frontage, and adjacent to the data center building. The City's General Plan (Policy 5.3.1-P10) requires new development to include new street trees and at least 2:1 on or off-site replacement for removal of existing trees. The project currently proposes to plant 226 trees, predominantly Italian Cypress, which exceeds the City's replacement requirement. Because the project would comply with the City's tree replacement policy, the loss of trees on-site would result in a less than significant impact on trees in the project area.

The project would include an approximately 0.6 mile off-site 60kV transmission line extension. The proposed transmission line would not require the removal of any trees, but may require trimming of some trees to accommodate the line in certain locations. If any trees are determined to require removal, the 226 trees to be planted by the project would meet the City's required tree replacement ratio.

Trees to be retained on-site may be injured during project construction activities including demolition and site grading. Additionally, trees adjacent to the proposed overhead transmission line may require substantial pruning to ensure clearance. The following mitigation measures would be implemented to reduce impacts to existing trees to less than significant levels.

Mitigation Measures:

- MM BIO-5.1:** Barricades – Prior to initiation of construction activity, temporary barricades would be installed around all trees in the construction area. Six-foot high, chain link fences would be mounted on steel posts, driven two feet into the ground, at no more than 10-foot spacing. The fences shall enclose the entire area under the drip line of the trees or as close to the drip line area as practical. These barricades will be placed around individual trees and/or groups of trees.
- MM BIO-5.2:** Root Pruning (if necessary) – During and upon completion of any trenching/grading operation within a tree’s drip line, should any roots greater than one inch in diameter be damaged, broken or severed, root pruning to include flush cutting and sealing of exposed roots should be accomplished under the supervision of a qualified Arborist to minimize root deterioration beyond the soil line within 24 hours.
- MM BIO-5.3:** Pruning – Pruning of the canopies to include removal of deadwood should be initiated prior to construction operations. Such pruning will provide any necessary construction clearance, will lessen the likelihood or potential for limb breakage, reduce ‘windsail’ effect and provide an environment suitable for healthy and vigorous growth.
- MM BIO-5.4:** Fertilization – Fertilization by means of deep root soil injection should be used for trees to be impacted during construction in the spring and summer months.
- MM BIO-5.5:** Mulch – Mulching with wood chips (maximum depth of three inches) within tree environments should be used to lessen moisture evaporation from soil, protect and encourage adventitious roots and minimize possible soil compaction.

With implementation of mitigation measures MM BIO-5.1 - 5.5, the project would result in a less than significant impact to trees. **(Less Than Significant Impact with Mitigation Incorporated)**

Impact BIO-6: The project would not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. **(No Impact)**

The project site is not located within an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. The City of Santa Clara is not located within, nor a Habitat Plan participant. **(No Impact)**

3.4.2.2 *Cumulative Impacts*

Impact BIO-C: As mitigated, the project would not result in a cumulatively considerable contribution to a cumulatively significant biological resources impact. **(Less than Significant Cumulative Impact with Mitigation Incorporated)**

The geographic area for cumulative biological resources impacts includes the project site and its surrounding area. The project site does not contain sensitive, wetland, or riparian habitat and, therefore, the project has no potential to combine with other projects to result in cumulative impacts to these resources. **(No Cumulative Impact)**

Implementation of the proposed project could result in impacts to nesting raptors, migratory birds, and trees. All projects, however, would be subject to federal and state regulations that protect nesting birds and the City's General Plan Policy requiring the replacement of trees removed would avoid and/or reduce the cumulative impact to nesting birds and trees. Finally, through implementation of the mitigation measures described in this section, the project's contribution to a biological impact would not be cumulatively considerable. For these reasons, the proposed project would not result in a significant cumulative impact to biological resources. **(Less than Significant Cumulative Impact with Mitigation Incorporated)**

3.5 CULTURAL RESOURCES

The discussion in this section is based in part upon an Archaeological Literature Search prepared for the project by Holman & Associates, Inc. in December 2019 (see Appendix D), as well as a Historic Resource Evaluation and a Historic Resource Impacts Analysis prepared by *Architectural Resources Group* in December 2019 and April 2020, respectively (see Appendices E and F).

3.5.1 Environmental Setting

3.5.1.1 *Regulatory Framework*

Federal and State

National Historic Preservation Act

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

The NRHP is the nation's master inventory of historic resources that are considered significant at the national, state, or local level. The minimum criteria for determining NRHP eligibility include:

- The property is at least 50 years old (properties under 50 years of age that are of exceptional importance or are contributors to a district can also be included in the NRHP);
- It retains integrity of location, design, setting, materials, workmanship, feeling, and associations; and
- It possesses at least one of the following characteristics:
 - Association with events that have made a significant contribution to the broad patterns of history;
 - Association with the lives of persons significant in the past;
 - Distinctive characteristics of a type, period, or method of construction, or represents the work of a master, or possesses high artistic values, or represents a significant, distinguishable entity whose components may lack individual distinction; or
 - Has yielded, or may yield, information important to prehistory or history.

California Register of Historical Resources

The California Register of Historical Resources (CRHR) is administered by the State Office of Historic Preservation and encourages protection of resources of architectural, historical, archeological, and cultural significance. The CRHR identifies historic resources for state and local

planning purposes and affords protections under CEQA. Under Public Resources Code Section 5024.1(c), a resource may be eligible for listing in the CRHR if it meets any of the NRHP criteria.²⁷

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

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

California Native American Historical, Cultural, and Sacred Sites Act

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

Public Resources Code Sections 5097 and 5097.98

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

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

²⁷ California Office of Historic Preservation. “CEQA Guidelines Section 15064.5(a)(3) and California Office of Historic Preservation Technical Assistance Series #6.” Accessed August 31, 2020.
<http://www.ohp.parks.ca.gov/pages/1069/files/technical%20assistance%20bulletin%206%202011%20update.pdf>.

Local

City of Santa Clara Criteria for Local Significance

The City of Santa Clara's Criteria for Local Significance establishes an evaluation framework that help to determine significance for properties not yet included in the City's Historic Resources Inventory (HRI). Any building, site, or property in Santa Clara that is 50 years old or older and meets at least one of the following criteria for cultural, historical, architectural, geographical, or archaeological significance is potentially eligible.²⁸

To be historically or culturally significant, a property must meet at least one of the following criteria:

1. The site, building or property has character, interest, integrity, and reflects the heritage and cultural development of the City, region, state, or nation.
2. The property is associated with a historical event.
3. The property is associated with an important individual or group who contributed in a significant way to the political, social, and/or cultural life of the community.
4. The property is associated with a significant industrial, institutional, commercial, agricultural, or transportation activity.
5. A building's direct association with broad patterns of local area history, including development and settlement patterns, early or important transportation routes or social, political, or economic trends and activities. Included is the recognition of urban street pattern and infrastructure.
6. A notable historical relationship between a site, building, or property's site and its immediate environment, including original native trees, topographical features, outbuildings or agricultural setting.

To be architecturally significant, a property must meet at least one of the following criteria:

1. The property characterizes an architectural style associated with a particular era and/or ethnic group.
2. The property is identified with a particular architect, master builder or craftsman.
3. The property is architecturally unique or innovative.
4. The property has a strong or unique relationship to other areas potentially eligible for preservation because of architectural significance.
5. The property has a visual symbolic meaning or appeal for the community.
6. A building's unique or uncommon building materials, or its historically early or innovative method of construction or assembly.
7. A building's notable or special attributes of an aesthetic or functional nature. These may include massing, proportion, materials, details, fenestration, ornamentation, artwork or functional layout.

²⁸ City of Santa Clara. City of Santa Clara General Plan – 8.9 Historic Preservation and Resource Inventory. 8.9-18 and 8.9-19. Accessed April 10, 2020.

To be geographically significant, a property must meet at least one of the following criteria:

1. A neighborhood, group, or unique area directly associated with broad patterns of local area history.
2. A building's continuity and compatibility with adjacent buildings and/or visual contribution to a group of similar buildings.
3. An intact, historical landscape or landscape features associated with an existing building.
4. A notable use of landscaping design in conjunction with an existing building.

3.5.1.2 *Existing Conditions*

Archaeological Resources

A records search was completed at the Northwest Information Center of the California Historical Resources Information System (CHRIS) in December 2019. All records of identified archaeological resources within a quarter mile, and all other cultural resources and archaeological resources reports for projects within 50 meters (165 feet) of the project site were reviewed. The project area has been previously studied for its cultural resources potential during investigations for two large infrastructure projects. No cultural resources are recorded within the project site or within the study zone. In this portion of Santa Clara County, Native American archaeological resources have been identified adjacent to springs and major creeks, and within and along the edges of marshlands. Wetlands would include both Goldrush era bayshore margins that once framed much of southern San Francisco Bay and discrete wetlands such as one that was once located north, west, and south of the Mineta San Jose International Airport. Other sensitive locations include confluences with other creeks, and on habitable lands within a half mile from the various Mission Santa Clara locations. The project site is located more than 0.65 miles from the closest Mission location. The site is approximately 1.25 miles west of the Guadalupe River and is approximately 0.75 miles from San Tomas Aquino Creek to the west. Based on this geographic information, the site has a low potential for Native American resources.

Historic-era maps for the project area were examined to identify the potential for archaeological resources that might elaborate on the history of the property and general area. In 1857, the bay margins were north of what is now State Route 237. In 1876, the project site was part of 18 acres owned by J.R. Carpstein with no nearby improvements depicted. At that time, the property was beyond Santa Clara's city limits. No improvements were depicted within or near the site; however, much of the surrounding lands were planted in orchards. After 1953 and by 1961, the site was developed and likely included within the city limits. In 1993, aerial images show the site configured approximately the same as today. Based on the review of historical land use patterns, there is a low potential for specific historic-era archaeological deposits on the site.

Historical Resources

The property was constructed in 1961, with additions constructed in 1964 and 1966, as the first world headquarters of Memorex Corporation, one of the many electronics start-up companies that catalyzed the Santa Clara Valley's transformation into "Silicon Valley" during the postwar era. As a multifaceted industrial campus including a manufacturing plant, research and development facilities, and administrative offices, the subject property conveys popular trends in industrial development during the postwar era. Memorex Corporation holds particular significance within the context of the

development of the modern electronics and computer industry due to its early innovations in the field of peripheral computer equipment. In 1968, while still headquartered at the subject property, Memorex released the first independently produced hard disk drives that were compatible with IBM computers. Because IBM dominated 71 to 83 percent of the global computer market at the time, the introduction of compatible computer equipment established an important avenue for smaller electronics firms to establish themselves within the field. Memorex Corporation's development of the first IBM-compatible hard drive had a significant impact on the early electronics industry, and the product itself was both developed and manufactured at the subject property in the late 1960's. The Memorex Corporation continued operations on the site through approximately 1993. The buildings have since been divided into numerous suites utilized by various tenants.

The Historic Resource Evaluation completed for the site determined that the property is eligible for listing in the CRHR under Criterion 1, Association with Significant Events. To be considered eligible for listing under CRHR Criterion 1, a property must be associated with one or more events important in a defined historic context. This criterion recognizes properties associated with single events, a pattern of events, repeated activities, or historic trends. The event or trends, however, must clearly be important within the associated context. Further, mere association of the property with historic events or trends is not enough, in and of itself, to qualify under this criterion: the specific association must be considered important as well. The subject property is eligible under Criterion 1 for its association with the development of the modern electronics industry and in the broader context of Silicon Valley's development in the 1960s and 1970s.

In order for a building to qualify for listing on the CRHR, it must both display significance under one or more of the California Register criteria and retain historical integrity. Based on an integrity analysis completed for the property, the building currently retains its integrity of location, design, setting, material, feeling, and association. The property retains a degree of integrity of workmanship.

Because the property is eligible for listing on the CRHR under Criterion 1, and the three buildings retain their integrity, the existing development on the site is considered a historical resource under CEQA.

3.5.2 Impact Discussion

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

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

3.5.2.1 *Project Impacts*

Impact CUL-1: The project would cause a substantial adverse change in the significance of a historical resource pursuant to CEQA Guidelines Section 15064.5.
(Significant and Unavoidable Impact with Mitigation Incorporated)

As described above, the former headquarters of the Memorex Corporation located on the site qualifies as a historical resource under CEQA due to its eligibility for listing on the CRHR under Criterion 1, Association with Significant Events. The significance of an historical resource is considered to be “materially impaired” when a project demolishes or materially alters the physical characteristics that justify the determination of an historical resources’ significance. The project would demolish the existing improvements on site and therefore would have a significant and unavoidable impact on a historical resource.

According to CEQA Guidelines Section 15126.4(b), all feasible mitigation must be completed even if it does not mitigate project impacts below a level of significance. Although recordation of a resource prior to demolition does not mitigate the physical impact on the resource, it serves a “legitimate archival purpose.”²⁹ The project would include the following mitigation to record the building, however, the mitigation would not fully offset the loss and the impact would remain significant and unavoidable.

MM CUL-1.1: Historic American Buildings Survey (HABS) Recordation. Prior to project implementation, the historical resource will be recorded to Historic American Buildings Survey (HABS) standards established by the National Park Service, as detailed below:³⁰

- A HABS written report will be completed to document the physical history and description of the historical resource, the historic context for its construction and use, and its historic significance. The report will follow the standard outline format described in the *Historic American Buildings Survey Guidelines for Historical Reports* in effect at the time of recording. The report shall be prepared by a professional who meets the Secretary of the Interior’s Professional Qualifications Standards for Architectural History.
- Large-format, black and white photographs of the historical resource will be taken and processed for archival permanence in accordance with Historic American Building Survey (HAB), Historic American Engineering Record (HAER), and HALS (Historic American Landscapes Survey) Photography Guidelines in effect at the time of recording. The photographs shall be taken by a professional with HABS photography experience. The number and type of views required will be determined in consultation with the local jurisdiction.
- Existing drawings, where available, will be reproduced on archival paper. If existing drawings are not available, a full set of measured drawings

²⁹ California Office of Historic Preservation, “California Environmental Quality Act (CEQA) and Historical Resources.”

³⁰ National Park Service, “HABS Guidelines,” accessed April 8, 2020, <https://www.nps.gov/hdp/standards/habsguidelines.htm>.

depicting existing conditions will be prepared. The drawings shall be prepared by a professional who meets the Secretary of the Interior's Professional Qualification Standards for Architecture or Historic Architecture.

- The HABS documentation, including the written report, large-format photographs, and drawings, shall be submitted to appropriate repositories, such as the Santa Clara County Historical & Genealogical Society (SCCHGS), Silicon Valley Historical Association, Sourisseau Academy for State and Local History at San José State University, and/or the Computer History Museum in Mountain View. The documentation shall be prepared in accordance with the archival standards outlined in the Transmittal Guideline for Preparing HABS/HAER/HALS Documentation in effect at the time of recording. A professional who meets the Secretary of the Interior's Professional Qualifications Standards for Architectural History shall manage production of the HABS documentation.

MM CUL-1.2: Video Documentation. Video documentation of the subject property will supplement HABS documentation by recording the exterior and interior of the industrial complex at 1200 – 1310 Memorex Drive, as it appears, prior to project implementation. Using visuals in combination with active narration, the documentation shall include as much information as possible about the spatial arrangement, circulation patterns, historic use, current condition, construction methods, and material appearance of the historic resource. The documentation shall be conducted by a professional videographer, preferably one with experience recording architectural resources, and produced in conjunction with a qualified professional who meets the standards for history, architectural history, or architecture (as appropriate) set forth by the Secretary of the Interior's Professional Qualification Standards.

It is recommended that the video documentation be preserved in an electronic format that is cross-platform and nonproprietary. Like HABS documentation, archival copies of the video documentation shall be submitted to appropriate repositories, such as the SCCHGS, Silicon Valley Historical Association, Sourisseau Academy for State and Local History at San José State University, and/or the Computer History Museum in Mountain View. It may also be shared online via a freely accessible platform such as YouTube.

MM CUL-1.3: Interpretive Display. Interpretive displays vary widely in size, style, construction, and information capacity. Specifications for a particular interpretive display should consider a number of factors, including but not limited to the nature of the resource, the intended audience, and the location of the display. Although typically located at the subject property, offsite interpretive displays may be appropriate in certain cases, such as when the property is not publicly accessible for security or other reasons. In all instances, interpretive displays should be conducted by an architectural historian or historian who meets the

Secretary of the Interior's Professional Qualification Standards, in coordination with an exhibit designer.

Both onsite and offsite interpretive displays may be appropriate mitigation measures for the demolition of the industrial complex at 1200 – 1310 Memorex Drive. Onsite displays should be located in a prominent space, such as a lobby, where they may be viewed by employees and visitors to the property. Displays should be permanent and should address the history and architectural features of the industrial complex at 1200 – 1310 Memorex Drive and its operation during the property's period of significance.

Because of the nature of the proposed replacement project, however, the subject property may not be easily accessible by the public, and an offsite interpretive display may be recommended in place of or in addition to the onsite display. An offsite interpretive display should be located in a place with a connection to the subject property or its historical context. For example, the Computer History Museum in Mountain View may be an appropriate location for an interpretive display because of the substantial, contextual connection between the museum's mission and the subject property's significance within the development of the modern computer industry. The Computer History Museum also holds hundreds of Memorex Corporation artifacts and records in its repository, which would complement an interpretive display related to the subject property.

MM CUL-1.4: Oral History Collection. Oral history is a method of gathering and preserving the memories of people and communities, including personal commentaries of historical significance. Best practices for performing oral interviews are outlined by the Oral History Association (OHA), which was founded in 1966 and serves as the principal membership organization for those involved in the field of oral history.

The project will prepare an oral history collection that focuses on the operation of the Memorex Corporation between 1961 and 1971, when the subject property served as the company headquarters. To the extent feasible, at least one former employee of the Memorex Corporation who was employed at the subject property shall be interviewed. A list of guests at the Memorex at Fifty reunion, hosted at the Computer History Museum in Mountain View in 2011, may serve as a preliminary list of potential narrators.

Oral history audio and visual files collected as part of a mitigation effort for the 1200 – 1310 Memorex Drive will be conducted by a professional oral historian and preserved in an accessible, electronic format and submitted to appropriate repositories, such as the Santa Clara County Historical & Genealogical Society (SCCHGS), Silicon Valley Historical Association, Sourisseau Academy for State and Local History at San José State University, Oral History Center at the Bancroft Library in Berkeley, and/or the Computer History Museum, which currently houses more than one hundred oral history interviews related to the development of the modern computer industry. In the event that no appropriate

narrators are identified, or in the event that all potential narrators decline to participate, a memorandum will be prepared to document the project methodology and efforts.

The project would result in a significant and unavoidable impact to the significance of a historical resource pursuant to CEQA Guidelines Section 15064.5, even with incorporation of mitigation measures. A discussion of alternatives that would involve preservation and adaptive reuse of the building while achieving most basic project objectives is presented in Section 7.0 Alternatives. **(Significant and Unavoidable Impact with Mitigation Incorporated)**

Impact CUL-2: As mitigated, the project would not cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines Section 15064.5. **(Less than Significant Impact with Mitigation Incorporated)**

The project would require excavation to depths of up to 12 feet for the on-site construction work and 12-15 feet for trenching related to the potential underground portion of the transmission line along Di Giulio Avenue. Based upon the results of the Archaeological Literature Search completed for the project, the site has a low potential for containing prehistoric archaeological resources. Additionally, the underground portion of the transmission line would be located within the street right-of-way adjacent to existing underground utilities in previously disturbed soils. Although the analysis completed for Archaeological Literature Search deemed that no further investigation or monitoring would be necessary, the project would implement the following measures to prevent damage in case unrecorded subsurface resources are encountered during trenching and excavation of the site.

Mitigation Measures:

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

- MM CUL-2.1:** In the event that prehistoric or historical resources are encountered during excavation and/or grading of the site, all activity within a 50-foot radius of the find will be stopped, the Director of Community Development will be notified, and the archaeologist will examine the find and make appropriate recommendations prior to issuance of building permits. If the find is deemed significant, a Treatment Plan will be prepared and provided to the Director of Community Development. The key elements of a Treatment Plan shall include the following:
- Identify 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 field strategy used to record, recover, or avoid the finds (photogs, 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.).
- Report structure, including a technical and layman'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,
- Appendices: site records, update site records, correspondence, consultation with Native Americans, etc.

With implementation of the measures identified above, the project would not cause a substantial adverse change in the significance of an archaeological resource. **(Less than Significant Impact with Mitigation Incorporated)**

Impact CUL-3: As mitigated, the project would not result in any substantial disturbance to human remains, including those interred outside of dedicated cemeteries.
(Less than Significant Impact with Mitigation Incorporated)

Although unlikely, trenching and excavation activities could disturb human remains, should they be encountered on the site.

Mitigation Measures:

The following project-specific mitigation measures will be implemented during construction to avoid significant impacts to unknown human remains:

MM CUL-3.1: In the event that human remains are discovered during excavation and/or grading of the site, all activity within a 50-foot radius of the find will be stopped. The Santa Clara County Coroner will be notified and shall make a determination as to whether the remains are of Native American origin or whether an investigation into the cause of death is required. If the remains are determined to be Native American, the Coroner will notify the Native American Heritage Commission (NAHC) immediately. Once the NAHC identifies the most likely descendants, the descendants will make recommendations regarding proper burial, which will be implemented in accordance with Section 15064.5(e) of the CEQA Guidelines.

With implementation of these measures, impacts to unknown human remains would be less than significant. **(Less than Significant Impact with Mitigation Incorporated)**

3.5.2.2 *Cumulative Impacts*

Impact CUL-C: As mitigated, the project would not result in a cumulatively considerable contribution to a cumulatively significant cultural resources impact. **(Less than Significant Cumulative Impact with Mitigation Incorporated)**

The geographic area for cumulative cultural resources impacts is the project site and adjacent parcels. The proposed project requires excavation, grading, and other construction activities that may affect unknown subsurface historic and prehistoric archaeological resources. All projects in the City of Santa Clara would be required to implement mitigation measures that would avoid impacts to subsurface archaeological resources and human remains and/or reduce them to a less than significant level. For these reasons, the cumulative projects, including the proposed project, would not result in significant cumulative impacts to archaeological resources or human remains.

As described above, the proposed project would result in a significant and unavoidable impact to a historical resource. The significance of the historical resource is tied to its association with significant events (association with the development of the modern electronics industry), as opposed to its architectural style or location within a historic district. No other approved or pending projects in the City would result in identified significant impacts to historical resources associated with the same significant events as the resource located on the project site. Therefore, the project would not result in a cumulatively considerable contribution to a cumulatively significant cultural resources impact. **(Less than Significant Cumulative Impact with Mitigation Incorporated)**

3.6 ENERGY

3.6.1 Environmental Setting

3.6.1.1 *Regulatory Framework*

Federal and State

Energy Star and Fuel Efficiency

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

Renewables Portfolio Standard Program

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

Executive Order B-55-18 To Achieve Carbon Neutrality

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

California Building Standards Code

The Energy Efficiency Standards for Residential and Nonresidential Buildings, as specified in Title 24, Part 6 of the California Code of Regulations (Title 24), was established in 1978 in response to a legislative mandate to reduce California's energy consumption. Title 24 is updated approximately every three years.³¹ Compliance with Title 24 is mandatory at the time new building permits are issued by city and county governments.³²

³¹ California Building Standards Commission. "California Building Standards Code." Accessed October 21, 2020. https://www.dgs.ca.gov/BSC/Codes#@ViewBag_JumpTo.

³² California Energy Commission (CEC). "2019 Building Energy Efficiency Standards." Accessed October 21, 2020. <https://www.energy.ca.gov/programs-and-topics/programs/building-energy-efficiency-standards/2019-building-energy-efficiency>.

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. CALGreen 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.³³

Regional and 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:

Policies	Description
5.10.3-P1	Promote the use of renewable energy resources, conservation and recycling programs.
5.10.3-P4	Encourage new development to incorporate sustainable building design, site planning and construction, including encouraging solar opportunities.
5.10.3-P5	Reduce energy consumption through sustainable construction practices, materials and recycling.
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.
5.10.4-P8	Provide incentives for LEED certified, or equivalent development.

3.6.1.2 Existing Conditions

Total energy usage in California was approximately 7,881 trillion British thermal units (Btu) in the year 2017, the most recent year for which this data was available.³⁴ 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 percent (1,416 trillion Btu) for residential uses, 19 percent (1,473 trillion Btu) for commercial uses, 23 percent (1,818 trillion Btu) for industrial uses,

³³ California Air Resources Board. "The Advanced Clean Cars Program." Accessed October 21, 2020.

<https://www.arb.ca.gov/msprog/acc/acc.htm>.

³⁴ United States Energy Information Administration. "State Profile and Energy Estimates, 2017." Accessed October 27, 2020. <https://www.eia.gov/state/?sid=CA#tabs-2>.

and 40 percent (3,175 trillion Btu) for transportation.³⁵ This energy is primarily supplied in the form of natural gas, petroleum, nuclear electric power, and hydroelectric power.

Electricity

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.³⁶

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.³⁷ 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.³⁸

Fuel for Motor Vehicles

In 2018, 15.5 billion gallons of gasoline were sold in California.³⁹ 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 2018.⁴⁰ 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 2011 through 2020.^{41,42}

³⁵ United States Energy Information Administration. "State Profile and Energy Estimates, 2017." Accessed October 26, 2020. <https://www.eia.gov/state/?sid=CA#tabs-2>.

³⁶ Silicon Valley Power. "Did you Know." Accessed October 26, 2020. <https://www.siliconvalleypower.com/svp-and-community/about-svp/faqs>.

³⁷ California Gas and Electric Utilities. 2019 *California Gas Report*. Accessed October 23, 2020. https://www.socalgas.com/regulatory/documents/cgr/2019_CGR_Supplement_7-1-19.pdf.

³⁸ California Energy Commission. "Natural Gas Consumption by County." Accessed October 23, 2020. <http://ecdms.energy.ca.gov/gasbycounty.aspx>.

³⁹ California Department of Tax and Fee Administration. "Net Taxable Gasoline Gallons." Accessed October 27, 2020. <https://www.cdtfa.ca.gov/dataportal/dataset.htm?url=VehicleTaxableFuelDist>.

⁴⁰ United States Environmental Protection Agency. "The 2020 EPA Automotive Trends Report: Greenhouse Gas Emissions, Fuel Economy, and Technology since 1975." January 2021.

⁴¹ United States Department of Energy. *Energy Independence & Security Act of 2007*. Accessed October 27, 2020. <http://www.afdc.energy.gov/laws/eisa>.

⁴² Public Law 110–140—December 19, 2007. *Energy Independence & Security Act of 2007*. Accessed October 27, 2020. <http://www.gpo.gov/fdsys/pkg/PLAW-110publ140/pdf/PLAW-110publ140.pdf>.

3.6.2 Impact Discussion

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

- 1) Result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?
- 2) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?
- 3) Result in a substantial increase in demand upon energy resources in relation to projected supplies?

3.6.2.1 *Project Impacts*

Impact EN-1:	The project would not result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation. (Less than Significant Impact)
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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 3.3 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).

Operation

Operation of the project 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 projected maximum load for information technology (IT) equipment in the data center would be 60 MW. Additional electricity would be required for mechanical cooling equipment and other building functions. Power Usage Effectiveness (PUE) is a metric used to compare the operating efficiency of data center facilities. PUE is defined as the ratio of total power use of a facility to the power used strictly by the information technology (IT) equipment (e.g. $PUE = \text{Total Facility Power} / \text{IT Equipment Power}$). For example, with a PUE of 2.0 a data center would use (2) watts of total power for every (1) watt of power used by the IT equipment. The ideal PUE is one (1) where all power drawn by the facility goes to the IT infrastructure.

Based on anticipated operating conditions, the annualized PUE of the proposed data center would be 1.29. A PUE of 1.29 is considered efficient. Based on industry surveys, the average PUE for data centers is 1.67, although newly constructed data centers typically have PUEs ranging from 1.1 to

1.4.⁴³ If it is conservatively assumed that the data center would operate at full capacity 24 hours per day, 365 days per year, the project could consume up to 678,024 MWh per year. For comparison, the current industrial use on the site is estimated to consume roughly 3,295 MWh of electricity per year.⁴⁴ In 2019, California generated 277,704 gigawatt-hours (GWh) of electricity, meaning the maximum demand of the project would represent 0.24 percent of the State's electricity supply.

The project would be built in accordance with Title 24 and CalGreen and include green building measures to reduce energy consumption. The project 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 project would not result in a wasteful, inefficient, or unnecessary consumption of energy, or wasteful use of energy resources.

Energy would be consumed by the generator facility during regular testing and maintenance of the 25 emergency backup generators. Each generator would be 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 generators would consume up to 257,650 gallons of fuel per year. According to the California Energy Commission's 2019 Weekly Fuel's Watch Report, the annual capacity of CARB Diesel Fuel in California was 1,736,000 barrels, or roughly 72,912,000 gallons, annually.⁴⁵ The proposed consumption of CARB Diesel Fuel by the generators is less than 0.004 percent of the total California capacity. Because the generators would only be operated when necessary for testing and maintenance, and would not be used regularly for electricity generation, the generator facility would not result in a wasteful, inefficient, or unnecessary consumption of energy, or wasteful use of energy resources. Additionally, the project 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. **(Less than Significant Impact)**

Impact EN-2:	The project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency. (Less than Significant Impact)
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The project would be consistent with the regulations described in 3.6.1.1 (including General Plan Policies) by:

- Complying with Title 24 and CalGreen,
- Incorporating measures such as lighting control, air economization and evaporative cooling, water conservation measures, clean air vehicle parking, and other energy conservation measures such as reflective roof surface, low-e insulated glass, and daylight penetration to offices.
- Providing clean air vehicle parking

⁴³ Uptime Institute. Annual Data Center Survey Results - 2019. Available at: <https://datacenter.com/wp-content/uploads/2019/06/data-center-survey-2019.pdf>

⁴⁴ Based on CalEEMod default electricity consumption rates for general light industrial land uses applied to the existing development on the site.

⁴⁵ Addition of the total weekly Production Capacity and total weekly Refinery Stock reported for June 14, 2019.

- Participating in the City’s Construction and Demolition Debris Recycling Program
- Implementing TDM measures to promote walking, bicycling and transit use.

The project, therefore, would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency. **(Less than Significant Impact)**

Impact EN-3: The project would not result in a substantial increase in demand upon energy resources in relation to projected supplies. **(Less than Significant Impact)**

Operation of the project would consume energy for multiple purposes including building heating and cooling, lighting, and appliance use. Additionally, operational energy would be consumed by employee vehicle use to and from the site. The table below compares the energy use under project conditions with the energy use under existing conditions.

Table 3.6-1: Estimated Annual Energy Use of Proposed Development				
Proposed Development	Electricity Use (MWh)	Natural Gas Use (kBtu)	Gasoline (gallons)¹	Diesel Fuel (gallons)²
Existing Development	3,295	10,524,700	255,491	0
Proposed Development	678,024	14,277,455	64,413	257,650
Net Increase/Decrease:	674,729 Increase	3,752,755 Increase	191,078 Decrease	257,650 Increase
Source: Atmospheric Dynamics, Inc. Memorex Data Center and Office Project. Attachment 1. ¹ Gasoline demand was calculated by dividing the project’s estimated VMT by 24 mpg (Source: California Department of Energy. Average Fuel Economy by Major Vehicle Category. https://afdc.energy.gov/data/10310) ² Diesel fuel usage presented in this table is associated with on-site operations only, not vehicle trips. Available data on vehicular fuel use does not distinguish between diesel fuel and gasoline. As a result, all vehicular fuel use is included in the total for “Gasoline”.				

As shown in Table 3.6-1, implementation of the development would increase electricity use by approximately 1,949,535 kWh per year, natural gas usage by approximately 3,752,755 kBtu and diesel fuel consumption by approximately 257,650 gallons, while reducing gasoline consumption for vehicles by 252,931.

The project would be built to the most recent CALGreen requirements and Title 24 energy efficient standards, which would improve the efficiency of the overall project. Due to population increases, it is estimated that future demand in California (for electricity) will increase by approximately one percent each year through 2027. Efficiency and production capabilities would help meet increased electricity demand in the future, such as improving energy efficiency in existing and future buildings, establishing energy efficiency targets, inclusion of microgrids and zero-net energy buildings, and integrating renewable technologies.⁴⁶ As a result, the project’s increase in electricity use would not result in a significant increase in demand on electrical energy resources in relation to projected supplies statewide.

⁴⁶ California Energy Commission. “2016 Integrated Energy Policy Report.” Accessed October 28, 2020. http://www.energy.ca.gov/2016_energy_policy/.

In 2016, California consumed approximately 2.2 billion MBtu of natural gas. Based on the relatively small increase in natural gas demand (approximately 5,970,200 kBtu annually) compared to the growth trends in natural gas supply and the existing available supply in California, the proposed project would not result in a substantial increase in natural gas demand relative to projected supply.

Project trips would decrease gasoline use by 191,078 gallons per year compared to existing conditions. Therefore, implementation of the project would not result in an increase on transportation-related energy uses. However, the project would increase the use of diesel fuel by 257,650 gallons per year compared to existing uses. This increase is small when compared to the 4.2 billion gallons of diesel fuel consumed in California in 2015⁴⁷. **(Less Than Significant Impact)**

3.6.2.2 *Cumulative Impacts*

Impact EN-C:	The project would not result in a cumulatively considerable contribution to a cumulatively significant energy impact. (Less than Significant Cumulative Impact)
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The geographic area for cumulative energy impacts is the State of California. Past, present, and future development projects contribute to the state's energy impacts. If the project is determined to have a significant energy impact, it is concluded that the impact is cumulatively considerable. As discussed under Impact EN-1, EN-2, and EN-3, the project would not result in significant energy impacts. Therefore, the project would not have a cumulatively considerable contribution to a significant cumulative energy impact. **(Less than Significant Impact)**

⁴⁷ California Department of Energy. Diesel Fuel Data, Facts, and Statistics. Accessed November 11, 2020. <https://www.energy.ca.gov/data-reports/energy-almanac/transportation-energy/diesel-fuel-data-facts-and-statistics#:~:text=Diesel%20fuel%20is%20the%20second,including%20offroad%20diesel%2C%20was%20sold>.

3.7 GEOLOGY AND SOILS

The following discussion is based in part on a Geotechnical Investigation Report and a Soil, Soil Vapor and Groundwater Quality Evaluation both prepared for the project by Cornerstone Earth Group in September 2019. Copies of these reports are attached as Appendices G and H, respectively.

3.7.1 Environmental Setting

3.7.1.1 *Regulatory Framework*

State

Alquist-Priolo Earthquake Fault Zoning Act

The Alquist-Priolo Earthquake Fault Zoning Act was passed following the 1971 San Fernando earthquake. The act regulates development in California near known active faults due to hazards associated with surface fault ruptures. Alquist-Priolo maps are distributed to affected cities, counties, and state agencies for their use in planning and controlling new construction. Areas within an Alquist-Priolo Earthquake Fault Zone require special studies to evaluate the potential for surface rupture to ensure that no structures intended for human occupancy are constructed across an active fault.

Seismic Hazards Mapping Act

The Seismic Hazards Mapping Act (SHMA) was passed in 1990 following the 1989 Loma Prieta earthquake. The SHMA directs the California Geological Survey (CGS) to identify and map areas prone to liquefaction, earthquake-induced landslides, and amplified ground shaking. CGS has completed seismic hazard mapping for the portions of California most susceptible to liquefaction, landslides, and ground shaking, including the central San Francisco Bay Area. The SHMA requires that agencies only approve projects in seismic hazard zones following site-specific geotechnical investigations to determine if the seismic hazard is present and identify measures to reduce earthquake-related hazards.

California Building Standards Code

The California Building Standards Code (CBC) prescribes standards for constructing safe buildings. The CBC contains provisions for earthquake safety based on factors including occupancy type, soil and rock profile, ground strength, and distance to seismic sources. The CBC requires that a site-specific geotechnical investigation report be prepared for most development projects to evaluate seismic and geologic conditions such as surface fault ruptures, ground shaking, liquefaction, differential settlement, lateral spreading, expansive soils, and slope stability. The CBC is updated every three years.

California Division of Occupational Safety and Health Regulations

Excavation, shoring, and trenching activities during construction are subject to occupational safety standards for stabilization by the California Department of Industrial Relations, Division of Occupational Safety and Health (Cal/OSHA) under Title 8 of the California Code of Regulations and

Excavation Rules. These regulations minimize the potential for instability and collapse that could injure construction workers on the site.

Public Resources Code Section 5097.5

Paleontological resources are the fossilized remains of organisms from prehistoric environments found in geologic strata. They range from mammoth and dinosaur bones to impressions of ancient animals and plants, trace remains, and microfossils. These materials are valued for the information they yield about the history of the earth and its past ecological settings. California Public Resources Code Section 5097.5 specifies that unauthorized removal of a paleontological resource is a misdemeanor. Under the CEQA Guidelines, a project would have a significant impact on paleontological resources if it would disturb or destroy a unique paleontological resource or site or unique geologic feature.

Local

Santa Clara General Plan

General Plan policies applicable to geology and soils include, but are not limited to, the following listed below.

Policies	Description
5.6.3-P5	In the event that archaeological/paleontological resources are discovered, require that work be suspended until the significance of the find and recommended actions are determined by a qualified archaeological/paleontologist.
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.
5.10.5-P6	Require that new development is designed to meet current safety standards and implement appropriate building code to reduce risks associated with geologic conditions.
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.

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).

3.7.2.1 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

The project site is underlain by approximately four to 32 inches of base rock. Beneath the base rock layer are native lean clays and saturated, poorly-graded to well-graded sand. The site also includes fill of well-graded sand, poorly-graded sand with gravel, and poorly-graded gravel. Moderately to highly expansive surficial soils generally blanket the site.

Because the topography of the project area is flat, with elevations ranging from 50 to 55 feet above sea level, erosion hazards are limited and there are no landslide hazards.

Groundwater

Based on soil borings completed for the Soil, Soil Vapor, and Groundwater Quality Evaluation (refer to Appendix H), depth to groundwater in the area is approximately 13-18 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 10 miles east of the site), the San Andreas Fault (approximately 10.7 miles west of the site), and the Hayward Fault (approximately 7.25 miles east of the site). The project site is not located within a fault rupture zone.⁴⁸

Ground shaking at the project site is predicted to be very strong as determined by the Association of Bay Area Governments (ABAG)⁴⁹. 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.

⁴⁸ Santa Clara County. *Santa Clara County Geologic Hazard Zones*. October 26, 2012.

⁴⁹ Association of Bay Area Governments. *Santa Clara County Earthquake Hazard*. Accessed November 11, 2019. <http://resilience.abag.ca.gov/earthquakes/santaclara/>

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. The project site is located within a State-designated Liquefaction Hazard Zone and a Santa Clara County Liquefaction Hazard Zone.⁵⁰

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 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.⁵¹

3.7.3 Impact Discussion

For the purpose of determining the significance of the project's impact on geology and soils, 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)?
 - Strong seismic ground shaking?
 - Seismic-related ground failure, including liquefaction?
 - Landslides?
- 2) Result in substantial soil erosion or the loss of topsoil?

⁵⁰ Santa Clara County Geologic Hazard Zones. *County Geologic Hazard Zones*. 2012

⁵¹ City of Santa Clara. City of Santa Clara Draft 2010-2035 General Plan. January 2011. Page 328.

- 3) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?
- 4) Be located on expansive soil, as defined in the current California Building Code, creating substantial direct or indirect risks to life or property?
- 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?
- 6) Directly or indirectly destroy a unique paleontological resource or site or unique geological feature?

3.7.3.1 *Project Impacts*

Existing Geologic Conditions Affecting the Project – Planning Considerations

The California Supreme Court in a December 2015 opinion (BIA v. BAAQMD) confirmed CEQA is concerned with the impacts of a project on the environment, not the effects the existing environment may have on a project; nevertheless, the City has policies that address existing conditions (e.g. geologic hazards) affecting a proposed project, which are addressed below.

The policies of the City of Santa Clara 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-P6 requires that new development is designed to meet current safety standards and implement appropriate building codes to reduce risk associated with geologic conditions.

Impact GEO-1: As mitigated, the project would not 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. **(Less than Significant Impact with Mitigation Incorporated)**

As discussed in Section 4.7.1.2, 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.

The project site is located in a mapped liquefaction hazard zone. The site is not located within a landslide hazard zone. The following standard City of Santa Clara permit condition would be implemented.

Standard Permit Condition:

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.

With incorporation of the Standard Permit Condition, the project would not 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. **(Less than Significant Impact)**

Impact GEO-2: The project would not result in substantial soil erosion or the loss of topsoil. **(Less than Significant Impact)**

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) (see Section 4.10) 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. **(Less than Significant Impact)**

Impact GEO-3: The project would not be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse. **(Less than Significant Impact)**

The project site is located in a mapped liquefaction hazard zone. The site is not located within a landslide hazard zone. Compliance with the Standard Permit Condition discussed under Impact GEO-1 and incorporated into the project design as mitigation would avoid or reduce impacts related to the stability of soil on-site. The project would not change or exacerbate the geologic conditions of

the project area and would not result in a significant geology hazards impact. **(Less than Significant Impact)**

Impact GEO-4: Although the project is located on expansive soil, as defined in the current California Building Code, the project would not create substantial direct or indirect risks to life or property. **(Less than Significant Impact)**

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 development be designed to meet current safety standards and implement appropriate building codes to reduce risk associated with geologic conditions. As a result, development of the proposed project would not expose future occupants of the site or nearby properties to hazards related to expansive soils. **(Less Than Significant Impact)**

Impact GEO-5: The project would not have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater. **(No Impact)**

The project 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)**

Impact GEO-6: As mitigated, the project would not directly or indirectly destroy a unique paleontological resource or site or unique geological feature. **(Less than Significant Impact with Mitigation Incorporated)**

There are no known unique paleontological resources or unique geological features within the City. However, ground disturbing activities of 10 feet or more have the potential to impact undiscovered paleontological resources. The project would require excavation to depths of up to 12 feet. Although unlikely, paleontological resources could be encountered during construction.

Mitigation Measures:

MM GEO-6.1: In the event paleontological resources are discovered all work shall be halted within 50 feet of the find and a Paleontological Resource Mitigation Plan shall be prepared by a qualified paleontologist to address assessment and recovery of the resource. A final report documenting any found resources, their recovery, and disposition shall be prepared in consultation with the Community Development Director and filed with the City and local repository.

With implementation of these measures, impacts to undiscovered paleontological resources would be less than significant. **(Less than Significant Impact with Mitigation Incorporated)**

3.7.3.2 *Cumulative Impacts*

Impact GEO-C: The project would not result in a cumulatively considerable contribution to a cumulatively significant geology and soils impact. **(Less than Significant Cumulative Impact)**

The geographic area for cumulative geological impacts would be locations adjacent to the site since geological impacts are limited to the project site and adjacent properties. All projects in the City of Santa Clara are required to comply with mitigation measures to reduce construction-related erosion impacts. The project will comply with the CBC to reduce seismic-related impacts on people and/or property. Therefore, implementation of the cumulative projects would not result in significant cumulative impact (related to geology and soils) to people and/or property. **(Less Than Significant Cumulative Impact)**

3.8 GREENHOUSE GAS EMISSIONS

The following discussion is based in part on an Air Quality and GHG Emissions Assessment prepared for the project by Atmospheric Dynamics in November 2020. A copy of the report is attached as Appendix B.

3.8.1 Environmental Setting

3.8.1.1 *Background Information*

Gases that trap heat in the atmosphere, GHGs, regulate the earth's temperature. This phenomenon, known as the greenhouse effect, is responsible for maintaining a habitable climate. In GHG emission inventories, the weight of each gas is multiplied by its global warming potential (GWP) and is measured in units of CO₂ equivalents (CO₂e). The most common GHGs are carbon dioxide (CO₂) and water vapor but there are also several others, most importantly methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF₆). These are released into the earth's atmosphere through a variety of natural processes and human activities. Sources of GHGs are generally as follows:

- CO₂ and N₂O are byproducts of fossil fuel combustion.
- N₂O is associated with agricultural operations such as fertilization of crops.
- CH₄ is commonly created by off-gassing from agricultural practices (e.g., keeping livestock) and landfill operations.
- Chlorofluorocarbons (CFCs) were widely used as refrigerants, propellants, and cleaning solvents, but their production has been stopped by international treaty.
- HFCs are now used as a substitute for CFCs in refrigeration and cooling.
- PFCs and SF₆ emissions are commonly created by industries such as aluminum production and semiconductor manufacturing.

An expanding body of scientific research supports the theory that global climate change is currently causing changes in weather patterns, average sea level, ocean acidification, chemical reaction rates, and precipitation rates, and that it will increasingly do so in the future. The climate and several naturally occurring resources within California are adversely affected by the global warming trend. Increased precipitation and sea level rise will increase coastal flooding, saltwater intrusion, and degradation of wetlands. Mass migration and/or loss of plant and animal species could also occur. Potential effects of global climate change that could adversely affect human health include more extreme heat waves and heat-related stress; an increase in climate-sensitive diseases; more frequent and intense natural disasters such as flooding, hurricanes and drought; and increased levels of air pollution.

3.8.1.2 *Regulatory Framework*

State

Assembly Bill 32

Under the California Global Warming Solutions Act, also known as AB 32, CARB established a statewide GHG emissions cap for 2020, adopted mandatory reporting rules for significant sources of GHGs, and adopted a comprehensive plan, known as the Climate Change Scoping Plan, identifying how emission reductions would be achieved from significant GHG sources.

In 2016, SB 32 was signed into law, amending the California Global Warming Solution Act. SB 32, and accompanying Executive Order B-30-15, require CARB to ensure that statewide GHG emissions are reduced to 40 percent below the 1990 level by 2030. CARB updated its Climate Change Scoping Plan in December of 2017 to express the 2030 statewide target in terms of million metric tons of CO₂E (MMTCO₂e). Based on the emissions reductions directed by SB 32, the annual 2030 statewide target emissions level for California is 260 MMTCO₂e.

Senate Bill 375

SB 375, known as the Sustainable Communities Strategy and Climate Protection Act, was signed into law in September 2008. SB 375 builds upon AB 32 by requiring CARB to develop regional GHG reduction targets for automobile and light truck sectors for 2020 and 2035. The per-capita GHG emissions reduction targets for passenger vehicles in the San Francisco Bay Area include a seven percent reduction by 2020 and a 15 percent reduction by 2035.

Consistent with the requirements of SB 375, the Metropolitan Transportation Commission (MTC) partnered with the Association of Bay Area Governments (ABAG), BAAQMD, and the Bay Conservation and Development Commission to prepare the region's Sustainable Communities Strategy (SCS) as part of the Regional Transportation Plan process. The SCS is referred to as Plan Bay Area 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.

3.8.1.3 *Existing Conditions*

Unlike emissions of criteria and toxic air pollutants, which have regional and local impacts, emissions of GHGs have a broader, global impact. Global warming is a process whereby GHGs accumulating in the upper atmosphere contribute to an increase in the temperature of the earth and changes in weather patterns.

Other Implementing Laws and Regulations

There are a number 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.

Climate Action Plan

The City of Santa Clara has a comprehensive GHG emissions reduction strategy (Climate Action Plan) to achieve its fair share of statewide emissions reductions for the 2020 timeframe consistent with AB 32, the Global Warming Solutions Act. The Climate Action Plan was adopted on December 3, 2013. The City of Santa Clara Climate Action Plan specifies the strategies and measures to be

taken for a number of focus areas (coal-free and large renewables, energy efficiency, water conservation, transportation and land use, waste reduction, etc.) citywide to achieve the overall emission reduction target, and includes an adaptive management process that can incorporate new technology and respond when goals are not being met.

A key reduction measure that is being undertaken by the City of Santa Clara under the Climate Action Plan is in the *Coal-Free and Large Renewables* focus area. The City of Santa Clara operates Silicon Valley Power (SVP), a publicly owned utility that provides electricity for the community of Santa Clara, including the project site. Data centers constitute a large portion of the electricity used in the City of Santa Clara; about 28 percent on average. Since nearly half (48 percent) of Santa Clara's GHG emissions result from electricity use, removing GHG-intensive sources of electricity generation (such as coal) is a major focus area in the Climate Action Plan for achieving the City's GHG reduction goals.

CEQA clearance for all discretionary development proposals are required to address the consistency of individual projects with reduction measures in the Climate Action Plan and goals and policies in the General Plan designed to reduce GHG emissions. Compliance with appropriate measures in the Climate Action Plan would ensure an individual project's consistency with an adopted GHG reduction plan.

In December 2018, SVP published an updated Strategic Plan that outlines goals and actions for achieving 2030 GHG emission reductions consistent with the legislation described above. All electricity from SVP has been coal-free since January 2018. SVP's 2018 Integrated Resource Plan lays out needed steps to meet the 50 percent Renewable Portfolio Standard set by SB 32. SVP plans to exceed the 50 percent target.⁵²

3.8.1.4 *Existing Conditions*

The project site is currently developed with three buildings: a three-story approximately 300,000 square foot building, a two-story approximately 46,000 square foot building, and a one-story approximately 2,950 square foot building. Roughly 100,000 square feet of active outdoor light industrial uses are located on the eastern portion of the site. The main source of GHG emissions associated with the existing uses on-site is the electricity use of the existing buildings. Additional emissions also result from vehicle trips and equipment usage associated with daily operations on the site.

⁵² Silicon Valley Power. 2018 Integrated Resource Plan. November 12, 2018. Available at: <http://www.siliconvalleypower.com/home/showdocument?id=62481>.

3.8.2 Impact Discussion

For the purpose of determining the significance of the project's impact on greenhouse gas emissions, would the project:

- 1) Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment?
- 2) Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs?

3.8.2.1 *Project Impacts*

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.

Per 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. The City of Santa Clara adopted its CAP (a GHG reduction strategy) in 2013 in conformance with its most recent General Plan Update. The City's projected emissions and the CAP are consistent with measures necessary to meet statewide 2020 goals established by AB 32 and addressed in the Climate Change Scoping Plan. For projects that would be operational by the end of 2020, the threshold of significance for whether a development project in the City of Santa Clara would generate GHG emissions that would have a significant impact on the environment therefore would be whether or not the project conforms to the applicable reduction measures in the City's CAP. Because the project would not become operational prior to the end of 2020, consistency with the CAP cannot be used to determine significance under CEQA. The project, however, would still be required to be consistent with the requirements of the CAP, and implementation of required CAP measures would reduce GHG emissions from the project.

Per BAAQMD guidance for stationary-sources such as the projects backup generators, the threshold to determine the significance of an impact from GHG emissions is 10,000 metric tons of CO₂e 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 CO₂e 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, such as electricity use and water delivery, associated with data center operation would not be included for comparison to this threshold, based on guidance in the

BAAQMD's CEQA Guidelines. Instead, GHG impacts from data center operation would be considered to have a less than significant impact if the project is consistent with applicable regulatory programs and policies adopted by CARB or other California agencies.

Impact GHG-1: 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 GHG Emissions

GHG emissions from the project would consist of emissions from vehicle trips to and from the site, emissions from routine testing and maintenance of the backup generators, and indirect emissions related to the generation of electricity used in the data center buildings. 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.

Silicon Valley Power Electricity Generation

Electricity for the data center facility is provided by SVP, which is the public electric utility of the City of Santa Clara. Santa Clara currently has ownership interest, or has purchase agreements for 1,062 megawatt (MW) of electricity. This capacity far exceeds City of Santa Clara's current peak electricity demand of approximately 587 MW.⁵³ No new generation peak capacity is necessary to meet the capacity requirements of new construction, or redeveloped facilities within the City to meet the near or projected future demand. SVP's 2019 power mix for non-residential uses consisted of 39.3 percent eligible renewable resources. When large hydroelectric resources are included, SVP's non-residential power mix was 67.2 percent GHG free.⁵⁴

The City of Santa Clara follows the State's preferred loading order in procuring new energy resources. First, the current load (customer) is encouraged to participate in energy efficiency programs to reduce their usage, thus freeing up existing resources (and any related emissions) for the new load (electricity demand). In addition, the City of Santa Clara encourages the use of renewable resources and clean distributed generation, and has seen a significant increase in its applications for large and small rooftop photovoltaics (PV). Demand displaced by customer-based renewable projects is also available to meet new load requests.

The City of Santa Clara will meet its Renewable Portfolio Standard (RPS) through the addition of new renewable resources. In order to meet anticipated increases in energy needs (as separate from peak generation capacity requirements) the City of Santa Clara has contracted for additional wind energy including the Big Horn II Wind Project that would provide the City of Santa Clara up to an additional 17.5 MW of GHG-emission-free electricity.

⁵³ Silicon Valley Power. 2018 Integrated Resource Plan. Accessed: November 8, 2020. Available at: <https://www.siliconvalleypower.com/home/showdocument?id=62481>.

⁵⁴ Silicon Valley Power. 2019 Power Content Label. Accessed: March 19, 2021. Available at: <https://www.siliconvalleypower.com/svp-and-community/about-svp/power-content-label>

SVP has a lower emission rate than the statewide California power mix because it utilizes a higher portion of renewable sources. A comparison of SVP's and the statewide power mix for the year 2019, which is the most recent year for which data is available, is shown in Table 3.8-1.

Table 3.8-1: Comparison of SVP And Statewide Power Mix		
Energy Resources	2019 SVP Non-Residential Power Mix	2019 CA Power Mix (For Comparison)
Eligible Renewables (Biomass & Waste, Geothermal, Eligible Hydro, Solar, Wind)	39.3%	31.7%
Coal	0.0%	3.0%
Large Hydro	27.9%	14.6%
Natural Gas	23.1%	34.2%
Nuclear	0%	9.0%
Other	0%	0.2%
Unspecified Source of Power (Not Traceable to Specific Sources)	9.7%	7.3%
Total	100.0%	100.0%

Proposed Efficiency Measures

Overview: Power Usage Effectiveness During Operation

Power Usage Effectiveness, or PUE, is a metric used to compare the efficiency of facilities that house computer servers. PUE is defined as the ratio of total facility energy use to Information Technology (IT) (i.e., server) power draw (e.g., $PUE = \text{Total Facility Source Energy} / \text{IT Source Energy}$). For example, a PUE of two (2), means that the data center or laboratory must draw two (2) watts of electricity for every one (1) watt of power consumed by the IT/server equipment. It is equal to the total energy consumption of a data center (for all fuels) divided by the energy consumption used for the IT equipment. The ideal PUE is one (1) where all power drawn by the facility goes to the IT infrastructure.

The annualized PUE for the proposed project would be 1.29, which would be considered efficient. Based on industry surveys, the average PUE for data centers is 1.67, although newly constructed data centers typically have PUEs ranging from 1.1 to 1.4.⁵⁵

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:

- Air economization and evaporative cooling instead of mechanical cooling.
- Meet or exceed Title 24 requirements.
- Reflective roof surface.

⁵⁵ Uptime Institute. Annual Data Center Survey Results - 2019. Available at: <https://datacenter.com/wp-content/uploads/2019/06/data-center-survey-2019.pdf>

- Low-e Insulated glass.
- Daylight penetration to offices.
- Lighting control
- Clean air vehicle parking.
- Low flow plumbing fixtures.
- Landscaping would meet City of Santa Clara requirements for low water use.

Construction-Related Emissions

GHG emissions associated with construction were computed to be 1,828 MT of CO₂e for the total construction period. These are the emissions from on-site operation of construction equipment, vendor and hauling truck trips, and worker trips. Neither the City of Santa Clara nor BAAQMD have a threshold for construction emissions. These emissions would be temporary in nature and would be less than the indirect emissions associated with operation of the proposed uses. Construction emissions would occur during building construction, trenching and minor paving and landscape installation.

As a Best Management Practice (BMP), 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. The project would also use at least ten percent local building materials.

Stationary Equipment Emissions from Routine Testing of Generators

The consumption of diesel fuel to test generators would result in direct CO₂ emissions. On an annual basis, the project's total operational emissions related to emergency backup generator maintenance and testing use would be approximately 2,650 metric tons of CO₂e per year. This is well below the BAAQMD threshold for stationary sources of 10,000 metric tons per year of CO₂e for stationary sources.

Operational Emissions

SVP's carbon intensity factor was determined to be 341 pounds of CO₂e per MWh in 2019, and projected to be 271 pounds of CO₂e per MWh in 2021.⁵⁶ SVP's carbon intensity factor for electricity generation will continue to change as SVP's power mix continues to reduce the percentage of electricity produced by coal-fired power plants and increase the use of renewable resources. As noted above, the City and SVP have committed to be coal-free and increased large renewables power generation as a part of the City's CAP.

Project Electricity Usage. 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. The projected maximum demand for the project is 60 MW. On an annual basis, the project could consume up to the maximum electrical usage of 678,024 MWh per year.

⁵⁶ Kathleen Hughes, City of Santa Clara. Personal Communication. February 6, 2019.

Project Mobile Emission Sources. Trip generation rates for the proposed project were based on Institute of Transportation Engineers' (ITE) Trip Generation Manual, Tenth Edition's trip generation rates for data centers (land use code 160) and general office buildings (land use code 710). The data center trip rate was applied to the data center and storage components, while the general office building trip rate was applied to the office component. Using these trip generation rates, the project would generate roughly 1,001 daily vehicle trips. This represents a conservative estimate based on default trip rates and does not reflect the anticipated trip generation of the project. The applicant anticipates a maximum of 90 employees/visitors to the site per day, which would generate far fewer trips than projected by the default rates. Existing vehicle trips associated with the project site are estimated to be roughly 2,780, meaning the project would result in a reduction in vehicle trips and associated emissions (refer to Section 3.17 Transportation for a discussion of existing vehicle trips associated with the site).

Building Operation. This category includes all other emissions generated by general operation of the project such as natural gas consumption, water and wastewater conveyance, and solid waste disposal.

GHG emissions generated by the project are summarized in Table 3.8-2.

Table 3.8-2: Annual Project GHG Emissions (CO2e) in Tons/Yr		
Source Category	Existing Uses in 2021	Proposed Project in 2024
Direct Emissions		
Mobile	2,536.7	580.5
Area Source	0.0084	0.016
Generator Testing	0	2,920
Subtotal	2,536.7	3,500.5
Subtotal Net Emissions	+963.8	
Indirect Emissions		
Energy Consumption (General Office/Light Industrial Uses under Title 24) ¹	1,104.9	1,612
Energy Consumption (Data Center Needs) ²	0	73,742
Solid Waste Generation	274.3	305
Water Usage	211.8	3.2
Subtotal	1,519	75,662.2
Subtotal Net Emissions	+74,143.2	
Total Net Emissions	+75,107	
Notes:		
¹ CalEEMod calculated the GHG emissions for the general office/light industrial use for energy consumption based on the assumptions presented for Title 24 and non-Title 24 uses.		
² The CO2e emissions from energy use for the servers were calculated outside of CalEEMod as follows:		
1. A composite CO2e intensity factor for SVP for 2024 was established at 280.6 lbs. CO2e/Mw-hr.		
2. The servers in the data center were estimated to require approximately 60 MW of power per hour.		
3. Server center ops were conservatively estimated to be 8760 hours/yr.		
4. Total MW/yr would be 525,600.		
5. Total CO2e tons/yr would be 73,742		

The emissions in Table 3.8-1 are separated into direct emissions and indirect emissions. Per the BAAQMD CEQA Guidelines, direct emissions refer to emissions produced from onsite combustion of energy, such as natural gas used in furnaces and boilers, emissions from industrial processes, and fuel combustion from mobile sources. Indirect emissions are emissions produced offsite from energy production and water conveyance due to a project's energy use and water consumption.

Although the project's indirect emissions are reported in this EIR, these emissions have already been accounted for at the emission source. For example, emissions associated with the project's electricity consumption occur at power production facilities within the SVP (and outside suppliers) system. These emissions are accounted for and reported by SVP pursuant to State GHG reporting regulations. Attributing these emissions to the proposed project is, therefore, a form of double counting. Nevertheless, to be conservative, the project's indirect emissions are included in the analysis of the project's GHG impacts.

As shown in Table 3.8-1, the primary source of GHG emissions from the project is electricity use. As described above, electricity would be provided by SVP, a utility that is on track to meet the 2030 GHG emissions reductions target established by AB 32. To reduce GHG emissions and the use of energy related to building operations, the project includes a variety of energy efficiency measures, as described above. The project would comply with all applicable City and state green building measures, including Title 24, Part 6, California Energy Code baseline standard requirements for energy efficiency, based on the 2019 Energy Efficiency Standards requirements, and the 2019 California Green Building Standards Code, commonly referred to as CALGreen (California Code of Regulations, Part 11). Because the project would receive electricity from a utility on track to meet the State's 2030 GHG emission reduction target, would include energy efficiency measures to reduce emissions to the extent feasible, and would be consistent with applicable plans and policies adopted to reduce GHG emissions, the project would not GHG emissions, either directly or indirectly, that may have a significant impact on the environment. **(Less than Significant Impact)**

Impact GHG-2:	The project would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs. (Less than Significant Impact)
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Santa Clara Climate Action Plan

As described previously, the *City of Santa Clara Climate Action Plan* was adopted in December 2013. The CAP, which is part of the City's General Plan, identifies a series of GHG emissions reduction measures to be implemented by development projects that would allow the City to achieve its GHG reduction goals. The measures center around seven focus areas: coal-free and large renewables, energy efficiency, water conservation, waste reduction, off-road equipment, transportation and land use, and urban heat island effect.

The CAP includes measures applicable to City government, existing development and new development projects in Santa Clara. The project's conformance with applicable reduction measures for new development in the CAP are discussed below.

Energy Efficiency Measures

For new data center projects with an average rack power rating⁵⁷ of 15 kilowatts or more, *Measure 2.3 Data Centers* calls for completion of a feasibility study of energy efficient practices to achieve a power usage effectiveness (PUE) of 1.2 or lower. The average rack power rating would be six to eight kilowatts and, therefore, the project is not required to complete a feasibility study. As described previously, the project includes energy efficiency measures to reduce emissions to the extent feasible.

Water Conservation Measures

Measure 3.1 Water Conservation calls for a reduction in per capita water use to meet Urban Water Management targets by 2020. Development standards for water conservation would be applied to increase efficiency in indoor and outdoor water use areas. Water conservation measures include the use of:

- recycled or non-potable graywater for landscape irrigation;
- water efficient landscaping with low water usage plant material to minimize irrigation requirements; and
- ultra-low flow toilets and plumbing fixtures in the building.

Waste Reduction Measures

Measure 4.2 Increased Waste Diversion calls for an increase in solid waste diversion rate through recycling efforts, curbside food waste pickup, and construction and demolition waste programs. The project would divert construction and demolition waste during project construction to help the City reach its 80 percent waste diversion rate.

Off-Road Equipment

Measure 5.2 Alternative Construction Fuels requires construction projects to comply with BAAQMD best management practices, including alternative-fueled vehicles and equipment. The project would adopt BAAQMD best management practices, as described in *Section 4.3 Air Quality*.

Transportation and Land Use

Measure 6.1 Transportation Demand Management Program requires new development located in the City's transportation districts to implement a transportation demand program (TDM) to reduce drive-alone trips. The project site is located within Transportation District 1 – North of Caltrain. Based on Table 9: Minimum Vehicle Miles Traveled Reduction Requirements by Transportation District and Land Use Designation of the Climate Action Plan, the project is not obligated to provide a TDM program, because it is located on a site with a land use designation of Light Industrial. Nevertheless, the project will be required to implement a TDM program to reduce vehicle miles traveled (VMT) in accordance with mitigation measure MM TRN-2.1 (refer to Section 3.17.2.1).

⁵⁷ Average rack power rating is a measure of the power available for use on a rack used to store computer servers. The higher the value of kilowatts, the greater power density per rack and generally more energy use per square foot of building area in a data center.

Measure 6.3 Electric Vehicle Parking directs the City to revise parking standards for new nonresidential development to allow that a minimum of one parking space, and a recommended level of five percent of all new parking spaces, be designated for electric vehicle charging. Of the 113 parking spaces proposed by the project, 11 would be designated for clean air vehicles, representing 9.7 percent of all spaces.

Applicable General Plan Policies

In addition to the reduction measures in the Climate Action Plan, 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 Land Use, Air Quality, Energy, and Water Policies of the General Plan is described in Table 3.8-2.

Bay Area 2017 Clean Air Plan

The Bay Area 2017 Clean Air Plan includes performance objectives, consistent with the State's climate protection goals under AB 32, SB 375, and SB 32, designed to reduce emissions of GHG emissions to 1990 levels by 2020 and 40 percent below 1990 levels by 2030. The 2017 Clean Air Plan identifies a range of control measures that make up the Clean Air Plan's control strategy for emissions, including GHGs.

Due to the relatively high electrical demand of the data center uses on the site, energy efficiency measures have been included in the design and operation of the electrical and mechanical systems on the site. This is in keeping with the general purpose of Energy Sector Control Measures in the Clean Air Plan.

Plan One Bay Area/ California Senate Bill 375 – Redesigning Communities to Reduce Greenhouse Gases

Under the requirements of SB 375, the Metropolitan Planning Organizations (MPO) in partnership with ABAG have developed a Sustainable Community Strategy with the adopted *Plan One Bay Area* to achieve the Bay Area's regional GHG reduction target. Targets for the MTC in the San Francisco Bay Area, originally adopted in September 2010 by CARB, include a seven (7) percent reduction in GHG per capita from passenger vehicles by 2020 compared to emissions in 2005. The adopted target for 2035 is a 15 percent reduction per capita from passenger vehicles when compared to emissions in 2005. The emission reduction targets are for those associated with land use and transportation strategies only.

The project has a low concentration of employment and would not contribute to a substantial increase in passenger vehicle travel within the region.

Table 3.8-2: 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.	The project proposes to use emergency generators with advanced air pollution controls. The generator testing schedule includes measures to reduce local air quality impacts.
5.10.2-P4 Encourage measures to reduce GHG emissions to reach 30 percent below 1990 levels by 2020.	Water conservation and energy efficiency measures included in the project would reduce GHG emissions associated with the generation of electricity
Energy Policies	
5.10.3-P1 Promote the use of renewable energy resources, conservation and recycling programs.	The project would divert at least 50 percent of construction waste.
5.10.3-P4 Encourage new development to incorporate sustainable building design, site planning and construction, including encouraging solar opportunities.	The project would 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 installed to limit water consumption.
5.10.3-P5 Reduce energy consumption through sustainable construction practices, materials and recycling.	
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.	
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.

Applicable State Climate Change Strategies and Policies

In 2008, the Governor of California issued Executive Order S-13-08 that specifically asked the Natural Resources Agency to identify how State agencies can respond to rising temperatures, changing precipitation patterns, sea level rise, and extreme natural events. The 2009 *California Climate Adaptation Strategy* was developed in response to the executive order. Adaptation to projected sea level rise is addressed in Section 3.10 Hydrology and Water Quality.

The CARB-approved *Climate Change Scoping Plan* outlines a comprehensive set of actions intended to reduce overall GHG emissions in California, improve the environment, reduce dependence on oil, diversify California's energy sources, save energy, create new jobs, and enhance public health. Actions associated with energy efficiency standards and renewables portfolio standards are measures that would most greatly influence GHG emissions of the project over time.

The project would be generally consistent with the Climate Change Scoping Plan, as updated, and appropriate GHG Control Measures in the Bay Area 2017 Clean Air Plan (as discussed above). As discussed above, the project would not conflict with plans, policies or regulations adopted for the purpose of reducing the emissions of GHG. Therefore, the project would not conflict with any currently adopted local plans, policies, or regulations pertaining to GHG emissions and would not generate GHG emissions that would have a significant impact on the environment. **(Less than Significant Impact)**

3.8.2.2 Cumulative Impacts

Impact GHG-C: The project would not result in a cumulatively considerable contribution to a cumulatively significant GHG emissions impact. **(Less than Significant Cumulative Impact)**

As discussed in Section 3.8.2.1, GHG emissions worldwide contribute, on a cumulative basis, to the significant adverse environmental impacts of global climate change. No single land use project could generate sufficient GHG emissions on its own to noticeably change the global average temperature. The combination of GHG emissions from past, present, and 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. The above analysis of the project's GHG emissions impacts is, therefore, also an analysis of the project's contribution to cumulative GHG emissions impacts. **(Less than Significant Impact)**

3.9 HAZARDS AND HAZARDOUS MATERIALS

The discussion in this section is based in part upon a Soil Management Plan prepared for the project by Cornerstone Earth Group in June 2020. A copy of this report is included in Appendix I of this EIR.

3.9.1 Environmental Setting

3.9.1.1 *Regulatory Framework*

Overview

The storage, use, generation, transport, and disposal of hazardous materials and waste are highly regulated under federal and state laws. In California, the EPA has granted most enforcement authority over federal hazardous materials regulations to the California Environmental Protection Agency (CalEPA). In turn, local agencies have been granted responsibility for implementation and enforcement of many hazardous materials regulations under the Certified Unified Program Agency (CUPA) program.

Worker health and safety and public safety are key issues when dealing with hazardous materials. Proper handling and disposal of hazardous material is vital if it is disturbed during project construction. Cal/OSHA enforces state worker health and safety 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

Federal Aviation Regulations Part 77

Federal Aviation Regulations, Part 77 Objects Affecting Navigable Airspace (FAR Part 77) sets forth standards and review requirements for protecting the airspace for safe aircraft operation, particularly by restricting the height of potential structures and minimizing other potential hazards (such as reflective surfaces, flashing lights, and electronic interference) to aircraft in flight. These regulations require that the Federal Aviation Administration (FAA) be notified of certain proposed construction projects located within an extended zone defined by an imaginary slope radiating outward for several miles from an airport's runways, or which would otherwise stand at least 200 feet in height above the ground.

Comprehensive Environmental Response, Compensation, and Liability Act

The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), commonly known as Superfund, was enacted by Congress on December 11, 1980. This law created a tax on the chemical and petroleum industries and provided broad federal authority to respond directly to releases or threatened releases of hazardous substances that may endanger public health or the environment. Over five years, \$1.6 billion was collected and the tax went to a trust fund for cleaning up abandoned or uncontrolled hazardous waste sites. CERCLA accomplished the following objectives:

- Established prohibitions and requirements concerning closed and abandoned hazardous waste sites;
- Provided for liability of persons responsible for releases of hazardous waste at these sites; and
- Established a trust fund to provide for cleanup when no responsible party could be identified.

The law authorizes two kinds of response actions:

- Short-term removals, where actions may be taken to address releases or threatened releases requiring prompt response; and
- Long-term remedial response actions that permanently and significantly reduce the dangers associated with releases or threats of releases of hazardous substances that are serious, but not immediately life-threatening. These actions can be completed only at sites listed on the EPA's National Priorities List.

CERCLA also enabled the revision of the National Contingency Plan (NCP). The NCP provided the guidelines and procedures needed to respond to releases and threatened releases of hazardous substances, pollutants, or contaminants. The NCP also established the National Priorities List. CERCLA was amended by the Superfund Amendments and Reauthorization Act on October 17, 1986.⁵⁸

Resource Conservation and Recovery Act

The Resource Conservation and Recovery Act (RCRA), enacted in 1976, is the principal federal law in the United States governing the disposal of solid waste and hazardous waste. RCRA gives the EPA the authority to control hazardous waste from the "cradle to the grave." This includes the generation, transportation, treatment, storage, and disposal of hazardous waste. RCRA also sets forth a framework for the management of non-hazardous solid wastes.

The Federal Hazardous and Solid Waste Amendments (HSWA) are the 1984 amendments to RCRA that focused on waste minimization, phasing out land disposal of hazardous waste, and corrective action for releases. Some of the other mandates of this law include increased enforcement authority for the EPA, more stringent hazardous waste management standards, and a comprehensive underground storage tank program.⁵⁹

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

⁵⁸ United States Environmental Protection Agency. "Superfund: CERCLA Overview." Accessed May 11, 2020. <https://www.epa.gov/superfund/superfund-cercla-overview>.

⁵⁹ United States Environmental Protection Agency. "Summary of the Resource Conservation and Recovery Act." Accessed May 11, 2020. <https://www.epa.gov/laws-regulations/summary-resource-conservation-and-recovery-act>.

substance release sites identified by the Department of Toxic Substances Control (DTSC) and State Water Resources Control Board (SWRCB).⁶⁰

Toxic Substances Control Act

The Toxic Substances Control Act (TSCA) of 1976 provides the EPA with authority to require reporting, record-keeping and testing requirements, and restrictions relating to chemical substances and/or mixtures. Certain substances are generally excluded from TSCA, including, among others, food, drugs, cosmetics, and pesticides. The TSCA addresses the production, importation, use, and disposal of specific chemicals including polychlorinated biphenyls (PCBs), asbestos, radon, and lead-based paint.

California Accidental Release Prevention Program

The California Accidental Release Prevention (CalARP) Program aims to prevent accidental releases of regulated hazardous materials that represent a potential hazard beyond the boundaries of 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 City of Santa Clara Fire Department reviews CalARP risk management plans as the Certified Unified Program Agency (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 use of friable asbestos products between 1973 and 1978. National Emission Standards for Hazardous Air Pollutants (NESHAP) 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 the Cal/OSHA Lead in Construction Standard, CCR Title 8, Section 1532.1 during demolition activities. Requirements include employee training, employee air monitoring, and dust control. If lead-based paint is peeling, flaking, or blistered, it is required to be removed prior to demolition.

Regional and Local

Municipal Regional Permit Provision C.12.f

Polychlorinated biphenyls (PCBs) were produced in the United States between 1955 and 1978 and used in hundreds of industrial and commercial applications, including building and structure

⁶⁰ California Environmental Protection Agency. "Cortese List Data Resources." Accessed May 28, 2020. <https://calepa.ca.gov/sitecleanup/corteselist/>.

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 methodology for applicable structures planned for demolition to ensure PCBs do not enter municipal storm drain systems.⁶¹ Municipalities throughout the Bay Area are currently modifying demolition permit processes and implementing PCB screening protocols to comply with Provision C.12.f. Buildings constructed between 1950 and 1980 that are proposed for demolition must be screened for the presence of PCBs prior to the issuance of a demolition permit. Single family homes and wood-frame structures are exempt from these requirements.

Norman Y. Mineta San José International Airport Comprehensive Land Use Plan

The project site is located approximately 0.65 miles west of the San José International 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 San José International Airport.

Federal Aviation Administration Regulations

Federal Aviation Regulations, Part 77, "Objects Affecting Navigable Airspace" (FAR Part 77) sets forth standards and review requirements for protecting the airspace for safe aircraft operation, particularly by restricting the height of potential structures and minimizing other potential hazards (such as reflective surfaces, flashing lights, and electronic interference) to aircraft in flight. These regulations require that the FAA be notified of certain proposed construction projects located within an extended zone defined by an imaginary slope radiating outward for several miles from an airport's runways.

Santa Clara Emergency Operations Plan

In June 2016, the City of Santa Clara adopted an Emergency Operations Plan (EOP) to address the planned response of the City of Santa Clara to emergency situations associated with natural disasters and technological incidents, as well as chemical, biological, radiological, nuclear and explosive emergencies. The EOP establishes the emergency organization, assign tasks, specifies policies and general procedures, and provides for coordination of planning efforts for emergency events such as earthquake, flooding, dam failure, and hazardous materials responses.

⁶¹ California Regional Water Quality Control Board. *San Francisco Bay Region Municipal Regional Stormwater NPDES Permit*. November 2015.

3.9.1.2 *Existing Conditions*

Historic Site Uses

The project site was developed as agricultural land since at least the early 1900s. Between 1964 and the late 1970s, the site was developed with the existing commercial structures in multiple phases for use by Memorex for the manufacture of magnetic tape. Memorex operations through 1993 included the use of up to 30 underground storage tanks (USTs), installed between 1965 and 1991. The USTs were used for the storage of predominantly cyclohexanone and methyl ethyl ketone (MEK), and lesser amounts of xylenes, isopropanol, acetone, ethylene glycol monoethyl ether (trade name: Cellosolve), diesel fuel, waste solvent and waste process water. The Memorex USTs reportedly were removed between 1983 and 1996. Several releases from the USTs and associated aboveground and underground piping have been identified as impacting soil, soil vapor and groundwater. After ceasing magnetic tape manufacturing operations in 1993, Memorex secured a permit with the City for facility closure for the production areas (exclusive of the remaining USTs).

Since approximately 1993, the three existing buildings have been divided into multiple commercial suites that have been occupied by various businesses including multiple metal processing operations (plating, polishing, anodizing and powder coating), automotive parts sales and light repair, pharmaceutical manufacturing, office and storage space, biological research/testing and machining. Some of these operations have included the use and storage of hazardous materials and generation of hazardous wastes, including solvents, acids and bases, as well as installation of two additional USTs; one UST reportedly used for the storage of waste solvent and the other UST reportedly utilized to capture fire suppression system overflow. Both USTs were reportedly closed-in-place in 2004 by filling with water and locking.

Impacted Soil

Prior studies have identified several release areas related to former Memorex operations which have left residual soil impacts on-site. Below is a brief description of site environmental soil conditions based on the readily available information reviewed.

Old Tank Farm (OTF)

In 1990, eight USTs were removed from the Old Tank Farm (OTF). Soil samples were collected from the sidewalls of the excavation and from the excavation bottom. These samples were analyzed for MEK, cyclohexanone, acetone, xylenes, toluene and cellosolve. The greatest concentration was reported at 1,100 milligrams per kilogram (mg/kg) for cyclohexanone.

After bioremediation efforts in the OTF area, soil sampling was performed in 1990 and 1991 to depths of up to approximately 15 feet. Organic solvent concentrations up to 976 mg/kg total COC (MEK, cyclohexanone and xylenes) were detected. In 1994, ten soil samples were collected at depths of approximately five and 10 feet. Analysis of the samples detected concentrations of total VOCs above site cleanup goals (one mg/kg) in all ten samples, and MEK was detected up to 420 mg/kg.

Former Memorex Process Area

In 1994, facility closure activities included soil sampling and laboratory analyses. Soil samples were analyzed for the site chemicals of concern (acetone, cyclohexanone, MEK and BTEX compounds). Of the 17 soil samples collected in the former process area, 13 samples contained measurable VOC concentrations, of which 10 contained concentrations above the site cleanup goal (one mg/kg). Cyclohexanone and MEK were detected up to concentrations of 3,200 and 1,700 mg/kg, respectively.

To remediate the impacts identified beneath the Process Area, soil vapor extraction (SVE) was initiated in the former mix room area in 1995. Although soil vapor sampling performed in 2015 and 2016 showed significant reductions in VOC concentrations in soil gas, it is unknown to what extent soil VOC concentrations were reduced. It is assumed that residual soil impacted with VOCs remains beneath this area.

Waste Solvent UST Piping Release Beneath 1230/1232 Memorex Drive

In 1991, Tank 7 (used to store waste solvent) and associated piping leading from the tank to the existing building (near present day 1230/1232 Memorex Drive) were removed. Soil samples were collected within the excavation and along the pipe trenching; they were analyzed for BTEX, acetone, MEK and cyclohexanone. Significant concentrations of solvents, including cyclohexanone up to 5,400 mg/kg, were detected in the pipe excavation. Final soil excavations were completed in 1992. The Water Board closed this area with known residual impacts in place above cleanup goals (one mg/kg total VOCs). Residual concentrations above cleanup goals were left in place due to inaccessible soil beneath the tape manufacturing building where below grade piping entered. The precise location of existing piping, the extent and depth of piping and residual soil impacts beneath the existing building is unknown.

New Tank Farm (NTF)

By 1990, four USTs were installed in the New Tank Farm (NTF) to store cyclohexanone and MEK. In January 1990 a release of cyclohexanone occurred from above ground piping. Soil sampling was performed to define the extent of possible impacts to soil. Impacted soil was identified in a reportedly narrow area that was previously unpaved and exposed to the release (presumably within or near the NTF area). Impacted soils were excavated to a depth of approximately 15 feet, and a sample collected from the base of the excavation detected cyclohexanone at a concentration of 30 mg/kg. The Water Board determined that additional excavation would not be necessary, and the excavation was backfilled with reportedly “clean” soil. The USTs were removed under permit in 1997.

Organochlorine Pesticides

Organochlorine pesticides were detected in seven of nine samples analyzed. Total DDT (the total amount of DDT and its breakdown products DDE and DDD), exceeded its total threshold limit concentration (TTLC), California’s hazardous waste criteria, in one sample located in the northwestern area of the site. Dieldrin was detected in one of nine samples at a concentration that was above its Tier 1 ESL (based on leaching to groundwater concern). No detected organochlorine pesticide concentrations were in exceedance of their respective construction worker or commercial direct exposure ESLs.

Soil Vapor

In 2009, the Water Board issued a letter requiring soil vapor sampling and a vapor intrusion evaluation to assess potential impacts to indoor air at the subject property. The letter presented three areas of concern to be addressed: 1) soil vapor sampling had not been performed in areas of the mix room and adjacent to trenches where elevated VOC concentrations were identified in soil samples, 2) residual impacted soil above shallow ground water remaining beneath the main building and the OTF area that may pose a risk to building occupants; 3) five of 13 soil vapor extraction wells were disconnected from the SVE system due to high concentrations of VOCs in SVE system effluent that were above levels permitted by the Bay Area Air Quality Management District (BAAQMD).

Memorex Process Area

In response to the Water Board letter (2009), the SVE system in the Process Area was reconfigured to become a dedicated sub-slab depressurization system; it was completed in 2010. At the request of the Water Board, in 2011, three sub-slab vapor samples were collected in the mix room area. Analysis detected numerous VOCs including PCE, MEK, acetone, xylenes, and toluene. Between 2011 and 2016, multiple soil vapor sampling events (from existing SVE wells and installed soil vapor probes) were performed. The greatest detected concentrations of VOCs reported for this area are below January 2019, commercial ESL screening criteria with the exception of benzene (45 micrograms per cubic meter [$\mu\text{g}/\text{m}^3$]), ethylbenzene (170 $\mu\text{g}/\text{m}^3$) and PCE (150 $\mu\text{g}/\text{m}^3$).

Extent of Subsurface VOC Vapors

The most recent work to characterize soil vapor and sub-slab vapor conditions at the site were performed by Rosso Environmental (Rosso) in 2014 and Cornerstone Earth Group in 2019. Rosso collected 23 exterior soil vapor samples and 11 interior sub-slab vapor samples across the site. Cornerstone collected two soil vapor samples from the exterior perimeter of the former Memorex Process Area. Benzene was detected above commercial Water Board ESLs throughout the majority of the site. PCE, vinyl chloride, bromodichloromethane, ethylbenzene and xylene also were detected;

Groundwater

Based on prior investigations on the site, groundwater is typically encountered between depths of approximately 10 and 18 feet. Groundwater appears to be under confined conditions and will rise multiple feet in elevation when encountered. Historic high groundwater levels are mapped at an approximate depth of six feet. In general, fluctuations in groundwater levels occur due to many factors including seasonal fluctuation, underground drainage patterns, regional fluctuations, and other factors.

Rosso and Cornerstone collected groundwater samples at the site during their respective 2014 and 2019 subsurface investigations. In all, 20 groundwater samples were collected from across the site and analyzed. All detected compounds were below their respective screening criteria except for methyl tert-butyl ether (MTBE), which was detected above its 2019 Water Board Tier 1 ESL in one sample.

3.9.1.3 *Other Hazards*

Airports

The Norman Y. Mineta San José International Airport is located approximately 0.65 miles east of the project site. As previously mentioned, FAR Part 77 requires that the FAA be notified of certain proposed construction projects located within an extended zone defined by an imaginary slope radiating outward for several miles from an airport's runways, or which would otherwise stand at least 200 feet in height above ground. For the project site, any structure exceeding 35 feet in height above grade would require submittal to the FAA for airspace safety review. As the proposed project would have a maximum height of 99 feet, notification to the FAA is required to determine the potential for the project to create an aviation hazard.

The project site 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. Development within the AIA can be subject to hazards from aircraft and also pose hazards to aircraft travelling to and from the airport. The AIA is a composite of areas surrounding the airport that are affected by noise, height and safety considerations. These hazards are addressed in Federal and State regulations as well as in land use regulations and policies in the CLUP. The most recent CLUP for the Airport was adopted in 2011 and updated in 2016. The project is also in the Traffic Pattern Zone (TPZ), which requires ten percent of the gross area located within one-half mile of the Airport to be open space, and also does not allow land uses with very high concentrations of people.⁶²

Wildfire Hazards

The project site is located in an urbanized area of Santa Clara. According to the California Department of Forestry and Fire Protection (CAL FIRE), the project site is not located within a moderate, high, or very high fire hazard severity zone.⁶³

3.9.1.4 *Impact Discussion*

For the purpose of determining the significance of the project's impact on hazards and hazardous materials, would the project:

- 1) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?
- 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?
- 3) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

⁶² Santa Clara County Airport Land Use Commission. *Comprehensive Land Use Plan*. Figure 6. Amended November 16, 2016.

⁶³ CAL FIRE. "Draft Fire Hazard Severity Zones." Accessed October 29, 2019.
http://frap.fire.ca.gov/webdata/maps/statewide/fhszl06_1_map.jpg.

- 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, would it create a significant hazard to the public or the environment?
- 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?
- 6) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?
- 7) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?

3.9.1.5 *Project Impacts*

Impact HAZ-1: The project would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials. **(Less than Significant Impact)**

Some oils and lubricants could be stored on-site for maintenance of mechanical equipment in the equipment yards. Additionally, operation of the proposed project would include the use and storage of diesel fuel for testing and maintenance of the backup generators. Each backup generator would be a fully independent package system with dedicated and integrated fuel tanks located on a skid below the bottom level generator. The top-level generators would each have a day tank capable of storing 600 gallons, which would be fed from the 16,000-gallon lower level belly fuel tank.

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

To prevent potential spills during refueling, a spill catch basin is located at each fill port for the generators. To prevent a release from entering the storm drain system, drains would be blocked off by the truck driver and/or facility staff during fueling events. Rubber pads or similar devices would be kept in the generator yard to allow quick blockage of the storm sewer drains during fueling events. To further minimize the potential for diesel fuel to end up in stormwater, to the extent feasible, fueling operations would be scheduled at times when storm events are improbable.

Hazardous materials storage at the proposed data center would be regulated under local, state and federal regulations. For example, the project would be subject to the Aboveground Petroleum Storage Act (APSA) due to the volume of fuel that would be stored in aboveground tanks. Tank facilities under APSA must comply with all APSA requirements and prepare and implement a Spill Prevention, Control, and Countermeasure Plan. The spill prevention measures described above would be incorporated into the Plan. Additionally, a Hazardous Materials Business Plan would be completed for the safe storage and use of chemicals and would incorporate all relevant regulations.

Conformance with relevant laws and regulations would minimize the likelihood of hazardous material releases from the proposed fuel storage tanks and the use or storage of diesel fuel, oils and lubricants by the project would not create a significant impact on the environment. **(Less Than Significant Impact)**

Impact HAZ-2: As mitigated, the project would not create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment. **(Less than Significant Impact with Mitigation Incorporated)**

Project Operation

As described in the discussion under Impact HAZ-1, the proposed project would include the use and storage of diesel fuel for testing and maintenance of the backup generators. A Hazardous Materials Business Plan would be completed for the safe storage and use of chemicals. Conformance with relevant laws and regulations would minimize the likelihood of hazardous material releases from the proposed fuel storage tanks and the use or storage of diesel fuel, oils and lubricants by the project would not create a significant impact on the environment. **(Less than Significant Impact)**

Soil and Groundwater Contamination Impacts during Construction

As described in Section 3.9.1.2, the project site contains contaminated soil, groundwater, and soil vapor from previous on-site uses. Construction workers could be exposed to contaminated soil and/or groundwater during excavation, grading, and construction activities. Future users of the site could be exposed to hazardous soil vapor. Additionally, although construction activities associated with the potential underground transmission line would occur in the street right-of-way in previously disturbed soils, it is possible that unknown contaminated soils would be encountered.

A Soil Management Plan (SMP) was prepared for the site in June 2020 (see Appendix I). The SMP establishes 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 include: a detailed discussion of the site background; a summary of the analytical results from soil and groundwater sampling; protocols for preparation of a Health and Safety Plans; 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; 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; protocols to manage groundwater that may be encountered during trenching and/or subsurface excavation activities; protocols for air monitoring during construction activities; and mitigation of soil vapor emissions. The Regional Water Quality Control Board (RWQCB) provides regulatory oversight for remediation of contamination on the site. The RWQCB reviewed and approved the SMP in its capacity as the regulatory agency. Implementation of the approved SMP would reduce impacts associated with on-site contamination to less than significant levels (refer to MM HAZ-2.1, below).

Additionally, implementation mitigation measure MM HAZ-2.2 would reduce impacts associated with potential off-site contaminated soils to a less than significant level.

Mitigation Measures:

MM HAZ-2.1: For on-site construction activities, the project shall implement the approved Soil Management Plan prepared for the site under the oversight of the Regional Water Quality Control Board.

MM HAZ-2.2: For off-site construction activities associated with the underground transmission line, a qualified environmental specialist shall collect shallow soil samples within the areas of proposed construction activities and have the samples analyzed to determine if contaminated soil is present with concentrations above established construction/trench worker and residential thresholds. Once the soil sampling analysis is complete, a report of the findings will be provided to the Director of Community Development for review. The report shall indicate whether any off-site contaminated soils found during sampling are related to the known on-site contamination, or whether they are from a different off-site contamination source.

If contaminated soils are found in concentrations above established regulatory environmental screening levels, and are determined to be related to the known on-site contamination, the project shall incorporate the off-site contamination into the approved Soil Management Plan for the site. If the off-site contamination is determined to be unrelated to the known on-site contamination, the applicant shall enter into the Santa Clara County Department of Environmental Health's (SCCDEH) Voluntary Cleanup Program (VCP) to formalize regulatory oversight for remediation of contaminated soil to ensure the off-site location is safe for construction workers and the public after development. The project applicant must remove contaminated soil in order to achieve detection levels acceptable to the SCCDEH. With approval of the SCCDEH, some of the contaminated soil may be allowed to be left in-place buried under hardscape and/or several feet of clean soil.

The project applicant shall prepare and implement a Removal Action Plan, Soil Mitigation Plan or other similar report describing the remediation process and to document the removal and/or capping of contaminated soil. All work and reports produced shall be performed under the regulatory oversight and approval of the SCCDEH. **(Less than Significant Impact with Mitigation Incorporated)**

Asbestos and Lead Based Paint Impacts

Due to the age of the existing building on site (pre-1980 construction), asbestos-containing materials (ACMs) and lead-based paint may be present.

Demolition of the existing building on the project site could expose construction workers or residents in the vicinity of the project site to harmful levels of ACMs or lead. The project is required to

conform to the following regulatory programs and to implement the following measures to reduce impacts to the presence of ACMs and/or lead-based paint:

- In conformance with State and local laws, a visual inspection/pre-demolition survey, and possible sampling, shall be conducted prior to the demolition of on-site buildings to determine the presence of asbestos-containing materials and/or lead-based paint.
- Prior to demolition activities, all building materials containing lead-based paint shall be removed in accordance with Cal/OSHA Lead in Construction Standard, Title 8, California Code of Regulations (CCR) 1523.1, including employee training, employee air monitoring, and dust control. Any debris or soil containing lead-based paint or coatings would be disposed of at landfills that meet acceptance criteria for the waste being disposed.
- All potentially friable ACMs shall be removed in accordance with NESGAP guidelines prior to any building demolition or renovation that may disturb the materials. All demolition activities will be undertaken in accordance with Cal/OSHA standards contained in Title 8 of CCR, Section 1529, to protect workers from exposure to asbestos.
- A registered asbestos abatement contractor shall be retained to remove and dispose of ACMs identified in the asbestos survey performed for the site in accordance with the standards stated above.
- Materials containing more than one percent asbestos are also subject to Bay Area Air Quality Management District (BAAQMD) regulations. Removal of materials containing more than one percent asbestos shall be completed in accordance with BAAQMD requirements.

Conformance with aforementioned regulatory requirements will result in a less than significant impact from ACMs and lead. **(Less than Significant Impact)**

Impact HAZ-3: The project would not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school. **(Less than Significant Impact)**

The nearest school to the project site is Scott Lane Elementary School (1925 Scott Boulevard), approximately 0.2 miles southwest of the site⁶⁴. The project site is, therefore, within one-quarter mile of an existing school. As described in Section 3.3 Air Quality, the project would not generate significant levels of hazardous air emissions. Although hazardous materials may be encountered during construction activities, potential exposure would be limited to the project site, and mitigation measures would be implemented to reduce impacts to nearby receptors (including schools and residences) to less than significant levels (see MM HAZ-2.1). The project would not handle acutely hazardous materials or hazardous waste during project operation. For these reasons, the project would not impact schools within the project area. **(Less Than Significant Impact)**

⁶⁴ The school is located .35 miles southwest in a straight line (as the crow flies), or 1.5 miles via car (as referenced in Section 3.16).

Impact HAZ-4: The project would be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5. However, as mitigated, the project would not create a significant hazard to the public or the environment. **(Less than Significant Impact with Mitigation Incorporated)**

Due to the known contamination on the site, the site is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5. Implementation of identified mitigation measures (see MM HAZ-2.1) would ensure that the project would not create a significant hazard to the public or the environment. **(Less than Significant Impact with Mitigation Incorporated)**

Impact HAZ-5: The project would be located within an airport land use plan. Nevertheless, the project would not result in a safety hazard or excessive noise for people residing or working in the project area. **(Less than Significant Impact)**

The proposed project site is located approximately 0.65 miles northwest of the San José Norman Y. Mineta International Airport. Aircraft noise levels at the project site are discussed in Section 3.13 Noise and Vibration of this EIR.

As described previously, the project site is located within an Airport Safety Zone: the Traffic Pattern Zone (TPZ). The TPZ does not limit population density, but does require that at least 10 percent of the gross area be devoted to open space. More than 10 percent of the site would be free of buildings and other obstructions. Therefore, the project would comply with TPZ requirements.

As described previously, FAR Part 77 requires that the FAA be notified of certain proposed construction projects located within an extended zone defined by an imaginary slope radiating outward for several miles from an airport's runways, or which would otherwise stand at least 200 feet in height above ground. For the project site, any structure exceeding 45 feet in height above grade would require submittal to the FAA for airspace safety review. The proposed building would be approximately 99 feet in height. As a result, notification to the FAA is required to determine the potential for the project to create an aviation hazard. FAA issuance of "determination of no hazard" clearances, and subsequent applicant compliance with any conditions set forth in such FAA determinations, would ensure that the project does not have an adverse impact on airspace safety. The proposed project, therefore, would be compatible with applicable CLUP policies and the Airport Influence Area for building height.

The project site is not located in the vicinity of a private airstrip. **(Less Than Significant Impact)**

Impact HAZ-6: The project would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. **(No Impact)**

In June 2016, the City adopted an Emergency Response Plan, which addresses the planned response of the City of Santa Clara to emergency situations associated with natural disasters, technological incidents, and chemical, biological, radiological, nuclear and explosive emergencies. The project

would include development of a data center facility on a site designated for light industrial uses and would comply with relevant building and fire codes. The proposed project would not, therefore, impair or interfere with the implementation of an adopted emergency response plan or emergency evacuation plan. **(No Impact)**

Impact HAZ-7: The project would not expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires. **(No Impact)**

The project site is located in an urbanized area of Santa Clara. According to the California Department of Forestry and Fire Protection (CAL FIRE), the project site is not located within a moderate, high, or very high fire hazard severity zone.⁶⁵ **(No Impact)**

3.9.1.6 *Cumulative Impacts*

Impact HAZ-C: As mitigated, the project would not result in a cumulatively considerable contribution to a cumulatively significant hazards and hazardous materials impact. **(Less than Significant Cumulative Impact with Mitigation Incorporated)**

The geographic area for cumulative hazards and hazardous materials impacts is the project site and immediate vicinity.

As described in the discussion under Impact HAZ-1, the proposed project would include the use and storage of diesel fuel for testing and maintenance of the backup generators. A Hazardous Materials Business Plan would be completed for the safe storage and use of chemicals. Conformance with relevant laws and regulations would minimize the likelihood of hazardous material releases from the proposed fuel storage tanks and the use or storage of diesel fuel, oils and lubricants by the project would not result in or substantially contribute to a significant cumulative impact related to the use and storage of hazardous materials.

Because the project would implement mitigation measures to remediate existing soil and groundwater contamination on the site (see MM HAZ-2.1), thereby reducing contamination in the project area, the project would not result in or substantially contribute to a cumulative impact related to soil and groundwater contamination.

As described in Section 3.3 Air Quality, the project would not result in or substantially contribute to a cumulative impact related to hazardous air emissions. **(Less than Significant Cumulative Impact with Mitigation Incorporated)**

⁶⁵ CAL FIRE. "Draft Fire Hazard Severity Zones." Accessed October 29, 2019.
http://frap.fire.ca.gov/webdata/maps/statewide/fhszl06_1_map.jpg.

3.10 HYDROLOGY AND WATER QUALITY

3.10.1 Environmental Setting

3.10.1.1 *Regulatory Framework*

Federal and State

The federal Clean Water Act and California's Porter-Cologne Water Quality Control Act are the primary laws related to water quality in California. Regulations set forth by the EPA and the SWRCB have been developed to fulfill the requirements of this legislation. EPA regulations include the National Pollutant Discharge Elimination System (NPDES) permit program, which controls sources that discharge pollutants into the waters of the United States (e.g., streams, lakes, bays, etc.). These regulations are implemented at the regional level by the Regional Water Quality Control Boards (RWQCBs). The project site is within the jurisdiction of the San Francisco Bay RWQCB.

National Flood Insurance Program

The Federal Emergency Management Agency (FEMA) established the National Flood Insurance Program (NFIP) to reduce impacts of flooding on private and public properties. The program provides subsidized flood insurance to communities that comply with FEMA regulations protecting development in floodplains. As part of the program, FEMA publishes Flood Insurance Rate Maps (FIRMs) that identify Special Flood Hazard Areas (SFHAs). An SFHA is an area that would be inundated by the one-percent annual chance flood, which is also referred to as the base flood or 100-year flood.

Statewide Construction General Permit

The State Water Resources Control Board (SWRCB) has implemented an NPDES General Construction Permit for the State of California (Construction General Permit). For projects disturbing one acre or more of soil, a Notice of Intent (NOI) must be filed with the RWQCB by the project sponsor, and a Storm Water Pollution Prevention Plan (SWPPP) must be prepared by a qualified professional prior to commencement of construction and filed with the RWQCB by the project sponsor. The Construction General Permit includes requirements for training, inspections, record keeping, and, for projects of certain risk levels, monitoring. The general purpose of the requirements is to minimize the discharge of pollutants and to protect beneficial uses and receiving waters from the adverse effects of construction-related storm water discharges.

Regional and Local

San Francisco Bay Basin Plan

The San Francisco Bay RWQCB regulates water quality in accordance with the Water Quality Control Plan for the San Francisco Bay Basin (Basin Plan). The Basin Plan lists the beneficial uses that the San Francisco Bay RWQCB has identified for local aquifers, streams, marshes, rivers, and the San Francisco Bay, as well as the water quality objectives and criteria that must be met to protect these uses. The San Francisco Bay RWQCB implements the Basin Plan by issuing and enforcing waste discharge requirements, including permits for nonpoint sources such as the urban runoff

discharged by a City's stormwater drainage system. The Basin Plan also describes watershed management programs and water quality attainment strategies.

Municipal Regional Permit Provision C.3

The San Francisco Bay RWQCB re-issued the Municipal Regional Stormwater NPDES Permit (MRP) in 2015 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.⁶⁶ 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 new development and redevelopment projects that create or replace one acre or more of impervious surface to manage development-related increases in peak runoff flow, volume, and duration, where such hydromodification is likely to cause increased erosion, silt pollutant generation, or other impacts to local rivers, streams, and creeks. Projects may be deemed exempt from these requirements if they do not meet the minimized size threshold, drain into tidally influenced areas or directly into the Bay, or drain into hardened channels, or if they are infill projects in subwatersheds or catchment areas that are greater than or equal to 65 percent impervious.

Municipal Regional Permit Provision C.12.f

Provision C.12.f of the MRP requires co-permittee agencies to implement a control program for PCBs that reduces PCB loads by a specified amount during the term of the permit, thereby making substantial progress toward achieving the urban runoff PCBs wasteload allocation in the Basin Plan by March 2030.⁶⁷ Programs must include focused implementation of PCB control measures, such as source control, treatment control, and pollution prevention strategies. Municipalities throughout the Bay Area are updating their demolition permit processes to incorporate the management of PCBs in demolition building materials to ensure PCBs are not discharged to storm drains during demolition.

Water Resources Protection Ordinance and District Well Ordinance

Valley Water operates as the flood control agency for Santa Clara County. Their stewardship also includes creek restoration, pollution prevention efforts, and groundwater recharge. Permits for well construction and destruction work, most exploratory boring for groundwater exploration, and projects within Valley Water property or easements are required under Valley Water's Water Resources Protection Ordinance and District Well Ordinance.

⁶⁶ MRP Number CAS612008

⁶⁷ San Francisco Bay Regional Water Quality Control Board. *Municipal Regional Stormwater Permit, Provision C.12*. November 19, 2015.

Dam Safety

Since August 14, 1929, the State of California has regulated dams to prevent failure, safeguard life, and protect property. The California Water Code entrusts dam safety regulatory power to California Department of Water Resources, Division of Safety of Dams (DSOD). The DSOD provide oversight to the design, construction, and maintenance of over 1,200 jurisdictional sized dams in California.⁶⁸

As part of its comprehensive dam safety program, Valley Water routinely monitors and studies the condition of each of its 10 dams. Valley Water also has its own Emergency Operations Center and a response team that inspects dams after significant earthquakes. These regulatory inspection programs reduce the potential for dam failure.

Construction Dewatering Waste Discharge Requirements

Each of the RWQCBs regulate construction dewatering discharges to storm drains or surface waters within its Region under the NPDES program and Waste Discharge Requirements.

3.10.1.2 *Existing Conditions*

Flooding

The site is not located within a 100-year flood (one percent annual flood) hazard zone. According to the FEMA's Flood Insurance Rate Map, the project site is located within Zone X.⁶⁹ Zone X is defined as "areas of the 0.2 percent annual chance flood; area of one percent annual chance flood with average depths of less than one foot or with drainage areas less than one square mile; and areas protected by levees from one percent annual chance flood." The existing elevation is approximately 50 to 55 feet above mean sea level (msl).

A portion of Shulman Avenue over which the proposed transmission line would traverse is located in Zone AH, which is defined as having 100-year flood depths of one to three feet.

Inundation Hazards

The proposed project site is located approximately 1.25 miles west of the Guadalupe River and approximately 0.75 miles east of the San Tomas Aquino Creek. The project is within the San Tomas Aquino Creek Watershed. The project site is within the Lexington Dam failure inundation area under the "fair weather" scenario, which assumes that dam failure occurs during non-storm conditions with a normal full pool elevation in the reservoir and normal flow conditions downstream of the dam.⁷⁰

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

⁶⁸ California Department of Water Resources, Division of Safety of Dams. [https://water.ca.gov/Programs/All-Programs/Division-of-Safety-of-Dams#:~:text=Since%20August%2014%2C%201929%2C%20the,Safety%20of%20Dams%20\(DSOD\).](https://water.ca.gov/Programs/All-Programs/Division-of-Safety-of-Dams#:~:text=Since%20August%2014%2C%201929%2C%20the,Safety%20of%20Dams%20(DSOD).) Accessed June 9, 2020.

⁶⁹ Federal Emergency Management Agency, Flood Insurance Rate Map, Community Panel No. 06085C0227H, November 18, 2019.

⁷⁰ Santa Clara Valley Water District. Lenihan (Lexington) Dam Flood Inundation Maps. 2016.

a lake or reservoir by earthquake ground shaking or landsliding. Seiches are possible at reservoir, lake or pond sites. The project area is not subject to inundation from a seiche, tsunami, or mudflow.⁷¹

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 Memorex Drive. 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.^{72 73} The site is within the Santa Clara Plain Confined Area and is not within an area used for in-stream or other groundwater recharge.⁷⁴ Depth to groundwater beneath the project site is typically encountered at 13-18 feet below ground surface (bgs), and flows in a northeasterly direction.⁷⁵ 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.

3.10.2 Impact Discussion

For the purpose of determining the significance of the project's impact on hydrology and water quality, would the project:

- 1) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?
- 2) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?
- 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:
 - 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

⁷¹ Association of Bay Area Governments, San Francisco Bay Area Hazards, November 14, 2019.

⁷² California Department of Water Resources. *A Comprehensive Groundwater Protection Evaluation for the South San Francisco Bay Basins*. May 2003. Figure 9.

⁷³ Santa Clara Valley Water District. Groundwater Management Plan. 2016.

⁷⁴ Santa Clara Valley Water District. Groundwater Management Plan. 2016.

⁷⁵ Cornerstone Earth Group. *Phase 2 Environmental Site Assessment – 1220-1320 Memorex Drive*. September 25, 2019.

- impede or redirect flood flows?
- 4) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?
- 5) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

3.10.2.1 *Project Impacts*

Impact HYD-1: The project would not violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality. **(Less than Significant Impact)**

The project 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 project would include stormwater quality best management practices (BMPs) such as directing site runoff into bioswales. 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.

Construction Impacts

Implementation of the project would disturb approximately 9.18 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.

Standard Permit Condition

The project will incorporate the following measures into the project to 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.

The project would include the above measures to avoid or reduce construction-related water quality impacts to less than significant level.

Impervious and Pervious Surfaces

The project 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 project, 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.

The current site includes 95 percent impervious cover (roof top and pavements) and five percent pervious cover (gravels, weeds). The project would become approximately 80 percent impervious cover (building, paving) and 20 percent pervious cover (manicured landscape), as shown in Table 4.10-1.

Table 4.10-1: Pervious/Impervious Surfaces				
	Impervious (sf)	Pervious (sf)	Total Area (sf)	Percent Impervious
Existing	381,353	18,686	400,039	95
Proposed	319,843	80,196	400,039	80

Because the project would increase the amount of pervious surface area on the site, the project could potentially reduce the overall amount of runoff that leaves the site and enters the existing storm drain system. The project 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)**

Impact HYD-2: The project would not substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin. **(Less than Significant Impact)**

The project does not propose to pump groundwater or install groundwater extraction wells. In addition, as discussed in Section 3.10.1.2, 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)**

Impact HYD-3: The project would not 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. **(Less than Significant Impact)**

The project would not alter the course of a stream, river, or other waterway. As discussed under Impact HYD-1, the project would result in a decrease in surface runoff from the site compared to existing conditions due to an increase in pervious surface area. As a result, no off-site flooding would occur. In addition, as discussed under Impact HYD-1, the project would implement best management practices to reduce stormwater runoff water quality impacts to a less than significant level.

The project site is outside of the 100-year flood hazard zone, and therefore, would not impede or redirect flood flows. A portion of Shulman Avenue over which the transmission line would traverse is located in FEMA Flood Zone AH, which is defined as having 100-year flood depths of one to three feet. The poles for the proposed transmission line are very small relative to the width of the floodplain and would not pose a substantial obstruction to flood flows such that flood flows would be impeded or redirected in any substantial way **(Less than Significant Impact)**

Impact HYD-4: The project would not risk release of pollutants due to project inundation in flood hazard, tsunami, or seiche zones. **(Less than Significant Impact)**

Flooding, Tsunami and Seiche

As described previously, the project site is outside of the 100-year flood hazard zone, and therefore, would not expose people or structures to 100-year flood hazards. Additionally, as discussed in Section 4.10.1.2, the project area is not subject to inundation from a seiche, tsunami, or mudflow.

Although a portion of Shulman Avenue over which the transmission line would traverse is located in FEMA Flood Zone AH, the installation of poles for the new transmission line would not risk release of pollutants.

Dam Inundation Hazards

The project area is within the dam failure inundation area for Lexington Reservoir (Lenihan Dam)⁷⁶. 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,

⁷⁶ Santa Clara Valley Water District. *Lenihan (Lexington) Dam 2016 Flood Inundation Maps*. 2016. Accessed: November 18, 2019. <https://www.valleywater.org/sites/default/files/Lexington%20Dam%20Inundation%20Map%202016.pdf>

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. **(Less than Significant Impact)**

Impact HYD-5: The project would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan. **(Less than Significant Impact)**

As discussed under Impacts HYD-1 and HYD-2, 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)**

3.10.2.2 *Cumulative Impacts*

Impact HYD-C: The project would not result in a cumulatively considerable contribution to a cumulatively significant hydrology and water quality impact. **(Less than Significant Cumulative Impact)**

The geographic area for cumulative hydrology and water quality impacts is the San Tomas Aquino Creek watershed. With the implementation of best management practices to reduce impacts to water quality discussed and applicable regulations discussed in Section 3.10.1, development projects that could impact this watershed (including the proposed project) are required to undertake steps to avoid, minimize, and/or mitigate flooding and water quality impacts. For these reasons, the cumulative projects in compliance with applicable regulations would not result in significant cumulative hydrology or water quality impacts. **(Less than Significant Cumulative Impact)**

3.11 LAND USE AND PLANNING

3.11.1 Environmental Setting

3.11.1.1 *Regulatory Framework*

City of Santa Clara

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 *Light Industrial* and would retain its designation for Phases I, II and III. The *Light Industrial* classification allows for a range of light industrial uses, including general service, warehousing, storage, distribution, and manufacturing. It includes flexible space, such as buildings that allow combinations of single and multiple users, warehouses, data centers and ancillary office uses (permitted to a maximum of 20 percent of the building area). Because uses in this designation may be noxious or include hazardous materials, places of assembly, such as religious institutions and schools, and uses catering to sensitive receptors, such as children and the elderly, as well as entertainment uses such as clubs, theaters and sports venues south of U.S. Highway 101, are prohibited. The maximum floor area ratio (FAR) allowed under this designation is 0.6.

Zoning District

The project site is zoned *ML - Light Industrial*. The *ML – Light Industrial* zoning district (Chapter 18.48 of the City Code) is intended for (but not limited to) commercial storage and wholesale distribution warehouses, plants and facilities for the manufacturing, processing, and repair of equipment and merchandise, and retail sales of industrial products, and uses of a similar nature. Retail commercial and services uses, kennels, and lumber yards (and other similar uses) may also be allowed as a conditional; use with City approval of a Use Permit. The maximum permitted building height within this zone is 70 feet and the maximum building coverage is 75 percent.

Norman Y. Mineta San José International Airport

The proposed project site is approximately 0.65 miles 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. Development within the AIA can be subject to hazards from aircraft and also pose hazards to aircraft travelling to and from the airport. The AIA is a composite of areas surrounding the airport that are affected by noise, height and safety considerations. These hazards are addressed in Federal and State regulations as well as in land use regulations and policies in the CLUP. The most recent CLUP for the Airport was adopted in 2011 and updated in 2016.

The project is also in the Traffic Pattern Zone (TPZ), which requires ten percent of the gross area located within one-half mile of the airport to be open space, and also does not allow with very high concentrations of people.⁷⁷ Additionally, FAA Part 77 would require any proposed structure on the

⁷⁷ Santa Clara County Airport Land Use Commission. *Comprehensive Land Use Plan*. Figure 6. Amended November 16, 2016.

site higher than approximately 35 feet above ground to be submitted to the FAA for airspace safety review.⁷⁸ As the project proposes a maximum building height of 99 feet, review by the FAA is required, including the proposed off-site transmission line poles.

3.11.1.2 *Surrounding Land Uses*

A one-story office machine shop, and one and two-story industrial facilities are located directly east of the project site. Two, one-story commercial/industrial buildings and a one-story industrial building are located to the west of the project site. The Union Pacific Railroad (UPRR) tracks are located south of the project site, beyond which are one- and two-story single-family residences. One-story, industrial and commercial buildings are located north of the project site. The project area consists primarily of industrial land uses. Buildings in the area are similar in height and scale to the existing building on the project site. The Norman Y. Mineta San José International Airport is located approximately 0.65 miles east of the site. Views of the surrounding land uses can be seen in Photos Five and Six (See Section 3.1).

3.11.2 Impact Discussion

For the purpose of determining the significance of the project's impact on land use and planning, would the project:

- 1) Physically divide an established community?
- 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?

3.11.2.1 *Project Impacts*

Impact LU-1:	The project would not physically divide an established community. (No Impact)
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The project site is located in an industrial area surrounded by industrial development and commercial uses. It would not include any physical features that would physically divide the community (e.g., blocking of roadways or sidewalks) and would not interfere with the movement of residents through a neighborhood. For these reasons, construction of the proposed project would not divide an established community. **(No Impact)**

⁷⁸ Norman Y. Mineta San José International Airport. "Notice Requirement Criteria for Filing FAA Form 7460-1". September 2013.

Impact LU-2: The project would not cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect. **(Less than Significant Impact)**

Santa Clara General Plan

The project site is designated *Light Industrial* and would retain its designation. The *Light Industrial* classification allows data for warehousing and distribution, as well as data centers and supporting backup generation facilities. Therefore, the proposed project is consistent with the uses contemplated in the General Plan for the Light Industrial land use designation on the site. The proposed FAR of the project 1.4, is inconsistent with the maximum FAR of 0.6 specified in the General Plan for the Light Industrial land use classification. While the project is not strictly consistent with this component of the General Plan's 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. The City maintains the discretion to allow an increased FAR for qualifying projects where findings can be made that the project is otherwise consistent with the General Plan. As described in this section and throughout the EIR, the project is consistent with the policies in the General Plan. Therefore, the proposed project is consistent with the General Plan land use designation on the site.

The project area consists primarily of industrial land uses, including other data centers. The nearest sensitive receptors to the proposed project site are existing residences along Main Street, about 140 feet southwest of the southern project boundary. The residences are separated from the site by the UPRR tracks. The Airport is located approximately 0.65 miles east of the site. Aircraft, along with truck and other vehicle traffic, are readily apparent in the area. 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 Code

As stated above, the project site is zoned *ML - Light Industrial*. The City has routinely approved of data centers and supporting backup generation facilities as a use consistent with the *ML* zoning designation. The maximum permitted building height within this zone is 70 feet. The City allows up to a 25 percent increase in permitted building heights with a minor modification to the zoning requirements. The data center building would be approximately 85 feet in height, with additional screening and decorative features extending to a height of 99 feet. With approval of a minor modification, the proposed building height of 85 feet would be consistent with the zoning on the site. Per Section 18.64.010(a), the proposed parapets are not subject to the height restrictions. Additionally, noise generated by the project operation would comply with the City Code noise limits for adjacent land uses (refer to Section 3.13 Noise). The proposed project, therefore, would not conflict with the City's General Plan or Zoning Ordinance.

Consistency with the San José International Airport Comprehensive Land Use Plan

The project site is located within the AIA of the San José International Airport and within the Traffic Pattern Zone that extends to the northwest from the end of the airport runways. Potential conflicts

related to the building height or aircraft noise are discussed in Section 3.9 and Section 3.13, respectively. Additionally, the CLUP requires that an Avigation Easement setting forth acceptance of elevation restrictions and associated aircraft overflight impacts be granted to the Airport operator (City of San Jose) prior to approval of construction. The project would not conflict with the CLUP.

The project would not cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect. **(Less than Significant Impact)**

3.11.2.2 *Cumulative Impacts*

Impact LU-C:	The project would not result in a cumulatively considerable contribution to a cumulatively significant land use and planning impact. (Less than Significant Cumulative Impact)
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The geographic area for cumulative land use impacts is the City of Santa Clara. Construction of the cumulative projects within the City would consist of redevelopment of currently (or previously) developed sites. Development on a number of these sites would result in a change of uses and/or an intensification of development.

The compatibility of new development with adjacent land uses, and the general character of surrounding areas are considered as a part of the City of Santa Clara's architectural and environmental review processes.

All Santa Clara projects listed in Table 3.0-1 and the proposed project are subject to conformance with applicable land use plans (including the General Plan) for the purposes of avoiding or mitigating environmental effects. In addition, the setback, design, and operational requirements of the City Code minimize land use compatibility issues. The cumulative projects, in conformance with the applicable General Plan goals and policies, would not result in significant cumulative land use compatibility impacts or conflict with a policies or regulation adopted for the purpose of avoiding or mitigating an environmental impact. For these reasons, the cumulative projects, combined with the proposed project, would not result in significant cumulative land use impacts. **(Less Than Significant Cumulative Impact)**

3.12 MINERAL RESOURCES

3.12.1 Environmental Setting

3.12.1.1 *Regulatory Framework*

State

Surface Mining and Reclamation Act

The Surface Mining and Reclamation Act (SMARA) was enacted by the California legislature in 1975 to address the need for a continuing supply of mineral resources, and to prevent or minimize the negative impacts of surface mining to public health, property, and the environment. As mandated under SMARA, the State Geologist has designated mineral land classifications in order to help identify and protect mineral resources in areas within the state subject to urban expansion or other irreversible land uses which would preclude mineral extraction. SMARA also allowed the State Mining and Geology Board (SMGB), after receiving classification information from the State.

3.12.1.2 *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.

3.12.2 Impact Discussion

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

- 1) Result in the loss of availability of a known mineral resource that would be of value to the region and residents of the state?
- 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?

3.12.2.1 *Project Impacts*

Impact MIN-1:	The project 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)
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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)**

Impact MIN-2: The project would not result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan. **(No Impact)**

The project 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)**

3.12.2.2 *Cumulative Impacts*

Impact MIN-C: The project would not result in a cumulatively considerable contribution to a cumulatively significant mineral resources impact. **(No Cumulative Impact)**

As mentioned in Section 3.12.2.1, no mineral resources have been identified within the City. Since the project would not result in impacts to mineral resources, the project has no potential to combine with other projects to result in cumulative impacts to these resources. **(No Cumulative Impact)**

3.13 NOISE

The discussion in this section is based in part upon a Noise and Vibration Assessment and a supplemental Noise Assessment of Changes to Generators Memo prepared for the project by Illingworth & Rodkin, Inc. in November 2020 and March 2021, respectively. Copies of these reports are included in Appendix J of this EIR.

3.13.1 Environmental Setting

3.13.1.1 *Background Information*

Noise

Factors that influence sound as it is perceived by the human ear, include the actual level of sound, period of exposure, frequencies involved, and fluctuation in the noise level during exposure. Noise is measured on a decibel scale, which serves as an index of loudness. The zero on the decibel scale is based on the lowest sound level that the healthy, unimpaired human ear can detect. Each 10 decibel increase in sound level is perceived as approximately a doubling of loudness. Because the human ear cannot hear all pitches or frequencies, sound levels are frequently adjusted or weighted to correspond to human hearing. This adjusted unit is known as the A-weighted decibel, or dBA.

Since excessive noise levels can adversely affect human activities and human health, federal, state, and local governmental agencies have set forth criteria or planning goals to minimize or avoid these effects. Noise guidelines are generally expressed using one of several noise averaging methods, including L_{eq} , DNL, or CNEL.⁷⁹ These descriptors are used to measure a location's overall noise exposure, given that there are times when noise levels are higher (e.g., when a jet is taking off from an airport or when a leaf blower is operating) and times when noise levels are lower (e.g., during lulls in traffic flows on freeways or in the middle of the night). L_{max} is the maximum A-weighted noise level during a measurement period.

Vibration

Ground vibration consists of rapidly fluctuating motions or waves with an average motion of zero. Vibration amplitude can be quantified using Peak Particle Velocity (PPV), which is defined as the maximum instantaneous positive or negative peak of the vibration wave. PPV has been routinely used to measure and assess ground-borne construction vibration. Studies have shown that the threshold of perception for average persons is in the range of 0.008 to 0.012 inches/second (in/sec) PPV.

⁷⁹ L_{eq} is a measurement of average energy level intensity of noise over a given period of time. Day-Night Level (DNL) is a 24-hour average of noise levels, with a 10 dB penalty applied to noise occurring between 10:00 PM and 7:00 AM. Community Noise Equivalent Level (CNEL) includes an additional five dB applied to noise occurring between 7:00 PM and 10:00 PM. Where traffic noise predominates, the CNEL and DNL are typically within two dBA of the peak-hour L_{eq} .

3.13.1.2 *Regulatory Framework*

State and Local

California Green Building Standards Code

For commercial uses, CalGreen (Section 5.507.4.1 and 5.507.4.2) requires that wall and roof-ceiling assemblies exposed to the adjacent roadways have a composite STC rating of at least 50 or a composite OITC rating of no less than 40, with exterior windows of a minimum STC of 40 or OITC of 30 when the commercial property falls within the 65 dBA L_{dn} or greater noise contour for a freeway or expressway, railroad, or industrial or stationary noise source. The state requires interior noise levels to be maintained at 50 dBA $L_{eq(1-hr)}$ or less during hours of operation at a proposed commercial use.

Santa Clara General Plan

The City of Santa Clara General Plan identifies noise and land use compatibility standards for various land uses (General Plan Table 5.10-2). The noise standard is 70 dBA Community Noise Equivalent Level (CNEL) for uses with an industrial land use designation and 55 dBA CNEL for uses with a residential land use designation. The following policies are applicable to the project:

Policies	Description
5.10.6-P1	Review all land use and development proposals for consistency with the General Plan compatibility standards and acceptable noise exposure levels defined on Table 5.10-1.
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 5.10-1.
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)
5.10.6-P4	Encourage the control of noise at the source through site design, building design, landscaping, hours of operation and other techniques.
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.
5.10.6-P6	Discourage noise sensitive uses, such as residences, hospitals, schools, libraries and rest homes, from areas with high noise levels, and discourage high noise generating uses from areas adjacent to sensitive uses.
5.10.6-P7	Implement measures to reduce interior noise levels and restrict outdoor activities in areas subject to aircraft noise in order to make Office/research and Development uses compatible with the Norman Y. Mineta International Airport land use restrictions.

City Code

Chapter 9.10 “Regulation of Noise and Vibration,” of the City of Santa Clara City Code identifies allowable hours for construction to limit impacts to sensitive uses within 300 feet of a project site. The nearest sensitive receptors to the proposed project site are the Granada Islamic School about 0.5 miles northwest of the site and existing residences along Lafayette Street in Santa Clara about 0.6 miles north of the site. The project is, therefore, not subject to the City Code regulations on construction hours.

The City Code also includes standards for maximum noise levels according to zoning districts for fixed sources of noise, as shown in Table 3.13-1 below.

Table 3.13-1: Noise Limits for Zoning Districts		
Receiving Zone	Daytime Noise Limit (dBA)	Nighttime Noise Limit (DBA)
Single-family and duplex residential	55	50
Multiple-family residential, public space	55	50
Commercial, Office	65	60
Light Industrial	70	70
Heavy Industrial	75	75

Santa Clara County Airport Land Use Commission Land Use Plan

The comprehensive land use plan adopted by the Santa Clara County Airport Land Use Commission (ALUC) contains standards for projects within the vicinity of Norman Y. Mineta International Airport which are relevant to this project:

Policies	Description
N-1	The Community Noise Equivalent Level (CNEL) method of representing noise levels shall be used to determine if a specific land use is consistent with the CLUP.
N-2	In addition to the other policies herein, the Noise Compatibility Policies presented in Table 4-1 shall be used to determine if a specific land use is consistent with this CLUP.
N-3	Noise impacts shall be evaluated according to the Aircraft Noise Contours presented on the 2027 CNEL Noise Contours for the Airport Master Plan.
N-6	Noise level compatibility standards for other types of land uses shall be applied in the same manner as the above residential noise level criteria. Table 4-1 presents acceptable noise levels for other land uses in the vicinity of the Airport.

3.13.1.3 Existing Conditions

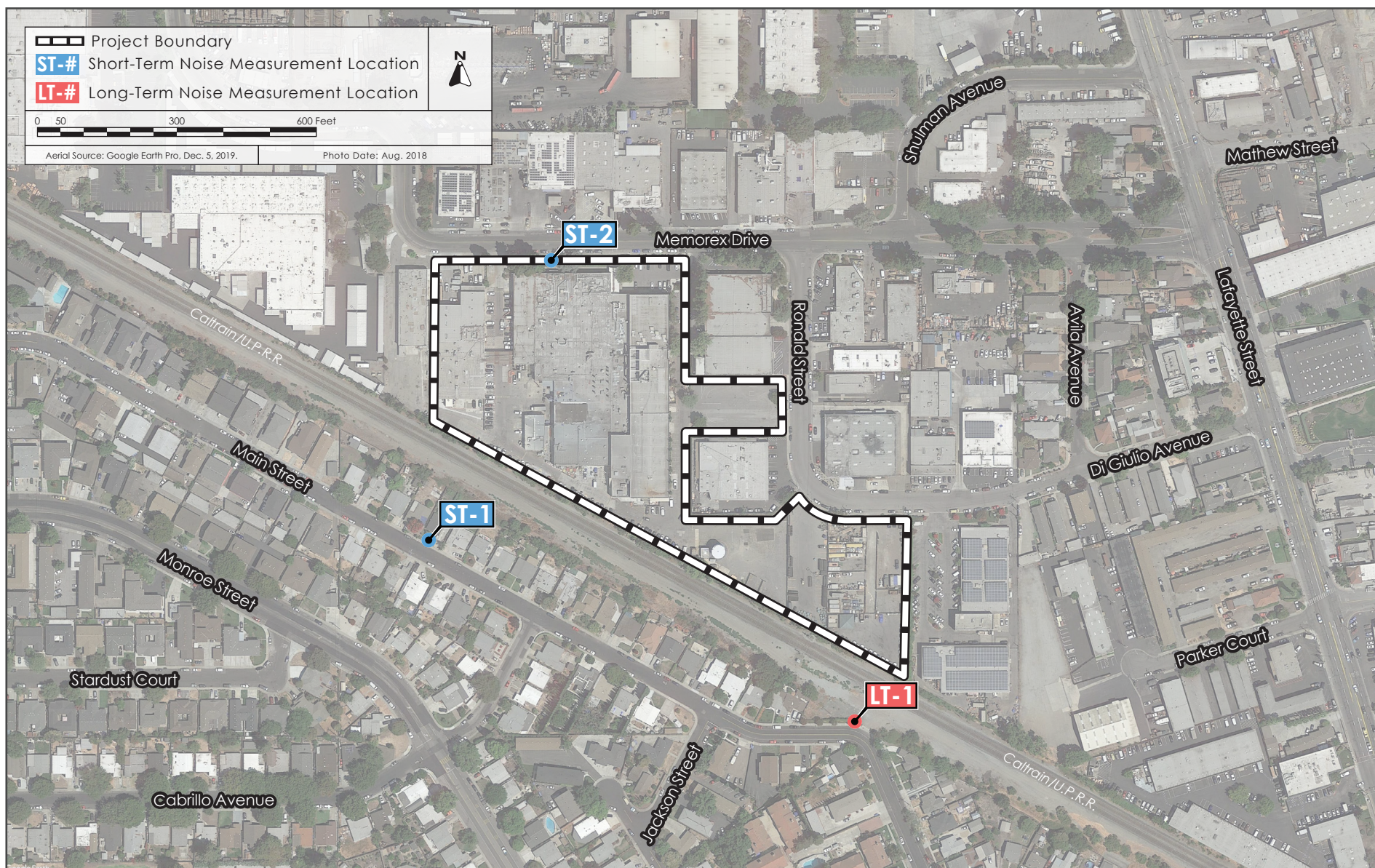
The predominant sources of noise in the project vicinity include traffic on Memorex Drive, mechanical equipment noise from surrounding uses, intermittent noise from Caltrain passbys, and intermittent noise from aircraft associated with Norman Y. Mineta International Airport.

A noise monitoring survey at the project site was conducted Friday, October 25, 2019 and Friday, November 1, 2019. One long-term noise measurement (LT-1) and three short-term noise measurements (ST-1 through ST-3), as shown in Figure 3.13-1, were made as part of the monitoring survey.

Long term measurement LT-1 was located along Main Street, approximately 130 feet southwest of the site. The primary noise sources at this location were Caltrain passbys and local traffic, with occasional noise generated by aircraft flyovers. Hourly average noise levels varied between 52 and

688 dBA Leq during daytime hours, and from 47 to 63 dBA Leq at night. Daily average community noise equivalent levels (CNEL) ranged between 61 and 66 dBA CNEL.

Short term measurements ST-1 and ST-2 were made on Tuesday March 10, 2020. Short term measurement ST-1 was made at the front of the residence located at 2109 Main Street. The primary noise sources at this location were local traffic and aircraft flyovers. The equivalent sound level at this location was 52 dBA L_{eq} . Short term measurement ST-2 was made along Memorex Drive at the north side of the site. The primary noise sources at this location were traffic along Memorex Drive, mechanical equipment operating at the site to north, and forklift operations. The equivalent sound level at this location was 67 dBA L_{eq} .



NOISE MEASUREMENT LOCATIONS

FIGURE 3.13-1

3.13.2 Impact Discussion

For the purpose of determining the significance of the project's impact on noise, would the project result in:

- 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?
- 2) Generation of excessive groundborne vibration or groundborne noise levels?
- 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?

3.13.2.1 *Project Impacts*

Impact NOI-1:	As mitigated, the project would not result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies. (Less than Significant Impact with Mitigation Incorporated)
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Construction

Noise impacts resulting from construction depend upon the noise generated by various pieces of construction equipment, the timing and duration of noise-generating activities, and the distance between construction noise sources and noise-sensitive areas. Construction noise impacts primarily result when construction activities occur during noise-sensitive times of the day (e.g., early morning, evening, or nighttime hours), the construction occurs in areas immediately adjoining noise-sensitive land uses, or when construction lasts over extended periods of time. Maximum instantaneous noise levels generated by typical construction equipment at 50 feet are shown in Table 3.13-2. Typical hourly average construction-generated noise levels for construction of various types of facilities are shown in Table 3.13-3.

The construction of the proposed project would involve demolition of the existing structure and pavement, site preparation, grading and excavation, trenching, building erection, interior/architectural coating, and paving. Less intensive construction activities associated with the transmission line pole installation would occur for brief periods of time at each pole location or along the length of the potential underground portion of the line. The highest maximum noise levels generated by project construction typically range from about 81 to 90 dBA L_{max} at a distance of 50 feet from the noise source and typical hourly average construction-generated noise levels for this type of facility are about 74 to 89 dBA L_{eq} measured at a distance of 50 feet from the center of the site during busy construction periods (e.g., earth moving equipment, impact tools, etc.). Construction-generated noise levels drop off at a rate of about six dBA per doubling of the distance between the source and receptor. Shielding by buildings or terrain can provide an additional five to 10 dBA noise reduction at distant receptors.

Table 3.13-2: Construction Equipment 50-Foot Noise Emission Limits		
Equipment Category	L_{max} Level (dBA)^{1,2}	Impact/Continuous
Arc Welder	73	Continuous
Auger Drill Rig	85	Continuous
Backhoe	80	Continuous
Bar Bender	80	Continuous
Boring Jack Power Unit	80	Continuous
Chain Saw	85	Continuous
Compressor ³	70	Continuous
Compressor (other)	80	Continuous
Concrete Mixer	85	Continuous
Concrete Pump	82	Continuous
Concrete Saw	90	Continuous
Concrete Vibrator	80	Continuous
Crane	85	Continuous
Dozer	85	Continuous
Excavator	85	Continuous
Front End Loader	80	Continuous
Generator	82	Continuous
Generator (25 KVA or less)	70	Continuous
Gradall	85	Continuous
Grader	85	Continuous
Grinder Saw	85	Continuous
Horizontal Boring Hydro Jack	80	Continuous
Hydra Break Ram	90	Impact
Impact Pile Driver	105	Impact
Insitu Soil Sampling Rig	84	Continuous
Jackhammer	85	Impact
Mounted Impact Hammer (hoe ram)	90	Impact
Paver	85	Continuous
Pneumatic Tools	85	Continuous
Pumps	77	Continuous
Rock Drill	85	Continuous
Scraper	85	Continuous

Table 3.13-2: Construction Equipment 50-Foot Noise Emission Limits		
Equipment Category	L_{max} Level (dBA)^{1,2}	Impact/Continuous
Slurry Trenching Machine	82	Continuous
Soil Mix Drill Rig	80	Continuous
Street Sweeper	80	Continuous
Tractor	84	Continuous
Truck (dump, delivery)	84	Continuous
Vacuum Excavator Truck (vac-truck)	85	Continuous
Vibratory Compactor	80	Continuous
Vibratory Pile Driver	95	Continuous
All other equipment with engines larger than 5 HP	85	Continuous
¹ Measured at 50 feet from the construction equipment, with a “slow” (1 sec.) time constant.		
² Noise limits apply to total noise emitted from equipment and associated components operating at full power while engaged in its intended operation.		
³ Portable Air Compressor rated at 75 cfm or greater and that operates at greater than 50 psi		

Table 3.13-3: Typical Ranges of Construction Noise Levels at 50 Feet, L _{eq} (dBA)								
	Domestic Housing		Office Building, Hotel, Hospital, School, Public Works		Industrial Parking Garage, Religious Amusement & Recreations, Store, Service Station		Public Works Roads & Highways, Sewers, and Trenches	
	I	II	I	II	I	II	I	II
Ground Clearing	83	83	84	84	84	83	84	84
Excavation	88	75	89	79	89	71	88	78
Foundations	81	81	78	78	77	77	88	88
Erection	81	65	87	75	84	72	79	78
Finishing	88	72	89	75	89	74	84	84
I - All pertinent equipment present at site.								
II - Minimum required equipment present at site.								

Noise sensitive uses surrounding the site include residential buildings along Main Street, located approximately 140 feet southwest of the project site, commercial buildings along Ronald Street, located approximately 25 feet east of the project site, and commercial buildings along Memorex Drive approximately 75 feet north and 15 feet west of the project site. Anticipated hourly average

and maximum noise levels at the surrounding uses are shown in Table 3.13-4. Noise levels at each use would be lower as construction moves away from shared property lines or into shielded areas.

Table 3.13-4: Calculated Construction Noise Levels at Surrounding Noise-Sensitive Uses			
Receptor Location	Use	L_{eq} (dBA)	L_{max} (dBA)
Main Street, ~150 ft. Southwest of Site	Residential	64 – 79	71 – 80
2100 – 2250 Ronald Street, ~25 ft. East of Site	Commercial	80 – 95	87 – 96
1330 Memorex Drive, ~15 ft. West of Site	Commercial	84 – 99	91 – 100
1125 – 1250 Memorex Drive, ~75 ft. North of Site	Commercial	70 – 85	77 – 86

As described previously, construction activities would also occur at the locations of each pole proposed as part of the overhead transmission line extension, or along the length of the potential underground portion of the line. The majority of the transmission line route is located adjacent to commercial and industrial uses, but in some locations on Di Giulio Avenue poles and/or the underground portion of the line would be installed adjacent to existing residential uses. Intermittent noise would be caused by periodic, short-term equipment operation. For example, a drill rig would need to be used with a backhoe or loader to create foundations for the pole installations, and this would require one or two days of work at each pole site. For the underground portion of the line, equipment such as excavators and backhoes would operate intermittently during the construction period along various segments of the line.

Mitigation Measures:

MM NOI-1.1: The project shall implement a construction noise control plan to regulate the hours of construction, reduce construction noise levels emanating from the site, and minimize disruption and annoyance at existing noise-sensitive receptors in the project vicinity. The control plan would include the following controls:

- Construction activities shall be limited to hours between 7:00 a.m. and 6:00 p.m. on weekdays and 9:00 a.m. and 6:00 p.m. on Saturdays. No construction is permitted on Sundays or Holidays.
- Construct temporary noise barriers, where feasible, to screen stationary noise-generating equipment from adjacent properties. Temporary noise barrier fences would provide a 5 dBA noise reduction if the noise barrier interrupts the line-of-sight between the noise source and receiver and if the barrier is constructed in a manner that eliminates any cracks or gaps.
- Equip all internal combustion engine-driven equipment with intake and exhaust mufflers that are in good condition and appropriate for the equipment.
- Unnecessary idling of internal combustion engines should be strictly prohibited.
- Locate stationary noise-generating equipment, such as air compressors or portable power generators, as far as possible from sensitive receptors as feasible. If they must be located near receptors,

adequate muffling (with enclosures where feasible and appropriate) shall be used reduce noise levels at the adjacent sensitive receptors. Any enclosure openings or venting shall face away from sensitive receptors.

- Utilize "quiet" air compressors and other stationary noise sources where technology exists.
- Construction staging areas shall be established at locations that will create the greatest distance between the construction-related noise sources and noise-sensitive receptors nearest the project site during all project construction.
- Control noise from construction workers' radios to a point where they are not audible at existing residential uses to the north of the project site.
- The contractor shall prepare a detailed construction plan identifying the schedule for major noise-generating construction activities. The construction plan shall identify a procedure for coordination with adjacent residential land uses so that construction activities can be scheduled to minimize noise disturbance.
- Designate a "disturbance coordinator" who would be responsible for responding to any complaints about construction noise. The disturbance coordinator will determine the cause of the noise complaint (e.g., bad muffler, etc.) and will require that reasonable measures be implemented to correct the problem. Conspicuously post a telephone number for the disturbance coordinator at the construction site and include in it the notice sent to neighbors regarding the construction schedule.

With implementation of identified mitigation measures, the project would not result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project due to construction noise. **(Less than Significant Impact with Mitigation Incorporated)**

Operational Noise

The primary source of noise from operation of the project would be related to mechanical equipment associated with data center operations. Vehicle trips associated with the project would be low, substantially lower than site baseline traffic volumes, and would not result in a substantial noise generation.

Section 9.10.040 of the City Code establishes noise level performance standards for fixed sources of noise. At single- or multi-family residences, hourly average noise levels exceeding 55 dBA L_{eq} between the hours of 7:00 a.m. and 10:00 p.m. or 50 dBA L_{eq} between 10:00 p.m. and 7:00 a.m. would constitute a significant noise impact. At commercial uses, hourly average noise levels exceeding 65 dBA L_{eq} , between the hours of 7:00 a.m. and 10:00 p.m. or 60 dBA L_{eq} between 10:00 p.m. and 7:00 a.m. would constitute a significant noise impact. At light industrial land uses, hourly average noise levels exceeding 70 dBA L_{eq} at any time would constitute a significant noise impact. At heavy industrial uses, hourly average noise levels exceeding 75 dBA L_{eq} at any time would constitute a significant noise impact. The City Code states that noise limits set forth in the code are

not applicable to the performance of emergency work, including the operation of emergency generators and pumps or other equipment necessary to provide services during an emergency. However, the City has applied the noise limits to testing of the standby generators for previous data center buildings in Santa Clara.

Heating, ventilation, and air conditioning (HVAC) equipment would be located on the rooftop of the data center building. Proposed rooftop equipment includes sixty (60) 345T air-cooled chillers. An electrical distribution substation would be located at the southeastern corner of the site. Data sheets including noise levels for the generators and HVAC equipment were provided by the project applicant. Under full load, each chiller would be designed to meet a sound power level goal of 100 dBA or less. Other mechanical and electrical equipment located inside the building would not be anticipated to emit audible noise outside. The data center building would have a solid rooftop screen wall reaching 14 feet in height above the roof. In order to effectively shield the nearest residences from HVAC noise, the screen wall would need to extend along the full length of the building's southern façade, a minimum distance of 225 feet north of the southwestern corner of the building along the western façade, and a minimum distance of 135 feet north of the southeastern corner of the building along the eastern façade. The remaining roof line would incorporate louvers which are not anticipated to provide substantial noise reduction.

The project would include a generator yard located on the south side of the proposed data center building. The generator yard would include twenty-four (24) CAT 3-MW emergency backup generators and one CAT 500-kW house generator. The layout of the generator yard would have 22 generators double-stacked from ground level and two single units at ground level, all aligned with the southern façade of the data center building. Each generator would be enclosed and only tested during daytime hours. Based on the proposed generator testing schedule, only one generator would be tested at a time.

The backup generators would undergo weekly readiness testing. Readiness testing would occur between 9:00 a.m. and 11:30 a.m. on Mondays and Wednesdays, and between 9:00 a.m. and 10:15 a.m. on Fridays. Readiness testing would last 15 minutes per generator and be under zero percent load. Quarterly and annual PM tests would occur under zero percent load and last for 30 minutes and 60 minutes, respectively. Generators would also undergo annual load bank testing, with 15-minute stages under 25 percent, 50 percent, and 75 percent load, and for 75 minutes under 100 percent load. There will be a total of 437.5 hours of generator testing per year, with 31.25 total hours of testing under full load. Under full load, each three MW double-stacked or individual generator would meet a design goal of 70 dBA at a distance of 23 feet. Under zero percent load, generator noise would reach approximately 59 dBA at a distance of 23 feet. The generators would be equipped with an exhaust silencer so that noise from the exhaust would not exceed 63 dBA at a lateral distance of 23 feet and a height of five feet above ground.

As shown in Table 3.13-5 and in Figure 3.13-2, noise resulting from operations of rooftop chillers and the electrical substation would meet the 55 dBA daytime and 50 dBA nighttime criteria at the nearest residences along Main Street, assuming the use of chillers with sound power levels of 100 dBA or lower.

As seen in Table 3.13-5 and Figure 3.13-3, generator testing concurrent with HVAC and substation operations would result in noise levels reaching, but not exceeding, 55 dBA L_{eq} at the nearest

property line of the residences along Main Street. As generator testing will only take place during daytime hours, this would not result in standards being exceeded. Daytime and nighttime light industrial limits of 70 dBA L_{eq} would not be exceeded at any time. Again, this assumes that the design goal of 70 dBA at a distance of 23 feet under full load is achieved for each 3-MW double-stacked or individual generator.

Table 3.13-5: Calculated Noise Levels Resulting from Mechanical Equipment Operations						
Receiver Location	Receiver Number	Calculated Noise Levels, dBA L_{eq}		Nighttime Threshold, dBA L_{eq}	Daytime Threshold, dBA L_{eq}	Exceedances
		Mechanical Equipment Only (Nighttime)	Mechanical Equipment and Generator Testing under 100% Load (Daytime)			
Main Street	R1	50	55	50	55	None
						None
	R2	50	52	50	55	None
						None
	R3	49	50	50	55	None
						None
Avila Avenue	R4	49	54	50	55	None
						None
	R5	49	52	50	55	None
						None
	R6	50	50	50	55	None
						None
Di Giulio Avenue	R7	35	49	50	55	None
						None
2100 – 2300 Ronald Street	R8	49	49	50	55	None
						None
	R9	47	50	70	70	None
						None
1330 Memorex	R10	49	49	70	70	None
						None
	R11	51	51	70	70	None
						None
Byington Steel	R12	59	59	70	70	None
						None
	R13	58	58	70	70	None
						None



Source: Illingworth & Rodkin, Inc., November 2, 2020.

NOISE EXPOSURE RESULTING FROM HVAC EQUIPMENT AND ELECTRICAL SUBSTATION

FIGURE 3.13-2



NOISE EXPOSURE RESULTING FROM HVAC EQUIPMENT, SUBSTATION, AND SINGLE GENERATOR TESTED UNDER FULL LOAD

FIGURE 3.13-3

To ensure the project conditions assumed in this noise analysis are enforceable, the project would be required to implement the following mitigation measures to reduce operational noise to less than significant levels.

Mitigation Measures:

- MM NOI-1.2:** The building shall include a rooftop screen wall reaching 14 feet in height above the roof, meeting a minimum surface weight of three pounds per square foot (such as one-inch-thick wood, ½-inch laminated glass, masonry block, concrete, or one-inch metal). The screen wall shall extend along the full length of the building's southern façade, a minimum distance of 225 feet north of the southwestern corner of the building along the western façade, and a minimum distance of 135 feet north of the southeastern corner of the building along the eastern façade.
- MM NOI-1.3:** Each chiller shall meet a sound power level goal of 100 dBA or less.
- MM NOI-1.4:** Each generator shall meet a design goal of 70 dBA or less at a lateral distance of 23 feet and a height of five feet above ground under full load. Generators shall be tested one at a time during daytime hours only.
- MM NOI-1.4:** Each generator shall be equipped with an exhaust silencer so that noise from the exhaust would not exceed 63 dBA at a lateral distance of 23 feet and a height of five feet above ground.

With implementation of the identified mitigation measures, noise from on-site equipment operations would not result in exceedances of criteria set in Section 9.10.040 of the City of Santa Clara City Code. **(Less than Significant Impact with Mitigation Incorporated)**

Impact NOI-2: The project would not result in generation of excessive groundborne vibration or groundborne noise levels. **(Less than Significant Impact)**

The City of Santa Clara does not specify a construction vibration limit. For structural damage, the California Department of Transportation recommends a vibration limit of 0.5 in/sec PPV for new residential and modern commercial/industrial structures, 0.3 in/sec PPV for older residential structures, and a limit of 0.25 in/sec PPV for historic and some old buildings. The 0.3 in/sec PPV vibration limit would be applicable to residences along Main Street. The 0.5 in/sec PPV vibration limit would be applicable to other properties in the vicinity of the project site.

The construction of the project may generate perceptible vibration when heavy equipment or impact tools are used. Construction activities would include demolition, site preparation, grading and excavation, trenching, building (exterior), interior/architectural coating, and paving. Other project construction activities, such as the use of jackhammers, rock drills, and other high-power or vibratory tools, and rolling stock equipment may potentially generate substantial vibration in the immediate vicinity. Erection of the building structure is not anticipated to be a source of substantial vibration

with the exception of sporadic events such as dropping of heavy objects, which should be avoided to the extent possible.

The closest structures to the project site are residences to the south along Main Street, located 140 feet from the site, commercial buildings along Ronald Street to the east, located about 25 feet from the site, and commercial buildings along Memorex Drive to the north and east, located approximately 75 and 15 feet from the site.

Table 3.13-6 presents typical vibration levels that could be expected from construction equipment at a reference distance of 25 feet and calculated levels at distances of 15 feet, 75 feet, and 150 feet.

Table 3.13-6: Vibration Source Levels for Construction Equipment					
Equipment		Distance from Vibration Source			
		Reference PPV at 25 feet (in/sec)	PPV at 15 feet (in/sec)	PPV at 75 feet (in/sec)	PPV at 150 feet (in/sec)
Clam shovel drop		0.202	0.354	0.060	0.028
Hydromill (slurry wall)	In soil	0.008	0.014	0.001	0.001
	In rock	0.017	0.030	0.002	0.002
Vibratory Roller		0.210	0.368	0.063	0.029
Hoe Ram		0.089	0.156	0.027	0.012
Large bulldozer		0.089	0.156	0.027	0.012
Caisson drilling		0.089	0.156	0.027	0.012
Loaded trucks		0.076	0.133	0.023	0.011
Jackhammer		0.035	0.061	0.010	0.005
Small bulldozer		0.003	0.005	0.001	0.000

As indicated in Table 3.13-6, construction vibration levels associated with the proposed data center facility are not anticipated to exceed 0.3 in/sec PPV at the nearest residences, located 140 feet from the site, or exceed 0.5 in/sec PPV at the nearest commercial structures, located 15 to 75 feet from the site. Vibration levels would be further below the threshold at more distant locations.

Construction of the proposed transmission line would generate less vibration than construction of the data center facility. Installation of the overhead poles could occur as close as 20 feet from existing residences on Di Giulio Avenue, but would not involve the use of equipment that generates substantial vibration (i.e., clam shovel drop, vibratory roller, etc.). Construction activities associated with the potential underground portion of the transmission line would occur in the street right-of-way at a distance greater than 25 feet from nearby buildings and would not generate substantial vibration at nearby structures. **(Less than Significant Impact)**

Impact NOI-3: The project would not be located within the vicinity of a private airstrip, but is subject to an airport land use plan. Nevertheless, the project would not expose people residing or working in the project area to excessive noise levels. **(Less than Significant Impact)**

Norman Y. Mineta International Airport is located approximately 0.65 mile east of the project site. The project site located outside of the 60 dBA CNEL airport noise exposure contour shown in the Norman Y. Mineta International Airport Master Plan Update Project Report. This noise level would be considered compatible with the proposed industrial use. **(Less than Significant Impact)**

3.13.2.2 Cumulative Impacts

Impact NOI-C: The project would not result in a cumulatively considerable contribution to a cumulatively significant noise impact. **(Less than Significant Cumulative Impact)**

Temporary Construction Noise

The geographic area for cumulative construction noise impacts is the immediate project vicinity. The nearest pending/approved projects are located at 917 Warburton Avenue, approximately 1,930 feet southeast of the project site, and 1627 Monroe Street, approximately 2,270 feet south of the project site. Noise from sources at this distance would not overlap in a manner that noticeably increases noise levels in the immediate vicinity of either project. Construction noise would be temporary and construction measures (required by the City Code) would be implemented to reduce construction noise. Therefore, construction of the projects would not result in a significant cumulative construction noise impact. **(Less Than Significant Cumulative Impact)**

Permanent Noise

The geographic area for cumulative permanent noise impacts includes the project site and surrounding roadways. A significant impact would occur if the cumulative traffic noise level increase was three dBA CNEL or greater for future levels exceeding normally acceptable levels or was five dBA CNEL or greater for future levels at or below normally acceptable levels and if the project would make a “cumulatively considerable” contribution to the overall traffic noise increase. As discussed in Section 3.13.2.1, the project would decrease daily roadway volumes compared to existing site uses, and would not exceed acceptable noise levels. Therefore, the cumulative projects (including the proposed project) would not result in a significant cumulative permanent noise increase. **(Less than Significant Cumulative Impact)**

3.14 POPULATION AND HOUSING

3.14.1 Environmental Setting

3.14.1.1 *Regulatory Framework*

State

Housing-Element Law

State requirements mandating that housing be included as an element of each jurisdiction's general plan is known as housing-element law. The Regional Housing Need Allocation (RHNA) is the state-mandated process to identify the total number of housing units (by affordability level) that each jurisdiction must accommodate in its housing element. California housing-element law requires cities 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.⁸⁰

The City of Santa Clara Housing Element and related land use policies were last updated in December of 2014.

Regional and Local

Plan Bay Area 2040

Plan Bay Area 2040 is a long-range transportation, land-use, and housing plan intended support a growing economy, provide more housing and transportation choices, and reduce transportation-related pollution and GHG emissions in the Bay Area. Plan Bay Area 2040 promotes compact, mixed-use residential and commercial neighborhoods near transit, particularly within identified Priority Development Areas (PDAs).⁸¹

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).

⁸⁰ California Department of Housing and Community Development. "Regional Housing Needs Allocation and Housing Elements" Accessed October 28, 2020. <http://hcd.ca.gov/community-development/housing-element/index.shtml>.

⁸¹ Association of Bay Area Governments and Metropolitan Transportation Commission. "Project Mapper." <http://projectmapper.planbayarea.org/>. Accessed October 28, 2020.

3.14.1.2 *Existing Conditions*

According to the California Department of Finance data, the City had a population of approximately 129,104 residents as of January 1, 2020.⁸² The Association of Bay Area Governments projects the Santa Clara population to be 137,215 in 2025 and 159,500 in 2040.⁸³

The job/housing ratio quantifies the relationship between the number of housing units required as a result of local jobs and the number of residential units available in the City. When the ratio reaches 1.0, a balance is struck between the supply of local housing and local jobs. The jobs/housing ratio is determined by dividing the number of local jobs by the number of employed residents that can be housed in local housing. The City of Santa Clara has fewer employed residents than jobs with a ratio of approximately two jobs per employed resident.⁸⁴ Accordingly, most employees within the City are required to seek housing outside of the community. ABAG estimates that the City of Santa Clara had 102,950 jobs in 2010, will have 151,310 jobs by 2025, and 170,575 jobs by 2040.⁸⁵

The project site is currently developed with three buildings: a three-story approximately 300,000 square foot building, a two-story approximately 46,000 square foot building, and a one-story approximately 2,950 square foot building. Existing uses on the site are light industrial in nature and include operations such as aluminum plating, metal cleaning/polishing, a machine shop, construction contractors, a brewery, material storage, vehicle storage, and hauling. There are no residences on-site.

3.14.2 Impact Discussion

For the purpose of determining the significance of the project's impact on population and housing, 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)?
- 2) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

⁸² State of California, Department of Finance, E-1 Population Estimates for Cities, Counties and the State with Annual Percent Change — January 1, 2019 and 2020.

⁸³ Association of Bay Area Governments. Plan Bay Area Projections 2040. November 2018.

http://mtcmedia.s3.amazonaws.com/files/Projections_2040-ABAG-MTC-web.pdf

⁸⁴ Based on the ABAG-projected 106,750 jobs in 2010 and Santa Clara General Plan Housing Element.

⁸⁵ Association of Bay Area Governments. Plan Bay Area Projections 2040. November 2018.

http://mtcmedia.s3.amazonaws.com/files/Projections_2040-ABAG-MTC-web.pdf

3.14.2.1 *Project Impacts*

Impact POP-1: The project would not induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure). **(Less than Significant Impact)**

The project would demolish the existing industrial buildings on the site to construct a four-story 472,920 square foot data center building with an attached six-story 87,520 square foot ancillary use component (of which roughly 51,000 square feet would be office space), for a combined square footage of 560,440. The project would be a low employment-generating use, supporting fewer jobs than the existing site buildings, 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 and would, therefore, result in a less than significant population and housing impacts. **(Less than Significant Impact)**

Impact POP-2: The project would not displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere. **(No Impact)**

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)**

3.14.2.2 *Cumulative Impacts*

Impact POP-C: The project would not result in a cumulatively considerable contribution to a cumulatively significant population and housing impact. **(Less than Significant Cumulatively Considerable Contribution to a Significant Cumulative Impact)**

The geographic area for cumulative population and housing impacts is the City of Santa Clara. The cumulative job-producing projects in the City would be inconsistent with applicable land use policies aimed at improving the City's jobs/housing balance and related assumptions in the existing General Plan. Worsening the City's jobs-housing imbalance results in secondary impacts of traffic, air quality and GHG emissions. The project would be a low employment-generating use, supporting fewer jobs than the existing site buildings, therefore approval of the project would be a minor increment of the overall jobs represented by the cumulative projects. For this reason, the jobs added by the project would not make a cumulatively considerable contribution to a worsening of the jobs/housing imbalance. **(Less than Cumulatively Considerable Contribution to a Significant Cumulative Impact)**

3.15 PUBLIC SERVICES

3.15.1 Environmental Setting

3.15.1.1 *Regulatory Framework*

State

Government Code Section 66477

The Quimby Act (included within Government Code Section 66477) requires local governments to set aside parkland and open space for recreational purposes. It provides provisions for the dedication of parkland and/or payment of fees in lieu of parkland dedication to help mitigate the impacts from new residential developments. The Quimby Act authorizes local governments to establish ordinances requiring developers of new residential subdivisions to dedicate parks, pay a fee in lieu of parkland dedication, or perform a combination of the two.

Government Code Section 65995 through 65998

California Government Code Section 65996 specifies that an acceptable method of offsetting a project's effect on the adequacy of school facilities is the payment of a school impact fee prior to the issuance of a building permit. Government Code Sections 65995 through 65998 set forth provisions for the payment of school impact fees by new development by "mitigating impacts on school facilities that occur (as a result of the planning, use, or development of real property" (Section 65996[a]). The legislation states that the payment of school impact fees "are hereby deemed to provide full and complete school facilities mitigation" under CEQA (Section 65996[b]).

Developers are required to pay a school impact fee to the school district to offset the increased demands on school facilities caused by the proposed residential development project. The school district is responsible for implementing the specific methods for mitigating school impacts under the Government Code.

Regional and Local

Countywide Trails Master Plan

The Santa Clara County Trails Master Plan Update is a regional trails plan approved by the Santa Clara County Board of Supervisors. It provides a framework for implementing the County's vision of providing a contiguous trail network that connects cities to one another, cities to the county's regional open space resources, County parks to other County parks, and the northern and southern urbanized regions of the County. The plan identifies regional trail routes, sub-regional trail routes, connector trail routes, and historic trails.

Santa Clara General Plan

Applicable public services General Plan policies include, but are not limited to, the following listed below.

Policies	Description
5.9.3-P3	Maintain a City-wide average three-minute response time for 90 percent of police emergency service calls.
5.9.3-P4	Maintain a City-wide average three-minute response time for fire emergency service calls.

3.15.1.2 *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 (Station 10 is temporarily closed while it is relocated) consisting of eight engines, two trucks, one rescue/light unit, two ambulances, one hazardous materials unit and one command vehicle. The closest fire station to the project site is Station 2, located at 1900 Walsh Avenue, which is 1.1 miles northwest of the project site and Station 1, located at 777 Benton St, which is also 1.1 miles away from the site to the southeast.⁸⁶

The Fire Department responds with highly trained and equipped personnel to emergency scenes, maintaining a City-wide response time of less than 5:30 minutes to 90 percent of all high-level emergency calls. Response time is measured from time of dispatch to the time of arrival at the call.⁸⁷

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 1.3 miles southeast of the project site.⁸⁸

The General Plan identifies a public service goal to maintain the SCPD response time average of three minutes for all areas of the City.⁸⁹

Parks and Schools

The nearest neighborhood park to the project site is Larry J. Marsalli Park, located at 1425 Lafayette Street (approximately 0.8 miles southeast of the site) and it is farther than a 10-minute walk.

The nearest public schools to the project site are Scott Lane Elementary School, located at 1925 Scott Boulevard (approximately 1.5 miles southwest of the site⁹⁰), Cabrillo Middle School, located at 2550 Cabrillo Avenue (approximately 2.1 miles southwest of the site), and Santa Clara High School, located at 3000 Benton Street (approximately 3.2 miles southwest of the site). The nearest private

⁸⁶ City of Santa Clara Fire Department. "About Us." <http://santaclaraca.gov/government/departments/fire/about-us>. Accessed on November 11, 2019.

⁸⁷ City of Santa Clara. "Emergency Services." Accessed November 13, 2019. <http://santaclaraca.gov/residents/emergency-services>.

⁸⁸ City of Santa Clara Police Department. "About Us." Accessed on November 13, 2019. <http://santaclaraca.gov/government/departments/police-department/about-us>.

⁸⁹ City of Santa Clara. *City of Santa Clara 2010-2035 General Plan*. Section 5.9.3. November 2010.

⁹⁰ The school is located 1.5 miles via car or .35 miles southwest in a straight line (as the crow flies), as referenced in Section 3.10.

school to the site is Saint Clare School, located at 725 Washington Street (approximately 1.4 miles southeast of the site).

3.15.2 Impact Discussion

For the purpose of determining the significance of the project's impact on public services, would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:

- 1) Fire protection?
- 2) Police protection?
- 3) Schools?
- 4) Parks?
- 5) Other public facilities?

3.15.2.1 *Project Impacts*

Impact PS-1:	The project would not result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for fire protection services. (Less than Significant Impact)
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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 (though lower employment) 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 impacts) in order to maintain acceptable service ratios, response times or other performance objectives for fire protection services. **(Less than Significant Impact)**

Impact PS-2: The project would not result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for police protection services. **(Less than Significant Impact)**

The project site is currently served by the SCPD. The project may result in an incremental increase in the need for police services associated with increased building area (though lower employment) 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)**

Impact PS-3: The project would not result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for schools. **(No Impact)**

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 would not require new or expanded school facilities, the construction of which could cause environmental impacts. **(No Impact)**

Impact PS-4: The project would not result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for parks. **(Less than Significant Impact)**

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 employees at the project site may visit local parks; however, this would be a reduction compared to current site employment levels and this use would not create the need for any new facilities or adversely impact the physical condition of existing facilities. **(Less than Significant Impact)**

Impact PS-5: The project would not result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for other public facilities. **(No Impact)**

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 employees at the project site may visit library facilities; however, this would be a reduction compared to current site employment levels and this would not create the need for any new facilities or adversely impact the physical condition of existing facilities. **(No Impact)**

3.15.2.2 *Cumulative Impacts*

Impact PS-C: The project would not result in a cumulatively considerable contribution to a cumulatively significant public services impact. **(Less than Significant Cumulative Impact)**

The geographic area for cumulative public services impacts is the City of Santa Clara. All cumulative projects would be built in conformance with current codes and public safety requirements in the General Plan. The project would not develop residences, and therefore, would not result in a cumulatively considerable contribution to a cumulative park and recreational facility impacts. For this reason, the cumulative projects would result in a less than significant cumulative impact to police, fire, and recreational facilities. **(Less than Significant Cumulative Impact)**

The project does not propose construction of residences, and therefore, would not contribute to cumulative school or library impacts. **(No Cumulative Impact)**

3.16 RECREATION

3.16.1 Environmental Setting

3.16.1.1 *Regulatory Framework*

State

Government Code Section 66477

The Quimby Act (included within Government Code Section 66477) requires local governments to set aside parkland and open space for recreational purposes. It provides provisions for the dedication of parkland and/or payment of fees in lieu of parkland dedication to help mitigate the impacts from new residential developments. The Quimby Act authorizes local governments to establish ordinances requiring developers of new residential subdivisions to dedicate parks, pay a fee in lieu of parkland dedication, or perform a combination of the two.

Local

Santa Clara General Plan

Applicable recreational services General Plan policies, include, but are not limited to, the following listed below.

Policies	Description
Prerequisite	
5.1.1-P20	Prior to 2023, identify the location for new parkland and/or recreational facilities to serve employment centers and pursue funding to develop these facilities by 2035.

3.16.1.2 *Existing Setting*

The City of Santa Clara Parks & Recreation Department (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 April 2021, the Department maintains and operates Central Park, a 45.04-acre community park (45.04 acres improved and Central Park North 34.93 acres unimproved, resulting in 79.97 acres), 30 neighborhood parks (124.517 acres improved and 6.132 acres unimproved resulting in 130.65 acres), 13 mini parks (2.59 acres improved and 3.189 acres unimproved resulting in 5.779 acres), public open space (16.13 acres improved and 40.08 acres unimproved resulting in 56.21 acres), recreational facilities (23.898 acres excluding the Santa Clara Golf and Tennis Club/BMX track), recreational trails (7.59 acres improved and 0.20 acres unimproved resulting in 7.79 acres), and joint use facilities (48.588 acres) throughout the City totaling approximately 268.354 improved acres and 84.531 unimproved acres. Community parks are over fifteen acres, neighborhood parks are one to fifteen acres and mini parks are typically less than one acres 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 recreation

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, Bob Fatjo Sports Center which includes the Tony Sanchez Field as well as a second lighted softball field, the Santa Clara Tennis Center with eight lighted tennis courts and a practice wall, open space, a lake, large group picnic areas, restroom facilities, a lawn bowling green, and an exercise course.

In addition to the parklands and facilities within Central Park, the City currently has a gymnastics center, a bicycle track, dog parks, 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 normal school hours.

The nearest neighborhood park to the project site is Larry J. Marsalli Park, located at 1425 Lafayette Street (approximately 0.8 miles southeast of the site) and it is farther than a 10-minute walk.

3.16.2 Impact Discussion

For the purpose of determining the significance of the project's impact on recreation:

- 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 would occur or be accelerated?
- 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?

3.16.2.1 *Project Impacts*

Impact REC-1:	The project would not increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated. (Less than Significant Impact)
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The proposed project would be a reduction compared to current site employment levels. Some 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)**

Impact REC-2:	The project would not include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment. (Less than Significant Impact)
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The proposed project would not include recreational facilities. Some employees may use nearby parks and recreational facilities; however, this would be a reduction compared to current site employment levels and this would not require the construction or expansion of recreational facilities. **(Less than Significant Impact)**

3.16.2.2 *Cumulative Impacts*

Impact REC-C: The project would not result in a cumulatively considerable contribution to a cumulatively significant recreation impact. **(Less than Significant Cumulative Impact)**

The geographic area for cumulative park/recreational facility impacts is the City of Santa Clara. The proposed project would be an industrial development and would not include new residences. While employees of the project may use nearby parks and trails during lunch breaks, this would be a reduction compared to current site employment levels and the project would not result in permanent new residents that would substantially increase park use such that physical deterioration would occur. The project would not substantially contribute to the cumulative impacts to parks in the area. For these reasons, cumulative impacts to recreational facilities would be less than significant. **(Less Than Significant Cumulative Impact)**

3.17 TRANSPORTATION

The discussion in this section is based in part upon a VMT Evaluation completed using the VMT Evaluation Tool in May 2021. A copy of this assessment is included in Appendix K of this EIR.

3.17.1 Environmental Setting

3.17.1.1 *Regulatory Framework*

State

Regional Transportation Plan

MTC is the transportation planning, coordinating, and financing agency for the nine-county San Francisco Bay Area, including Santa Clara County. MTC is charged with regularly updating the Regional Transportation Plan, a comprehensive blueprint for the development of mass transit, highway, airport, seaport, railroad, bicycle, and pedestrian facilities in the region. MTC and ABAG adopted Plan Bay Area 2040 in July 2017, which includes a Regional Transportation Plan to guide regional transportation investment for revenues from federal, state, regional and local sources through 2040.

Senate Bill 743

SB 743 establishes criteria for determining the significance of transportation impacts using a vehicle miles traveled (VMT) metric intended to promote the reduction of GHG emissions, the development of multimodal transportation networks, and a diversity of land uses. Specifically, SB 743 requires analysis of VMT in determining the significance of transportation impacts. Local jurisdictions were required by Governor's Office of Planning and Research (OPR) to implement a VMT policy by July 1, 2020.

SB 743 did not authorize OPR to set specific VMT impact thresholds, but it did direct OPR to develop guidelines for jurisdictions to utilize. CEQA Guidelines Section 15064.3(b)(1) describes factors that might indicate whether a development project's VMT may be significant.

Regional and Local

Congestion Management Program

VTA oversees the Congestion Management Program (CMP), which is aimed at reducing regional traffic congestion. The relevant state legislation requires that urbanized counties in California prepare a CMP in order to obtain each county's share of gas tax revenues. State legislation requires that each CMP define traffic LOS standards, transit service standards, a trip reduction and transportation demand management plan, a land use impact analysis program, and a capital improvement element. VTA has review responsibility for proposed development projects that are expected to affect CMP-designated intersections.

Vehicle Miles Traveled Transportation Analysis Policy

The City of Santa Clara currently adopted its VMT policy in June 2020. For industrial projects the City's VMT policy states that a project would have a significant impact if the project's VMT per employee is greater than 15 percent below the existing Countywide VMT per employee.

Santa Clara General Plan

General Plan policies applicable to transportation/traffic relevant to the proposed project include the following.

Policies	Description
5.4.1-P11	Locate parking at the side or rear of parcels and active uses along street frontages.
5.8.1-P5	Work with local, regional, State and private agencies, as well as employers and residents, to encourage programs and services that reduce vehicle miles traveled.
5.8.2-P1	Require that new and retrofitted roadways implement "Full-Service Streets" standards, including minimal vehicular travel lane widths, pedestrian amenities, adequate sidewalks, street trees, bicycle facilities, transit facilities, lighting and signage, where feasible.
5.8.3-P8	Require new development to include transit stop amenities, such as pedestrian pathways to stops, benches, traveler information and shelters.
5.8.3-P9	Require new development to incorporate reduced on-site parking and provide enhanced amenities, such as pedestrian links, benches and lighting, in order to encourage transit use and increase access to transit services.
5.8.4-P6	Require new development to connect individual sites with existing and planned bicycle and pedestrian facilities, as well as with on-site and neighborhood amenities/services, to promote alternate modes of transportation.
5.8.4-P8	Require new development and public facilities to provide improvements, such as sidewalks, landscaping and bicycling facilities, to promote pedestrian and bicycle use.
5.8.4-P9	Encourage pedestrian- and bicycle-oriented amenities, such as bicycle racks, benches, signalized mid-block crosswalks, and bus benches or enclosures.
5.8.4-P10	Encourage safe, secure and convenient bicycle parking and end-of-trip, or bicycle "stop" facilities, such as showers or bicycle repair near destinations for all users, including commuters, residents, shoppers, students and other bicycle travelers.
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 transportation demand management programs that provide incentives for the use of alternative travel modes to reduce the use of single-occupancy vehicles.
5.8.6-P3	Encourage flexible parking standards that meet business and resident needs as well as avoid an oversupply in order to promote transit ridership, bicycling and walking.
5.8.6-P11	Encourage development to "unbundle" parking spaces from leases and purchases to provide greater choices.

Santa Clara Bicycle and Pedestrian Master Plans

The City of Santa Clara Bicycle Plan Update 2018 establishes a long-term vision for improving bicycling in Santa Clara through policy, program, and project recommendations. Through the implementation of this Plan, the City intends to become a world-class bicycle community that prioritizes health and sustainability for its residents and visitors.

The City of Santa Clara Pedestrian Master Plan 2019 establishes a blueprint for creating safe, comfortable and enjoyable walking for current and future residents and visitors. The Plan is intended to make Santa Clara a walkable community that provides a comprehensive network of safe, convenient, and comfortable pedestrian routes for people of all ages and abilities.

3.17.1.2 *Existing Conditions*

Regional Roadway Access

Regional access to the project site is provided by Highway 101 (US 101) and Central Expressway as described below.

US 101 provides access to the project site via Lafayette Street and Mission College Boulevard. US 101 is a regional north/south freeway with six mixed-flow lanes and two high occupancy vehicle lanes in the project area. US 101 extends through the entire Bay Area north of San Francisco and south of San José.

Central Expressway is a regional east/west expressway with four lanes. Central Expressway extends from San Antonio Road in Mountain View to De La Cruz Boulevard in Santa Clara.

Local Roadway Access

Local access to the project site is provided via Lafayette Street, Memorex Drive, and Martin Avenue. These roadways are described below.

Lafayette Street is a north/south four-to-five-lane arterial road in the vicinity of the site. It extends from Alviso in North San Jose to Poplar Street in Santa Clara. North of Reed Street, Lafayette Street operates as a five-lane roadway with two lanes in each direction and a center turn lane. South of Reed Street, Lafayette Street is a four-lane roadway with two lanes in each direction. Lafayette Street is east of the project site and provides access via Memorex Drive.

Martin Avenue is an east/west four-lane roadway in the vicinity of the project site. It extends from Walsh Avenue to De la Cruz Boulevard. Martin Avenue is north of the project site and provides access via Memorex Drive. Parking is allowed on both sides of the roadway.

Memorex Drive is an east/west two-to-three-lane roadway in the vicinity of the project site (west of the project site the roadway curves north). The roadway extends from Lafayette Street to Richard Avenue. It has a posted speed of 25 miles per hour (mph). Two project driveways would be located along Memorex Drive.

Ronald Street begins at Memorex Drive and ends at Lafayette Street. Ronald Street is also known as Di Giulio Avenue beginning at the bend in the roadway. A project driveway would be located on Di Giulio Avenue.

Existing Transit Service

Bus Service

The nearest bus stop to the project site is the Scott Boulevard and Walsh Avenue stop, approximately 0.8 miles northwest of the project site. Local route 60 provides bus service to the Scott Boulevard and Walsh Avenue stop.⁹¹

Caltrain and ACE

The Santa Clara Caltrain station is located approximately 1.5 miles southeast of the project site, near Railroad Avenue and El Camino Real. Caltrain commuter rail service between San Francisco to Gilroy and the Altamont Commuter Express (ACE) rail service between Stockton and San Jose both stop at the Santa Clara Caltrain Station. Caltrain provides service with 15- to 30-minute headways during commute hours. The ACE rail service operates four trains during the morning and afternoon commute periods.

Bicycle and Pedestrian Facilities

Bicycle Facilities

Bicycle facilities comprise paths (Class I), lanes (Class II), routes (Class III), and protected bike lanes (Class IV). Bicycle paths are paved trails that are separate from roadways. Bicycle lanes are lanes on roadways designated for bicycle use by striping, pavement legends, and signs. Bicycle routes are roadways designated for bicycle use by signs only. Protected bike lanes are on-street bicycle facilities that are physically separated from motor vehicle traffic by a vertical element or barrier, such as a curb, bollards, or vehicle parking aisle. Class II bike lanes are located on portions of Scott Boulevard, west of the project site.⁹²

Pedestrian Facilities

Pedestrian access to the site is provided by sidewalks on the site's northern frontage on Memorex Drive. Sidewalks are also located on the west side of Ronald Street/Di Giulio Avenue.

3.17.2 Impact Discussion

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

- 1) Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadways, bicycle lanes, and pedestrian facilities?

⁹¹ Santa Clara Valley Transportation Authority. *Bus and Rail Map*. <https://www.vta.org/sites/default/files/2019-07/VTA%20Main%20Map%20JUL%202019.pdf> Accessed on November 11, 2019.

⁹² Silicon Valley Bicycle Coalition. *Maps*. <https://bikesiliconvalley.org/maps/> Accessed November 12, 2019.

- 2) Conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)?
- 3) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?
- 4) Result in inadequate emergency access?

3.17.2.1 *Project Impacts*

Impact TRN-1: The project would not conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadways, bicycle lanes, and pedestrian facilities. **(Less than Significant Impact)**

The VTA Congestion Management Plan (CMP) guidelines state that a project's traffic impacts should be analyzed during the weekday AM and PM peak periods if it will add more than 100 peak hour trips to the roadway network. Based upon Trip Generation analysis below, the project would not exceed the 100 peak hour trips threshold. As a result, no formal traffic impact analysis to evaluate changes in intersection level of service is required or proposed.

Vehicle Trips

The project would have low employment intensity and would not generate substantial vehicle trips. A trip generation estimate was completed to determine the net change in trips compared to existing conditions on the site (refer to Table 3.17-1, below). Trip generation rates for existing uses on the site were based on the Institute of Transportation Engineers' (ITE) Trip Generation Manual, Tenth Edition's trip generation rates for general light industrial land uses (land use code 110). Trip generation rates for the proposed project were based on ITE rates for data centers (land use code 160) and general office buildings (land use code 710). The trip rates for existing uses were applied to 348,950 square feet of light industrial building area and roughly 100,000 square feet of active outdoor light industrial uses, resulting in an estimated total of 2,227 existing daily trips, with 314 occurring in the AM peak hour and 283 occurring in the PM peak hour. For the proposed uses, the general office building trip rate was applied to the 51,000 square feet of office area, and the data center trip rate was applied to the remaining 509,440 square feet of the project, resulting in an estimated total of 1,001 daily project trips, with 115 occurring in the AM peak hour and 105 occurring in the PM peak hour. Based on ITE trip rates, the project would result in a net reduction of 1,226 daily vehicle trips, 129 AM peak hour trips, and 115 PM peak hour trips. The project, therefore, would not conflict with programs, plans, ordinances or policies addressing the circulation system as it pertains to roadways.

Table 3.17-1: Trip Generation							
Methodology	Size (square feet)	Weekday		AM Peak Hour		PM Peak Hour	
		Rate	Trips	Rate	Total	Rate	Total
Existing Uses							
General Light Industrial (ITE Land Use Code 110)	448,950	4.96	2,227	0.70	314	0.63	283
Proposed Uses							
Data Center (ITE Land Use Code 160)	509,440	0.99	504	0.11	56	0.09	46
General Office Building (ITE Land Use Code 710)	51,000	9.74	497	1.16	59	1.15	59
Net Trip Generation							
Total		--	-1,226	--	-199	--	-178
Source: Institute of Transportation Engineers. Trip Generation Manual, 10 th Edition. 2017.							

Bicycle and Pedestrian Facilities

The project would retain the existing sidewalk on Memorex Drive, Ronald Street, and Di Giulio Avenue. In addition, the project would reduce the number of driveways on Memorex Drive and replace those driveways with a new sidewalk. The project, therefore, would not conflict with pedestrian circulation in the area, and would be consistent with the City's adopted Pedestrian Master Plan.

No bicycle lanes are located adjacent to the project site along Memorex Drive, Ronald Street, or Di Giulio Avenue. Thus, the project would not conflict with any existing or planned bicycle facilities within the project area, and would be consistent with the City's adopted Bicycle Master Plan. Additionally, as described previously, the project would provide bicycle parking, which is consistent with plans and policies intended to facilitate alternative modes of transportation and reduce VMT.

Transit Facilities

VTA, Caltrain and ACE provide transit service within the project vicinity. The nearest bus stop to the project site is the Scott Boulevard and Walsh Avenue stop, approximately 0.8 miles northwest of the project site, which is served by local route 60. There are adequate pedestrian pathways connecting the project site to the bus stop.

The project is not proposing public improvements that would disrupt existing transit services or facilities nor conflict with an existing or planned transit facility. Additionally, as described below, mitigation measure MM TRN-2.1 would require the project to implement a TDM program that would include measures such as commute trip reduction education and transit subsidies, which is

consistent with plans and policies intended to facilitate transit use and reduce VMT. **(Less than Significant Impact)**

Impact TRN-2: The project would not conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b). **(Less than Significant Impact with Mitigation Incorporated)**

The CEQA Guidelines Section 15064.3, Subdivision (b)(1) states that land use projects with vehicle miles traveled (VMT) exceeding an applicable threshold of significance may indicate a significant impact. The City of Santa Clara currently adopted its VMT policy in June 2020. For industrial projects such as the proposed data center, the City's VMT policy states that a project would have a significant impact if the VMT per employee is greater than 15 percent below the existing Countywide VMT per employee. The Countywide VMT per employee is 16.64, meaning a project-level VMT greater than 14.14 would be considered significant. The VTA's VMT Evaluation Tool was used to determine the project's VMT in comparison to the Countywide average (refer to Appendix K). The VMT Evaluation Tool determined that the project's VMT per employee would be 15.53, which is above the threshold of 15 percent below the Countywide average.

MM TRN-2.1: The project shall implement a TDM program sufficient to demonstrate that VMT associated with the project would be reduced to 14.14 or less per employee. The TDM program may include, but is not limited to, the following measures which have been determined to be a feasible method for achieving the required VMT reduction:

- Provide commute trip reduction marketing and education for all eligible employees.
 - Implement marketing campaign targeting all project employees and visitors that encourages the use of transit, shared rides, and active modes. Marketing strategies may include new employee orientation on alternative commute options, event promotions, and publications. Providing information and encouragement to use transit, share ride modes, and active modes, reducing drive-alone trips and thereby reducing VMT.
- Provide a subsidized or discounted transit program for all eligible employees.
 - This strategy requires the project employer to subsidize transit passes for participating employees.
- Provide a rideshare program for all eligible employees.
 - Organize a program to match individuals interested in carpooling who have similar commute patterns. Strategy encourages the use of carpooling, reducing the number of vehicle trips and thereby reducing VMT.

The TDM program shall be submitted and approved by the Director of Community Development and shall be monitored annually to gauge its effectiveness in meeting the required VMT reduction. The TDM program shall

establish an appropriate estimate of initial vehicle trips generated by the occupant of the proposed project and shall conduct driveway traffic counts annually to measure peak-hour entering and exiting vehicle volumes. The volumes will be compared to trip thresholds established in the TDM program to determine whether the required reduction in vehicle trips is being met. In addition to monitoring driveway volumes, a survey will be developed as part of the TDM program to determine actual mode splits for employees. The survey will also gather information on usage of individual TDM program components. The results of the annual vehicle counts and survey will be reported in writing to the Director of Community Development.

If TDM program monitoring results show that the trip reduction targets are not being met, the TDM program shall be updated to identify replacement and/or additional feasible TDM measures to be implemented. The updated TDM program shall be subject to the same approvals and monitoring requirements listed above.

If monitoring and reporting demonstrates that the project is non-compliant (i.e., did not fulfill the requirements of the TDM program, meet the drive-alone reduction targets, etc.), the City as the enforcing agency may impose penalties including fines and/or permit limitations.

The TDM measures listed in MM TRN-2.1 would be made available to all eligible employees. This analysis assumes that 100 percent of employees would participate in commute trip reduction marketing and education, the transit subsidy would be 50 percent, and 10 percent of employees would participate in a rideshare program. At these rates of participation, MM TRN-2.1 would reduce the project's VMT to 13.9 per employee, which is below the threshold of 14.14. As a result, the project's VMT would be reduced to a less than significant level with implementation of MM TRN-2.1. The project, therefore, would not conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b). **(Less than Significant Impact with Mitigation Incorporated)**

Impact TRN-3: The project would not substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment). **(No Impact)**

The project would not alter the shape of adjacent roadways or create any sharp curves or dangerous intersections. The project would reduce the number of driveways accessing public streets compared to current site conditions. The project, therefore, would not substantially increase hazards. **(No Impact)**

Impact TRN-4: The project would not result in inadequate emergency access. **(Less than Significant Impact)**

The City of Santa Clara standards require two-way driveways providing access to all properties be a minimum width of 22 feet (20-foot pavement with one-foot clearance on each side). Access to the site would be provided by two two-way driveways on Memorex Drive and one two-way driveway on

Di Giulio Avenue at similar locations to current driveways (refer to Figure 2.4). The western driveway on Memorex Drive would have a width 26 feet and the driveway on Di Giulio Avenue would have a width of 40 feet. These driveways would provide emergency vehicle access. The eastern driveway on Memorex Drive would have a two-foot wide median in the center of the driveway, with a width of 20 feet for vehicles entering the site and a width of 12 feet for vehicles exiting the site. This driveway would not meet width requirements for emergency vehicles. While this driveway would not meet width requirements for emergency vehicles, the project would provide full access to the site via the other two driveways (mentioned above) that meet emergency vehicle access requirements. The final site design would be required to be consistent with regulatory requirements for fire truck access. **(Less Than Significant Impact)**

3.17.2.2 Cumulative Impacts

Impact TRN-C: The project would not result in a cumulatively considerable contribution to a cumulatively significant transportation impact. **(Less than Significant Cumulative Impact)**

VMT

The City has established a VMT policy to ensure development in the City does not result in a significant cumulative increase in VMT. For industrial projects such as the proposed data center facility, the City requires a project VMT that does not exceed 15 percent below the Countywide average. As described in the discussion under Impact TRN-2, the project's VMT would be below the Countywide average with implementation of TDM measures, as required by MM TRN-2.1. Additionally, the project would result in a net reduction in daily trips to/from the site, and a net reduction in employment levels, all of which would serve to reduce total VMT generated at the site. As a result, the project would not result in, or contribute substantially to, a significant cumulative VMT impact. **(Less than Significant Cumulative Impact)**

General Plan Transportation Policies

The project would be consistent with applicable General Plan policies regarding transportation and, therefore, would not have a cumulatively considerable contribution to a significant cumulative conflict with those policies. **(Less than Significant Cumulative Impact)**

Emergency Access and Geometric Design

All cumulative projects (including the project) would comply with current building and fire codes and be reviewed by the Fire Department to ensure adequate emergency access. For these reasons, the cumulative projects would not result in a significant cumulative impact to emergency access. The project would provide adequate sight distance and would not substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment). For these reasons, the cumulative projects would not result in a significant cumulative impact due to transportation hazards. **(Less than Significant Cumulative Impact)**

3.18 TRIBAL CULTURAL RESOURCES

3.18.1 Environmental Setting

3.18.1.1 *Regulatory Framework*

State

Assembly Bill 52

AB 52, effective July 2015, established a new category of resources for consideration by public agencies called Tribal Cultural Resources (TCRs). AB 52 requires lead agencies to provide notice of projects to tribes that are traditionally and culturally affiliated with the geographic area if they have requested to be notified. Where a project may have a significant impact on a tribal cultural resource, consultation is required until the parties agree to measures to mitigate or avoid a significant effect on a tribal cultural resource or until it is concluded that mutual agreement cannot be reached.

Under AB 52, TCRs are defined as follows:

- Sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are also either:
 - Included or determined to be eligible for inclusion in the California Register of Historic Resources, or
 - Included in a local register of historical resources as defined in Public Resources Code Section 5020.1(k).
- A resource determined by the lead agency to be a TCR.

3.18.1.2 *Existing Conditions*

No Native American tribes have contacted the City pursuant to AB 52 to be notified about projects within the City for the purposes of requesting consultation.

3.18.2 Impact Discussion

For the purpose of determining the significance of the project's impact on tribal cultural resources, would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:

- 1) 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)?
- 2) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1? In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

3.18.2.1 *Project Impacts*

Impact TCR-1: The project would not cause a substantial adverse change in the significance of a tribal cultural resource that is listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k). **(Less than Significant Impact)**

No tribes have requested consultation for projects in the area under AB 52 and there are no known TCRs on-site. A record search of the NAHC Sacred Lands File was completed for the site and the results were negative.⁹³ While there is the potential for unknown Native American resources or human remains to be present in the project area, impacts would be less than significant with implementation of the City's General Plan policies and Standard Permit Conditions related to discovery of archaeological resources or human remains as well as implementation of mitigation incorporated into the project (described in detail in Section 3.5 Cultural Resources).

On December 5, 2019, letters were sent to the following Native American tribes based on the recommendation of the Native American Heritage Commission (NAHC): Amah Mutsun Tribal Band, the Ohlone Indian Tribe, Amah Mutsun Tribal Band of Mission San Juan Bautista, Indian Canyon Mutsun Band of Costanoan, Muwekma Ohlone Indian Tribe of the San Francisco Bay Area, and North Valley Yokuts Tribe. The letters contained information about the project; an inquiry for any unrecorded Native American cultural resources or other areas of concern within or adjacent to the project site; and a solicitation of comments, questions, or concerns with regard to the project. To date, one response was received from the Ohlone Indian Tribe requesting access to a "Phase I Literature Search and/or a Foot Survey" if they had been completed for the project. It is unclear whether the request is referring to a Phase I Environmental Site Assessment, which assesses potential hazardous materials conditions on the site and surrounding area, or a Cultural Resources Literature Search, which assesses potential archaeological resources on the site and surrounding area. Regardless, Appendices L and M include summaries of previous Phase I Environmental Site Assessments completed for the site, and Appendix D includes a Cultural Resources Literature Search completed for the site.

Because the record search of the NAHC Sacred Lands File did not identify the presence of TCRs on the site or surrounding area, and because no tribes responded to outreach letters indicating that TCRs are present on the site, the project would not cause a substantial adverse change in the significance of a tribal cultural resource that is listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k). **(Less than Significant Impact)**

⁹³ Nancy Gonzalez-Lopez, NAHC. Personal Communication. December 2, 2019.

Impact TCR-2: The project would not cause a substantial adverse change in the significance of a tribal cultural resource that is 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. **(Less than Significant Impact)**

As discussed under Impact TCR-1, there are no known TCRs on-site, and the project includes measures to reduce potential impacts to less than significant levels should TCRs be unexpectedly discovered during project construction. For this reason, the project would not cause a substantial adverse change in the significance of a TCR that is 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. **(Less than Significant Impact)**

3.18.2.2 *Cumulative Impacts*

Impact TCR-C: The project would not result in a cumulatively considerable contribution to a cumulatively significant tribal cultural resources impact. **(No Cumulative Impact)**

The geographic study area for cumulative impacts to tribal cultural resources is the surrounding area (within 1,000 feet of the project site). No tribal cultural features, including sites, features, places, cultural landscapes or sacred place have been identified at the site based on available information. Additionally, no tribes have sent written requests for notification of projects to the City of Santa Clara under AB 52. As a result, the project would not contribute to a cumulative impact to tribal resources. **(No Cumulative Impact)**

3.19 UTILITIES AND SERVICE SYSTEMS

3.19.1 Environmental Setting

3.19.1.1 *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 2016.

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.

California Green Building Standards Code

In January 2010, the State of California adopted the California Green Building Standards Code, establishing mandatory green building standards for all buildings in California. The code covers five categories: planning and design, energy efficiency, water efficiency and conservation, material conservation and resources efficiency, and indoor environmental quality. These standards include the

following mandatory set of measures, as well as more rigorous voluntary guidelines, for new construction projects to achieve specific green building performance levels:

- Reducing indoor water use by 20 percent;
- Reducing wastewater by 20 percent;
- Recycling and/or salvaging 50 percent of nonhazardous construction and demolition debris; and
- Providing readily accessible areas for recycling by occupants.

Local

General Plan

General Plan policies applicable to utilities and service systems include, but are not limited to, the following listed below.

Policies	Description
Prerequisite Policies	
5.1.1-P3	Prior to the implementation of Phase III of the General Plan, undertake a comprehensive assessment of water, sanitary sewer conveyance, wastewater treatment, solid waste disposal, storm drain, natural gas, and energy demand and facilities in order to ensure adequate capacity and funding to implement the necessary improvements to support development in the next phase.
5.1.1-P21	Prior to 2023, identify and secure adequate solid waste disposal facilities to serve development in Phase III.
5.10.1-P6	Require adequate wastewater treatment and sewer conveyance capacity for all new development.
General Land Use	
5.3.1-P9	Require that new development provide adequate public services and facilities, infrastructure, and amenities to serve the new employment or residential growth.
5.3.1-P11	Encourage new developments proposed within a reasonable distance of an existing or proposed recycled water distribution system to utilize recycled water for landscape irrigation, industrial processes, cooling and other appropriate uses to reduce water use consistent with the CAP.
5.3.1-P27	Encourage screening of above-ground utility equipment to minimize visual impacts.
5.3.1-P28	Encourage undergrounding of new utility lines and utility equipment throughout the City.
Safety	
5.10.5-P20	Maintain, upgrade and replace storm drains throughout the City to reduce potential flooding.
5.10.5-P21	Require that storm drain infrastructure is adequate to serve all new development and is in place prior to occupancy.

3.19.1.2 *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.⁹⁴ 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.⁹⁵ 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.⁹⁶

The existing water use on-site is approximately 2.2 million gallons per year.⁹⁷

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.⁹⁸ 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 businesses. The nearest recycled water lines are located in Lafayette Street as well as in the northern section of Martin Avenue off of Walsh Avenue.⁹⁹

Wastewater

The City of Santa Clara Departments of Public Works and Water and Sewer Utilities are responsible for the wastewater collection system within the City. Wastewater is collected by sewer systems in Santa Clara and is conveyed by pipelines to the Regional Wastewater Facility (RWF) located in San José. The RWF 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,

⁹⁴ City of Santa Clara. *2015 Urban Water Management Plan, City of Santa Clara Water Utility*. Page 12. Adopted November 2016. Accessed: November 21, 2019. <http://santaclaraca.gov/index.aspx?page=1984>.

⁹⁵ *Ibid.*

⁹⁶ *Ibid.*

⁹⁷ Estimate based on 2018-2019 utility bills for the site provided by the project applicant.

⁹⁸ City of Santa Clara. *Water Utility*. Updated July 2012. Accessed: November 21, 2019.

<http://santaclaraca.gov/government/departments/water-sewer-utilities/water-utility>.

⁹⁹ City of Santa Clara. *Recycled Water System Map, City of Santa Clara, California*. Updated July 2012. Accessed: November 12, 2020. <http://santaclaraca.gov/home/showdocument?id=14883>.

and Monte Sereno.¹⁰⁰ The RWF has available capacity to treat up to 167 million gallons per day (mgd). The RWF presently operates at an average dry weather flow of 110 mgd, which is 57 mgd (or 35 percent) under the facility's 167 mgd treatment capacity.¹⁰¹ Approximately 10 percent of the plant's effluent is recycled for non-potable uses and the remainder flows into San Francisco Bay.

The existing wastewater generation on-site is approximately 1.98 million gallons per year.¹⁰² Wastewater from the existing buildings on-site currently discharges to a ten inch sanitary sewer line along the western border of the site and a ten inch sanitary sewer line along Ronald Street, which both connect to a ten inch sanitary sewer line that flows east along Memorex Drive 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. The on-site drainage system is comprised of overland flows. Stormwater from the western portion of the existing site flows into a 24 inch stormdrain that flows north to a 24 inch stormdrain in Memorex Drive. Stormwater from the eastern portion of the existing site flows into a 12 inch stormdrain in Memorex Drive flowing east, which then flows into a 24 inch stormdrain. The stormdrain eventually discharges to the Guadalupe River, which ultimately flows to the San Francisco Bay.

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. The site currently produces approximately 495 tons of waste per year.¹⁰³

Natural Gas and Electricity Services

Electric service is provided to the site by Silicon Valley Power and natural gas is provided by Pacific Gas and Electric (PG&E).

3.19.2 Impact Discussion

For the purpose of determining the significance of the project's impact on utilities and service systems, would the project:

¹⁰⁰ City of San José. "San José-Santa Clara Regional Wastewater Facility." Accessed: November 21, 2020. <http://www.sanjoseca.gov/index.aspx?NID=1663>.

¹⁰¹ City of Santa Clara. 2010-2035 General Plan Integrated Final Environmental Impact Report. SCH# 2008092005. January 2011.

¹⁰² This number equates to 90 percent of the estimated water usage in the existing buildings.

¹⁰³ Atmospheric Dynamics, Inc. Memorex Data Center and Office Project Air Quality and GHG Emissions Assessment. Attachment 1. November 2020.

- 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?
- 2) Have insufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?
- 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?
- 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?
- 5) Be noncompliant with federal, state, or local management and reduction statutes and regulations related to solid waste?

Impact UTL-1: The project would require or result in the relocation or construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects. **(Less than Significant Impact)**

Water Facilities

The project would install water lines on-site with service connections to the existing water main in Memorex Drive. The new and existing water system infrastructure would be adequate to meet the demands of the project.

Sanitary Sewer System/Wastewater Treatment Facilities

The proposed project would replace existing sanitary sewer lines on the site with six-inch sanitary lines with manhole connections. The new sanitary lines would connect to existing sewer lines on Memorex Drive. The project's estimated sanitary sewer discharge was added to the City's Sanitary Sewer Hydraulic Model (SSHM) to determine if there is enough conveyance capacity in the sanitary sewer trunk system to accommodate the proposed development. The SSHM output indicated that there would be enough sanitary sewer conveyance capacity to accommodate the proposed project, and no capacity improvement would be needed.

Based on the City's General Plan, the RWF has the capacity to treat 167 million gallons of wastewater a day. Based on 2020 data, the City's peak week flow is 15.5 mgd while the treatment capacity is 25.17 mgd.¹⁰⁴ The proposed project would generate approximately 4.23 million gallons per year of wastewater, or 0.012 mgd. The RWF has the ability to treat wastewater generated by the proposed project and, as a result, the project would not have a significant impact on the capacity of the RWF.

¹⁰⁴ City of San Jose, Environmental Services Department. San Jose - Santa Clara Regional Wastewater Facility Tributary Agencies' Estimated Available Plant Capacity – 2020. December 2020. Available at: <https://www.sanjoseca.gov/Home/ShowDocument?id=68283>

Storm Drainage System

The project would remove the existing on-site storm drain line and catch basins. Stormwater runoff from the site's impervious surfaces would be directed to treatment systems before being collected in a series of pipes sized for a 10-year storm event in accordance with the City's design requirements. The biotreatment basins would be located throughout the surface parking on the eastern section of the site, along the southern and northern site boundaries, and along the central section of the northern site boundary. These pipes would ultimately leave the site, connecting to the existing City storm drainage pipes in Memorex Drive and/or Di Giulio Avenue.

The project would result in a net decrease of 61,510 sf in impervious surfaces at the site, thereby resulting in a corresponding net decrease in runoff. The project, therefore, would not result in a net increase in runoff from the site and the existing and new storm drainage system would be adequate to serve the project.

Electric Power

The project would include construction of a new 150 megavolt amps (MVA) electrical substation in the eastern portion of the site to provide electric power to the proposed data center. A 60 kilovolt (kV) overhead transmission line would be extended to the site to connect the substation to the existing electrical grid. As shown on Figure 2.5, the transmission line would form a loop, with the route starting on the east side of Lafayette Street and heading west on Shulman Avenue to Memorex Drive. From there, the route would continue west to Ronald Street and then head south to Di Giulio Avenue to connect to the proposed substation. The route would then head east from the substation to Lafayette Street and turn north towards Mathew Street to close the loop. The transmission line would be supported by utility poles up to 85 feet in height. The portion of the transmission line located on Di Giulio Street may be undergrounded, if determined to be feasible by the City (refer to Figure 2.5). Under this scenario, the overhead portion of the transmission line would be supported by up to 10 steel poles with no wood poles. The impacts of both transmission line scenarios are analyzed in this EIR and determined not to result in significant environmental impacts.

Natural Gas

PG&E owns natural gas distribution facilities within the City of Santa Clara. The project would incrementally increase natural gas use, but would not require the construction of any additional off-site facilities.

The project would not require or result in the relocation or construction of new or expanded water, wastewater treatment or stormwater drainage, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects. The project would require the expansion of an overheard transmission line, however, the expansion would not cause significant environmental effects. **(Less than Significant Impact)**

Impact UTL-2: The project would not have insufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years. **(Less than Significant Impact)**

The project would require up to 14.4 acre-feet (or 4.7 million gallons) of water per year. The City of Santa Clara Water Department Staff has reviewed the anticipated water demand of the project and determined that the demand does not meet any of the regulatory criteria that would require the preparation of a WSA.¹⁰⁵

The City has determined that the projected increase in water demand associated with the proposed project is consistent with the growth projections and future water demand assumed in the preparation and analysis of the City's 2015 Urban Water Management Plan (UWMP).¹⁰⁶ The City's 2015 UWMP concluded that sufficient water supplies are available to meet the project demand. As such, there is a sufficient water supply to serve the project site under normal water year (non-drought) conditions.

In addition to normal water years, the UWMP assessed the ability of Santa Clara to meet forecasted water demands (including the proposed project) during multiple dry weather (drought) years. The City concluded that with projected supply totals and implementation of conservation measures consistent with its Water Shortage Contingency Plan, the retailer would be able to meet the projected demand during multiple dry water years.

Implementation of the project would not have a significant impact on existing or future water supplies. **(Less than Significant Impact)**

Impact UTL-3: The project would not 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. **(Less than Significant Impact)**

Based on the City's General Plan, the RWF has the capacity to treat 167 million gallons of wastewater a day. Based on 2009 data, the City's average dry weather flow is 13.3 mgd while the treatment capacity is 23 mgd. The proposed project would generate approximately 4.23 million gallons per year of wastewater, or 0.012 mgd. The RWF has the ability to treat wastewater generated by the proposed project and, as a result, the project would not have a significant impact on the capacity of the RWF.

¹⁰⁵ City of Santa Clara, Water & Sewer Utilities. Memorandum: Water Supply Assessment for 1200 Memorex Data Center. November 27, 2019.

¹⁰⁶ City of Santa Clara. "2015 Urban Water Management Plan." November 22, 2016.

Impact UTL-4: The project would not generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals. **(Less than Significant Impact)**

The proposed project would generate a total of approximately 695 tons of solid waste per year.¹⁰⁷ This is 200 tons per year more than the solid waste currently generated on-site. The proposed project would comply with the City's construction debris diversion ordinance and State waste diversion requirements.

The Newby Island Landfill, located in San José, has an agreement with the City to provide disposal capacity through 2024. If the Newby Island Landfill is not available to accept waste after 2024, the City will 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, the project's impacts related to solid waste and landfill capacity would be less than significant. **(Less than Significant Impact)**

Impact UTL-5: The project would not be noncompliant with federal, state, and local management and reduction statutes and regulations related to solid waste. **(Less than Significant Impact)**

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)**

3.19.2.1 *Cumulative Impacts*

Impact UTL-C: The project would not result in a cumulatively considerable contribution to a cumulatively significant utilities and service systems impact. **(Less than Cumulatively Considerable Contribution to a Significant Cumulative Impact)**

Water Supply and System

The geographic area for cumulative water supply and system impacts is the service area of the City of Santa Clara water system. The cumulative projects (including the proposed project) are accounted for in population and employment assumptions of the UWMP, which evaluates growth in water demand based on planned growth through the year 2040. For this reason, there is adequate water supply (with the implementation of the City's Water Shortage Contingency Plan if needed) for the cumulative projects. The project, therefore, would not result in a considerable contribution to a significant cumulative water supply impact. **(Less than Significant Cumulative Impact)**

¹⁰⁷ The solid waste generation is based on CalEEMod's solid waste generation rate of 1.24 tons per 1,000 square feet per year for light industrial uses. This is likely an overestimation of the project's solid waste generation, as data centers typically do not generate as much waste as typical light industrial projects.

Sanitary Sewer System/Wastewater Treatment

The geographic area for cumulative sanitary sewer system and wastewater treatment is the City's sanitary sewer system service area. Build-out of the General Plan would result in an increase in sewage generated within the City. As discussed in the certified General Plan EIR, the average dry weather flows projected from the full build-out of the General Plan were projected to be within the City's allocated treatment capacity at RWF, which at the time of the certification of the General Plan EIR was 20.1 mgd¹⁰⁸ and below the City's 2017 flow allocation of approximately 20.5 mgd.

Since the certification date of the General Plan EIR, however, the City has approved development applications that have included General Plan amendments, each of which have incrementally increased the potential sewage generation at full build-out. Consequently, it is conceivable that at some point prior to 2035, the City could exceed its current capacity allocation, and the proposed project is anticipated to generate an additional 0.012 mgd. The RWF has excess flow capacity of approximately 59.7 mgd and the City has a process to obtain additional capacity rights at the RWF should the need arise.¹⁰⁹

Based on the above discussion, there is sufficient treatment capacity at the RWF to serve the build-out of the General Plan and the cumulative projects (including the proposed project). The cumulative projects (including the proposed project) would not result in a significant cumulative impact on wastewater treatment capacity. **(Less than Significant Cumulative Impact)**

Storm Drainage System

The geographic area for cumulative storm drain impacts includes the project site and surrounding area, specifically areas upstream and downstream of the project site that also drain to the San Tomas Aquino Creek. Build out of the cumulative projects would involve redevelopment of existing developed sites that contain impervious surfaces, and these projects would be required to comply with applicable regulations regarding stormwater runoff and infrastructure. For these reasons, the cumulative projects would not result in a significant cumulative impact to the storm drain system. As described above, the project would result in decrease in stormwater runoff from the site as a result of increasing the amount of pervious area on the site and reducing the amount of impervious area. The project, therefore, would not result in a considerable contribution to a significant cumulative storm drain system impact. **(Less than Significant Cumulative Impact)**

Electricity, Natural Gas, and Telecommunication Services

Energy is a cumulative resource. The geographic area for cumulative electricity, natural gas, and telecommunication services is the State of California. If a project is determined to have a significant energy impact, it is concluded that the impact is a cumulative impact. As discussed under Impact EN-3 in Section 3.6, the project would not result in a significant energy impact. In addition, the cumulative projects are within urban areas already served by existing electricity, natural gas, and

¹⁰⁸ City of Santa Clara. *2010-2035 General Plan Integrated Final Environmental Impact Report*. SCH# 2008092005. January 2011. Page 228.

¹⁰⁹ The total flow capacity at the RWF is 167 mgd, and the joint owners (Santa Clara and San José) have agreements with several tributary agencies, which have capacity rights of approximately 35 mgd. Pursuant to Section V.B.3 of the 1983 agreements with the tributary agencies, Santa Clara can purchase additional capacity from those tributary agencies.

telecommunication infrastructure. The project, therefore, would not result in a considerable contribution to a significant cumulative impact to electricity, natural gas, and telecommunication infrastructure. **(Less than Significant Cumulative Impact)**

Solid Waste

Build-out of the City and the proposed project would generate solid waste that would need to be disposed of appropriately. Consistent with the conclusion in the certified General Plan and City Place Santa Clara Project FEIR,¹¹⁰ without a specific plan for disposing of solid waste beyond 2024, the solid waste generated by development in the City post-2024 (including waste from the proposed project and other cumulative projects such as City Place Santa Clara) would result in a significant unavoidable cumulative impact.

As described above, the project would result in a net increase of 200 tons of solid waste per year.¹¹¹ The General Plan EIR determined that the total increase in solid waste (residential + nonresidential) associated with net new General Plan growth in 2035 would be approximately 37,000-42,000 tons per year. The project would represent a small fraction of the overall solid waste generation in the City. The proposed project, by itself, would not have a considerable contribution towards a significant cumulative solid waste impact. **(Less than Cumulatively Considerable Contribution to a Significant Cumulative Impact)**

¹¹⁰ City of Santa Clara. *City Place Santa Clara Project Draft Environmental Impact Report*. SCH# 2014072078. Certified June 2016. Pages 3.14-38 and 3.14-39.

¹¹¹ As stated previously, the estimate of the project's solid waste generation relies on standard rates for light industrial uses, and likely overstates the actual solid waste generation of the proposed data center facility.

3.20 WILDFIRE

3.20.1 Environmental Setting

The project site is not located in or near state responsibility areas or lands classified as very high fire hazard severity zones.¹¹²

3.20.2 Impact Discussion

For the purpose of determining the significance of the project's impact on wildfire, 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?
- 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?
- 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?
- 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?

3.20.2.1 *Project Impacts*

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)**

3.20.2.2 *Cumulative Impacts*

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 cumulative wildfire impacts. **(No Cumulative Impact)**

¹¹² State of California Department of Forestry and Fire Protection. Santa Clara County Fire Hazard Severity Zones in SRA. Adopted November 7, 2007.

SECTION 4.0 GROWTH-INDUCING IMPACTS

Impact GRO-1: The project would not foster or stimulate significant economic or population growth in the surrounding environment. **(Less than Significant Impact)**

The CEQA Guidelines require that an EIR identify the likelihood that a proposed project could “foster” or stimulate “economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment” (Section 15126.2(d)). This section of the EIR is intended to evaluate the impacts of such growth in the surrounding environment.

The project is proposed on an infill site in the City of Santa Clara. The site is developed with industrial buildings and is surrounded by existing infrastructure and both existing and planned development. The project does not include expansion of the existing infrastructure that would facilitate growth in the project area or other areas of the City. The project would reduce the employment levels on the site compared to current levels in existing buildings, as data centers are very low employment uses.

Development of the project site would place a new data center in the middle of an industrial area. The proposed project would be compatible with the surrounding land uses and would not pressure adjacent industrial, office, and commercial properties to redevelop with new or different land uses.

The project would not have a significant growth inducing impact. **(Less Than Significant Impact)**

SECTION 5.0 SIGNIFICANT AND IRREVERSIBLE ENVIRONMENTAL CHANGES

This section was prepared pursuant to CEQA Guidelines Section 15126.2(c), which requires a discussion of the significant irreversible changes that would result from the implementation of a proposed project. Significant irreversible changes include the use of nonrenewable resources, the commitment of future generations to similar use, irreversible damage resulting from environmental accidents associated with the project, and irretrievable commitments of resources. Applicable environmental changes are described in more detail below.

5.1 USE OF NONRENEWABLE RESOURCES

The proposed project, during construction and operation, would require the use and consumption of nonrenewable resources. Renewable resources, such as lumber and other wood byproducts, could also be used. Additionally, building materials present in the existing buildings on site that would not be suitable for recycling would be landfilled and the energy embedded in those materials wasted. Unlike renewable resources, nonrenewable resources cannot be regenerated over time. Nonrenewable resources include fossil fuels and metals.

Energy would be consumed during both the construction and operational phases of the project. The construction phase would require the use of nonrenewable construction material, such as concrete, metals, and plastics, and glass. Nonrenewable resources and energy would also be consumed during the manufacturing and transportation of building materials, preparation of the site, and construction of the buildings. The operational phase would consume energy for multiple purposes including, building heating and cooling, lighting, appliances, and electronics. Energy, in the form of fossil fuels, would be used to fuel vehicles traveling to and from the project site.

The project would result in a substantial increase in demand for nonrenewable resources. The project would, however, be subject to the standard California Code of Regulations Title 24 Part 6 and CALGreen energy efficiency requirements.

As discussed in *Section 3.5, Energy*, the project is consistent with the City's General Plan policies regarding energy use, which fosters development that reduces the use of nonrenewable energy resources in transportation, buildings, and urban services (utilities).

SECTION 6.0 SIGNIFICANT AND UNAVOIDABLE IMPACTS

A significant unavoidable impact is an impact that cannot be mitigated to a less than significant level if the project is implemented as it is proposed. The following significant unavoidable impacts have been identified as resulting from the proposed project:

- **Cultural Resources:** The proposed project would demolish existing structures on the site and result in a significant unavoidable impact to the significance of a historical resource (i.e. the former Memorex campus) pursuant to CEQA Guidelines Section 15064.5.

All other significant impacts of the proposed project would be reduced to a less than significant level with the implementation of mitigation measures identified in this EIR.

SECTION 7.0 ALTERNATIVES

CEQA requires that an EIR identify and evaluate alternatives to a project as it is proposed. Two key provisions from the CEQA Guidelines pertaining to the discussion of alternatives are included below:

Section 15126.6(a). Consideration and Discussion of Alternatives to the Proposed Project. An EIR shall describe a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives. An EIR need not consider every conceivable alternative to a project. Rather, it must consider a reasonable range of potentially feasible alternatives that will foster informed decision making and public participation. An EIR is not required to consider alternatives which are infeasible. The lead agency is responsible for selecting a range of project alternatives for examination and must publicly disclose its reasoning for selecting those alternatives. There is no ironclad rule governing the nature or scope of the alternatives to be discussed other than the rule of reason.

Section 15126.6(b). Purpose. Because an EIR must identify ways to mitigate or avoid the significant effects that a project may have on the environment (Public Resources Code Section 21002.1), the discussion of alternatives shall focus on alternatives to the project or its location which are capable of avoiding or substantially lessening any significant effects of the project, even if these alternatives would impede to some degree the attainment of the project objectives, or be more costly.

Other elements of the Guidelines discuss that alternatives should include enough information to allow a meaningful evaluation and comparison with the proposed project. The CEQA Guidelines state that if an alternative would cause one or more additional impacts, compared to the proposed project, the discussion should identify the additional impact, but in less detail than the significant effects of the proposed project.

The three critical factors to consider in selecting and evaluating alternatives are: (1) the significant impacts from the proposed project that could be reduced or avoided by an alternative, (2) consistency with the project's objectives, and (3) the feasibility of the alternatives available. Each of these factors is discussed below.

7.1 OBJECTIVES OF THE PROJECT

While CEQA does not require that alternatives be capable of meeting all project objectives, their ability to meet most of the objectives is considered relevant to their consideration. The stated objectives of the project proponent are to:

1. Redevelop the 9.18-acre site with a state of the art data center capable of supporting at least 60 MW of IT power in an environmentally controlled structure with redundant subsystems (cooling, power, network links, storage, fire suppression, etc.) along with sufficient ancillary office and storage space to accommodate the needs of future tenants (estimated to require up to 472,920 square feet of data center space and 87,520 square feet of ancillary space). The data center shall be located near a reliable large power source, and emergency response

access, and being located such that it can be protected, to the maximum extent feasible, from security threats, natural disasters, and similar events. The project shall include backup power generation facilities that provide sufficient generation capacity, reliability, and redundancy to meet the needs of future tenants.

2. Provide operational electric power to the proposed data center via an electric substation, and provide other utility infrastructure to serve the project, including water, storm drainage, sanitary sewer, electric, natural gas, and telecommunications. Extend a 60 kilovolt (kV) overhead transmission line to connect the substation to the existing electrical grid.
3. Meet high sustainability and green building standards by designing the data center to meet US Green Building Code LEED and Cal-Green standards for any new construction.
4. Incorporate the most reliable and flexible form of backup electric generating technology considering the following evaluation criteria.
 - Commercial Availability and Feasibility. The selected backup electric generation technology must currently be in use and proven as an accepted industry standard for technology. 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.
 - Reliability. The selected backup electric generation technology must be extremely reliable in the case of an emergency loss of electricity from the utility.
 - Industry Standard. The selected backup electric generation technology must be considered industry standard or best practice.
5. Construct a high-quality data center that is marketable and produces a reasonable return on investment for the project applicant and its investors and is able to attract investment capital and construction financing.

7.2 SIGNIFICANT IMPACTS FROM THE PROJECT

The significant unavoidable impacts identified in this EIR resulting from the proposed project include:

- **Cultural Resources:** The proposed project would demolish existing structures on the site and result in a significant unavoidable impact to the significance of a historical resource (i.e. the former Memorex campus) pursuant to CEQA Guidelines Section 15064.5.

Alternatives may also be considered if they would further reduce impacts that are already less than significant because of identified mitigation. The project would result in potentially significant impacts in the following areas, but mitigation measures have been identified that would reduce the impacts to less than significant levels:

- **Biological Resources:** Construction activities associated with the proposed project could result in damage to existing trees and/or the loss of fertile eggs, nesting raptors or other migratory birds, or nest abandonment.
- **Cultural Resources:** Construction activities associated with the proposed project could result damage to unrecorded subsurface resources during trenching and excavation of the site. The project could disturb human remains, including those interred outside of dedicated cemeteries.
- **Geological Resources:** The project could directly or indirectly destroy a unique paleontological resource or site or unique geological feature.
- **Hazardous Materials:** The project could create a significant hazard to the public or the environment resulting from disturbance of existing soil and groundwater contamination on the site.
- **Noise:** Construction and operation of the project could result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies/

7.3 PROJECT ALTERNATIVES

The discussion in this section is based in part upon a Preservation Alternatives Analysis prepared by Architectural Resources Group in September 2020 (see Appendix N).

7.3.1 Project Alternatives Considered but Rejected

The following alternatives were considered for the project but rejected.

7.3.1.1 *Location Alternative*

There is no rule requiring an EIR to explore off-site project alternatives in every case. As stated in the Guidelines: "An EIR shall describe a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives." (Guidelines, § 15126.6, subd. (a), *italics added*.) As this implies, "an agency may evaluate on-site alternatives, off-site alternatives, or both." (*Mira Mar, supra*, 119 Cal.App.4th at p. 491.) The Guidelines thus do not require analysis of off-site alternatives in every case. Nor does any statutory provision in CEQA "expressly require a discussion of alternative project locations." (119 Cal.App.4th at p. 491 citing §§ 21001, subd. (g), 21002.1, subd. (a), 21061.)

In considering an alternative location in an EIR, the CEQA Guidelines advise that the key question is "whether any of the significant effects of the project would be avoided or substantially lessened by putting the project in another location".¹¹³ The proposed project is a data center development within the City of Santa Clara. The project would result in a significant unavoidable impact to a historical resource that is currently on the site. An alternative location would avoid this impact. However, for a variety of reasons, an alternative location is not considered feasible for this project. The proposed

¹¹³ CEQA Guidelines Section 15126.6(f)(2)(A)

development is a joint venture between the applicant and current property owner. The applicant does not have purchasing rights (i.e. site control) to any other properties in the area, and thus would have no ability to develop the project at an alternative location. Prior to filing the application for the proposed project, the applicant completed due diligence in the project area to determine potential sites for development. The project site is the only site that was found that was available for redevelopment and had the required site characteristics to accommodate the proposed development. For these reasons, developing a project that would meet the stated objectives at an alternative location is not feasible. Consideration of an alternative location is most relevant for a public agency choosing to locate a project, where the public agency could potentially use eminent domain to acquire another suitable site. This ability does not exist for private applicants.

7.3.1.2 *Adaptive Reuse of the Historical Resource*

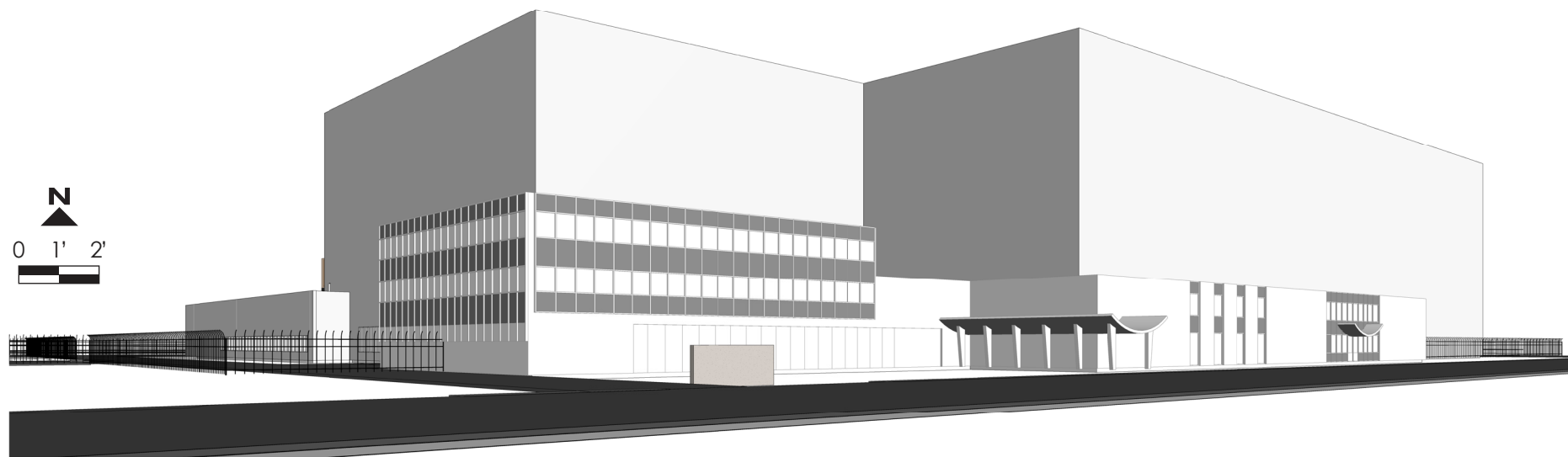
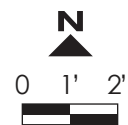
Adaptive reuse of the historical resource, with no demolition of the exterior of the former Memorex headquarters building and circa 1960 warehouse building, was considered but rejected due to this alternative's failure to meet project objectives. Reuse and interior alteration of these buildings (including the demolition of the mezzanines in the former headquarters building) would allow approximately 204,990 square feet of space for the proposed data center and ancillary office and storage uses, or about two-fifths of the approximately 560,000 square feet identified in the project description. Based on the configuration of the site, reuse of the existing building would allow for the construction of only six generators, rather than the 25 proposed by the project. Additionally, the existing structure is not designed to support the heavy infrastructure required to operate the data center, such as large rooftop equipment, and would require substantial renovation that may impact the integrity of the historical resource. Additionally, even if the building were able to be renovated to accommodate the proposed data center, the site constraints would greatly reduce the potential capacity of the proposed data center, leaving the project unable to meet its objectives. For these reasons, it is not a viable project alternative.

7.3.1.3 *Preservation Alternative – Retain Portion of Historical Resource*

The Preservation Alternative – Retain Portions of Historical Resource would retain the former headquarters building along Memorex Drive to a depth of between 30 feet and 82 feet from the project boundary (See Figures 7.3-1 and 7.3-2). This alternative would demolish 158,202 square feet and retain 46,185 square feet of the existing buildings on the site. This alternative would construct a four-story 444,513 square foot data center building behind the retained historic structure. The historic structure would be utilized for office (36,000 square feet) and storage (10,185 square feet). The combined square footage of the facility would be 490,698 square feet. The project would include 20 three MW diesel-fueled generators at the southwestern corner of the site and a 150 MVA electrical substation on the eastern portion of the site.

The purpose of Preservation Alternative – Retain Portion of Historical Resources is to consider a plan that would lessen the significant impacts of the proposed project on the existing historical resource while achieving a majority of project objectives. The alternative would retain a portion of the headquarters building behind the north (primary) and east facades and adapt this space for office and lobby use. The circa 1960 warehouse and circa 1966 gable-roofed building would be demolished. New construction would be located south and west of the retained portion of the headquarters building.





PRESERVATION ALTERNATIVE – RETAIN PORTION OF HISTORICAL RESOURCE (MASSING)

FIGURE 7.3-2

The alternative would maintain several of the character-defining features on the primary and east facades of the former headquarters building, including a portion of its smooth stucco finish, alternating aluminum windows and metal spandrel panels, and curvilinear porch roofs. However, the proposed four-story addition to the south and west portion of the building would substantially alter the appearance of the building and its characteristic broad, low profile. The proposed new construction would also mean substantial alteration or loss of additional character-defining features of the former headquarters building and wholesale loss of the warehouse and gable-roofed building. New construction would occupy a much larger footprint than the existing building and be immediately discernible from Memorex Drive, which is the public face of the property. As a result, it would not be in conformance with the Secretary of the Interior's Standards for Rehabilitation.

While this alternative would retain a portion of the existing historical resource, it would materially impair the historical resource and would not reduce impacts to a less than significant level. The property would no longer qualify for listing on the CRHR, meaning it would no longer be considered a historical resource. Because this alternative would still result in a significant unavoidable impact to the historical resource on the site and would result in a property that no longer qualifies as a historical resource, the project's impacts would not be substantially lessened, and it is not a viable project alternative.

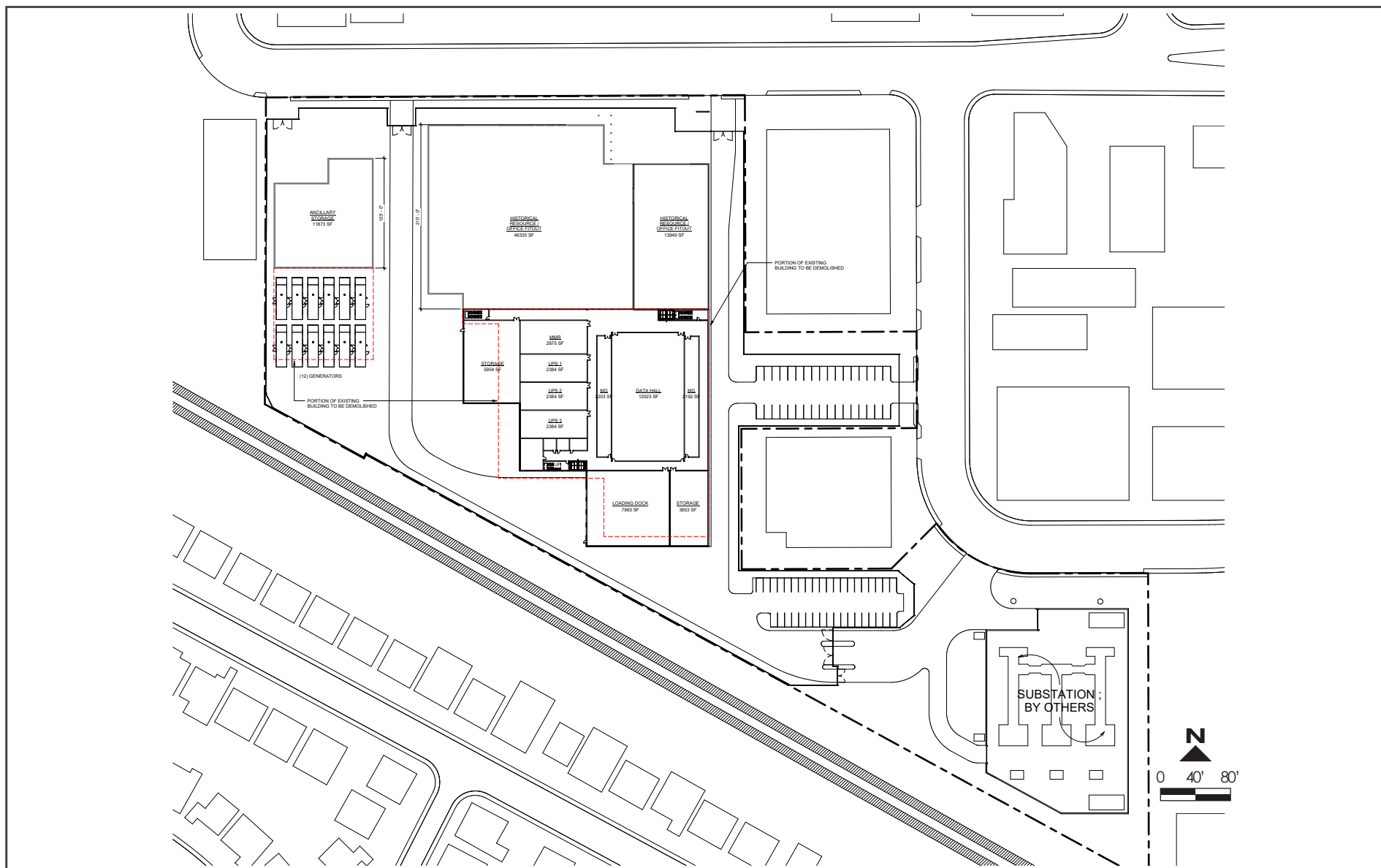
7.3.2 No Project Alternative

The CEQA Guidelines [Section 15126(d)4] require an EIR specifically include a "No Project" alternative. The purpose of including a No Project alternative is to allow decision-makers to compare the impacts of approving the project with the impacts of not approving the project. The Guidelines specifically advise that the No Project alternative is "what would be reasonably expected to occur in the foreseeable future if the project is not approved, based on current plans and consistent with available infrastructure and community services." [Section 15126.6(e)(2)] The Guidelines emphasize that an EIR should take a practical approach, and not "...create and analyze a set of artificial assumptions that would be required to preserve the existing physical environment [Section 15126.6(e)(3)(B)]."

The No Project Alternative would retain the existing three buildings and surface parking lot. The existing development is consistent with the General Plan designation. If the site were to remain as is, there would be no new impacts, and the historic Memorex campus would remain intact. New tenants may occupy the site buildings over time, consistent with current zoning regulations. None of the project objectives would be met under the No Project Alternative.

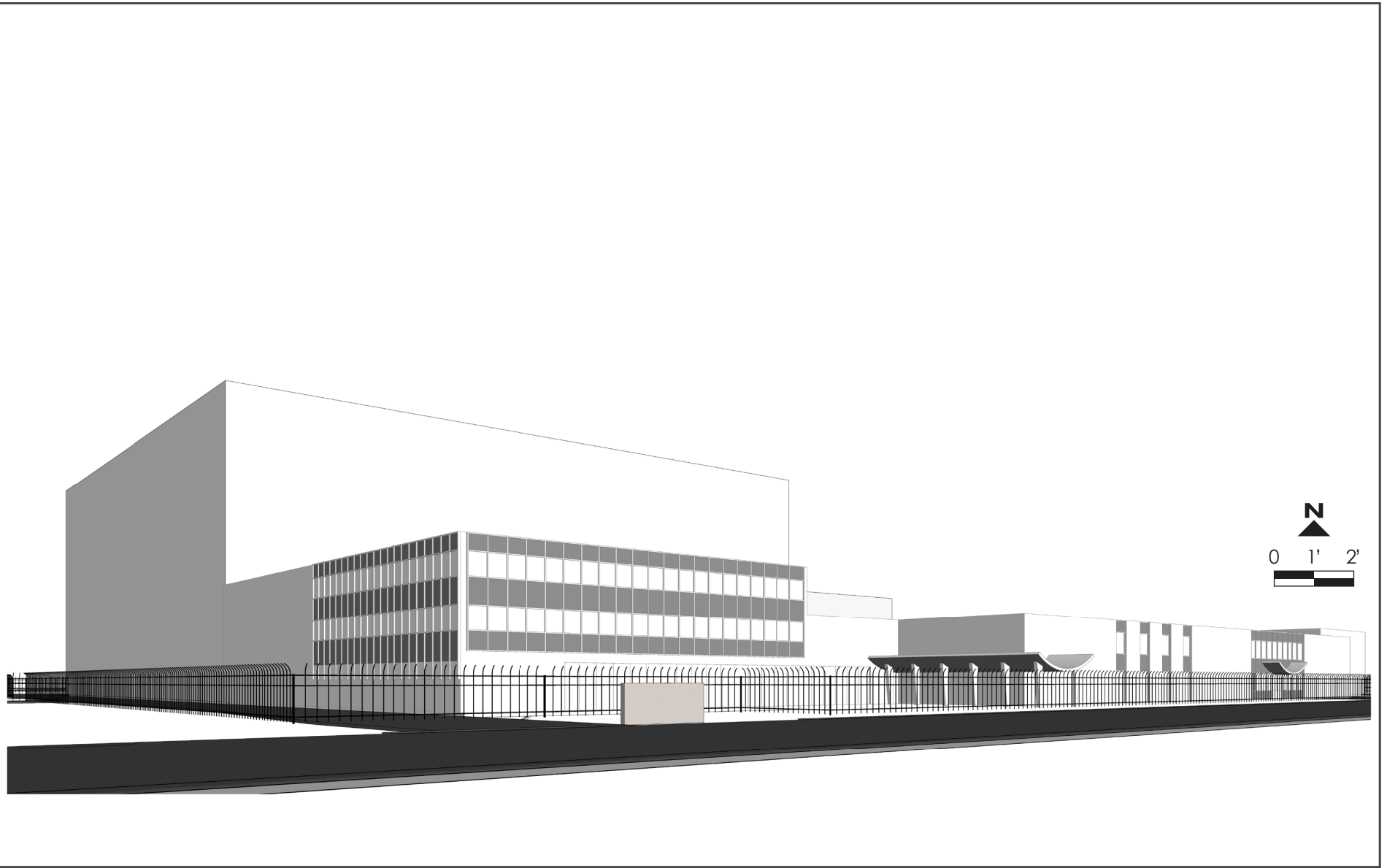
7.3.3 Preservation Alternative – Retain Historical Resource

The Preservation Alternative – Retain Historical Resource would retain the majority of the character defining features of the historical resource while demolishing other portions of the existing development not considered character defining features, allowing for the construction of the data center facility (See Figures 7.3-3 and 7.3-4). This alternative would retain the historical resources along Memorex Drive to depths of 210 feet (former headquarters building) and 125 feet (former



PRESERVATION ALTERNATIVE - RETAIN HISTORICAL RESOURCE (SITE PLAN)

FIGURE 7.3-3



PRESERVATION ALTERNATIVE – RETAIN HISTORICAL RESOURCE (MASSING)

FIGURE 7.3-4

warehouse building) from the project boundary. Overall, this alternative would demolish 93,736 square feet and retain 111,254 square feet of the existing buildings on site. This alternative would construct a four-story, 209,296 square feet data center building behind the retained historic structures. The historic structures would be utilized for office (89,000 square feet) and storage (22,254 square feet). The combined square footage of the facility would be 320,550 square feet. The project would include 12 three MW diesel-fueled engine generators at the southwestern corner of the site and a 150 MVA electrical substation on the eastern portion of the site.

7.3.3.1 *Alternative Impacts*

Cultural Resources

The purpose of Preservation Alternative – Retain Historical Resource is to consider a plan that would retain a substantial portion of the historical resources at the project site and adapt it for use as office space, while also integrating a new addition to house the data center. The alternative would maintain the majority of the character-defining features and form of the existing historical resource as visible from Memorex Drive. The character defining features are summarized in Table 7.3-1, below.

Table 7.3-1: Character Defining Features
Site
Vehicular access from Memorex Drive, along the northern property boundary
Vehicular and pedestrian circulation through the site along north/south-oriented alleyways on either side of the original 1961 building and its additions and along one northwest/southeast-oriented alleyway along the southern property boundary
Exposed aggregate walkways and shallow stairs linking the primary entrances on the northern façade to the sidewalk along Memorex Drive
Paved surfaces throughout the site
All extant buildings, including the original 1961 headquarters building and its additions; the ca. 1960 warehouse building that was purchased and added to the property in 1964; and the ca. 1966 gable-roofed building located at the southern end of the property
North/south orientation of major building elements
Low-profile, landscaped vegetation at the northern façade of the 1961 building and its 1964 addition
Former Memorex Headquarters Building and Additions
Rectangular plan of building and additions, with primary façades fronting Memorex Drive
Broad, horizontal profile, with verticality emphasized through fenestration
One- to three-story height
Flat roofs with simple parapets
Steel-frame construction
Smooth stucco finish on exterior walls
Aluminum fixed windows throughout
Curtain walls with glazing and metal spandrel panels centered in the northern façade of the 1961 building and 1964 addition
Curtain walls with glazing and metal spandrel panels dominating the northern and, to a slightly lesser

Table 7.3-1: Character Defining Features
extent, the eastern façades of the 1966 three-story addition
Near-continuous glazing across the northern façade of the 1966 three-story addition and the eastern façade of the 1964 addition
Symmetrical curvilinear porch hood over the primary entrance to the 1961 building
Asymmetrical curvilinear porch roof with angular columns at the primary entrance to the 1964 addition
Physical connection (i.e., the ca. 1967 breezeway) between the main building and the ca. 1960 warehouse building
Loading facilities on the western and southern façades

Under this alternative, the primary (north) facades of the former Memorex headquarters building and the circa 1960 warehouse building to its west would be retained to a depth of 210 feet and 125 feet from the northern boundary, respectively. Vehicular access from Memorex Drive would be retained, as would the exposed aggregate walkways along the north façade of the former headquarters building and its addition. The smooth stucco finish, aluminum windows and metal spandrel panels, and curvilinear porch roofs of the headquarters building would be preserved, along with the primary façade of the ca. 1960 warehouse building to its east. While the circa 1966 gable-roofed building located at the southern end of the property would be removed under this preservation alternative, the building is not readily visible from Memorex Drive. Additionally, as this building did not historically contain offices or research and development facilities, it is of comparatively lesser significance with regard to the property's role in the development of Memorex's IBM-compatible hard disk drives in the late 1960s.

The new four-story addition to the rear of the headquarters building would be taller than the retained portion; this would somewhat diminish the horizontality of the headquarters building, which has been identified as a character-defining feature. However, the potential visual impact of new construction on the building is reduced because the addition would be set back 210 feet from the northern project boundary. The massing and flat roof of the addition would echo to the form of the retained portions of the headquarters building, while also being clearly differentiated from the historical resource. No addition would be constructed to the rear of the warehouse building, as this space would be given over to 12 three MW generators. Alterations to the retained portions of the headquarters and warehouse buildings would be limited to the interior in order to repurpose them for offices and storage.

Under this alternative, most of the character-defining features of the historical resource at the project site would remain intact, such that the property would remain eligible for listing in the California Register. Because the alternative retains a majority of the property's character-defining features and because new construction would be visibly differentiated from the existing buildings, this alternative appears to be in conformance with the Secretary of the Interior's Standards for Rehabilitation. As a result, this alternative would avoid the project's significant unavoidable impact to a historical resource.

Other Impact Areas

As described previously, the project's only significant unavoidable impact is associated with the proposed demolition of a historical resource. Other significant impacts were identified that would be reduced to less than significant levels with implementation of mitigation measures (refer to Section 7.2).

Under this alternative, physical impacts associated with development of the site and the proposed overhead transmission line, such as those related to trees and nesting birds, buried archeological and/or paleontological resources, and construction noise, would be essentially identical to the proposed project since substantial construction and ground disturbing activities would still occur.

Impacts associated with operation, such as increases in noise levels, would be lessened under this alternative due to the decrease in the amount of mechanical equipment required to operate the reduced size data center. However, as mentioned previously, mitigation is already identified to reduce the project's noise impacts to less than significant levels. Under this alternative, the decrease in mechanical equipment would allow for less restrictive mitigation measures, such as less restrictive requirements for noise reduction related to the rooftop mechanical equipment (MM NOI 2.1 through 2.3). In other words, the operational impacts in either scenario would likely be similar, just with different mitigation measures.

7.3.3.2 Conclusion

The alternative would not meet project objectives one and five to the same extent as the project. The alternative would reduce the size of the data center by approximately 263,624 square feet and reduce the number of generators by 12. This reduction in size would reduce the project's marketability and return on investment for the project applicant to some degree, potentially to the point where the project may not be able to attract the investors needed to facilitate its development. The alternative would reduce the significant and unavoidable impact to cultural resources to a less than significant level, and would result in similar impacts to the project in other impact areas.

7.4 ENVIRONMENTALLY SUPERIOR ALTERNATIVE

The CEQA Guidelines state that an EIR shall identify an environmentally superior alternative. If the environmentally superior alternative is the “No Project” alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives (Section 15126.6(e)(2)).

The environmentally superior alternative would be the No Project Alternative, which would avoid all project impacts; however, this alternative would not meet any project objectives.

The Preservation Alternative – Retain Historical Resource Alternative would reduce project impacts to historical resources to a less than significant level. The alternative result in similar impacts to the project in other impact areas. This alternative would not meet project objectives one and five. Due to the fact that the alternative reduces impacts to historical resources to a less than significant level, the Preservation Alternative – Retain Historical Resource Alternative would be the environmentally superior alternative.

SECTION 8.0 REFERENCES

The analysis in this Environmental Impact Report is based on the professional judgement and expertise of the environmental specialists preparing this document, based upon review of the site, surrounding conditions, site plans, and the following references:

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SECTION 9.0 LEAD AGENCY AND CONSULTANTS

9.1 LEAD AGENCY

City of Santa Clara

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Historic Resources Consultants

Atmospheric Dynamics, Inc

Air Quality and Greenhouse Gas

Cornerstone Earth Group

Geotechnical Engineering Consultants

Holman and Associates

Archaeological Consultants

Illingworth & Rodkin

Noise and Vibration

SECTION 10.0 ACRONYMS AND ABBREVIATIONS

AB	Assembly Bill
ABAG	Association of Bay Area Governments
ADT	Average Daily Traffic
AIA	Airport Influence Area
ALUC	Airport Land Use Commission
BAAQMD	Bay Area Air Quality Management District
bgs	Below ground surface
BMP	Best Management Practice
Btu	British thermal units
CAL FIRE	California Department of Forestry and Fire Protection
CALGreen	California Green Building Standards Code
CalEEMod	California Emissions Estimator Model
Cal/OSHA	California Department of Industrial Relations, Division of Occupational Safety and Health
CAP	Clean Air Plan
CARB	California Air Resources Board
CARE	Community Air Risk Evaluation
CBC	California Building Standards Code
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
CGS	California Geological Survey
CH ₄	Methane
CHRIS	California Historical Resources Information System
CLUP	Comprehensive Land Use Plan
CO	Carbon Monoxide
CO ₂	Carbon Dioxide
CO ₂ e	Carbon Dioxide Equivalents
CNEL	Community Noise Equivalent Level
CRHR	California Register of Historical Resources
DPM	Diesel Particulate Matter
DSOD	California Division of Safety of Dams

EIR	Environmental Impact Report
EMU	Electric Multiple Unit
EO	Executive Order
EPA	Environmental Protection Agency
FAA	Federal Aviation Administration
FAR	Floor Area Ratio
FEMA	Federal Emergency Management Agency
FIRMs	Flood Insurance Rate Maps
FMMP	Farmland Mapping and Monitoring Program
GHG	Greenhouse Gases
GIS	Geographic Information Systems
HABS	Historic American Building Survey
HAER	Historic American Engineering Record
HALS	Historic American Landscapes Survey
HFCs	Hydrofluorocarbons
HI	Hazard Index
HRI	Historic Resources Inventory
HVAC	Heating, Ventilation, and Air Conditioning
IT	Information Technology
ITE	Institute of Transportation Engineers
kV	Kilovolt
LID	Low Impact Development
LOS	Level of Service
MBTA	Migratory Bird Treaty Act
MDC	Memorex Data Center
MEI	Maximally Exposed Individual
MMTCO ₂ e	Million Metric Tons of Carbon Dioxide Equivalent
MND	Mitigated Negative Declaration
MPO	Metropolitan Planning Organizations
MTC	Metropolitan Transportation Commission
MW	Megawatts
MWh	Megawatt Hours
MVA	Megavolt Amps

N ₂ O	Nitrous Oxide
NAHC	Native American Heritage Commission
NFIP	National Flood Insurance Program
NOD	Notice of Determination
NOI	Notice of Intent
NOP	Notice of Preparation
NO ₂	Nitrogen dioxide
NO _x	Nitrogen oxide
NPDES	National Pollutant Discharge Elimination System
NRHP	National Register of Historic Places
O ₃	Ground-level ozone
OHA	Oral History Association
PDA	Priority Development Areas
PFCs	Perfluorocarbons
PM	Particulate Matter
PM _{2.5}	Fine Particulate Matter
PM ₁₀	Coarse Particulate Matter
Ppm	Parts Per Million
PPV	Peak Particle Velocity
PUE	Power Usage Effectiveness
PV	Photovoltaics
RHNA	Regional Housing Need Allocation
ROG	Reactive Organic Gases
RPS	Renewable Portfolio Standard
RWQCB	Regional Water Quality Control Board
SB	Senate Bill
SCCHGS	Santa Clara County Historical & Genealogical Society
SCFD	City of Santa Clara Fire Department
SCPD	City of Santa Clara Police Department
SCS	Sustainable Communities Strategy
SCVWD	Santa Clara Valley Water District
SHMA	Seismic Hazards Mapping Act
SF ₆	Sulfur Hexafluoride

SFHA	Special Flood Hazard Area
SMARA	Surface Mining and Reclamation Act
SMGB	State Mining and Geology Board
SO _x	Sulfur Oxides
SO ₂	Sulfur Dioxide
SVP	Silicon Valley Power
SWPPP	Storm Water Pollution Prevention Plan
TACs	Toxic Air Contaminants
TCRs	Tribal Cultural Resources
TDM	Transportation Demand Management
TPZ	Traffic Pattern Zone
UPRR	Union Pacific Railroad
USACE	United States Army Corps of Engineers
USFWS	United States Fish and Wildlife Service
VMT	Vehicle Miles Traveled
VOC	Volatile Organic Compound
VTA	Santa Clara Valley Transportation Authority