Sacramento Municipal Utility District
Pocket Substation Rebuild Project

Final Initial Study and Proposed Mitigated Negative Declaration •
October 2026

State Clearinghouse Number 2026080691



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APPENDICES

A Draft IS/MND

LIST OF ABBREVIATIONS

AMM	avoidance and minimization measure
BMP	best management practice
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CRHR	California Register of Historical Resources
dBA	A-weighted decibels
DPR	Department of Parks and Recreation
HCP	habitat conservation plan
IS/MND	Initial Study/Mitigated Negative Declaration
ITP	incidental take permit
kV	kilovolt
L_{eq}	equivalent continuous sound level
LED	light-emitting diode
MMRP	mitigation monitoring and reporting program
mph	miles per hour
NO_X	oxides of nitrogen
$PM_{2.5}$	particulate matter less than 2.5 microns in diameter
PM_{10}	particulate matter less than 10 microns in diameter
Project	Pocket Substation Rebuild Project
ROG	reactive organic gases
SMAQMD	Sacramento Metropolitan Air Quality Management District
SMUD	Sacramento Municipal Utility District

EXECUTIVE SUMMARY

Introduction

This Initial Study/Mitigated Negative Declaration (IS/MND) has been prepared to evaluate the potential physical environmental impacts associated with Sacramento Municipal Utility District's (SMUD) Pocket Substation Rebuild Project (project) in compliance with the California Environmental Quality Act (CEQA). SMUD is the lead agency responsible for complying with the provisions of CEQA.

Project Description

SMUD is proposing to construct and operate a new substation (Meadowview Substation) that would replace the existing Pocket Substation located on Gardendale Road in Sacramento, California. The Meadowview Substation would feature a graded aggregate-base site with electrical infrastructure to safely operate the power system, but would include a third transformer, two additional 69 kilovolt (kV) line connections, a larger control building, and a detention basin, while using more environmentally friendly technology and minimizing SF6 use. The proposed substation would include the interconnection of 230kV and 69kV lines and require the construction of new electrical infrastructure to connect the new substation to the existing power grid. The substation would also require the construction of a control building that would measure approximately 95 feet by 42 feet with a height of 25 feet. The control building would have a restroom for on-site employee use that will require minor water and sewer utility connections into existing utility infrastructure. The new substation would include three new driveway access points: off Gardendale Road, potentially off 65th Avenue or 29th Street, and potentially across the expansion area. Site fencing would be installed along the west fence line of the new substation and would include a ten-foot concrete wall and/or chain link topped by barbed wire, consistent with existing conditions. The substation would include light-emitting diode (LED) lighting for safety, security, and occasional nighttime maintenance, with fixtures located at entry gates and throughout the facility, normally remaining off except when needed and directed downward to minimize glare on surrounding properties. In addition, the substation would include an underground stormwater drainage system and detention basin to collect and manage runoff from impermeable surfaces, with water primarily discharged to the municipal stormwater system and some allowed to infiltrate into the soil.

The existing Pocket Substation would be decommissioned and removed from the site as it is nearing the end of its service life. In addition, five new transmission poles would be installed, and four existing transmission poles would be repainted or replaced. Finally, the project would include installation and reconstruction of electrical lines to tie the proposed substation into the existing grid and integrate the new capacity into the existing system.

Findings

As lead agency for compliance with CEQA requirements, SMUD finds that the Project would be implemented without causing a significant adverse impact on the environment. Mitigation measures for potential impacts associated with Air Quality, Biological Resources, Cultural Resources, Noise, and Tribal Cultural Resources would be implemented as part of the project through adoption of a mitigation monitoring and reporting program.

Cumulative Impacts

CEQA requires lead agencies to assess whether a project's incremental effects are significant when viewed in connection with the effects of other past, present, and foreseeable future projects. Based on the analysis presented in the Draft IS/MND, the project would not contribute incrementally to considerable environmental changes when considered in combination with other projects in the area. Therefore, the potential cumulative environmental effects of the project were determined to be less than cumulatively considerable. All identified potentially significant impacts would be mitigated to less-than-significant levels.

Growth-Inducing Impacts

SMUD exists as a public agency to supply electrical energy to customers in the Sacramento area. It has an obligation to serve all new development approved by the local agencies and Sacramento County. SMUD does not designate where and what new development may occur.

Determination

On the basis of this evaluation, SMUD concludes:

- The project does not have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered species, or eliminate important examples of the major periods of California history or prehistory.

- The project would not achieve short-term environmental goals to the disadvantage of long-term environmental goals.

- The project would not have impacts that are individually limited, but cumulatively considerable.

- The project would not have environmental effects that would cause substantial adverse effects on human beings, either directly or indirectly.

- No substantial evidence exists to demonstrate that the project would have a substantive negative effect on the environment.

K Crawford

Kim Crawford
Supervisor, Environmental Services

10/19/2026
Date

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1 INTRODUCTION

1.1 Project Overview

The Sacramento Municipal Utility District (SMUD) is proposing the Pocket Substation Rebuild Project (project), which involves construction and operation of a new substation that would replace the existing Pocket Substation located on Gardendale Road in Sacramento, California. The proposed substation, Meadowview Substation, would convert or "step down" voltage from 230 kV transmission lines to 69 kV sub transmission voltage through transformers and supporting equipment to safely reduce transmission voltages for local distribution. The Meadowview Substation would be located immediately north of the existing Pocket Substation across Gardendale Road on a vacant parcel that is owned by SMUD. The existing Pocket Substation would be decommissioned and removed from the site as it is nearing the end of its service life. In addition, five new transmission poles would be installed, and four existing transmission poles would be repainted or replaced. Finally, the project would include installation and reconstruction of electrical lines to tie the proposed substation into the existing grid and integrate the new capacity into the existing system.

1.2 Environmental Process Summary

1.2.1 Review of the Draft IS/MND

Copies of the Draft IS/MND were made available in hard copy form for public review at SMUD offices (Customer Service Center and East Campus Operations Center) and posted on SMUD's public website. A notice of intent was distributed to property owners within 500 feet of the project alignment, as well as to the State Clearinghouse and each responsible and trustee agency.

The 30-day public review period began on August 20, 2026 and ended on September 21, 2026. SMUD held a public meeting on September 3, 2026. One comment letter was received during the comment period. The comment letter and SMUD's written responses are presented in Section 2.0 of this document. As noted in Section 2.0, the conclusions presented in the Draft IS/MND were not altered in response to comments received.

1.2.2 Preparation of the Final IS/MND

The comment letter was reviewed, and a response was prepared (see Section 2.0). Based on the comment received, there were no new environmental effects identified. The Final IS/MND does not incorporate any changes to the project description or to the Initial Study checklist responses in the Draft IS/MND (provided as Appendix A of this Final IS/MND).

CEQA Guidelines

CEQA Guidelines Section 15073.5 provides the conditions for determining if recirculation of a negative declaration is required before adoption. Section 15073.5(a) states:

> *A lead agency is required to recirculate a negative declaration when the document must be substantially revised after public notice of its availability has previously been given pursuant to Section 15072, but prior to adoption.*

According to Section 15073.5(b), a substantial revision is defined as:

> *(1) A new, avoidable significant effect is identified, and mitigation measures or project revisions must be added in order to reduce the effect to insignificance, or*
>
> *(2) The lead agency determines that the proposed mitigation measures or project revisions will not reduce potential effects to less than significance and new measures or revisions must be required.*

SMUD has determined that none of the aforementioned conditions were satisfied following public notice; therefore, recirculation of the Draft IS/MND is not required. SMUD, as the lead agency, may proceed to present the Final IS/MND to the SMUD Board for action.

Circumstances under which recirculation is not required include:

> *(1) Mitigation measures are replaced with equal or more effective measures pursuant to Section 15074.1.*
>
> *(2) New project revisions are added in response to written or verbal comments on the project's effects identified in the proposed negative declaration which are not new avoidable significant effects.*
>
> *(3) Measures or conditions of project approval are added after circulation of the negative declaration which are not required by CEQA, which do not create new significant environmental effects and are not necessary to mitigate an avoidable significant effect.*
>
> *(4) New information is added to the negative declaration which merely clarifies, amplifies, or makes insignificant modifications to the negative declaration. (Section 15073.5[c])*

No changes to the checklist in the Draft IS/MND is required; therefore, recirculation of the Draft IS/MND is not required.

1.3 Mitigation Measures

This section presents the mitigation measures SMUD would implement to address potential impacts on Air Quality (as addressed in 3.3 of the Draft IS/MND), Biological Resources (as addressed in 3.4 of the Draft IS/MND), Cultural Resources (as addressed in 3.5 of the Draft IS/MND), Noise (as addressed in 3.13 of the Draft IS/MND), and Tribal Cultural Resources (as addressed in 3.18 of the Draft IS/MND).

1.3.1 Air Quality

Conflict With or Obstruct Implementation of the Applicable Air Quality Plan

As discussed in section 3.3, "Air Quality," of the Draft IS/MND (item a), construction related activities would result in project-generated emissions of reactive organic gases (ROG), oxides of nitrogen (NO_X), particulate matter less than 10 microns in diameter (PM_{10}), and particulate matter less than 2.5 microns in diameter ($PM_{2.5}$) from construction activities (e.g., digging holes for pole installation, pouring cement), off-road equipment, material delivery, and worker commute trips. Project construction would not generate emissions in excess of the Sacramento Metropolitan Air Quality Management District (SMAQMD) thresholds for NO_X; however, the project, without the application of best management practices, would generate daily and annual emissions of PM_{10} and $PM_{2.5}$ in excess of SMAQMD thresholds during construction activities.

Mitigation Measure 3.3-1 would reduce exhaust emissions by limiting vehicle idling and by requiring regular maintenance of equipment, while dust emissions would be reduced through measures such as those that limit vehicle speeds and require regular construction site sweeping and watering. With implementation of Mitigation Measure 3.3-1, the potential impact of emissions generated during construction activities would be reduced to a **less-than-significant** level and would not exceed established air quality emissions thresholds for any pollutants.

Mitigation Measure 3.3-1: Implement SMAQMD Basic Construction Emission Control Practices

SMUD shall incorporate the SMAQMD Basic Construction Emission Control Practices (BMPs) into the construction specifications for the project. BMPs that shall be incorporated into the construction contract include the following:

- *Water all exposed surfaces two times daily. Exposed surfaces include, but are not limited to soil piles, graded areas, unpaved parking areas, staging areas, and access roads.*
- *Cover or maintain at least two feet or free board space on haul trucks transporting soil, sand, or other loose material on the site. Any haul trucks that would be traveling along freeways or major roadways should be covered.*

- *Use wet power vacuum street sweepers to remove any visible track out mud or dirt onto adjacent public roads at least once a day. Use of dry power sweeping is prohibited.*

- *Limit vehicle speeds on unpaved roads to 15 miles per hour (mph).*

- *Complete construction of all roadways, driveways, sidewalks, parking lots as soon as possible. In addition, building pads should be laid as soon as possible after grading unless seeding or soil binders are used.*

- *Minimize idling time either by shutting equipment off when not in use or reducing the time of idling to 5 minutes [required by California Code of Regulations, Title 13, sections 2449(d)(3) and 2485]. Provide clear signage that posts this requirement for workers at the entrances to the site.*

- *Maintain all construction equipment and ensure it is in proper working condition according to manufacturer's specifications. The equipment must be checked by a certified mechanic and determined to be running in proper condition before it is operated.*

Cumulatively Considerable Net Increase of any Criteria Pollutant Emissions

As described in Section 3.3, "Air Quality," of the Draft IS/MND (item b), Sacramento County is currently in nonattainment for federal and State ozone, State PM_{10}, and federal $PM_{2.5}$. Ozone impacts are the result of cumulative emissions from numerous sources in the region and transport from outside the region. Ozone is formed by chemical reactions involving NO_X, ROG, and sunlight. Particulate matter also has the potential to cause significant local problems during periods of dry conditions accompanied by high winds, and during periods of heavy earth disturbing activities. Particulate matter (PM_{10} and $PM_{2.5}$) may have cumulative local impacts if, for example, several unrelated grading or earth moving activities are underway simultaneously at nearby sites. Construction-related emissions would exceed SMAQMD significance thresholds. Because these thresholds are intended to support attainment and maintenance of state and federal air quality standards, the project could conflict with regional air quality plans and contribute to adverse health effects, resulting in a potentially significant impact.

As concluded under Impact "a," implementation of Mitigation Measure 3.3-1, which would require application of SMAQMD's dust BMPs, would reduce construction-generated emissions to below SMAQMD's construction thresholds for all pollutants. Implementation of Mitigation Measure 3.3-1 would reduce project construction emissions and ensure that project-related emissions of NO_X, ROG, PM_{10}, and $PM_{2.5}$ would not exceed SMAQMD thresholds during construction activities, therefore, reducing the impact to a **less-than-significant** level.

Mitigation Measure 3.3-1: Implement SMAQMD Basic Construction Emission Control Practices (described above)

1.3.2 Biological Resources

Substantial Adverse Effect on Crotch's Bumble Bee

As described in section 3.4, "Biological Resources," of the Draft IS/MND, Crotch's Bumble Bee (*Bombus Crotchii*), a special-status invertebrate species, have the potential to occur on the project site. Suitable habitat for this invertebrate species is generally loose soil, leaf litter, or other debris near the ground surface near vegetated areas. Ground disturbing project activities and vegetation removal could result in loss of Crotch's bumble bee. The presence of suitable habitat is not currently present on the project site.

Mitigation Measure 3.4-1 would require SMUD to implement general AMMs of the SMUD HCP, including worker training, limiting environmental hazards, and minimize work footprints. With implementation of Mitigation Measure 3.4-2, impacts on Crotch's bumble bees would be avoided or minimized by conducting project activities outside of the Crotch's bumble bee nest season, conducting surveys for Crotch's bumble bee and implementing avoidance as needed, and by obtaining an ITP if avoidance were infeasible. If the presence of Crotch's Bumble Bees does occur, implementation of Mitigation Measures 3.4-1 and 3.4-2 would reduce impacts to the Crotch's Bumble Bees to be **less-than-significant**.

Mitigation Measure 3.4-1: Implement General Avoidance and Minimization Measures from the SMUD HCP

The following General Avoidance and Minimization Measures (AMMs) of the SMUD HCP shall be implemented:

G-AMM1: Annual Environmental Training

- *Employees and contractors performing Covered Activities (SMUD field crews) will receive annual environmental training on SMUD's HCP. This training will include a review of permit requirements, avoidance and minimization measures, and other relevant environmental laws and guidelines that must be followed by all personnel to avoid or minimize take of Covered Species during Covered Activities. Crews will be informed on the implementation of the HCP and conditions in the take permits, including use of SMUD's job packet12 (or equally effective documentation) and their responsibilities to ensure compliance. Training will include the importance of the Covered Species and the purpose and necessity of protecting them, handouts or cards containing Covered Species or Modeled Habitat information, as well as penalties for non-compliance. Information will also be presented to inform personnel of methods to minimize the spread of*

invasive or nonnative plants during Covered Activities. New employees will receive the training prior to the start of work on Covered Activities.

G-AMM2: Minimize Impacts of Work Area

- *To the extent possible, SMUD field crews and contractors will reduce the work area footprint and the duration of work at a work area to reduce the potential for take of Covered Species.*

G-AMM3: Work Area Access

- *SMUD field crews and contractors will use existing paved and unpaved roads to access the work area where available. Vehicles and equipment will be parked on pavement, existing roads, or previously disturbed areas to the maximum extent feasible. When this is not feasible, SMUD will implement G-AMM4: Off Road Speed Limit, VP-AMM1: Avoid Driving through Vernal Pools, and VP-AMM2: Minimize Vehicle Impacts on Vernal Pools (See Mitigation Measure 3.4-4 below).*

G-AMM4: Off Road Speed Limit

- *When driving off of paved roads in Covered Species habitat, vehicles will not exceed a speed limit of 15 miles per hour.*

G-AMM5: Work Area General Guidelines

- *Trash dumping, littering, open fires (such as barbecues), hunting, and pets will be prohibited in Covered Activity work areas. All garbage will be removed from the project site at the end of each workday.*

G-AMM6: Erosion Control Measures

- *SMUD field crews will utilize standard erosion and sediment control best management practices (BMPs) (pursuant to the most current version of the California Stormwater Best Management Practices Handbook) to prevent construction site runoff into SMUD HCP Riverine; Open Water/Fringe; Other Depressional Wetland; and Vernal Pool, Seasonal Wetland, and Swale land cover types when Covered Activities are the source of potential erosion. Soil will be stockpiled within established work area boundaries, and stockpiles will be located so as not to enter water bodies, stormwater inlets, or other standing bodies of water. Stockpiled soil will be covered prior to precipitation events. Erosion control materials will be removed once the site has been stabilized.*

G-AMM7: Equipment Refueling

- *SMUD field crews will not refuel or conduct equipment maintenance activities within 250 feet of SMUD HCP Vernal Pool, Seasonal Wetland, and Swale, and within 100 feet of any Riverine, Open Water/Fringe, or Other Depressional Wetlands land cover types. If refueling must be conducted closer to wetlands, SMUD field crews will construct a secondary containment area subject to review by an environmental specialist and/or biologist. SMUD field crews will maintain spill prevention and cleanup equipment in refueling areas.*

G-AMM8: Hazardous Materials Clean Up

- *SMUD field crews will clean up any spilled oil, fuel, or other automotive fluids. SMUD field crews will ensure that all construction areas have proper spill clean-up materials (absorbent pads, sealed containers, booms, etc.) to contain the movement of any spilled substances*

Mitigation Measure 3.4-2: Implement Limited Operating Period, Conduct Focused Surveys, and Implement Avoidance Measures for Crotch's Bumble Bee

Initial ground-disturbing work in vegetated areas within suitable habitat (e.g., Property and Access Road East of the Railroad Tracks, Expansion Area if vegetation grows prior to project implementation), including staging, shall take place between August 15 and March 15, if feasible, to avoid impacts on nesting Crotch's bumble bees. If this limited operating period is determined to be infeasible, then focused surveys for Crotch's bumble bee will be conducted and avoidance measures will be implemented.

If the limited operating period described above is infeasible, a qualified biologist familiar with bumble bees of California and experienced using survey methods for bumble bees shall conduct focused surveys for Crotch's bumble bee before the start of ground-disturbing activities. Surveys shall be conducted when Crotch's bumble bee is most likely to be identified, typically April through August (i.e., the colony active period), when floral resources and ideal weather conditions are present, and shall follow the methods in Survey Considerations for California Endangered Species Act (CESA) Candidate Bumble Bee Species (CDFW 2023). Surveys shall be conducted during the colony activity period closest to the start of planned construction activities.

CDFW shall be notified within 24 hours if Crotch's bumble bees are detected.

- *If Crotch's bumble bees are not detected during the focused surveys, no additional mitigation is required.*

- *If Crotch's bumble bees are detected during the focused surveys, appropriate avoidance measures shall be implemented. Avoidance measures shall include the following:*

    - *Protective buffers shall be implemented around active nest colonies or overwintering queens until these sites are no longer active. A qualified biologist, in coordination with CDFW, shall determine the appropriate buffer size to protect nesting colonies or overwintering queens; however, the buffer shall be a minimum of 50 feet.*

    - *If impacts on Crotch's bumble bee cannot be avoided, compliance with CESA and consultation with CDFW is required and may involve acquiring an incidental take permit (ITP) from CDFW. SMUD will implement all avoidance measures included in the ITP.*

Substantial Adverse Effect on Monarch Butterfly

As described in section 3.4, "Biological Resources" of the Draft IS/MND, Monarch Butterfly (*Danaus Plexippus*), a special-status invertebrate species, have the potential to occur on the project site. Suitable habitat for this invertebrate species includes vegetated areas with the presence of milkweed plants (*Ascelpias spp.)*. Work activities could cause impacts to habitat or loss of monarchs, monarch eggs, or monarch caterpillars through construction personnel or equipment trampling or otherwise affecting habitat. The project site is located outside of the overwintering range of monarchs and there are currently no milkweed plants on the site.

Mitigation Measure 3.4-1 would require SMUD to implement general AMMs of the SMUD HCP, including worker training, limiting environmental hazards, and minimize work footprints. With implementation of Mitigation Measure 3.4-3, impacts on monarch butterfly would be reduced by identifying monarch host plants and caterpillars, and implementing protective buffers. With implementation of Mitigation Measures 3.4-1 and 3.4-3, if the presence of Monarch Butterflies occurs, the potential impacts to Monarch Butterflies would be reduced to **less-than-significant** level.

Mitigation Measure 3.4-1: Implement General Avoidance and Minimization Measures from the SMUD HCP (see above)

Mitigation Measure 3.4-3: Conduct Surveys for Monarch Butterfly Host Plants and Host Plant Avoidance

Prior to project activities in vegetated areas within suitable habitat (e.g., Property and Access Road East of the Railroad Tracks, Expansion Area if vegetation grows prior to project implementation), a qualified biologist familiar with monarch butterflies and their host plants (i.e., milkweeds) shall survey for monarch butterfly larval host plants. If milkweed plants are found, the biologist shall conduct surveys for monarch eggs or larvae on the plants. Where eggs or larvae

are present, host plants shall be flagged for avoidance and shall not be removed until the plants are no longer being used by any monarch life stage.

Substantial Adverse Effect on Vernal Pool Tadpole Shrimp

As described in section 3.4, "Biological Resources," of the Draft IS/MND, Vernal Pool Tadpole Shrimp (*Lepidurus Packardi*), a special-status invertebrate species, have the potential to occur on the project site. Suitable habitat for this invertebrate species are wetlands. Work activities could cause impacts to habitat or loss of vernal pool tadpole shrimp cysts through construction personnel or equipment trampling or otherwise affecting habitat.

Mitigation Measure 3.4-1 would require SMUD to implement general AMMs of the SMUD HCP, including worker training, limiting environmental hazards, and minimize work footprints. With implementation of Mitigation Measures 3.4-4 and 3.4-5, impacts on vernal pool tadpole shrimp and potential aquatic habitat would be avoided by restricting driving in suitable habitat, and compensating for unavoidable or lost habitat. With implementation of Mitigation Measures 3.4-1, 3.4-4, and 3.4-5, the potential impacts to Vernal Tadpole Shrimp would be reduced to **less-than-significant** level.

Mitigation Measure 3.4-1: Implement General Avoidance and Minimization Measures from the SMUD HCP (see above)

Mitigation Measure 3.4-4: Implement Vernal Pool Avoidance and Minimization Measures from the SMUD HCP

The following Avoidance and Minimization Measures (AMMs) of the SMUD HCP shall be implemented:

VP-AMM1: Avoid Driving through Vernal Pools

- *SMUD field crews will avoid driving through SMUD HCP Vernal Pool, Seasonal Wetland, and Swale land cover to the maximum extent feasible. When this is not feasible, SMUD will implement VP-AMM2: Minimize Vehicle Impacts on Vernal Pools.*

VP-AMM2: Minimize Vehicle Impacts on Vernal Pools

- *If a Covered Activity work area or access to the work area is located on SMUD HCP Vernal Pool, Seasonal Wetland, and Swale land cover, SMUD field crews will evaluate site conditions and determine if soil moisture is present. If soil moisture is present, the field crew will coordinate with the Environmental Services team to identify alternative measures to minimize disturbance of Covered Species Modeled Habitat. Alternative measures may include laying down rubber matting, creating temporary bridges of swales, or using alternate access routes as prescribed by SMUD*

Environmental Services to minimize impacts. If it is not feasible for SMUD to avoid driving through Vernal Pool, Seasonal Wetland, and Swale land cover while moisture is present, SMUD will track the acres of disturbance, and those acres will count towards take limits.

Mitigation Measure 3.4-5: Compensate for Impacts to Wetlands and Aquatic Species Habitat

Mitigation for both temporary and permanent vernal pool tadpole shrimp and vernal pool fairy shrimp habitat disturbance would be provided as part of SMUD's HCP. Temporary impacts would be mitigated at a 0.5:1 ratio and permanent impacts would be mitigated at a 3:1 ratio through a combination of preservation and restoration. SMUD will use vernal pool restoration or creation credits at a 1:1 ration (i.e., 2:1 preservation, 1:1 restoration/creation).

Substantial Adverse Effect on Swainson's Hawk

As described in section 3.4, "Biological Resources," of the Draft IS/MND, Swainson's Hawk (*Buteo Swainsoni*), a special-status bird species, have the potential to occur on the project site. Suitable habitat for this bird species includes grassland areas with tall trees. Work activities could cause impacts to habitat or loss of Swainson's hawks, their nests, or their young through vegetation removal, ground disturbance, and replacement infrastructure. Currently, the project site does not provide adequate habitat, but the species has been recorded nesting within a mile of the project site.

Mitigation Measure 3.4-1 would require SMUD to implement general AMMs of the SMUD HCP, including worker training, limiting environmental hazards, and minimize work footprints. With implementation of Mitigation Measure 3.4-6, impacts on both special-status and common nesting birds would be reduced by conducting nesting bird surveys and implementing protective buffers if needed. Should the presence of Swainson's Hawks or nesting occur, the implementation of Mitigation Measures 3.4-1 and 3.4-6 would reduce impacts to be **less-than-significant**.

Mitigation Measure 3.4-1: Implement General Avoidance and Minimization Measures from the SMUD HCP (see above)

Mitigation Measure 3.4-6: Conduct Pre-construction Survey for Migratory Birds and Raptors, Including Special-status Species

For any construction activities that will occur between February 1 and August 31 within the work limits, a qualified biologist shall conduct a pre-construction survey in suitable nesting habitat within 100 feet for passerine nests and within 500 feet for raptor nests and ground nests. If construction activities occur during bird nesting season (between February 1 and August 31), including equipment staging and construction, surveys shall be conducted within 7 days prior to commencement of construction activities.

If no active nests are found during the pre-construction survey, no additional mitigation measures are required.

If an active bird or raptor nest is identified within the construction work area or an active raptor nest is identified within the appropriate survey buffers from the construction work area, a no disturbance buffer shall be established around the nest to avoid disturbance of the nesting birds or raptors until a qualified biologist determines that the young have fledged and are foraging on their own or the nest has failed. The extent of these buffers shall be determined by the biologist and shall depend on the species identified, level of noise or construction disturbance, line-of sight between the nest and the disturbance, ambient levels of noise and other disturbances, and other topographic or artificial barriers. In addition to the establishment of buffers, other avoidance measures may include monitoring the nest during construction and restricting the type of work that can be conducted near the nest site. If a lapse in construction activities for one week or longer occurs during the avian breeding season, another pre-construction survey shall be performed prior to work re-initiation.

1.3.3 Cultural Resources

Substantial Adverse Change In the Significance of an Archaeological Resource

As described in section 3.5, "Cultural Resources," of the Draft IS/MND, one historic era archaeological site is located within the project site. The proposed project requires the potential relocation of up to four poles; however the area was previously trenched in 2017 and there was no evidence of the archaeological resource observed. Nonetheless, components of the project that require earth-moving and excavation may result in the discovery of previously unrecorded archaeological deposits.

Implementation of Mitigation Measure 3.5-1 would reduce potential impacts to previously undiscovered resources by requiring that steps be taken in the event that archaeological resources are encountered during project construction. Implementation of Mitigation Measure 3.5-1 would reduce the impacts to undiscovered resources to be **less-than-significant.**

Mitigation Measure 3.5-1: Unanticipated Discovery of Cultural Resources

In the event that a historic-period archaeological resource (such as concentrated deposits of bottles or bricks with makers marks, amethyst glass, ceramic or metal pipes, or other historic refuse) or a precontact archaeological resource (such as lithic scatters, midden soils), is uncovered during grading or other construction activities, all ground-disturbing activity within 100 feet of the discovery shall be halted until a qualified archaeologist can assess the significance of the find. SMUD will be notified of the potential find and a qualified archeologist shall be retained to investigate its significance. If the find is suspected to be Native American in origin, Mitigation Measure 3.18-1b shall be implemented. Any

previously undiscovered archaeological resources found during construction will be recorded on appropriate California Department of Parks and Recreation DPR 523 forms and evaluated for significance under all applicable regulatory criteria if the resource cannot be avoided and preserved in place. If the archaeologist determines that the find does not meet the CRHR standards of significance for cultural resources, construction may proceed. If the find is determined to be significant by the qualified archaeologist (i.e., because the find is determined to constitute either an historical resource or a unique archaeological resource), the archaeologist shall work with SMUD to follow accepted professional standards such as data recovery. The results of the identification, evaluation, and/or data recovery program for any unanticipated discoveries shall be presented in a professional-quality report that details all methods and findings, evaluates the nature and significance of the resources, analyzes and interprets the results.

Disturbance of Human Remains

As described in 3.5, "Cultural Resources," of the Draft IS/MND, a historic-era family cemetery marginally intercepts the known boundary of the project site. The replacement poles are not expected to be located in an area known to contain human remains. However, the unmarked or unknown grave sites and Native American remains could be present within the project site and could be uncovered by project-related construction activities.

Implementation of Mitigation Measure 3.5-2 would reduce potential impacts to previously undiscovered human resources by ensuring that any discovered human remains are promptly protected, appropriately evaluated, and treated in accordance with legal requirements and cultural traditions. With implementation of Mitigation Measure 3.5-2, this impact would be reduced to a **less-than-significant** level.

Mitigation Measure 3.5-2: Unanticipated Discovery of Human Remains

Pursuant to Sections 5097.97 and 5097.98 of the State Public Resources Code, and Section 7050.5 of the State Health and Safety Code, if a human bone or bone of unknown origin is found during construction, all work is to stop and the County Coroner and the District shall be immediately notified. If the remains are determined to be Native American, the coroner shall notify the Native American Heritage Commission within 24 hours, and the Native American Heritage Commission shall identify the person or persons it believes to be the most likely descendent from the deceased Native American. The most likely descendent may make recommendations to the landowner or the person responsible for the excavation work, for means of treating or disposition of, with appropriate dignity, the human remains and any associated grave goods.

1.3.4 Noise

Generation of Substantial Temporary or Permanent Increase in Ambient Noise Levels

As described in 3.13, "Noise," of the Draft IS/MND, the project would involve the demolition of the existing substation and construction of a new substation. Noise related to on-site construction, off-site construction, hauling vehicles, and operational transportation would all occur within hours of operation as per the City of Sacramento Municipal Code and would not differ from regular traffic noise. The project would, however, introduce continuous operational noise from three substation transformers, and while predicted noise levels at the nearest residence would comply with the City's daytime standard, they would exceed the nighttime standard, resulting in a potentially significant impact.

Implementation of Mitigation Measure 3.13-1 would reduce nighttime construction noise impacts to a less-than-significant level by requiring soundwalls, equipment enclosures, or other verified noise attenuation measures that ensure noise levels do not exceed 50 dBA Leq at nearby residences. With implementation of Mitigation Measure 3.13-1, this impact would be reduced to a **less-than-significant** level.

Mitigation Measure 3.13-1: Construction Noise Reduction

For oil processing activities that must occur during nighttime hours (6:00 p.m. to 7:00 a.m.), the construction contractor shall ensure that the following measures are implemented:

- *Require the use of a temporary soundwall or equipment enclosures around the oil processing equipment for the duration of the process that results in a minimum of 16 dBA noise reduction, such that noise levels do not exceed 50 dBA L_{eq} at the adjacent off-site residences, if the permanent substation perimeter barrier has not been installed.*

- *Compliance with the noise standard shall be confirmed with either on-site noise monitoring during the oil processing operations or manufacturer specifications of the sound barriers/enclosures that confirm the minimum required noise reduction can be achieved.*

- *Alternatively, if specific equipment noise levels are determined to be less than what was evaluated in this IS/MND (i.e., 81 dBA L_{eq} for the pump and 73 dBA L_{eq} for the generator at 50 feet for a combined noise level of 78.6 dBA L_{eq}), based on construction contractor specifications, the required noise reduction from the sound barrier may be reduced accordingly, so long as the 50 dBA L_{eq} noise level is not exceeded at off-site residential uses. The adjusted reduction requirement shall be conducted by a qualified acoustics professional.*

1.3.5 Tribal Cultural Resources

Discovery of Resource Significant to a California Native American Tribe

As described in 3.18, "Tribal Cultural Resources," of the Draft IS/MND, the project area is located within a Tribal cultural landscape. After consultation with the Wilton tribe, it was determined that there were no identifiable Tribal cultural resources present. However, due to the Tribal use of the area historically, it is possible that unanticipated Tribal cultural resources could be uncovered during project-related construction activities.

Implementation of Mitigation Measures 3.18-1a through 3.18-1c would reduce impacts associated with Tribal cultural resources to a less-than-significant level by requiring the appropriate treatment (pausing work) and proper care (e.g., preservation in place) of significant Tribal cultural resources, in the case of an unanticipated discovery.

> ***Mitigation Measure 3.18-1a: Monitoring During Ground-disturbing Activities***
> *The project area is within a Tribal cultural landscape and buried resources could be encountered. Therefore, a Tribal monitor from Wilton Rancheria will perform monitoring of specific ground-disturbing activities.*
>
> *Spot check monitoring will be conducted for grading and excavating work during the construction of the substation and installation of the transmission pole foundations.*
>
> *The frequency and timing of these spot checks will vary based on the scope of work—for instance, more frequent checks will be conducted for deeper excavations, while less frequent monitoring will suffice for general grading. Generally, spot-checks will be limited to up to half a day per session, conducted twice weekly. For trenching activities along Gardendale Road and pole replacements near the historic-era family cemetery, full-time monitoring will be implemented during ground disturbing activities.*
>
> *The Tribal monitor will complete daily logs. Logs will confirm any finds, the locations of the find, time and date. If Tribal cultural resources are identified that have the potential to be adversely affected by the project, SMUD will implement Mitigation Measure 3.18-1b Unanticipated Discoveries of Tribal Cultural Resources, and monitoring will increase to full time during ground disturbing work in the vicinity of the find.*
>
> ***Mitigation Measure 3.18-1b: Unanticipated Discovery of Tribal Cultural Resources***
> *If any suspected Tribal cultural resources or resources of Tribal cultural significance, including but not limited to features, anthropogenic/cultural soils, cultural belongings or objects (items), shell, bone, shaped stones or bone, or ash/charcoal deposits are discovered by any person during construction activities*

including ground disturbing activities, all work shall pause immediately within 100 feet of the find, or an agreed upon distance based on the project area and nature of the find. Work shall cease in and within the immediate vicinity of the find regardless of whether the construction is being actively monitored by a Tribal Monitor, cultural resources specialist, or professional archaeologist. A Tribal Representative from Wilton shall be immediately notified and shall determine if the find is a Tribal cultural resource (PRC §21074). Evaluation and treatment will be performed in coordination with Tribes in accordance with SMUD's Inadvertent Discovery Plan.

When avoidance is infeasible, preservation in place is the preferred option for mitigation of Tribal cultural resources under CEQA, and every effort shall be made to preserve the resources in place, including through project redesign, if feasible. If redesign is determined to not be feasible, SMUD shall consult with the Tribe to determine appropriate treatment of the find.

Culturally appropriate treatment may be, but is not limited to, processing materials for reburial, minimizing handling of cultural objects, leaving objects in place within the landscape, or returning objects to a location within the project area where they will not be subject to future impacts. Permanent curation of Tribal cultural resources will not take place unless approved in writing by Wilton.

The contractor shall implement any measures deemed by the CEQA lead agency to be necessary and feasible to preserve in place, avoid, or minimize impacts to the resource, including, but not limited to, facilitating the appropriate Tribal treatment of the find, as necessary. Treatment that preserves or restores the cultural character and integrity of a Tribal cultural resource may include Tribal Monitoring, culturally appropriate recovery of cultural objects and belongings, and reburial of cultural objects and belongings or cultural soil.

The construction contractor(s) shall provide secure, on-site storage for culturally sensitive soils or objects that are components of Tribal cultural resources that are found or recovered during construction. Only Tribal Representatives shall have access to the storage. Storage size shall be determined by the nature of the Tribal cultural resource and can range from a small lock box or jobsite work box to a conex box (shipping container). A secure (locked), fenced area can also provide adequate on-site storage if larger amounts of material must be stored. The construction contractor(s) and SMUD shall facilitate the respectful reburial of the culturally sensitive soils or objects. This includes providing a reburial location that is consistent with the Tribe's preferences, excavation of the reburial location, and assisting with the reburial, upon request. Any discoveries shall be documented on a Department of Parks and Recreation (DPR) 523 form within 2 weeks of the discovery and submitted to the appropriate CHRIS center in a timely manner.

Work at the Tribal cultural resource discovery location shall not resume until authorization is granted by the Lead Agency in coordination with Wilton. If articulated or disarticulated human remains, or human remains in any state of decomposition or skeletal completeness are discovered during construction activities, the Sacramento County Coroner shall be contacted immediately. Upon determination by the Sacramento County Coroner that the find is Native American in origin, the Native American Heritage Commission will assign the Most Likely Descendent who will work with SMUD to define appropriate treatment and disposition of the burials.

For any work required to be undertaken in an area where shoring and or with hazardous materials, including soils, all archaeologists, Tribal Representatives, and Tribal Monitors shall meet the appropriate level of safety training (e.g., confined spaces, hazardous material exposure, etc.) in compliance with California Division of Occupational Safety and Health State and federal Occupational Safety and Health Administration requirements prior to entering construction work areas.

Mitigation Measure 3.18-1c: Cultural Resources Awareness Training

A cultural resources awareness respect training program will be provided to all construction personnel involved in ground-disturbing work, prior to such activities. A representative or representatives from culturally affiliated Native American Tribe(s) will be invited to participate in the development and delivery of the cultural resources awareness training program in coordination with a qualified archaeologist meeting the United States Secretary of Interior guidelines for professional archaeologists. The program will include relevant information regarding sensitive Tribal cultural resources, including protocols for resource avoidance, applicable laws regulations, and the consequences of violating them. The program will also underscore the requirement for confidentiality and culturally-appropriate treatment of any find of significance to Native Americans and protocols, consistent, to the extent feasible, with Native American Tribal values.

1.4 CEQA Determination

SMUD has determined that although the project could have a significant effect on the environment, a significant effect would not occur with implementation of the aforementioned mitigation measures because the proposed mitigation measures would reduce the effects of any impacts to below the established thresholds of significance. Therefore, SMUD published the proposed MND and supporting IS on August 20, 2026, and SMUD's Board of Directors will consider adoption of the MND at a Board meeting on November 19, 2026.

2 COMMENTS AND RESPONSES

2.1 Introduction

The Draft IS/MND for the Project was circulated for a 30-day public review period (August 20, 2026 to September 21, 2026). During the public comment period, SMUD received one comment letter (see Table 2-1).

Table 2-1 List of Commenters

Letter Number	Name
1	Robynn Spence California Department of Transportation, District 3 September 9, 2026

2.2 Responses to Comments

The comment letter identified above and SMUD's responses to comments are provided on the following pages.

Letter 1

California Department of Transportation, District 3
Robynn Spence
September 9, 2026

Comment 1-1

Thank you for including the California Department of Transportation in the review process for the Pocket Substation Rebuild Project. We wanted to reach out and provide the comments below.

Any project along or within the State's right of way (ROW) requires an encroachment permit issued by Caltrans. To apply, a completed encroachment permit application, environmental documentation, and five sets of plans clearly indicating State ROW must be submitted to:

California Department of Transportation
District 3, Office of Permits
703 B Street
Marysville, CA 95901
D3encpermit@dot.ca.gov

Please provide our office with copies of any further actions regarding this proposal. We would appreciate the opportunity to review and comment on any changes related to this development.

Should you have questions please contact me by phone (530) 812-6874 or via email at D3.local.development@dot.ca.gov.

Response 1-1

This comment does not raise issues related to environmental impacts or the content of the CEQA document. SMUD will coordinate with Caltrans as appropriate and obtain any required encroachment permits and approvals for work within or affecting State right-of-way. Copies of future project actions will be provided to Caltrans, as appropriate, to allow for continued review and coordination.

3 CHANGES TO DRAFT IS/MND TEXT

No changes to the Draft IS/MND since its publication and public review are necessary.

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4 MITIGATION MONITORING AND REPORTING PROGRAM

4.1 Introduction

This mitigation monitoring and reporting program (MMRP) summarizes identified mitigation measures, implementation schedule, and responsible parties for the SMUD Pocket Substation Rebuild Project (project). SMUD will use this MMRP to ensure that identified mitigation measures, adopted as conditions of project approval, are implemented appropriately. This MMRP program meets the requirements of CEQA Guidelines Section 15074(d), which mandates preparation of monitoring provisions for the implementation of mitigation assigned as part of Project approval or adoption.

4.2 Mitigation Implementation and Monitoring

SMUD will be responsible for monitoring the implementation of mitigation measures designed to minimize impacts associated with the project. While SMUD has ultimate responsibility for ensuring implementation, others may be assigned the responsibility of actually implementing the mitigation. SMUD will retain the primary responsibility for ensuring that the project meets the requirements of this MMRP and other permit conditions imposed by participating regulatory agencies.

SMUD will designate specific personnel who will be responsible for monitoring implementation of the mitigation that will occur during project construction. The designated personnel will be responsible for submitting documentation and reports to SMUD on a schedule consistent with the mitigation measure and in a manner necessary for demonstrating compliance with mitigation requirements. SMUD will ensure that the designated personnel have authority to require implementation of mitigation requirements and will be capable of terminating project construction activities found to be inconsistent with mitigation objectives or project approval conditions.

SMUD and its appointed contractor will also be responsible for ensuring that its construction personnel understand their responsibilities for adhering to the performance requirements of the MMRP and other contractual requirements related to the implementation of mitigation as part of project construction. In addition to the prescribed mitigation measures, Table 4-1 lists each identified environmental resource being affected, the corresponding monitoring and reporting requirement, and the party responsible for ensuring implementation of the mitigation measure and monitoring effort.

4.3 Mitigation Enforcement

SMUD will be responsible for enforcing mitigation measures. If alternative measures are identified that would be equally effective in mitigating the identified impacts, implementation of these alternative measures will not occur until agreed upon by SMUD.

Table 4-1. Mitigation Monitoring and Reporting Program

Checklist Section	Environmental Criteria	Mitigation Measures	Implementation Duration	Monitoring Duration	Responsibility	
					Implementation	Monitoring
Air Quality	a) Conflict with or obstruct implementation of the applicable air quality plan? b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?	**Mitigation Measure 3.3-1: Implement SMAQMD Basic Construction Emission Control Practices** *SMUD shall incorporate the SMAQMD Basic Construction Emission Control Practices (BMPs) into the construction specifications for the project. BMPs that shall be incorporated into the construction contract include the following:* • *Water all exposed surfaces two times daily. Exposed surfaces include, but are not limited to soil piles, graded areas, unpaved parking areas, staging areas, and access roads.* • *Cover or maintain at least two feet or free board space on haul trucks transporting soil, sand, or other loose material on the site. Any haul trucks that would be traveling along freeways or major roadways should be covered.* • *Use wet power vacuum street sweepers to remove any visible track out mud or dirt onto adjacent public roads at least once a day. Use of dry power sweeping is prohibited.* • *Limit vehicle speeds on unpaved roads to 15 miles per hour (mph).* • *Complete construction of all roadways, driveways, sidewalks, parking lots as soon as possible. In addition, building pads should be laid as soon as possible after grading unless seeding or soil binders are used.* • *Minimize idling time either by shutting equipment off when not in use or reducing the time of idling to 5 minutes [required by California Code of Regulations,*	Prior to and during construction	During construction	SMUD Environmental Services and Construction Contractor	SMUD Construction Management and Inspection

Checklist Section	Environmental Criteria	Mitigation Measures	Implementation Duration	Monitoring Duration	Responsibility	
					Implementation	Monitoring
		Title 13, sections 2449(d)(3) and 2485]. Provide clear signage that posts this requirement for workers at the entrances to the site. • *Maintain all construction equipment and ensure it is in proper working condition according to manufacturer's specifications. The equipment must be checked by a certified mechanic and determined to be running in proper condition before it is operated.*				
		Mitigation Measure 3.4-1: Implement General Avoidance and Minimization Measures from the SMUD HCP *The following General Avoidance and Minimization Measures (AMMs) of the SMUD HCP shall be implemented:* *G-AMM1: Annual Environmental Training* • *Employees and contractors performing Covered Activities (SMUD field crews) will receive annual environmental training on SMUD's HCP. This training will include a review of permit requirements, avoidance and minimization measures, and other relevant environmental laws and guidelines that must be followed by all personnel to avoid or minimize take of Covered Species during Covered Activities. Crews will be informed on the implementation of the HCP and conditions in the take permits, including use of SMUD's job packet12 (or equally effective documentation) and their responsibilities to ensure compliance. Training will include the importance of the Covered Species and the purpose and necessity of protecting them, handouts or cards containing Covered Species or*	Prior to any work and during construction	During construction	SMUD Environmental Services and Construction Contractor	SMUD Construction Management and Inspection

Checklist Section	Environmental Criteria	Mitigation Measures	Implementation Duration	Monitoring Duration	Responsibility	
					Implementation	Monitoring
		Modeled Habitat information, as well as penalties for non-compliance. Information will also be presented to inform personnel of methods to minimize the spread of invasive or nonnative plants during Covered Activities. New employees will receive the training prior to the start of work on Covered Activities. *G-AMM2: Minimize Impacts of Work Area* • *To the extent possible, SMUD field crews and contractors will reduce the work area footprint and the duration of work at a work area to reduce the potential for take of Covered Species.* *G-AMM3: Work Area Access* • *SMUD field crews and contractors will use existing paved and unpaved roads to access the work area where available. Vehicles and equipment will be parked on pavement, existing roads, or previously disturbed areas to the maximum extent feasible. When this is not feasible, SMUD will implement G-AMM4: Off Road Speed Limit, VP-AMM1: Avoid Driving through Vernal Pools, and VP-AMM2: Minimize Vehicle Impacts on Vernal Pools (See Mitigation Measure 3.4-4 below).* *G-AMM4: Off Road Speed Limit* • *When driving off of paved roads in Covered Species habitat, vehicles will not exceed a speed limit of 15 miles per hour.* *G-AMM5: Work Area General Guidelines* • *Trash dumping, littering, open fires (such as barbecues), hunting, and pets will be prohibited in*				

Checklist Section	Environmental Criteria	Mitigation Measures	Implementation Duration	Monitoring Duration	Responsibility	
					Implementation	Monitoring
		Covered Activity work areas. All garbage will be removed from the project site at the end of each workday. *G-AMM6: Erosion Control Measures* • *SMUD field crews will utilize standard erosion and sediment control best management practices (BMPs) (pursuant to the most current version of the California Stormwater Best Management Practices Handbook) to prevent construction site runoff into SMUD HCP Riverine; Open Water/Fringe; Other Depressional Wetland; and Vernal Pool, Seasonal Wetland, and Swale land cover types when Covered Activities are the source of potential erosion. Soil will be stockpiled within established work area boundaries, and stockpiles will be located so as not to enter water bodies, stormwater inlets, or other standing bodies of water. Stockpiled soil will be covered prior to precipitation events. Erosion control materials will be removed once the site has been stabilized.* *G-AMM7: Equipment Refueling* • *SMUD field crews will not refuel or conduct equipment maintenance activities within 250 feet of SMUD HCP Vernal Pool, Seasonal Wetland, and Swale, and within 100 feet of any Riverine, Open Water/Fringe, or Other Depressional Wetlands land cover types. If refueling must be conducted closer to wetlands, SMUD field crews will construct a secondary containment area subject to review by an environmental specialist and/or biologist. SMUD field crews will maintain spill prevention and cleanup equipment in refueling areas.*				

Checklist Section	Environmental Criteria	Mitigation Measures	Implementation Duration	Monitoring Duration	Responsibility	
					Implementation	Monitoring
		G-AMM8: Hazardous Materials Clean Up • *SMUD field crews will clean up any spilled oil, fuel, or other automotive fluids. SMUD field crews will ensure that all construction areas have proper spill clean-up materials (absorbent pads, sealed containers, booms, etc.) to contain the movement of any spilled substances.*				
Biological Resources	a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or the US Fish and Wildlife Service?	**Mitigation Measure 3.4-2: Implement Limited Operating Period, Conduct Focused Surveys, and Implement Avoidance Measures for Crotch's Bumble Bee** • *Initial ground-disturbing work in vegetated areas (e.g., Property and Access Road East of the Railroad Tracks, Expansion Area if vegetation grows prior to project implementation), including staging, shall take place between August 15 and March 15, if feasible, to avoid impacts on nesting Crotch's bumble bees. If this limited operating period is determined to be infeasible, then focused surveys for Crotch's bumble bee will be conducted and avoidance measures will be implemented.* • *If the limited operating period described above is infeasible, a qualified biologist familiar with bumble bees of California and experienced using survey methods for bumble bees shall conduct focused surveys for Crotch's bumble bee before the start of ground-disturbing activities. Surveys shall be conducted when Crotch's bumble bee is most likely to be identified, typically April through August (i.e., the colony active period), when floral resources and ideal weather conditions are present, and shall follow the methods in Survey Considerations for California*	Prior to any work and during construction	During construction	SMUD Environmental Services and Construction Contractor	SMUD Construction Management and Inspection

Checklist Section	Environmental Criteria	Mitigation Measures	Implementation Duration	Monitoring Duration	Responsibility	
					Implementation	Monitoring

		Endangered Species Act (CESA) Candidate Bumble Bee Species (CDFW 2023). Surveys shall be conducted during the colony activity period closest to the start of planned construction activities.
		• *CDFW shall be notified within 24 hours if Crotch's bumble bees are detected.*
		  ○ *If Crotch's bumble bees are not detected during the focused surveys, no additional mitigation is required.*
		  ○ *If Crotch's bumble bees are detected during the focused surveys, appropriate avoidance measures shall be implemented. Avoidance measures shall include the following:*
		  ▪ *Protective buffers shall be implemented around active nest colonies or overwintering queens until these sites are no longer active. A qualified biologist, in coordination with CDFW, shall determine the appropriate buffer size to protect nesting colonies or overwintering queens; however, the buffer shall be a minimum of 50 feet.*
		• *If impacts on Crotch's bumble bee cannot be avoided, compliance with CESA and consultation with CDFW is required and may involve acquiring an incidental take permit (ITP) from CDFW. SMUD will implement all avoidance measures included in the ITP.*				

Checklist Section	Environmental Criteria	Mitigation Measures	Implementation Duration	Monitoring Duration	Responsibility	
					Implementation	Monitoring
Biological Resources	a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or the US Fish and Wildlife Service?	**Mitigation Measure 3.4-3: Conduct Surveys for Monarch Butterfly Host Plants and Host Plant Avoidance** • *Prior to project activities in vegetated areas (e.g., Property and Access Road East of the Railroad Tracks, Expansion Area if vegetation grows prior to project implementation), a qualified biologist familiar with monarch butterflies and their host plants (i.e., milkweeds) shall survey for monarch butterfly larval host plants. If milkweed plants are found, the biologist shall conduct surveys for monarch eggs or larvae on the plants. Where eggs or larvae are present, host plants shall be flagged for avoidance and shall not be removed until the plants are no longer being used by any monarch life stage.*	Prior to project activities	During survey	SMUD Environmental Services, a qualified biologist	SMUD Construction Management and Inspection
Biological Resources	a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by	**Mitigation Measure 3.4-4: Implement Vernal Pool Avoidance and Minimization Measures from the SMUD HCP** *The following Avoidance and Minimization Measures (AMMs) of the SMUD HCP shall be implemented:* *VP-AMM1: Avoid Driving through Vernal Pools* • *SMUD field crews will avoid driving through SMUD HCP Vernal Pool, Seasonal Wetland, and Swale land cover to the maximum extent feasible. When this is not feasible, SMUD will implement VP-AMM2: Minimize Vehicle Impacts on Vernal Pools.*	Prior to and during construction	During construction	SMUD Environmental Services and Construction Contractor	SMUD Construction Management and Inspection

Checklist Section	Environmental Criteria	Mitigation Measures	Implementation Duration	Monitoring Duration	Responsibility	
					Implementation	Monitoring
	the California Department of Fish and Wildlife or the US Fish and Wildlife Service?	*VP-AMM2: Minimize Vehicle Impacts on Vernal Pools* • *If a Covered Activity work area or access to the work area is located on SMUD HCP Vernal Pool, Seasonal Wetland, and Swale land cover, SMUD field crews will evaluate site conditions and determine if soil moisture is present. If soil moisture is present, the field crew will coordinate with the Environmental Services team to identify alternative measures to minimize disturbance of Covered Species Modeled Habitat. Alternative measures may include laying down rubber matting, creating temporary bridges of swales, or using alternate access routes as prescribed by SMUD Environmental Services to minimize impacts. If it is not feasible for SMUD to avoid driving through Vernal Pool, Seasonal Wetland, and Swale land cover while moisture is present, SMUD will track the acres of disturbance, and those acres will count towards take limits.*				
Biological Resources	a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by	**Mitigation Measure 3.4-5: Compensate for Impacts to Wetlands and Aquatic Species Habitat** • *Mitigation for both temporary and permanent vernal pool tadpole shrimp and vernal pool fairy shrimp habitat disturbance would be provided as part of SMUD's HCP. Temporary impacts would be mitigated at a 0.5:1 ratio and permanent impacts would be mitigated at a 3:1 ratio through a combination of preservation and restoration. SMUD will use vernal pool restoration or creation credits at a 1:1 ration (i.e., 2:1 preservation, 1:1 restoration/creation).*	Prior to and during construction	During construction	SMUD Environmental Services	SMUD Construction Management and Inspection

Checklist Section	Environmental Criteria	Mitigation Measures	Implementation Duration	Monitoring Duration	Responsibility	
					Implementation	Monitoring
	the California Department of Fish and Wildlife or the US Fish and Wildlife Service?					
Biological Resources	a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or the US Fish and Wildlife Service?	**Mitigation Measure 3.4-6: Conduct Pre-construction Survey for Migratory Birds and Raptors, Including Special-status Species** *For any construction activities that will occur between February 1 and August 31 within the work limits, a qualified biologist shall conduct a pre-construction survey in suitable nesting habitat within 100 feet for passerine nests and within 500 feet for raptor nests and ground nests. If construction activities occur during bird nesting season (between February 1 and August 31), including equipment staging and construction, surveys shall be conducted within 7 days prior to commencement of construction activities.* *If no active nests are found during the pre-construction survey, no additional mitigation measures are required.* *If an active bird or raptor nest is identified within the construction work area or an active raptor nest is identified within the appropriate survey buffers from the construction work area, a no disturbance buffer shall be established around the nest to avoid disturbance of the nesting birds or raptors until a qualified biologist determines that the young have fledged and are foraging on their own or the nest has failed. The extent of these buffers shall be determined by the biologist and shall depend on the species identified, level of noise or construction disturbance, line-of sight between the nest and the disturbance, ambient levels of noise and other disturbances, and other topographic or artificial barriers.*	Within 7 days construction that occurs between February 1 and August 31	During survey	SMUD Environmental Services, a qualified biologist	SMUD Construction Management and Inspection

Checklist Section	Environmental Criteria	Mitigation Measures	Implementation Duration	Monitoring Duration	Responsibility	
					Implementation	Monitoring
		In addition to the establishment of buffers, other avoidance measures may include monitoring the nest during construction and restricting the type of work that can be conducted near the nest site. If a lapse in construction activities for one week or longer occurs during the avian breeding season, another pre-construction survey shall be performed prior to work re-initiation.				
Cultural Resources	b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?	**Mitigation Measure 3.5-1: Unanticipated Discovery of Cultural Resources** *In the event that a historic-period archaeological resource (such as concentrated deposits of bottles or bricks with makers marks, amethyst glass, ceramic or metal pipes, or other historic refuse) or a prehistoric archaeological resource (such as lithic scatters, midden soils), is uncovered during grading or other construction activities, all ground-disturbing activity within 100 feet of the discovery shall be halted until a qualified archaeologist can assess the significance of the find. SMUD will be notified of the potential find and a qualified archeologist shall be retained to investigate its significance. If the find is suspected to be Native American in origin, Mitigation Measure 3.18-1b shall be implemented. Any previously undiscovered resources found during construction will be recorded on appropriate California Department of Parks and Recreation 523 forms and evaluated for significance under all applicable regulatory criteria. If the archaeologist determines that the find does not meet the CRHR standards of significance for cultural resources, construction may proceed. If the find is determined to be significant by the qualified archaeologist (i.e., because the find is determined to constitute either an historical resource or a unique*	During construction	During construction	SMUD Environmental Services, Construction Contractor, and a qualified archaeologist (if suspected Cultural Resources are found)	SMUD Construction Management and Inspection

Checklist Section	Environmental Criteria	Mitigation Measures	Implementation Duration	Monitoring Duration	Responsibility	
					Implementation	Monitoring
		archaeological resource), the archaeologist shall work with SMUD to follow accepted professional standards such as further testing for evaluation or data recovery, as necessary. The results of the identification, evaluation, and/or data recovery program for any unanticipated discoveries shall be presented in a professional-quality report that details all methods and findings, evaluates the nature and significance of the resources, analyzes and interprets the results.				
Cultural Resources	c) Disturb any human remains, including those interred outside of dedicated cemeteries?	**Mitigation Measure 3.5-2: Unanticipated Discovery of Human Remains** *Pursuant to Sections 5097.97 and 5097.98 of the State Public Resources Code, and Section 7050.5 of the State Health and Safety Code, if a human bone or bone of unknown origin is found during construction, all work is to stop and the County Coroner and the District shall be immediately notified. If the remains are determined to be Native American, the coroner shall notify the Native American Heritage Commission within 24 hours, and the Native American Heritage Commission shall identify the person or persons it believes to be the most likely descendent from the deceased Native American. The most likely descendent may make recommendations to the landowner or the person responsible for the excavation work, for means of treating or disposition of, with appropriate dignity, the human remains and any associated grave goods.*	During construction (if suspected human remains are found)	During construction (if suspected human remains are found)	SMUD Environmental Services and Construction Contractor	SMUD Construction Management and Inspection
Noise	a) Generation of a substantial temporary or permanent increase in ambient noise levels in the	**Mitigation Measure 3.13-1: Construction Noise Reduction** *For oil processing activities that must occur during nighttime hours (6:00 p.m. to 7:00 a.m.), the construction contractor shall ensure that the following measures are implemented:*	During construction (for oil processing activities that must occur during nighttime	During construction (for oil processing activities that must	SMUD Environmental Services and Construction Contractor	SMUD Construction Management and Inspection

Checklist Section	Environmental Criteria	Mitigation Measures	Implementation Duration	Monitoring Duration	Responsibility	
					Implementation	Monitoring
	vicinity of the project in excess of standards established in the local general plan or noise ordinance, or in other applicable local, state, or federal standards?	• *Require the use of a temporary soundwall or equipment enclosures around the oil processing equipment for the duration of the process that results in a minimum of 16 dBA noise reduction, such that noise levels do not exceed 50 dBA Leq at the adjacent off-site residences, if the permanent substation perimeter barrier has not been installed.* • *Compliance with the noise standard shall be confirmed with either on-site noise monitoring during the oil processing operations or manufacturer specifications of the sound barriers/enclosures that confirm the minimum required noise reduction can be achieved.* • *Alternatively, if specific equipment noise levels are determined to be less than what was evaluated in this IS/MND (i.e., 81 dBA Leq for the pump and 73 dBA Leq for the generator at 50 feet for a combined noise level of 78.6 dBA Leq), based on construction contractor specifications, the required noise reduction from the sound barrier may be reduced accordingly, so long as the 50 dBA Leq noise level is not exceeded at off-site residential uses. The adjusted reduction requirement shall be conducted by a qualified acoustics professional.*	hours [6:00 p.m. to 7:00 a.m.])	occur during nighttime hours [6:00 p.m. to 7:00 a.m.])		
Tribal Cultural Resources	b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant	**Mitigation Measure 3.18-1a: Monitoring During Ground-disturbing Activities** *The project area is within a Tribal cultural landscape and buried resources could be encountered. Therefore, a Tribal monitor from Wilton Rancheria will perform monitoring of specific ground-disturbing activities.* *Spot check monitoring will be conducted for grading and excavating work during the construction of the*	During construction (during grading and excavating work for the substation and installation of the	During construction (during grading and excavating work for the substation and installation	SMUD Environmental Services, Construction Contractor, and Tribal representative	SMUD Construction Management and Inspection

Checklist Section	Environmental Criteria	Mitigation Measures	Implementation Duration	Monitoring Duration	Responsibility	
					Implementation	Monitoring
	to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe?	*substation and installation of the transmission pole foundations.* *The frequency and timing of these spot checks will vary based on the scope of work—for instance, more frequent checks will be conducted for deeper excavations, while less frequent monitoring will suffice for general grading. Generally, spot-checks will be limited to up to half a day per session, conducted twice weekly. For trenching activities along Gardendale Road and pole replacements near the historic-era family cemetery, full-time monitoring will be implemented during ground disturbing activities.* *The Tribal monitor will complete daily logs. Logs will confirm any finds, the locations of the find, time and date. If Tribal cultural resource are identified that have the potential to be adversely affected by the project, SMUD will implement Mitigation Measure 3.18-1b Unanticipated Discoveries of Tribal Cultural Resources, and monitoring will increase to full time during ground disturbing work in the vicinity of the find.*	transmission pole foundations)	of the transmission pole foundations)		
Tribal Cultural Resources	b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying	**Mitigation Measure 3.18-1b: Unanticipated Discovery of Tribal Cultural Resources** *If any suspected Tribal cultural resources or resources of Tribal cultural significance, including but not limited to features, anthropogenic/cultural soils, cultural belongings or objects (items), shell, bone, shaped stones or bone, or ash/charcoal deposits are discovered by any person during construction activities including ground disturbing activities, all work shall pause immediately within 100 feet of the find, or an agreed upon distance based on the project area and nature of the find. Work shall cease in and within the immediate vicinity of the find regardless of whether the construction*	During construction	During construction	SMUD Environmental Services, Construction Contractor, and Tribal representative (if suspected Tribal Cultural Resources are found)	SMUD Construction Management and Inspection

Checklist Section	Environmental Criteria	Mitigation Measures	Implementation Duration	Monitoring Duration	Responsibility	
					Implementation	Monitoring
	the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe?	*is being actively monitored by a Tribal Monitor, cultural resources specialist, or professional archaeologist. A Tribal Representative from Wilton shall be immediately notified and shall determine if the find is a Tribal cultural resource (PRC §21074). Evaluation and treatment will be performed in coordination with Tribes in accordance with SMUD's Inadvertent Discovery Plan.* *When avoidance is infeasible, preservation in place is the preferred option for mitigation of Tribal cultural resources under CEQA, and every effort shall be made to preserve the resources in place, including through project redesign, if feasible. If redesign is determined to not be feasible, SMUD shall consult with the Tribe to determine appropriate treatment of the find.* *Culturally appropriate treatment may be, but is not limited to, processing materials for reburial, minimizing handling of cultural objects, leaving objects in place within the landscape, or returning objects to a location within the project area where they will not be subject to future impacts. Permanent curation of Tribal cultural resources will not take place unless approved in writing by Wilton.* *The contractor shall implement any measures deemed by the CEQA lead agency to be necessary and feasible to preserve in place, avoid, or minimize impacts to the resource, including, but not limited to, facilitating the appropriate Tribal treatment of the find, as necessary. Treatment that preserves or restores the cultural character and integrity of a Tribal cultural resource may include Tribal Monitoring, culturally appropriate recovery of cultural objects and belongings, and reburial of cultural objects and belongings or cultural soil.*				

Checklist Section	Environmental Criteria	Mitigation Measures	Implementation Duration	Monitoring Duration	Responsibility	
					Implementation	Monitoring
		The construction contractor(s) shall provide secure, on-site storage for culturally sensitive soils or objects that are components of Tribal cultural resources that are found or recovered during construction. Only Tribal Representatives shall have access to the storage. Storage size shall be determined by the nature of the Tribal cultural resource and can range from a small lock box or jobsite work box to a conex box (shipping container). A secure (locked), fenced area can also provide adequate on-site storage if larger amounts of material must be stored. The construction contractor(s) and SMUD shall facilitate the respectful reburial of the culturally sensitive soils or objects. This includes providing a reburial location that is consistent with the Tribe's preferences, excavation of the reburial location, and assisting with the reburial, upon request. Any discoveries shall be documented on a Department of Parks and Recreation (DPR) 523 form within 2 weeks of the discovery and submitted to the appropriate CHRIS center in a timely manner. *Work at the Tribal cultural resource discovery location shall not resume until authorization is granted by the Lead Agency in coordination with Wilton. If articulated or disarticulated human remains, or human remains in any state of decomposition or skeletal completeness are discovered during construction activities, the Sacramento County Coroner shall be contacted immediately. Upon determination by the Sacramento County Coroner that the find is Native American in origin, the Native American Heritage Commission will assign the Most Likely Descendent who will work with SMUD to define appropriate treatment and disposition of the burials.*				

Checklist Section	Environmental Criteria	Mitigation Measures	Implementation Duration	Monitoring Duration	Responsibility	
					Implementation	Monitoring
		For any work required to be undertaken in an area where shoring and or with hazardous materials, including soils, all archaeologists, Tribal Representatives, and Tribal Monitors shall meet the appropriate level of safety training (e.g., confined spaces, hazardous material exposure, etc.) in compliance with California Division of Occupational Safety and Health State and federal Occupational Safety and Health Administration requirements prior to entering construction work areas.				
Tribal Cultural Resources	b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe?	**Mitigation Measure 3.18-1c: Cultural Resources Awareness Training** *A cultural* **resources** *awareness respect training program will be provided to all construction personnel active on the project site prior to implementation of earth moving activities. A representative or representatives from culturally affiliated Native American Tribe(s) will be invited to participate in the development and delivery of the cultural resources awareness training program in coordination with a qualified archaeologist meeting the United States Secretary of Interior guidelines for professional archaeologists. The program will include relevant information regarding sensitive Tribal cultural resources, including protocols for resource avoidance, applicable laws regulations, and the consequences of violating them. The program will also underscore the requirement for confidentiality and culturally-appropriate treatment of any find of significance to Native Americans and protocols, consistent, to the extent feasible, with Native American Tribal values.*	During construction (prior to earth moving activities)	During construction (prior to earth moving activities)	SMUD Environmental Services, Construction Contractor, Tribal representative, and a qualified archaeologist	SMUD Construction Management and Inspection

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CDFW. *See* California Department of Fish and Wildlife.

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Appendix A

Draft Initial Study and
Proposed Mitigated
Negative Declaration
August 2026

Sacramento Municipal Utility District

Pocket Substation Rebuild Project

Draft Initial Study and Proposed Mitigated Negative Declaration • August 2026



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Sacramento Municipal Utility District

Pocket Substation Rebuild Project

Draft Initial Study and Proposed Mitigated Negative Declaration • August 2026

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ACRONYMS AND OTHER ABBREVIATIONS

AMM	Avoidance and Minimization Measure
AQAP	air quality attainment plans
BMP	best management practice
CAAQS	California ambient air quality standards
Cal EPA	California Environmental Protection Agency
CalEEMod	California Emissions Estimator Model
CalEnviroScreen	California Communities Environmental Health Screening Tool
CA-MUTCD	California Manual on Uniform Traffic Control Devices
CARB	California Air Resources Board
CARI	California Aquatic Resource Inventory
CBC	California Building Code
CEC	California Energy Commission
CESA	California Endangered Species Act
CFR	Code of Federal Regulations
CNDDB	California Natural Diversity Database
CNEL	community noise equivalent level
CNPS	California Native Plant Society
CRHR	California Register of Historic Resources
CRPR	California Rare Plant Rank
CWA	Clean Water Act
DAC	disadvantaged community
DOC	California Department of Conservation
DSH	diameter at standard height
DTSC	California Department of Toxic Substances Control
EJ	environmental justice
EPA	US Environmental Protection Agency
ESA	Endangered Species Act
FMMP	Farmland Mapping and Monitoring Program
GGRF	Greenhouse Gas Reduction Fund
GHG	greenhouse gas
HFC	hydrofluorocarbon
IARC	International Agency for Research on Cancer
IRP	Integrated Resource Plan
IRP	new Integrated Resource Plan
kg	kilogram
LCI	Governor's Office of Land Use and Climate Innovation
LED	light-emitting diode
L_{max}	Maximum Sound Level
L_{min}	Minimum Noise Level

LRT	light rail train
LUST	leaking underground storage tank
MBTA	Migratory Bird Treaty Act
$MTCO_2e$	metric tons of carbon dioxide equivalent
MTP/SCS	Metropolitan Transportation Plan/Sustainable Community Strategy
MUDP	Meadowview Urban Design Plan
NAAQS	national ambient air quality standards
NCIC	North Central Information Center
NO_2	nitrogen dioxide
NOAA	National Oceanic and Atmospheric Administration
NO_X	oxides of nitrogen
NPPA	California Native Plant Protection Act
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
OPR	Governor's Office of Planning and Research
PFC	perfluorocarbon
PM_{10}	particulate matter less than 10 microns in diameter
PPV	peak particle velocity
ROG	reactive organic gas
RWQCB	Regional Water Quality Control Board
SACOG	Sacramento Area Council of Governments
SacRT	Sacramento Regional Transit
SB	Senate Bill
SF_6	sulfur hexafluoride
SFD	Sacramento Fire Department
SMAQMD	Sacramento Metropolitan Air Quality Management District
SO_2	sulfur dioxide
SPD	Sacramento Police Department
SPL	sound pressure level
ST	short-term
SVAB	Sacramento Valley Air Basin
SWPPP	Stormwater Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TAC	toxic air contaminant
tpy	tons/year
UAIC	United Auburn Indian Community of the Auburn Rancheria
UPRR	Union Pacific Railroad
USFWS	US Fish and Wildlife Service
USGS	US Geological Survey
VdB	vibration decibels
VMT	vehicle miles traveled

1.0 INTRODUCTION

1.1 Project Overview

The Sacramento Municipal Utility District (SMUD) is proposing the Pocket Substation Rebuild Project (project), which involves construction and operation of a new substation that would replace the existing Pocket Substation located on Gardendale Road in Sacramento, California. The proposed substation, Meadowview Substation, would convert or "step down" voltage from 230 kilovolt (kV) transmission lines to 69 kV subtransmission voltage through transformers and supporting equipment to safely reduce transmission voltages for local distribution. Meadowview Substation would be located immediately north of the existing Pocket Substation across Gardendale Road on a vacant parcel that is owned by SMUD. The existing Pocket Substation would be decommissioned and removed from the site as it is nearing the end of its service life. In addition, five new transmission poles would be installed, and four existing transmission poles would be repainted or replaced. Finally, the project would include installation and reconstruction of electrical lines to tie the proposed substation into the existing grid and integrate the new capacity into the existing system.

1.2 Purpose of Document

This Draft Initial Study/Mitigated Negative Declaration (Draft IS/MND) has been prepared by SMUD to evaluate potential environmental effects resulting from the project. Chapter 2, "Project Description," presents the detailed project information.

This document has been prepared in accordance with the California Environmental Quality Act (CEQA) (Public Resources Code [PRC] Section 21000 et seq.) and the CEQA Guidelines (California Code of Regulations [CCR] Section 15000 et seq.). Under CEQA, an IS can be prepared by a lead agency to determine if a project may have a significant effect on the environment (CEQA Guidelines Section 15063[a]), and thus to determine the appropriate environmental document. For this project, the lead agency has prepared the following analysis that identifies potential physical environmental impacts and mitigation measures that would reduce impacts to a less-than-significant level. SMUD is the lead agency responsible for complying with the provisions of CEQA.

In accordance with the provisions of CEQA, SMUD is distributing a Notice of Intent (NOI) to adopt an MND to solicit comments on the analysis and mitigation measures in the Draft IS/MND. The NOI will be distributed to property owners within 5,000 feet of the project, as well as to the State Clearinghouse and each responsible and trustee agency. The Draft IS/MND will be available for review and comment for a period of 30 days from August 20, 2026 to September 21, 2026.

Written comments must be received by close of business on September 21, 2026. Written comments should be addressed to:

SMUD–Environmental Services
P.O. Box 15830 MS B209
Sacramento, CA 95852-1830
Attn: Kim Crawford

E-mail comments should be addressed to kim.crawford@smud.org. If you have questions regarding the NOI or Draft IS/MND, please call Kim Crawford at (916) 732-5063.

Digital copies of the NOI and Draft IS/MND are available at: https://www.smud.org/en/Corporate/About-us/Company-Information/Reports-and-Statements/CEQA-Reports. Printed copies of the NOI and Draft IS/MND are available for public review at the following locations:

Sacramento Municipal Utility District
Customer Service Center
6301 S St.
Sacramento, CA 95817

Sacramento Municipal Utility District
East Campus Operations Center
4401 Bradshaw Road
Sacramento, CA 95827

1.3 Public Review Process

This Draft IS/MND is being circulated for a 30-day public comment period and is available at the locations identified above. Following the 30-day public review period, a Final IS/MND will be prepared, presenting written responses to comments received on significant environmental issues. Before SMUD's Board of Directors makes a decision on the project, the Final IS/MND will be provided to all parties commenting on the Draft IS/MND.

1.4 SMUD Board Approval Process

The SMUD Board of Directors must adopt the IS/MND and approve the mitigation monitoring and reporting program (MMRP) before it can approve the project. The project and relevant environmental documentation will be formally presented at a SMUD Environmental Resources and Customer Service (ERCS) Committee meeting for information and discussion. The SMUD Board of Directors will then consider adopting the final IS/MND and MMRP at its next regular meeting. Meetings of the SMUD Board of Directors are generally held on the third Thursday of each month.

1.5 Document Organization

This Draft IS/MND is organized as follows:

- **Chapter 1: Introduction.** This chapter provides an introduction to the environmental review process and describes the purpose and organization of this document.
- **Chapter 2: Project Description.** This chapter provides a detailed description of the project.
- **Chapter 3: Environmental Checklist.** This chapter presents an analysis of a range of environmental issues identified in the CEQA Environmental Checklist and determines if the project would result in no impact, a less-than-significant impact, or a less-than-significant

impact with mitigation incorporated. Where needed to reduce impacts to a less-than-significant level, mitigation measures are presented.

- **Chapter 4: Environmental Justice Analysis.** Although not required by CEQA, SMUD has elected to prepare an evaluation of potential environmental justice issues related to the project.
- **Chapter 5: List of Preparers.** This chapter lists the organizations and people that prepared the document.
- **Chapter 6: References.** This chapter lists the references used in preparation of this Draft IS/MND.

1.6 Environmental Factors Potentially Affected

Impacts on the environmental factors below are evaluated using the checklist included in Chapter 3. SMUD determined that the environmental factors checked below would be less than significant with implementation of mitigation measures. It was determined that the unchecked factors would have a less-than-significant impact or no impact.

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

1.7 Determination

On the basis of this initial evaluation:

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

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

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

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

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

K Crawford
Signature

8/20/2026
Date

Kim Crawford
Printed Name

Environmental Services Supervisor
Title

Sacramento Municipal Utility District
Agency

2.0 PROJECT DESCRIPTION

SMUD proposes to construct and operate a new 230 kilovolt (kV) substation that would replace the existing Pocket Substation located at 3250 Gardendale Road in Sacramento, California. The proposed substation, Meadowview Substation, would convert or "step down" voltage from 230kV transmission lines to 69 kV subtransmission voltage through transformers and supporting equipment to safely reduce transmission voltages for local distribution. Meadowview Substation would be located immediately north of the existing Pocket Substation across Gardendale Road on a vacant parcel that is owned by SMUD. The existing Pocket Substation would be decommissioned and removed from the site as it is nearing the end of its service life. In addition, five new transmission poles would be installed, and four existing transmission poles would be repainted or replaced. Finally, the project would include installation and reconstruction of electrical lines to tie the proposed substation into the existing grid and integrate the new capacity into the existing 230kV and 69kV system.

2.1 Project Location

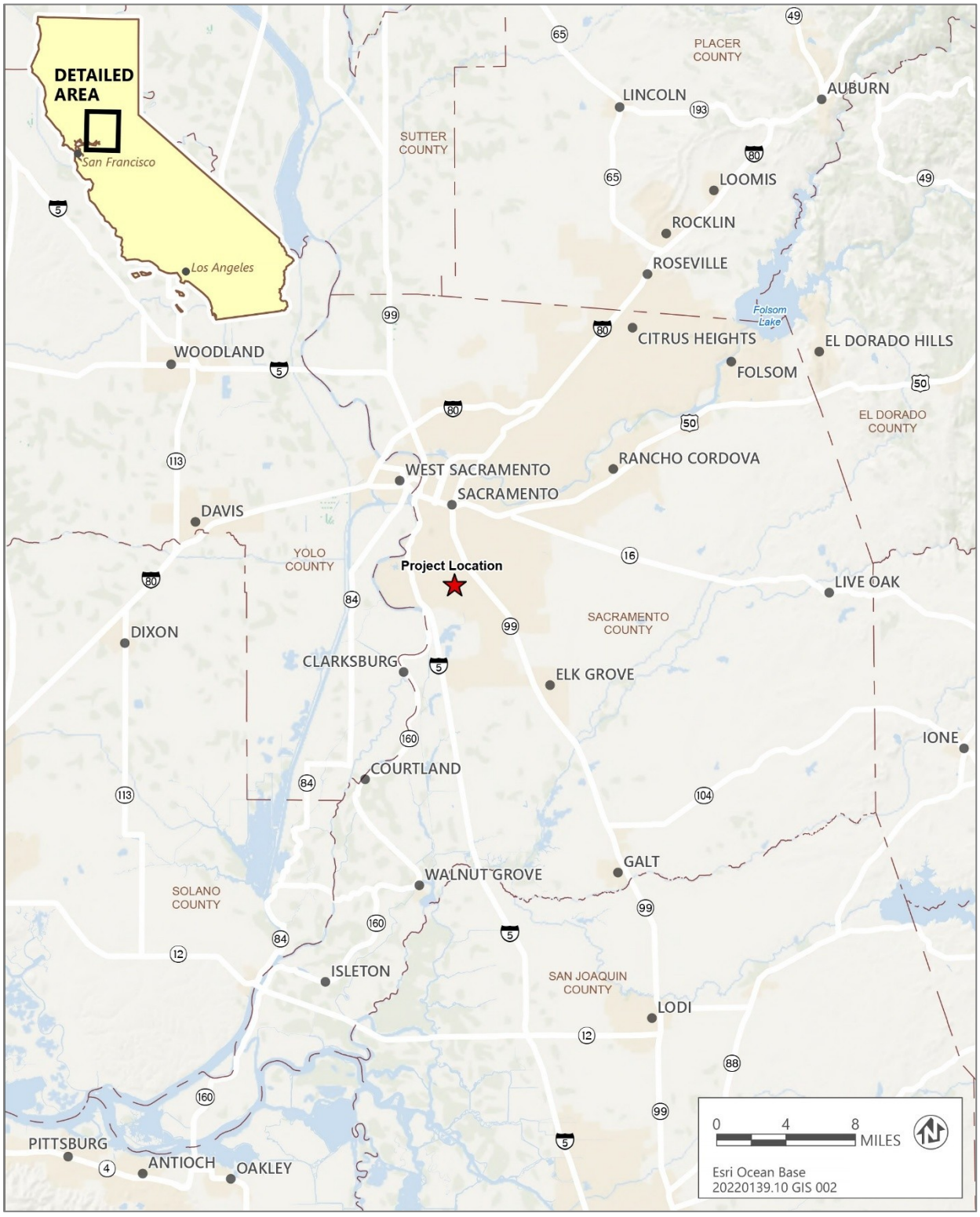
The project site is located in the Meadowview neighborhood of Sacramento (Figures 2-1 and 2-2). The project site can be accessed from the west via Interstate 5 (I-5) and from the east via State Route 99 (SR 99). The project site is located approximately 2.5 miles east of I-5/Florin Road interchange and approximately 1.4 miles west of the SR 99/Florin Road interchange. Local access to the existing Pocket Substation is provided by Gardendale Road, which dead ends into the project site.

The proposed project components and their locations are shown in Table 2-1 and in Figures 2-2 and 2-3).

Table 2-1 Project Components

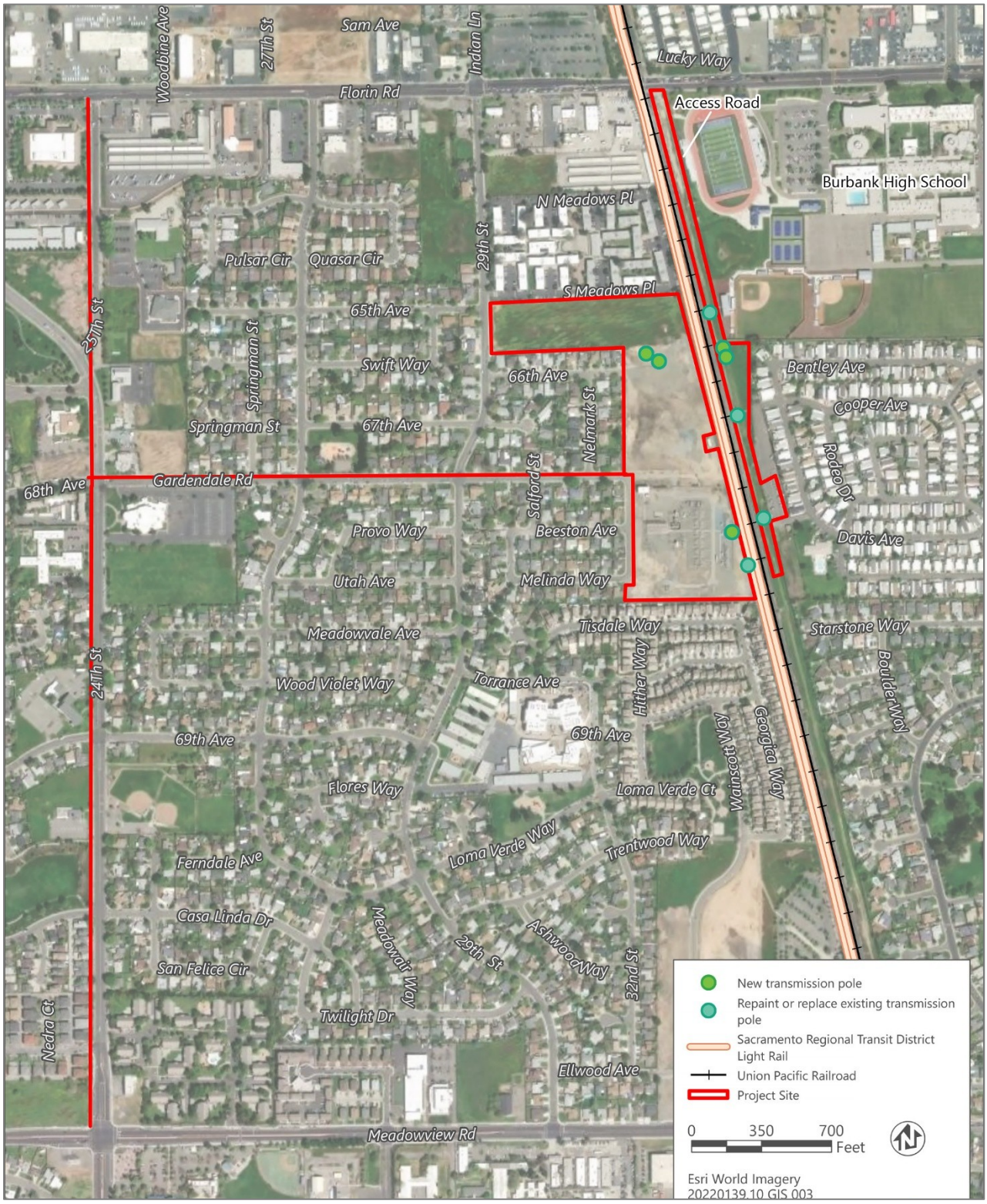
Project Component	Location	Details
New Meadowview Substation	3250 Gardendale Road, immediately north of existing substation	Construct and operate a new 230 kilovolt (kV) substation
Existing Pocket Substation	3250 Gardendale Road	Decommission and remove equipment
Expansion area	Expansion area, immediately north of new substation	Area for potential construction staging and/or project components
Transmission poles	At the existing substation, proposed substation, and east of the substations	Install, repaint, or replace nine transmissions poles
Construction staging and access	Access road and triangle area east of the substations and east of the railroad tracks	Use for temporary construction staging, and potentially improve the access road with aggregate base to facilitate heavy construction equipment, depending on road conditions
Electrical lines	1.5 total miles of electrical line work along 24th Street and Gardendale Road, east of the proposed substation	Add new circuits to the existing, aboveground lines located along 24th Street; and install underground lines along Gardendale Road

Source: Compiled by Ascent in 2026.



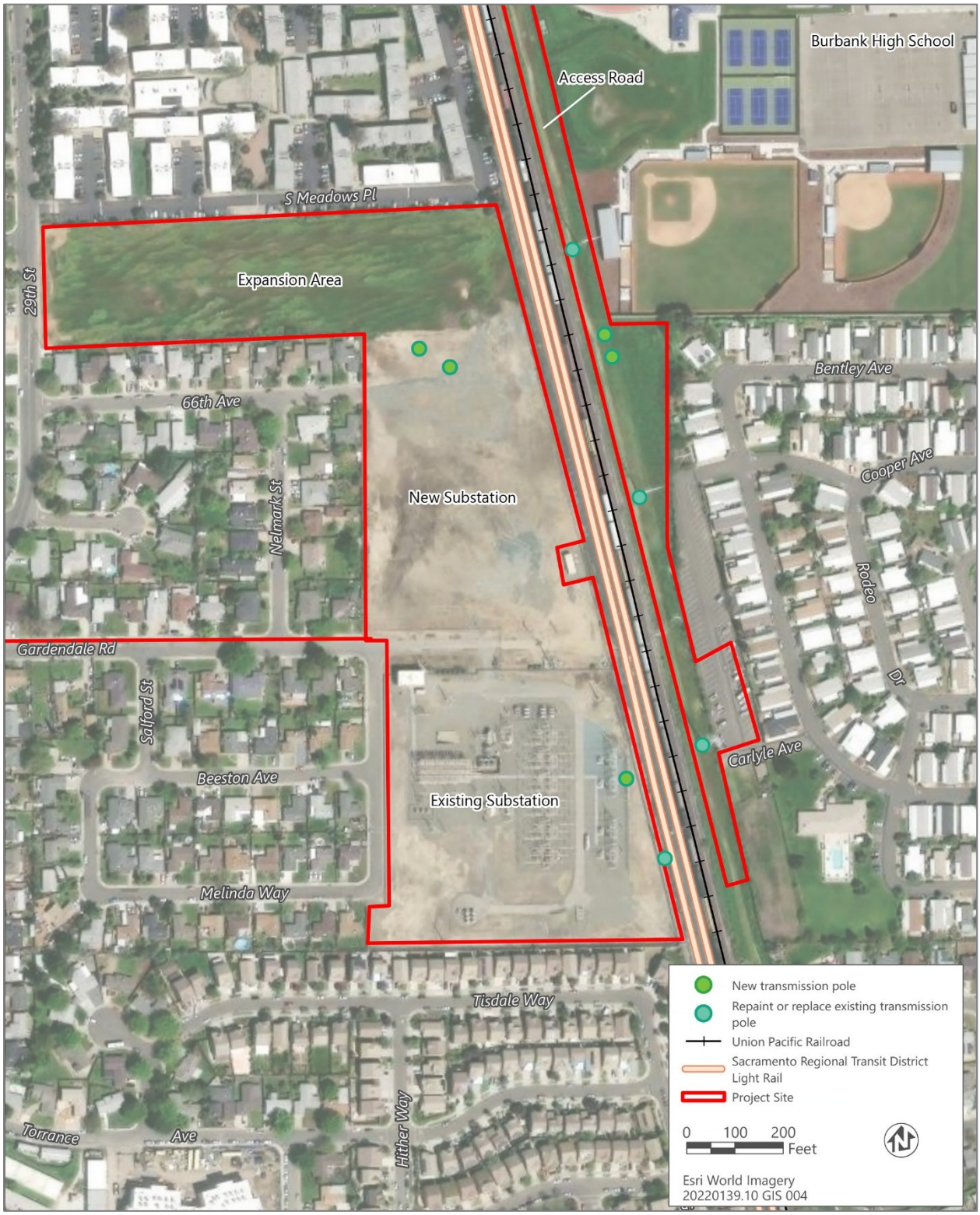
Source: Adapted by Ascent in 2026.

Figure 2-1. Regional Location



Source: Adapted by Ascent in 2026.

Figure 2-2. Project Location and Components



Source: Adapted by Ascent in 2026.

Figure 2-3. Project Site

The SMUD-owned property at 3250 Gardendale Road consists of the existing Pocket Substation and the north-adjacent vacant land, which would be used for the new Meadowview Substation. The project site also includes a SMUD-owned triangular piece of land located east of the railroad tracks, which would be used for construction staging; and approximately 5.5 acres of vacant land located north of the proposed substation for potential construction staging and/or project components (e.g., a detention basin).

The Assessor Parcel Numbers (APNs), land use, and zoning for the primary project components is provided in Table 2-2.

Table 2-2 Land Use and Zoning

Project Component	APN	Parcel Size	General Plan Land Use	City Zoning
New Meadowview Substation	049-0041-009	5.65 acres	Neighborhood	R-1-R Single Family Residential
Existing Pocket Substation	049-0042-004	8.4 acres	Neighborhood	R-1 Single Family Residential
Expansion area	049-0010-103	5.46 acres	Residential Mixed Use	R-2B Multi-Family Alternative Residential

Source: Compiled by Ascent in 2026.

In the City of Sacramento, public utility facilities can be located on residential land with issuance of a conditional use permit. SMUD will coordinate with the City regarding any necessary permits for the project. If permits are determined to be necessary, SMUD will obtain and maintain all required permits and approvals in accordance with City requirements.

SMUD has recently purchased an approximately 5.5-acre, vacant parcel that is located directly north of the new substation site. This area is called the “expansion area” throughout this IS/MND and could be used for temporary construction staging and/or for project components such as a detention basin. In addition, SMUD may install a paved driveway across the parcel.

Surrounding land uses include residential uses to the north, south, and west. The Sacramento Regional Transit District Blue light rail line as well as the Union Pacific Railroad line are located to the east of the project site. Burbank High School is located across the railroad tracks to the northeast of the site and Cesar Chavez Elementary School is located to the southwest.

2.2 Project Objectives

The objectives of the project are to:

- replace aging infrastructure,
- increase capacity to meet projected load growth,
- contribute to SMUD’s goals for ensuring electrical service reliability,

- provide safe and reliable electrical service to existing and proposed development in the Sacramento area,
- provide greater operational flexibility between circuits and substations in the area,
- maximize the use of available SMUD property and resources, and
- minimize impacts to nearby sensitive receptors and sensitive natural communities.

2.3 Project Description

The project consists of constructing and operating a new substation that would replace the existing Pocket Substation. The substation would interconnect 230kV and step it down to 69kV. The new substation would include new electrical equipment, a control building, driveway access, site fencing, lighting, stormwater drainage, and utilities. In addition, the project consists of electrical line work to connect the new substation to the electrical grid.

2.3.1 Proposed Meadowview Substation

Figure 2-4 shows the proposed substation layout. Note this is a conceptual layout and will be finalized during project design. The proposed Meadowview Substation would be similar in size and appearance to the existing Pocket Substation. The site would be graded and the surface covered in aggregate base except where drive aisles and permanent concrete foundations are located for the control building, transformers, circuit breakers, disconnect switches, bus structures, and other electrical infrastructure necessary to safely manage, protect, and operate high-voltage electricity as it moves through SMUD's power system. Key differences between the two substations are that the Meadowview Substation would have a third transformer to increase the substation's capacity, would interconnect two additional 69kV lines, would have a larger control building and a detention basin. In addition, the equipment at the Meadowview Substation would be more environmentally friendly, with clean vacuum interrupting technology used in the 69kV circuit breakers. This would replace the oil-filled 69kV circuit breakers currently in use at the Pocket Substation. Furthermore, Sulfur Hexafluoride (SF6) would be limited by substituting it with vacuum technology, where applicable, to reduce environmental impacts.

Electrical Equipment

Electrical substations are an assemblage of electrical components that include major infrastructure such as power transformers, circuit breakers, and a control building. The proposed Meadowview Substation would include interconnection of 230kV and 69kV lines, and require the construction of new infrastructure including:

- three (3) 230/69kV 224MVA transformers,
- eleven (11) 230kV circuit breakers,
- sixteen (16) 69kV circuit breakers,
- three (3) 69kV capacitor banks,

- one (1) 12kV shunt reactor,
- up to 25 230kV disconnect switches,
- forty-one (41) 69kV disconnect switches,
- nine (9) sets of 230kV capacitor-coupled voltage transformers (CCVT),
- three (3) sets of 69kV potential transformers (PT), and)
- six (6) circuit switchers.

As used in the existing substation, SMUD would use SF6, a common insulating gas for high-voltage electrical systems, to provide equipment insulation within the Meadowview Substation. Use of the proposed SF6 containing high voltage switching equipment would comply with recordkeeping, reporting, and leakage emission limit requirements in California Air Resources Board (ARB) regulations for reduction of SF6 emissions. As part of substation operations and maintenance activities, SMUD would monitor existing substation equipment to accurately and immediately identify any SF6 leaks and immediately repair leaks that are discovered. SMUD is also an active member of the SF6 Emission Reduction Partnership, which focuses on reducing emissions of SF6 from transmission and distribution sources.

Control Building

The proposed substation would include a control building measuring approximately 95 feet by 42 feet with a height of 25 feet. The control building would be unoccupied but would include a restroom for employee use while employees are on-site. The location of the control building within the Meadowview Substation is not finalized.

Utilities

SMUD would install one restroom for employee use in the new control building. The new control building would require minor water and sewer utility connections into existing municipal water and wastewater infrastructure located adjacent to or within the existing substation.

Access and Fencing

The substation would include up to three new driveway entrance(s): off Gardendale Road, potentially off 65th Avenue or 29th Street, and potentially across the expansion area. In addition, paved access roads ranging from 35 to 50 feet would be constructed within the substation. Areas that are not paved would be covered in aggregate base.

The west fence line of the new substation would be a ten-foot concrete block or precast concrete wall. The remainder of the perimeter would be fenced with either ten-foot security fencing consisting of chain link topped by barbed wire, similar to existing conditions, and/or ten-foot concrete block or precast concrete wall to maintain site security and public safety. An additional taller chain link fence may be installed on the eastern boundary to prevent vandalism, similar to existing conditions.

Lighting

Lighting would be provided at the substation for safety, security, and nighttime emergency maintenance and would consist of light-emitting diode (LED) light sources. Lighting would fulfill the National Electrical Safety Code requirements. Lights would likely be installed at the entry gates and various locations within the substation. Most substation lighting would be off during standard operating conditions, except on occasions when nighttime access is required. All substation lighting would be oriented downward toward major equipment to minimize glare onto surrounding properties.

Stormwater Drainage

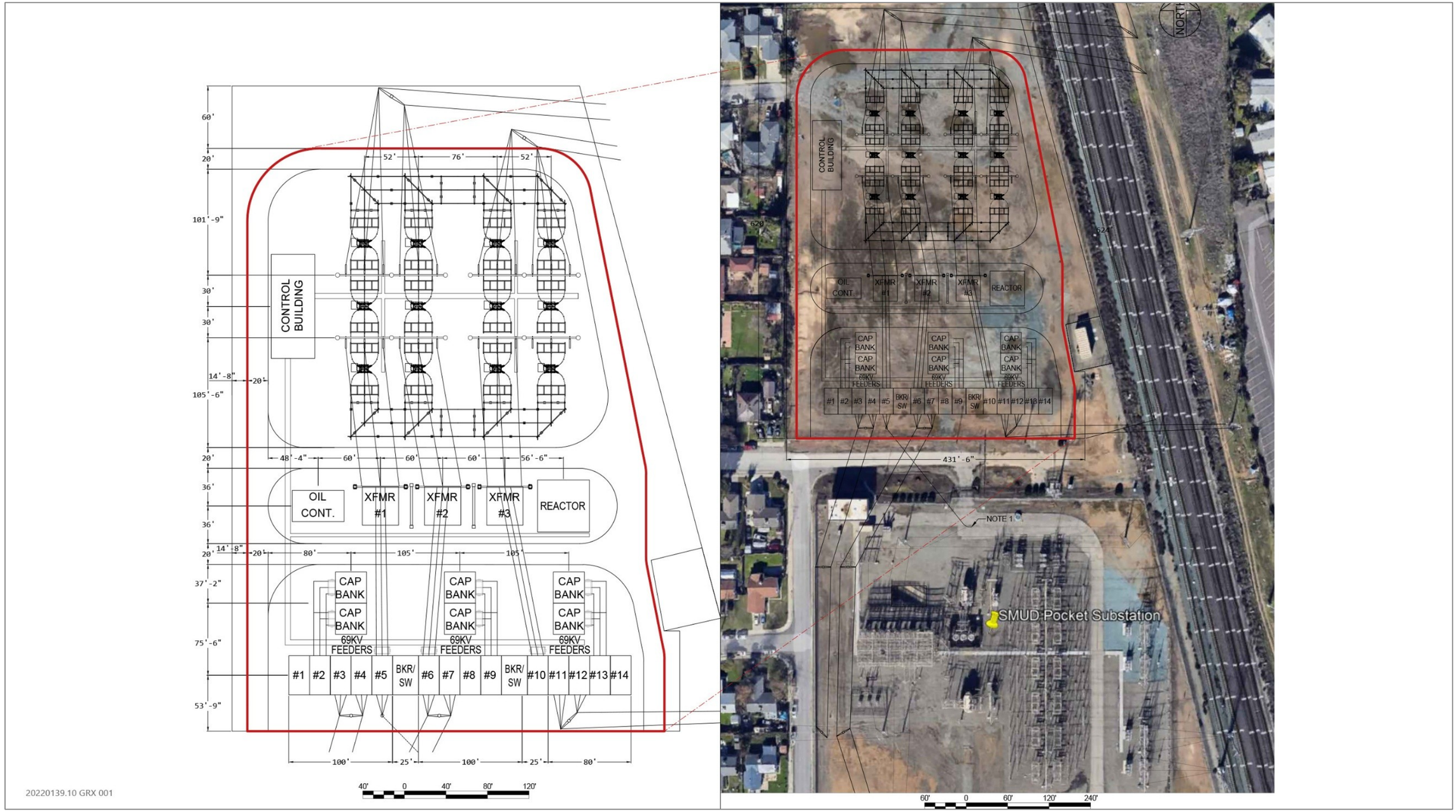
The substation would be designed such that on-site runoff would be collected into an underground storm drainpipe system and a stormwater detention basin. The stormwater detention basin would be constructed in accordance with site drainage design requirements. To minimize drainage impacts from the increased amount of non-permeable surfaces (estimated to be approximately 2.3 acres), the proposed on-site detention basin would collect stormwater in the basin. Water in the detention basin would primarily be pumped into the municipal stormwater system and some would percolate into the soil. While the design is not yet finalized, the detention basin may be located within the Meadowview Substation, the expansion area, or the existing Pocket Substation after it is decommissioned.

2.3.2 Transmission Poles and Electrical Line Work

The project would include installing and modifying existing overhead powerlines that deliver power to the substation and leave the substation to serve the grid, as portrayed on Figure 2-3.

The transmission line work would include:

- installing up to one new transmission pole inside the decommissioned Pocket substation;
- installing up to one new transmission pole next to rail tracks within existing transmission easement located east of the decommissioned Pocket substation.
- installing two new transmission poles inside the new Meadowview substation;
- installing two new transmission poles within the existing transmission easement located east of the new Meadowview substation;
- reconductoring approximately 1,100 feet of existing 230kV conductor located on transmission poles east of the new Meadowview substation; and
- replacing or repainting up to four existing transmission poles located east of the new Meadowview substation and decommissioned Pocket substation.



Source: Adapted by Ascent in 2026.

Figure 2-4. Proposed Substation Layout

To integrate the additional capacity from the Meadowview Substation, approximately 1.5 miles of new 69kV circuits would be installed on existing overhead infrastructure or within existing easements, as described below:

- 0.5 miles of 69kV circuit would be added from the Meadowview Substation along Gardendale Road to 24th Street. The 69kV circuit would either be added to existing overhead infrastructure on the north side of Gardendale Road or the new 69kV circuit would be installed underground if the existing overhead infrastructure cannot accommodate additional circuits;

- 0.7 miles of 69kV circuit would be added from Meadowview Road to the intersection of 24th and 25th Streets. The second 69kV circuit would be added to existing overhead infrastructure on the west side of the 24th Street; and

- 0.25 miles of 69kV circuit would be added from the intersection of 24th and 25th Streets to Florin Road. The 69kV circuit would be added to existing overhead infrastructure located on the west side of 25th Street.

2.3.3 Pocket Substation Decommissioning

Following the energization of the proposed Meadowview Substation, the existing Pocket Substation, which was constructed in the mid-1970s, would be de-energized, and the existing substation equipment, structures (including the two-story control building), and below grade infrastructure would be dismantled and removed from the site. Salvageable components would be removed for reuse; non-reusable materials would be recycled or scrapped.

After decommissioning, the site would be fenced and would contain one new transmission poles, if needed, as described in Section 2.3.2. In addition, a portion of the decommissioned site may be used for a detention basin for the Meadowview Substation, if needed. Future uses of the decommissioned site may include storage of SMUD equipment.

2.3.4 Operation and Maintenance

Operation and maintenance of the proposed substation would be similar to the existing operation and maintenance of the Pocket Substation. During normal operations, the substation would be operated remotely and continuously, meaning that no permanent employees would be stationed at the site and the substation would operate 24 hours per day/7 days per week. Substation maintenance would occur on a regular basis from two to four times per month for equipment inspections inside of the site and four times per year for perimeter maintenance. Major maintenance would occur about once every three years. After the substation has been in operation for an extended period of time, the transformer oil would require filtering. Impurities in the filtrate would either be removed and recycled or disposed of in accordance with federal, state, and local hazardous waste disposal requirements. While the oil itself is not toxic, the project would integrate secondary containment and/or diversionary structures or equipment to prevent an oil discharge.

In addition, restroom and vegetation management may occur with routine operations and maintenance activities.

2.3.5 Construction

Construction Phasing

Construction of the proposed Meadowview Substation would occur in several phases. The phases may be sequential, or they may overlap, and not all pieces of construction equipment may be used for the entire duration of a construction phase. The phases of construction would include the following:

- Site preparation
    - clearing and grubbing
    - site grading
    - drainage improvements and detention basin excavation
    - access road improvements
    - fencing installation
    - below-grade civil construction, including water and sewer lines, foundations, electrical grounding, and conduits
- Substation components
    - control building construction
    - erection of steel components and poles
    - electrical equipment installation
- Transmission and subtransmission line construction
- Decommissioning of the Pocket Substation

Site Preparation

The proposed substation site has already been cleared. No existing structures, equipment, or vegetation are present. The area is enclosed by temporary, chain-link fencing.

The proposed substation site would be graded for substation equipment, drainage, and access. SMUD anticipates excavation and removal of existing soil and import of backfill to re-establish grade within the site. While volumes are not yet finalized, SMUD estimates a volume of up to 25,000 cubic yards of exported soils and 12,000 cubic yards of imported fill. Imported fill, and, to the extent feasible, excavated soil, would be used to construct a raised substation pad and a paved access road. The raised pad would have a maximum side slope of 2:1.

A stormwater detention basin would be excavated in accordance with site drainage design requirements.

Below grade water and sewer lines and subsurface drainage components would be installed. Foundations for the control building and substation equipment would also be installed below grade. The maximum depth of construction within the substation site would be approximately 25 feet for substation foundations and approximately 50 feet for the transmission poles.

The 10-foot fence and/or block walls and gates would be installed around the perimeter of the substation site and a portion of the expansion area.

Substation Components

The new control building would be constructed with precast concrete walls. New substation equipment and overhead electrical conductors would be installed to provide connectivity to existing incoming electrical transmission service and outgoing subtransmission service. Construction would involve installing electrical conduits, grounding, and reinforced concrete foundations, and assembling the 230/69kV 224MVA transformers, 230kV circuit breakers, and 69kV circuit breakers, 69kV capacitor banks, 230kV disconnect switches, 69kV disconnect switches, 230kV CCVT's, 69kV PT's, 12kV shunt reactor, and circuit switchers.

Following the installation of substation components, the 35- to 50-foot-wide access road would be paved, connecting the access point on Gardendale Road with the control building and electrical equipment. After the substation and control building equipment are installed and tested, and all network connections are installed, the Meadowview Substation would be energized and begin operations.

Line Work

The project would include installing and modifying existing overhead powerlines that deliver power to the substation and leave the substation to serve the grid, as shown in Figure 2-2.

The new and replacement transmission poles would be 125 to 150 feet tall. To install and replace a transmission pole, a 10-foot-diameter hole would be augered up to 50 feet deep using a truck-mounted machine auger. An 108-inch-diameter steel reinforcing cage would be lowered into the hole by a crane. Approximately 4,000 cubic feet of concrete would be poured from a cement truck to form the new reinforced concrete foundation. New electrical components (davit arms, cross arms, pins, insulators, etc.) would be attached to the transmission pole, which would then be lifted to an upright position by a crane and bolted to the concrete foundation. The replacement transmission poles would be constructed as close to the existing poles as possible. The temporary work area for each replaced transmission pole would be approximately 0.25 acres. Reconductoring entails replacing the existing conductor with a larger diameter conductor to allow for an increase in capacity. A typical transmission pole installation or replacement plus reconductoring would take approximately 8 weeks.

To integrate the additional capacity from the Meadowview Substation, approximately 1.5 miles of new 69kV circuits would be installed on existing overhead infrastructure or within existing easements. Adding a new or additional 69kV circuit to SMUD's existing overhead infrastructure may require replacing the existing poles with taller, stronger poles. When pole replacements are warranted, the new pole would be installed adjacent to the existing pole, generally within 10 feet, to facilitate the transfer of the conductor from the old pole to the new pole. The excavated holes for new poles would average 24 inches in diameter. The new poles would be framed (cross arms, pins, insulators, grounds, bonding, markers, and other mounted electrical

components), and any anchors and guy wires attached before the pole is set in the ground. To set the new pole, SMUD would typically excavate a pole hole and any necessary anchor holes using a truck-mounted machine auger and a line truck. An auger drill, slightly larger in diameter than the pole, would be used to excavate the hole, approximately 24 inches in diameter. In easily accessible locations, pole replacement would take less than a day. In areas that require manual labor (e.g., backyards or sensitive habitat areas that are not accessible by a line truck and truck-mounted auger), the replacement work could take up to 3 days.

If the 69kV circuit along Gardendale Road is undergrounded, it would be installed via trenching. Trenching involves temporarily removing the surface material and soil to create void in which new conduit would be placed. Typically, a construction work area width of 25 feet would be required to allow for the open trench and equipment. The typical trench dimensions for installation of new conduit measures 2 feet wide and 4 feet deep. Once the trench is excavated, one to six segments of 4- or 6-inch-diameter plastic conduit would be installed on the trench floor and partially backfilled with concrete slurry. The trench would be backfilled with the previously excavated soil and the conduit buried under at least 2 feet of cover. After the conduit is placed, pull boxes, constructed of prefabricated, steel-reinforced concrete, would be installed. The pull boxes would be used initially to pull cable through the conduit and to splice cables together. During electrical line operation, pull boxes provide access to the underground cables for inspections and repairs.

Decommissioning Pocket Substation

After the Meadowview Substation is energized, the Pocket Substation would be de-energized, and existing substation equipment, control building, structures, and below grade infrastructure would be dismantled and removed from the site and the site would be re-graded. Salvageable components would be removed for reuse; non-reusable materials would be recycled or scrapped.

Construction Schedule

Project construction is anticipated to begin in the second half of 2027 and commissioning and energization would occur in spring 2030. Decommissioning would begin in the second half of 2030 and would be complete by early 2031. SMUD anticipates the construction duration to be approximately 3 years for the new substation, including approximately 16 months for decommissioning of the Pocket Substation.

Table 2-3 summarizes the timeline for each project phase. The phases may be sequential, or they may overlap.

Table 2-3 Construction Phasing

Construction Phase	Timeline
Clearing and grubbing	3 weeks
Grading, drainage facilities, and access road improvements	40 weeks
Installation of perimeter fencing and perimeter electrical grounding	4 weeks
Installation of water and sewer lines, electrical grounding, below-ground conduits, cable troughs, and foundations	16 weeks

Table 2-3 Construction Phasing

Construction Phase	Timeline
Construction of the control building	40 weeks
Integration of the control building with the switchyard	40 weeks
Paving of the substation interior access roads	3 weeks
Erection of structural steel components and tubular steel poles at proposed substation	8 weeks
Installation of the substation equipment and transmission and distribution lines	40 weeks
Commissioning phase	26 weeks
Decommissioning of the existing Pocket Substation	16 weeks

Source: Provided by SMUD in 2026.

Personnel, Equipment, and Staging

Construction would require an average of 15 workers per day, with up to approximately 30 workers during peak construction activities associated with on-site demolition, re-grading, and heavy equipment deliveries. Crews would normally work Monday through Saturday from 7 a.m. to 6 p.m.

Staging for the construction of the new substation, which would include areas for construction equipment and materials storage, would be located within the Meadowview Substation or within the expansion area. During construction, access to the substation staging area would be through Gardendale Road.

Staging for the transmission pole work would be located within the triangle-shaped property located east of the Meadowview Substation. This area would be temporarily fenced and rubber matting or geofabric and aggregate base would be placed over the surface and the property would be restored to pre-project conditions when construction is completed. SMUD would access the work areas from Carlyle Road or an access road adjacent to the railroad tracks via Meadowview Road. Depending on conditions, the access road may need to be improved with aggregate base to facilitate the heavy equipment.

Construction materials would be delivered to the site and stored on the project site or in the designated staging and laydown areas. Deliveries would be made by concrete trucks, flatbed trucks, and tractor-trailer rigs. Hazardous materials, including paint, grease, epoxies, and oil would be delivered to the site, and stored in either storage lockers or covered containers, in accordance with local, state, and federal requirements. Once the electrical equipment has been installed, transformer oil and sealed batteries would be delivered and stored in approved containers.

2.4 Potential Permits and Approvals Required

Elements of the project could be subject to permitting and/or approval authority of other agencies. As the lead agency pursuant to CEQA, SMUD is responsible for considering the adequacy of the IS/MND and determining whether the project should be approved. The following agencies and private company could require permits or approvals as part of project implementation:

State

- **State Water Resources Control Board (SWRCB)/Central Valley Regional Water Quality Control Board**: Construction Storm Water Discharge Permits for projects that disturb more than one acre of land. The permit would also require preparation and implementation of a stormwater pollution prevention plan that would specify storm water best management practices. In addition, SWRCB would review and approve dewatering plans, as appropriate.

- **California Department of Transportation**: permits for movement of oversized or excessive loads on State Highways.

Local

- **Sacramento Metropolitan Air Quality Management District (SMAQMD)**: Authority to Construct/Permit to Operate pursuant to SMAQMD Regulation 2 (Rule 201 et seq.).

- **Sacramento County**: encroachment permit, approval of traffic control plan and dewatering plan.

- **City of Sacramento**: encroachment permit, approval of traffic control plan.

- **Sacramento Regional Transit (SacRT)**: permit to access the SacRT right-of-way for the proposed work. Depending on the nature of the construction activities, SacRT may also require issuance of a Red Tag permit, which would temporarily shut down their electrical service in the work area.

Private Company

- **Union Pacific Railroad (UPRR)**: crossing permit for the proposed crossing upgrade.

3.0 ENVIRONMENTAL IMPACT EVALUATION

3.0 Evaluation of Environmental Impacts

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

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

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

4) "Negative Declaration: Less Than Significant With Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less-Than-Significant Impact." The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less-than-significant level (mitigation measures from "Earlier Analyses," as described in (5) below, may be cross-referenced).

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

    a) Earlier Analysis Used. Identify and state where they are available for review.

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

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

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

7) Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.

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

9) The explanation of each issue should identify:

    d) the significance criteria or threshold, if any, used to evaluate each question; and

    e) the mitigation measure identified, if any, to reduce the impact to less than significance.

3.1 Aesthetics

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

3.1.1 Environmental Setting

Aesthetic resources are generally defined as both the natural and built features of the landscape that contribute to the public's experience and appreciation of the environment. Aesthetic impacts may occur depending on the extent to which a project's presence would negatively alter the perceived visual character and quality of the environment.

Scenic Resources

As identified in the City's Master Environmental Impact Report for the 2040 General Plan and Climate Action & Adaptation Plan, notable scenic resources within Sacramento include the Sacramento and American rivers, which are located approximately 1.5 miles southwest and 5.2 miles northwest of the project site, respectively, at their nearest point. Other scenic resources within the City include culturally important or historic buildings, such as the State Capitol building (approximately 5.6 miles northwest of the project site), Tower Bridge (approximately 6.4 miles northwest of the project site), and Sutter's Fort (approximately 5.5 miles northwest of the project site). Other landmarks, historic districts, trees, and parks throughout the city may also be considered scenic resources (City of Sacramento 2023).

Route 160 is the only officially designated state scenic highway in Sacramento County (Caltrans 2026a). The designated portion of Route 160 is located approximately 1.5 miles southwest of the project site at its nearest point.

Existing Visual Character and Quality of Public Views

The project site is located within a developed suburban portion of Sacramento characterized by residential neighborhoods, community-serving land uses, and existing transportation and utility infrastructure. The topography of the project site and surrounding area is relatively flat, which limits long-distance views because there is little elevation change to provide vantage points over trees, intervening buildings, and other urban development. As a result, views within the area are generally confined to foreground and midground distances.

The project site includes the existing Pocket Substation, adjacent vacant and disturbed land north of the existing substation, the property east of the railroad tracks, and approximately 1.5 miles of roadway corridor along the north side of Gardendale Road and the west sides of 24th Street and 25th Street. Public views toward the project site are primarily available from adjacent roadways and sidewalks, the nearby rail corridor, neighboring residences, parks, and surrounding community-serving facilities.

The visual character of the existing Pocket Substation site is dominated by electrical utilities infrastructure. Visible features include steel support structures, transformers, electrical equipment, overhead transmission and distribution lines, utility poles, security lighting, asphalt access drive aisles, graveled surfaces, and perimeter chain-link fencing with barbed wire. Ornamental shrubs are present outside of the fenced area. Visual quality within the substation is moderately low due to the presence of utility infrastructure with minimal aesthetic design elements.

The vacant land proposed for the new Meadowview Substation, the expansion area, and adjacent property east of the railroad tracks is disturbed and characterized by exposed soil, gravel surfaces, and ruderal vegetation. Visual quality in these areas is low due to their disturbed condition, including evidence of trespassing and dumping. These conditions contribute to a degraded visual setting with limited scenic value.

Roadway corridors along Gardendale Road, 24th Street, and 25th Street have a mixed visual character consisting of suburban streetscapes with residential development, community-serving uses (e.g., parks, a fire station, places of worship, a nursing home, schools, and businesses), and utility infrastructure. Visual quality along the roadway corridors is generally moderate, reflecting the presence of maintained landscaping, street trees, sidewalks, and public facilities that is also influenced by the presence of overhead utility lines, power poles, and roadways.

Public views from within and adjacent to the project site include one- and two-story single-family residences and apartment buildings and associated landscaping and street trees to the north, south, and west. The Sacramento Regional Transit District Blue light rail line and the Union Pacific Railroad corridor are visible to the east of the project site. Sports fields and classroom buildings associated with Luther Burbank High School are visible northeast of the project site across the railroad corridor.

Light and Glare

The project site is within a developed, suburban area. Existing sources of nighttime lighting in the project area include streetlights along roadway corridors, security lighting at the existing Pocket Substation, and lighting associated with nearby residences and community-serving facilities.

Light and glare conditions within the existing Pocket Substation are typical of utility facilities and include security lighting mounted on poles or structures that illuminate the fenced substation yard for safety and operational purposes. These light sources are generally directed inward toward the facility; however, some spillover lighting may be visible from adjacent roadways and nearby land uses. Glare within the substation is limited due to the nonreflective finish on most electrical equipment and structural components, although occasional reflective surfaces may be associated with vehicles traveling within the substation for maintenance activities (which occurs two to four times per month).

The vacant land proposed for the new Meadowview Substation, the expansion area, and adjacent property currently have minimal to no on-site lighting. As a result, existing nighttime light levels in these areas are low and primarily influenced by spillover light from surrounding street lighting and nearby residential and roadway sources.

The roadway corridors along Gardendale Road, 24th Street, and 25th Street contain consistent nighttime lighting from streetlights, traffic lights, and illumination from adjacent residential and commercial properties. This results in a moderate level of ambient nighttime light typical of a developed suburban neighborhood. Glare along roadway corridors is primarily associated with vehicle headlights.

3.1.2 Discussion

a) Have a substantial adverse effect on a scenic vista?

Less-than-Significant Impact. A scenic vista is generally defined as a distant public view along or through an opening or corridor that is recognized and valued for its scenic quality, or a natural or cultural resource that is indigenous to the area.

As described in Section 3.1.1, “Environmental Setting,” the project site is within a developed suburban area characterized by residential neighborhoods, transportation corridors, and existing utility infrastructure. The project site and surrounding area are generally flat and do not contain designated scenic vistas, scenic overlooks, or visually prominent natural landforms. The nearest scenic resource is the Sacramento River, which is located approximately 1.5 miles southwest of the project site. The project site is not within the viewshed of the Sacramento River or any other scenic resource due to the distance to these resources, intervening development, and the relatively flat topography that limits extended views. Nearby parks may provide opportunities for enjoyment of local views of trees and open space; however, these parks are not recognized for exceptional or regionally significant scenic quality. Therefore, the proposed project would not have a substantial adverse effect on a scenic vista. This impact would be **less than significant**.

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

No Impact. As discussed in Section 3.1.1, “Environmental Setting,” above, the nearest officially designated state scenic highway is Route 160, located approximately 1.5 miles southwest of the project site at its nearest point. The project site is not visible from Route 160 due to the distance to this corridor, intervening development, and the relatively flat topography that limits extended views. Because there are no designated state scenic highways within, adjacent to, or visible from the project site, the project would not substantially damage scenic resources within a state scenic highway. The project would have **no impact**.

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

Less-than-Significant Impact. As described in Section 3.1.1, "Environmental Setting," the project site is located within an urbanized area in the Meadowview neighborhood of Sacramento characterized by residential development, transportation corridors, and existing utility infrastructure. The project site consists of the existing Pocket Substation, adjacent vacant and disturbed land north and east of the existing substation, and roadway corridors along Gardendale Road and 24th and 25th Streets. Existing visual character is low within the vacant and disturbed parcels, moderately low at the existing substation, and moderate along the maintained roadway corridors.

Applicable regulations and policies governing scenic quality in the project area include the following:

- The Sacramento 2040 General Plan and applicable zoning designations for the project site (R-1 and R-2B) allow high-voltage transmission facilities, subject to the special use regulations in Section 17.228.550 et seq. of the Sacramento City Code. These regulations are intended to minimize visual impacts by encouraging the siting of facilities in compatible locations and in the least obtrusive manner feasible. The code establishes priorities for the siting of substations and transmission lines. It also encourages measures such as undergrounding or rerouting transmission lines where feasible, minimizing the number of poles or towers, and incorporating landscaping to screen or soften visual impacts.

- The Meadowview Urban Design Plan (MUDP) establishes a framework for beautification and streetscape enhancement along portions of Meadowview Road and 24th Street through design features such as landscaping, community identity elements, accent treatments, and enhanced streetscapes. Portions of the project site along 24th and 25th Streets between Florin Road and Meadowview Road are located within the boundaries of the MUDP.

The project would include decommissioning and removal of the existing Pocket Substation, construction of the new Meadowview Substation on the adjacent parcel north of Gardendale Road, and installation and modification of existing overhead power lines.

During construction, views in the project area would be temporarily modified by the presence of construction equipment, materials, staging areas, and activities. Temporary visual changes would occur within a developed urban setting already characterized by existing utility and transportation infrastructure. Areas used exclusively for construction staging would be temporarily fenced and would be restored to pre-project conditions when construction is completed. Accordingly, construction-related visual effects would not conflict with applicable zoning and other regulations governing scenic quality.

Once operational, direct public views of the project components would be available from adjacent roadways, nearby residences, and the railroad corridor. Figure 3.1-1 depicts representative viewing locations within the project vicinity. Figures 3.1-2 through 3.1-5 compare existing and simulated project views from South Meadows Place (looking south and southeast toward the project site), 66th Avenue (looking northeast and southeast toward the project site),

the intersection of Gardendale Road and Melinda Way (looking north and northeast toward the project site), and the railroad corridor (looking northwest and west toward the project site).

As shown in Figures 3.1-2 through 3.1-5, visible components of the new Meadowview Substation would include electrical equipment such as power transformers and circuit breakers, transmission poles and overhead lines, a control building, driveway access, site fencing/walls, and lighting. The west fence line of the new substation would be a ten-foot concrete block or precast concrete wall. The remainder of the perimeter would be fenced with either ten-foot security fencing consisting of chain link topped by barbed wire, similar to existing conditions, and/or ten-foot concrete block or precast concrete wall to maintain site security and public safety. An additional taller chain link fence may be installed on the eastern boundary to prevent vandalism, similar to existing conditions.

Within the expansion area, the area to the east would likely be fenced and would potentially include a new detention basin, while the area to the west would likely include a paved driveway. Views of the new substation would generally be similar to existing views of the Pocket Substation, although the new substation facilities would be located north of Gardendale Road and would be more prominent from neighboring residences along 66th Avenue, Nelmark Street, 29th Street, and South Meadows Place. However, these improvements would occur within areas of low to moderately low visual quality that already contain more distant views of similar utility infrastructure.

Following decommissioning, the site of the existing Pocket Substation would remain fenced and may be used for storage of SMUD equipment. The removal of existing substation equipment would reduce the intensity and scale of visible utility infrastructure currently present at the site. One new transmission pole would be installed within the existing Pocket Substation, and one existing pole would be repainted and/or replaced.

New 69kV circuits would be installed on existing overhead infrastructure or within existing easements on Gardendale Road and 24th and 25th Streets. These roadway corridors currently include overhead utility lines, poles, street lighting, and transportation infrastructure. Therefore, the proposed improvements would be visually consistent with existing conditions and would not alter the visual character or quality of the corridors.

The project would be developed in accordance with applicable zoning regulations in the Sacramento City Code, which permits high-voltage transmission facilities subject to special use regulations intended to minimize visual impacts. The project would locate the new substation adjacent to existing transportation infrastructure and would utilize existing utility corridors and easements for transmission line improvements where feasible, consistent with City Code policies encouraging compatible siting of utility facilities. In addition, the project would not remove or obstruct existing streetscape improvements identified in the MUDP, nor would it preclude implementation of planned or future streetscape improvements. Overall, the project would not conflict with applicable zoning or other regulations governing scenic quality. This impact would be **less than significant**.



Source: Image produced and provided by Cunningham Engineering Corporation in 2026; Adapted by Ascent in 2026.

Figure 3.1-1. Overview of Viewpoint Locations



Source: Image produced and provided by Cunningham Engineering Corporation in 2026; Adapted by Ascent in 2026.
Existing Viewpoint 1.



Source: Image produced and provided by Cunningham Engineering Corporation in 2026; Adapted by Ascent in 2026.
Simulated Viewpoint 1.

Figure 3.1-2. Viewpoint 1 from the Expansion Area Looking Southeast



Source: Image produced and provided by Cunningham Engineering Corporation in 2026; Adapted by Ascent in 2026.
Existing Viewpoint 2.



Source: Image produced and provided by Cunningham Engineering Corporation in 2026; Adapted by Ascent in 2026.
Simulated Viewpoint 2.

Figure 3.1-3. Viewpoint 2 from 66th Avenue Looking East



Source: Image produced and provided by Cunningham Engineering Corporation in 2026; Adapted by Ascent in 2026.
Existing Viewpoint 3.



Source: Image produced and provided by Cunningham Engineering Corporation in 2026; Adapted by Ascent in 2026.
Simulated Viewpoint 3.

Figure 3.1-4. Viewpoint 3 from Melinda Way Looking Northeast



Source: Image produced and provided by Cunningham Engineering Corporation in 2026; Adapted by Ascent in 2026.
Existing Viewpoint 4.



Source: Image produced and provided by Cunningham Engineering Corporation in 2026; Adapted by Ascent in 2026.
Simulated Viewpoint 4.

Figure 3.1-5. Viewpoint 4 from the Railroad Tracks Looking Northwest

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

Less-than-Significant Impact. As discussed in Section 3.1.1, “Environmental Setting,” existing light and glare conditions within the project site are characteristic of a developed suburban environment.

Construction activities would occur during daylight hours and are not expected to require nighttime lighting. Construction equipment typically consists of nonreflective surfaces and would not be a substantial source of glare in the area.

During project operation, lighting would be provided at the proposed Meadowview Substation for safety, security, and nighttime emergency maintenance. Substation lighting would likely be installed at the entry gates and various locations within the facility and would consist of light-emitting diode (LED) light sources. Most substation lighting would remain off during standard operating conditions, except on occasions when nighttime access is required, such as for maintenance or emergency conditions. All substation lighting would be oriented downward toward major equipment to minimize spillover light and reduce potential glare onto adjacent properties and roadways. Light levels at the proposed Meadowview Substation would generally be consistent with those currently present at the existing Pocket Substation, and would not represent a substantial increase in nighttime illumination within the project area. Therefore, the project would not create a new source of substantial light or glare that would adversely affect day or nighttime views in the area. The impact would be **less than significant**.

3.2 Agriculture and Forestry Resources

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
II. Agriculture and Forest Resources.				
In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997, as updated) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board.				
Would the project:				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	☒
b) Conflict with existing zoning for agricultural use or a Williamson Act contract?	☐	☐	☐	☒
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	☐	☐	☐	☒
d) Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒
e) Involve other changes in the existing environment, which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use?				

3.2.1 Environmental Setting

Located in a highly developed area, in the Meadowview neighborhood of Sacramento, the project site is identified as urban and built-up land by the California Department of Conservation's (DOC's) Farmland Mapping and Monitoring Program (FMMP) (DOC 2026a). No agricultural land or operations are located on or adjacent to the project site.

No portions of the project site or adjacent parcels are held under Williamson Act contracts (DOC 2026b).

There are no areas within the project site that are zoned as forestland, timberland, or Timberland Production Zone. The existing Pocket Substation site and the new Meadowview Substation are zoned as R-1 Standard Single Family. The expansion area is zoned as R-2B Multi-Family and is undeveloped. While the expansion area was formerly agricultural land from as early as 1937 until at least 1952, the land has been vacant since 1961 (Partner 2026). The area east of the project site and the Union Pacific Railroad is zoned as Agricultural and is

completely developed as a mobile home park (City of Sacramento 2026). There are no existing agricultural operations in the project area.

3.2.2 Discussion

a-e) Would the project convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural uses; conflict with existing zoning for agricultural use, or a Williamson Act contract; 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)); result in the loss of forest land or conversion of forest land to non-forest use; or 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. The project site does not contain any lands designated as Important Farmland (i.e., Prime Farmland, Unique Farmland, or Farmland of Statewide Importance) or zoned as forest land or timberland. As noted above, there are no active agricultural operations within or near the project site, and there are no Williamson Act contracts associated with the project site. While an area east of the project site is zoned as Agricultural, there are no agricultural operations and the area is developed as a mobile home park. No existing agricultural or timber-harvest uses are located on or near the project site. Therefore, the project would have **no impact** on agriculture or forest land.

3.3 Air Quality

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
III. Air Quality.				
Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied on to make the following determinations.				
Are significance criteria established by the applicable air district available to rely on for significance determinations?		☒ Yes	☐ No	
Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☒	☐	☐
b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?	☐	☒	☐	☐
c) Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☒	☐
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	☐	☐	☒	☐

3.3.1 Environmental Setting

The US Environmental Protection Agency (EPA) has established national ambient air quality standards (NAAQS) for criteria air pollutants, which are known to be harmful to human health and the environment. These pollutants include carbon monoxide (CO), lead, nitrogen dioxide (NO_2), ozone, particulate matter (which is categorized into particulate matter less than 10 microns in diameter [PM_{10}] and particulate matter less than 2.5 microns in diameter [$PM_{2.5}$]), and sulfur dioxide (SO_2). The State of California has also established the California ambient air quality standards (CAAQS) for these pollutants, as well as sulfates, hydrogen sulfide, vinyl chloride, and visibility-reducing particles. The NAAQS and CAAQS were established to protect the public with a margin of safety, from adverse health impacts caused by exposure to air pollution. These standards are summarized in Table 3.3-1.

Table 3.3-1 National and California Ambient Air Quality Standards

Pollutant	Averaging Time	California (CAAQS)[a,b]	National (NAAQS)[c]	
			Primary[b,d]	Secondary[b,e]
Ozone	1-hour	0.09 ppm (180 µg/m^3)	—	Same as primary standard
	8-hour	0.070 ppm (137 µg/m^3)	0.070 ppm (147 µg/m^3)	
Carbon monoxide (CO)	1-hour	20 ppm (23 mg/m^3)	35 ppm (40 mg/m^3)	Same as primary standard
	8-hour	9 ppm[f] (10 mg/m^3)	9 ppm (10 mg/m^3)	

Table 3.3-1 National and California Ambient Air Quality Standards

Pollutant	Averaging Time	California (CAAQS)[a,b]	National (NAAQS)[c]	
			Primary[b,d]	Secondary[b,e]
Nitrogen dioxide (NO_2)	Annual arithmetic mean	0.030 ppm (57 µg/m^3)	53 ppb (100 µg/m^3)	Same as primary standard
	1-hour	0.18 ppm (339 µg/m^3)	100 ppb (188 µg/m^3)	—
	24-hour	0.04 ppm (105 µg/m^3)	—	—
Sulfur dioxide (SO_2)	3-hour	—	—	0.5 ppm (1300 µg/m^3)
	1-hour	0.25 ppm (655 µg/m^3)	75 ppb (196 µg/m^3)	—
Respirable particulate matter (PM_{10})	Annual arithmetic mean	20 µg/m^3	—	Same as primary standard
	24-hour	50 µg/m^3	150 µg/m^3	
Fine particulate matter ($PM_{2.5}$)	Annual arithmetic mean	12 µg/m^3	9.0 µg/m^3	15.0 µg/m^3
	24-hour	—	35 µg/m^3	Same as primary standard
	Calendar quarter	—	1.5 µg/m^3	Same as primary standard
Lead [f]	30-Day average	1.5 µg/m^3	—	—
	Rolling 3-Month Average	–	0.15 µg/m^3	Same as primary standard
Hydrogen sulfide	1-hour	0.03 ppm (42 µg/m^3)	No national standards	
Sulfates	24-hour	25 µg/m^3		
Vinyl chloride [f]	24-hour	0.01 ppm (26 µg/m^3)		
Visibility-reducing particulate matter	8-hour	Extinction of 0.23 per km		

Notes: µg/m^3 = micrograms per cubic meter; km = kilometers; ppb = parts per billion; ppm = parts per million.

[a] California standards for ozone, carbon monoxide, SO_2 (1- and 24-hour), NO_2, particulate matter, and visibility-reducing particles are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.

[b] Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based on a reference temperature of 25 degrees Celsius (°C) and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.

[c] National standards (other than ozone, particulate matter, and those based on annual averages or annual arithmetic means) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration in a year, averaged over three years, is equal to or less than the standard. The PM_{10} 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 µg/m^3 is equal to or less than one. The $PM_{2.5}$ 24-hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard. Contact the US Environmental Protection Agency for further clarification and current federal policies.

[d] National primary standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.

[e] National secondary standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.

[f] The California Air Resources Board has identified lead and vinyl chloride as toxic air contaminants with no threshold of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.

Source: CARB 2024.

The project is located within the Sacramento Valley Air Basin (SVAB) and is under the jurisdiction of SMAQMD. SMAQMD develops rules and regulations and emission reduction programs to control emissions of criteria air pollutants, ozone precursors (oxides of nitrogen [NO_X] and reactive organic gases [ROGs]), toxic air contaminants (TACs), and odors within its jurisdiction.

SMAQMD adopted the Guide to Air Quality Assessment in Sacramento County (SMAQMD CEQA Guide) in December 2009 and has made multiple revisions since, with the most recent revisions occurring in October 2020 to operational emissions pertaining to best management practices (BMPs) for particulate matter. The SMAQMD CEQA Guide establishes thresholds of significance for criteria air pollutants that SMAQMD recommends using when evaluating air quality impacts in Sacramento County. CEQA-related air quality thresholds of significance are tied to achieving or maintaining attainment designation with the NAAQS and CAAQS, which are scientifically substantiated, numerical concentrations of criteria air pollutants considered to be protective of human health. Table 3.3-2 provides a summary of Sacramento County's attainment status under the NAAQS and CAAQS.

Table 3.3-2 Attainment Status Designations for Sacramento County

Pollutant	National Ambient Air Quality Standard	California Ambient Air Quality Standard
Ozone	Attainment (1-hour)[1]	
	Nonattainment (8-hour)[2]	Nonattainment
	Nonattainment (8-hour)[3]	
Respirable particulate matter (PM_{10})	Attainment (Maintenance)	Nonattainment
Fine particulate matter ($PM_{2.5}$)	Attainment	Attainment
Carbon monoxide (CO)	Attainment	Attainment
Nitrogen dioxide (NO_2)	Unclassified/Attainment	Attainment
Sulfur dioxide (SO_2)	Attainment	Attainment

Table 3.3-2 Attainment Status Designations for Sacramento County

Pollutant	National Ambient Air Quality Standard	California Ambient Air Quality Standard
Lead (Particulate)	Attainment	Attainment
Hydrogen Sulfide	—	Unclassified/Attainment
Sulfates	No Federal Standard	Attainment
Visibly Reducing Particles	—	Unclassified/Attainment
Vinyl Chloride	—	Unclassified/Attainment

[1] Air Quality meets federal 1-hour Ozone standard (77 FR 64036). EPA revoked this standard, but some associated requirements still apply.
[2] 2008 standard
[3] 2015 standard.
Sources: CARB 2024; EPA 2026a.

As shown in Table 3.3-2, Sacramento County is in nonattainment for both the 2008 and 2015 8-hour ozone NAAQS standards (and thus subject to enforcement of the 1-hour standard) as well as the CAAQS for ozone and PM_{10}.

SMAQMD maintains an updated plan for achieving the 8-hour ozone NAAQS and CAAQS that was updated and approved by the SMAQMD Board and the California Air Resources Board (CARB) in 2018. An updated plan for the 2015 8-hour ozone standard, the 2023 Sacramento Regional Plan for the 2015 8-Hour Ozone Standard (2023 Ozone Plan), was adopted on October 11, 2023. There are currently no plans available for achieving the CAAQS PM_{10} standard. The air quality plan establishes the strategies used to achieve compliance with the NAAQS and CAAQS in all areas within SMAQMD's jurisdiction.

Sensitive Receptors

SMAQMD generally defines a sensitive receptor as a facility or land use that houses or attracts members of the population who are particularly sensitive to the effects of air pollutants. This includes children, the elderly, and people with illnesses. Examples of sensitive receptors include residences, schools, medical facilities, daycare centers, parks, and playgrounds. The substation project site is surrounded on all sides by sensitive receptors including residences, a school, and parks. The nearest of these receptors are directly against the project boundaries. The proposed transmission line alignment is also surrounded by sensitive receptors that include a medical facility, residences, and parks. The nearest receptors are directly against the proposed alignment.

A brief description of the source and health effects of criteria air pollutants is provided in Table 3.3-3.

Table 3.3-3 Criteria Air Pollutants

Pollutant	Sources	Effects
Ozone	Ozone is a secondary air pollutant produced in the atmosphere through a complex series of photochemical reactions involving ROG, also sometimes referred to as volatile organic compounds by some regulating agencies) and NO_X. The main sources of ROG and NO_X, often referred to as ozone precursors, are products of combustion processes (including motor vehicle engines) and the evaporation of solvents, paints, and fuels.	Ozone causes eye irritation, airway constriction, and shortness of breath and can aggravate existing respiratory diseases such as asthma, bronchitis, and emphysema.
Carbon monoxide	CO is usually formed as the result of the incomplete combustion of fuels. The single largest source of CO is motor vehicle engines; the highest emissions occur during low travel speeds, stop-and-go driving, cold starts, and hard acceleration.	Exposure to high concentrations of CO reduces the oxygen-carrying capacity of the blood and can cause headaches, nausea, dizziness, and fatigue; impair central nervous system function; and induce angina (chest pain) in persons with serious heart disease. Very high levels of CO can be fatal.
Respirable particulate matter (PM_{10}), Fine particulate matter ($PM_{2.5}$).	Some sources of particulate matter, such as soot and smoke from wood burning in fireplaces, or fugitive dust from demolition and construction activities, are more local in nature. Other sources such as exhaust from vehicular traffic, or smoke and soot from wildfires, have a more regional effect. Particulate matter can also form in the atmosphere by condensation and/or transformation of SO_2 and ROG. PM_{10} emissions typically occur from construction sites, landfills and agriculture, wildfires and brush/waste burning, industrial sources, wind-blown dust from open lands, while $PM_{2.5}$ - emissions occur from the combustion of gasoline, oil, diesel fuel or wood.	For $PM_{2.5}$, short-term exposures (up to 24-hours duration) have been associated with premature mortality, increased hospital admissions for heart or lung causes, acute and chronic bronchitis, asthma attacks, emergency room visits, respiratory symptoms, and restricted activity days. These adverse health effects have been reported primarily in infants, children, and older adults with preexisting heart or lung diseases. Long-term (months to years) exposure to $PM_{2.5}$ has been linked to premature death, particularly in people who have chronic heart or lung diseases, and reduced lung function growth in children. Short-term exposures to PM_{10} have been associated primarily with worsening of respiratory diseases, including asthma and chronic obstructive pulmonary disease (COPD), leading to hospitalization and emergency department visits. The effects of long-term exposure to PM_{10} are less clear, although several studies suggest a link between long-term PM_{10} exposure and respiratory mortality.
Nitrogen dioxide	NO_2 is a reddish-brown gas that is a by-product of combustion processes. Automobiles and industrial operations are the main sources of NO_2.	Aside from its contribution to ozone formation, NO_2 can increase the risk of acute and chronic respiratory disease and reduce visibility.
Sulfur dioxide	SO_2 is a combustion product of sulfur or sulfur-containing fuels such as coal and diesel.	SO_2 is also a precursor to the formation of particulate matter, atmospheric sulfate, and atmospheric sulfuric acid formation that could precipitate downwind as acid rain.

Table 3.3-3 Criteria Air Pollutants

Pollutant	Sources	Effects
Lead	Leaded gasoline, lead-based paint, smelters (metal refineries), and the manufacture of lead storage batteries have been the primary sources of lead released into the atmosphere, with lead levels in the air decreasing substantially since leaded gasoline was eliminated in the United States.	Lead has a range of adverse neurotoxic health effects.

Notes: CO=carbon monoxide; NO_2= nitrogen dioxide; NO_x=nitrogen oxides; ROG-=reactive organic gases; SO_2=sulfur dioxide.
Source: EPA 2026b.

Per Appendix G of the State CEQA Guidelines and SMAQMD recommendations, air quality and its associated health impacts are considered significant if the project would result in any of the following:

- generate construction-related criteria air pollutant or precursor emissions to exceed the SMAQMD-recommended thresholds of 85 pounds per day (lb/day) for NO_X, 80 lb/day and 14.6 tons/year (tpy) for PM_{10}, and 82 lb/day and 15 tpy for $PM_{2.5}$. In addition, all SMAQMD-recommended Basic Construction Emission Control Practices (BMPs) shall be implemented to minimize emissions of PM_{10} and $PM_{2.5}$; otherwise, the threshold for both PM_{10} and $PM_{2.5}$ is 0 lb/day;

- generate operational-related long-term operational criteria air pollutant or precursor emissions that exceed the SMAQMD-recommended thresholds of 65 lb/day for ROG and NO_X, 80 lb/day and 14.6 tpy for PM_{10}, and 82 lb/day and 15 tpy for $PM_{2.5}$. In addition, all SMAQMD-recommended Operational BMPs for Particulate Matter Emissions from Land Use Development Projects shall be implemented to minimize emissions of PM_{10} and $PM_{2.5}$; otherwise, the threshold for both PM_{10} and $PM_{2.5}$ is 0 lb/day;

- result in short-term construction and long-term operational local mobile-source CO emissions that would violate or contribute substantially to concentrations that exceed the 1-hour CAAQS of 20 ppm or the 8-hour CAAQS of 9 ppm;

- expose any off-site sensitive receptor to a substantial incremental increase in TACs emissions that exceed 10 in 1 million for carcinogenic risk (i.e., the risk of contracting cancer) and/or a noncarcinogenic hazard index of 1.0 or greater; and/or

- result in other emissions, such as those leading to odors, adversely affecting a substantial number of people.

3.3.2 Discussion

a) Conflict with or obstruct implementation of the applicable air quality plan?

Less Than Significant with Mitigation Incorporated. As shown in Table 3.3-2, Sacramento County is in nonattainment for both the 2008 and 2015 8-hour ozone NAAQS standards as well as the CAAQS for ozone and PM_{10}. SMAQMD has air quality attainment plans (AQAPs) which present comprehensive strategies to reduce ROG and NO_X emissions from stationary, area, mobile, and indirect sources to achieve attainment status of the NAAQS and CAAQS. The 2023 Ozone Plan, discussed above, is an AQAP that is applicable to development in the City of Sacramento and Sacramento County. The emission inventories used to develop the reduction measures and strategies of the 2023 Ozone Plan are based on the planned growth identified in regional and local land use plans such as general plans or community plans, which then informs the growth projections used in the development of Sacramento region's Metropolitan Transportation Plan/Sustainable Community Strategy (MTP/SCS).The most current MTP/SCS for the Sacramento region is the 2025 Blueprint. However, the growth assumptions that informed the 2023 Ozone Plan were derived from the Sacramento Area Council of Governments' (SACOG) 2020 MTP/SCS (SMAQMD et al. 2023).

Projects that would result in population and/or employment growth beyond that projected in regional or local plans could result in increases in vehicle miles traveled (VMT) above levels forecasted in the attainment plans, further resulting in mobile source emissions that could conflict with or obstruct implementation of the air quality plans. Thus, increases in VMT that exceed regional VMT projections used to develop the region's air quality plans generally would be considered to have a significant adverse incremental effect on the SVAB's ability to attain CAAQS and NAAQS for all criteria air pollutants.

It is anticipated that operational activities associated with the project would include only occasional maintenance and repair. Substation maintenance would occur on a regular basis from two to four times per month for internal inspections and four times per year for perimeter maintenance. Major maintenance would occur about once every three years. Because the project would replace the existing Pocket Substation, which currently generates operations- and maintenance-related emissions, emissions generated by the project would likely be similar to existing conditions due to the similarity of the type and scale of proposed and existing operational activities. Specifically, the key differences between the existing and proposed substations are a third transformer to increase the substation's capacity, a larger control building, and technology upgrades to reduce greenhouse gas (GHG) emissions. None of these changes from the existing substation would result in considerably more operations-related emissions or require significantly more intense maintenance than those generated under existing conditions. Therefore, the project would not result in an increase in employment in the area nor would the project result in additional population/VMT. This would also mean that operational emissions from the project would be negligible. The project does not include any land uses or operational emission sources that would result in substantial increases in operational vehicle trips. Thus, long-term operational emissions of criteria air pollutants and precursors would not violate or substantially contribute to an existing or projected air quality violation or expose sensitive receptors to substantial pollutant concentrations such that adverse health impacts would occur.

As discussed previously, SMAQMD developed criteria pollutant thresholds in consideration of achieving attainment for the NAAQS and CAAQS, which represent concentration limits of criteria

air pollutants needed to adequately protect human health. Additionally, AQAPs are developed based on regional population and VMT projections. The project involves the addition of a third transformer to increase the substation's capacity, a larger control building, and technology upgrades to reduce GHG emissions which, as discussed above, would not result in increased population or VMT due to maintenance activities. Therefore, operation of the project would not substantially contribute to the exceedance of the NAAQS and CAAQs in the County nor result in greater health impacts compared to existing conditions. In addition, because the project would not induce population growth or VMT, it would not conflict with the goals of the applicable AQAP. Therefore, the operation of the project would not conflict with the applicable air quality plan for which criteria pollutant emission thresholds of significance were developed to support.

The construction phase of the project would generate emissions of air pollutants including ROG, NO_X, PM_{10}, and $PM_{2.5}$ from the operation of offroad equipment, truck hauling trips, and construction worker vehicle trips. Project construction is anticipated to begin in the second half of 2027 and conclude in early 2031 with the decommissioning of existing equipment. Construction emissions were estimated using a combination of project-specific information (e.g., approximations of overall construction schedule, phase types and durations, construction crew sizes, excavation and hauling quantities, land use size, and equipment types) and California Emissions Estimator Model (CalEEMod) Version 2022.1.1.41 default values for model inputs such as on-road vehicle trips and trip lengths, some heavy-duty equipment types and quantities, and vehicle and equipment emissions factors were used.

Table 3.3-4 summarizes the modeled maximum daily emissions for all pollutants and annual emissions for particulate matter from construction activity without the application of BMPs.

Table 3.3-4 Project-Generated Construction Emissions by Year

Construction Year	ROG (lb/day) Emissions	NO_X (lb/day) Emissions	PM_{10} (lb/day) Emissions	PM_{10} (tpy) Emissions	$PM_{2.5}$ (lb/day) Emissions	$PM_{2.5}$ (tpy) Emissions
2027	3	2	4	<1	1	<1
2028	3	2	4	<1	1	<1
2029	2	2	1	<1	1	<1
2030	3	2	1	<1	1	<1
2031	3	2	1	<1	1	<1
Maximum	**3**	**2**	**4**	<1	**1**	<1
SMAQMD Thresholds of Significance without BMPs[2]	None	85	0	0	0	0
Threshold Exceeded?	N/A	No	Yes	Yes	Yes	Yes

Notes: ROG = reactive organic gas; NO_X = oxides of nitrogen; PM_{10} = respirable particulate matter; lb/day = pounds per day; SMAQMD = Sacramento Air Quality Management District; tpy = tons per year; BMPs = best management practices

Source: Modeling conducted by Ascent in 2026.

As shown in Table 3.3-4, the project, without the application of SMAQMD's basic construction emission BMPs, would generate daily and annual emissions of PM_{10} and $PM_{2.5}$ in excess of the SMAQMD's thresholds for daily PM during construction activities (i.e., 0 lb/day). Because the project would exceed SMAQMD's thresholds, which were designed to attain and maintain the NAAQS and CAAQS, the project would conflict with the 2023 Ozone Plan and other efforts to attain and maintain the NAAQS and CAAQS. Because the NAAQS and CAAQS are scientifically substantiated to be protective of human health, conflict with plans to attain and maintain the NAAQS and CAAQS could result in adverse health outcomes. For these reasons, this impact would be **potentially significant**.

Mitigation

Mitigation Measure 3.3-1: Implement SMAQMD Basic Construction Emission Control Practices

SMUD shall incorporate the SMAQMD Basic Construction Emission Control Practices (BMPs) into the construction specifications for the project. BMPs that shall be incorporated into the construction contract include the following:

- Water all exposed surfaces two times daily. Exposed surfaces include, but are not limited to soil piles, graded areas, unpaved parking areas, staging areas, and access roads.
- Cover or maintain at least two feet or free board space on haul trucks transporting soil, sand, or other loose material on the site. Any haul trucks that would be traveling along freeways or major roadways should be covered.
- Use wet power vacuum street sweepers to remove any visible track out mud or dirt onto adjacent public roads at least once a day. Use of dry power sweeping is prohibited.
- Limit vehicle speeds on unpaved roads to 15 miles per hour (mph).
- Complete construction of all roadways, driveways, sidewalks, parking lots as soon as possible. In addition, building pads should be laid as soon as possible after grading unless seeding or soil binders are used.
- Minimize idling time either by shutting equipment off when not in use or reducing the time of idling to 5 minutes [required by California Code of Regulations, Title 13, sections 2449(d)(3) and 2485]. Provide clear signage that posts this requirement for workers at the entrances to the site.
- Maintain all construction equipment and ensure it is in proper working condition according to manufacturer's specifications. The equipment must be checked by a certified mechanic and determined to be running in proper condition before it is operated.

Significance after Mitigation

Mitigation Measure 3.3-1 would reduce exhaust emissions by limiting vehicle idling and by requiring regular maintenance of equipment, while dust emissions would be reduced through measures such as those that limit vehicle speeds and require regular construction site sweeping and watering. According to the SMAQMD CEQA Guide, implementation of SMAQMD's Basic

Construction Emission Control Practices allows for adjustment of SMAQMD's thresholds for daily PM_{10} and $PM_{2.5}$ from 0 lb/day to 80 lb/day for PM_{10} and 82 lb/day for $PM_{2.5}$.

Table 3.3-5 Mitigated Daily and Annual Construction-related Air Pollutant Emissions

Construction Year	ROG (lb/day) Emissions	NO_X (lb/day) Emissions	PM_{10} (lb/day) Emissions	PM_{10} (tpy) Emissions	$PM_{2.5}$ (lb/day) Emissions	$PM_{2.5}$ (tpy) Emissions
2027	3	2	4	<1	1	<1
2028	3	2	4	<1	1	<1
2029	2	2	1	<1	1	<1
2030	3	2	1	<1	1	<1
2031	3	2	1	<1	1	<1
Maximum	**3**	**2**	**4**	<1	**1**	<1
SMAQMD Thresholds of Significance with BMPs	None	85	80	14.6	82	15
Threshold Exceeded?	**N/A**	**No**	**No**	**No**	**No**	**No**

Notes: ROG = reactive organic gas; NO_X = oxides of nitrogen; PM_{10} = respirable particulate matter; lb/day = pounds per day; SMAQMD = Sacramento Air Quality Management District; tpy = tons per year; BMPs = best management practices

Source: Modeling conducted by Ascent in 2026.

As shown in Table 3.3-5, with the application of SMAQMD's dust BMPs that allow for the use of SMAQMD's non-zero PM thresholds, construction-generated emissions would be below SMAQMD's construction thresholds for all pollutants. As discussed previously, SMAQMD developed these thresholds in consideration of achieving attainment for the NAAQS and CAAQS, which represent concentration limits of criteria air pollutants needed to adequately protect human health. Therefore, impacts would be reduced to a **less-than-significant level with mitigation incorporated**.

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

Less than Significant with Mitigation Incorporated. As shown in Table 3.3-2, Sacramento County is currently in nonattainment for federal and state ozone, state PM_{10}, and federal $PM_{2.5}$. Ozone impacts are the result of cumulative emissions from numerous sources in the region and transport from outside the region. Ozone is formed by chemical reactions involving NO_X, ROG, and sunlight. Particulate matter also has the potential to cause significant local problems during periods of dry conditions accompanied by high winds, and during periods of heavy earth disturbing activities. Particulate matter (PM_{10} and $PM_{2.5}$) may have cumulative local impacts if, for example, several unrelated grading or earth moving activities are underway simultaneously at nearby sites. As discussed in Impact "a" above, construction-related emissions of ROG would exceed SMAQMD's daily threshold. Additionally, without the implementation of SMAQMD's basic dust BMPs, project-generated PM emissions would exceed SMAQMD's thresholds for

annual and daily PM_{10} and $PM_{2.5}$ emissions). Because the project would exceed SMAQMD's thresholds, which were designed to attain and maintain the NAAQS and CAAQS, the project would conflict with the 2023 Ozone Plan and other efforts to attain and maintain the NAAQS and CAAQS which were designed to protect human health, the project could result in adverse health outcomes. For these reasons, this impact would be **potentially significant**.

Mitigation

Implement Mitigation Measure 3.3-1.

Significance after Mitigation

As concluded under Impact "a," implementation of Mitigation Measure 3.3-1, which would require application of SMAQMD's dust BMPs, would reduce construction-generated emissions to below SMAQMD's construction thresholds for all pollutants.

Operation of the project would be limited to maintenance activities, similar to the existing requirements for the current power line that runs along the alignment. Because operation of the project would not result in a substantial increase in vehicle trips along the project alignment, there would not be a substantial increase in long-term emissions due to project implementation.

Therefore, impacts related to short-term project-generated construction emissions and long-term operational emissions would be **less than significant with mitigation incorporated**.

c) Expose sensitive receptors to substantial pollutant concentrations?

Less than significant. This analysis focuses specifically on the potential for sensitive receptors to be exposed to project-generated TACs. This is because sensitive receptors (e.g., children, elderly, asthmatics, and others whose are at a heightened risk of negative health outcomes due to exposure to air pollution) are the population at the greatest risk of experiencing negative health effects related to exposure to these pollutants, which themselves are considered to pose the highest risk to human health among air pollutants. Long-term (months to years) exposure to $PM_{2.5}$ has been linked to premature death, particularly in people who have chronic heart or lung diseases, and reduced lung function growth in children. The effects of long-term exposure to PM_{10} are less clear, although several studies suggest a link between long-term PM_{10} exposure and respiratory mortality. The International Agency for Research on Cancer (IARC) published a review in 2015 that concluded that particulate matter in outdoor air pollution causes lung cancer (CARB 2016). TACs from diesel PM are of particular importance because the potential cancer risk from inhalation of diesel PM outweighs the risk for all other health impacts (i.e., noncancer chronic risk, short-term acute risk) and health impacts from other TACs (CARB 2025). More than 90 percent of DPM is less than 1 µm in diameter and thus is a subset of $PM_{2.5}$ (CARB 2016). Although other TACs exist (e.g., benzene, 1,3-butadiene, hexavalent chromium, formaldehyde, methylene chloride), they are primarily associated with industrial operations and the project would not include any industrial sources. Therefore, construction-related TACs from the combustion of diesel fuel used to operate heavy equipment and on-road trucks are the primary focus of this analysis.

Construction-related activities would result in temporary, intermittent emissions of diesel PM from the exhaust of off-road, heavy-duty diesel equipment used for site preparation (e.g., demolition, clearing, grading); paving; on-road truck travel; and other miscellaneous activities. On-road diesel-powered haul trucks traveling to and from the construction areas to deliver materials and equipment are less of a concern because they would not stay on the site for long periods of time and would thus not expose any one receptor to TACs for a prolonged period.

Residential receptors are typically of primary concern when discussing TAC exposure, as they would generally be exposed to project-generated TACs for extended periods of time. As identified above, the substation project site and proposed transmission line alignment are, in multiple locations, set directly against residences and within 500 feet of other receptors such as parks, a school, and a medical facility. Construction activities would occur intermittently over an approximately 39-month construction period. With regards to exposure of diesel PM, the dose to which receptors are exposed is the primary factor used to determine health risk. Dose is a function of the concentration of a substance or substances in the environment and the duration of exposure to the substance. Dose is positively correlated with time, meaning that a longer exposure period would result in a higher level of health risk for any exposed receptor. Thus, the risks estimated for an exposed individual are higher if a fixed exposure occurs over a longer period. According to guidance from the California Office of Environmental Health Hazard Assessment's *Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments,* a 30-year exposure duration is used for estimating cancer risk at residential land uses (OEHHA 2015). Given that the majority of heavy-duty off-road diesel equipment use would be limited to an overall construction phase duration of approximately 39 months (with the 16-month decommissioning phase requiring less heavy duty equipment use and, therefore, emitting less TACs compared to the construction phase), receptors would not be exposed to TAC emissions for an extended period of time.

The maximum daily emissions of exhaust $PM_{2.5}$ would be approximately 3 pounds per day (see Appendix A). Studies show that diesel PM is highly dispersive and that concentrations of diesel PM decline with distance from the source (e.g., 500 feet from a freeway, the concentration of diesel PM decreases by 70 percent) (Roorda-Knape et al. 1999; Zhu et al. 2002, cited in CARB 2005: 9). Thus, considering the highly dispersive properties of diesel PM, the relatively low mass of diesel PM emissions that would be generated during project construction, the relatively short period during which diesel PM-emitting construction activity would take place in the same location near the same receptors, construction-related TACs would not expose sensitive receptors to an incremental increase in cancer risk that exceeds 10 in one million or a hazard index of 1.0 or greater. The project does not propose operational sources of TACs (e.g., stationary sources such as refineries or diesel generators, or uses associated with high volumes of truck activity such as shipping centers) and would thus not have the potential to expose receptors to substantial operational TAC concentrations or considerably increase existing TAC emissions and exposure levels above baseline conditions. Impacts related to the exposure of sensitive receptors to high concentrations of TACs would be **less than significant**.

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

Less than Significant. Minor odors from the use of heavy-duty diesel equipment during project construction activities would be intermittent and temporary, dissipating rapidly from the source within an increase in distance. While the project would be constructed over approximately 39 months, these types of odor-generating activities would not occur at any single location for an

extended period of time and would vary based on the type and intensity of the construction activities occurring at any given time. Therefore, project construction is not anticipated to result in substantial odor emissions. Activities associated with project operation would be limited to maintenance activities that would be similar to those performed under existing conditions. The project does not propose any land uses typically associated with the generation of nuisance odors (e.g., wastewater treatment plants, landfills, confined animal facilities, composting stations, food manufacturing plants, refineries, and chemical plants). Therefore, implementation of the project would not result in exposure of a substantial number of people to objectionable odors and this impact would be **less than significant**.

3.4 Biological Resources

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

3.4.1 Environmental Setting

This section describes biological resources in and adjacent to the project site and evaluates potential impacts to such resources as a result of project implementation. To determine the biological resources that may be potentially affected by the project, reconnaissance surveys of the project site and surrounding area were conducted by an Ascent biologist on April 2, 2026, April 23, 2026, and June 3, 2026. In addition, the following data sources were reviewed to determine biological resources that may occur on the project site:

- California Natural Diversity Database (CNDDB) occurrence records for the nine US Geological Survey (USGS) 7.5-minute quadrangles including and surrounding the project site (CNDDB 2026);
- California Native Plant Society (CNPS) Rare Plant Inventory occurrence records for the nine USGS quadrangles including and surrounding the project site (CNPS 2026);

- US Fish and Wildlife Service (USFWS) Information for Planning and Consultation (IPAC) electronic records search (USFWS 2026a);
- California Department of Forestry and Fire Protections Fire and Resource Assessment Program (FRAP) land cover and vegetation data (CAL FIRE 2026);
- California Aquatic Resource Inventory (CARI) dataset of surface waters and their riparian areas (SFEI 2026); and
- SMUD HCP Modeled Habitat and Land Cover mapping (SMUD 2024).

Vegetation and Habitat Types

Two land cover or vegetation types occur on and adjacent to the project site: urban and annual grassland (CAL FIRE 2026). Most of the project site is characterized as urban habitat (CAL FIRE 2026), including the existing Pocket Substation site, new Meadowview Substation site, and the area of additional electrical lines. Annual grassland is mapped adjacent to the southern end of the planned 69 kV overhead circuit (CAL FIRE 2026), at the intersection of 24th Street and Meadowview Road. The expansion area and property and access road east of the railroad tracks are mapped as urban land cover (CAL FIRE 2026); however, during the reconnaissance surveys, both areas also had characteristics consistent with annual grassland vegetation (see below). In addition, a human-made drainage classified as “riverine” intersects the alignment of the planned 69 kV overhead circuit (SFEI 2026). Under the SMUD HCP, the project site is within the Urban land cover, and is not within modeled habitat for species covered by the HCP (SMUD 2024).

Existing Pocket Substation

The existing Pocket Substation site is developed. Besides the existing infrastructure and fencing, ground cover is largely barren. Ornamental shrubs are present outside of the fenced area, which provide limited habitat for biological resources (Figure 3.4-1, top).

New Meadowview Substation

Land cover on the new Meadowview Substation project site is barren, consisting of dirt and gravel (Figure 3.4-1, bottom). Fencing is present around the majority of the project site; however, the area is anthropogenically disturbed by illegal trespassing and dumping. Vegetation is largely limited to dense Himalayan blackberry (*Rubus armeniacus*) bramble along the fenceline on the western edge of the project site (Figure 3.4-2, top), with smaller amounts of other species such as common stork’s-bill (*Erodium cicutarium*), alkali mallow (*Malvella leprosa*), curly dock (*Rumex crispus*), and wild oat (*Avena fatua*). A narrow area of un-mowed vegetation is present along the northern edge of the project site, primarily composed of grass species including wild oat.

Expansion Area

The expansion area north of the Meadowview Substation site is mapped as urban land cover (CAL FIRE 2026), with characteristics of agricultural use. The area is disked, but remnants of vegetation remain including wild oat and common stork’s-bill (Figure 3.4-2, bottom). Standing water on the project site was observed during the reconnaissance survey (Figure 3.4-3, top),

from aerial imagery, and during the June 3, 2026 wetland delineation (see "Aquatic and Wetland Habitat" below) in a depression on the area.

Property and Access Road East of the Railroad Tracks

The property east of the railroad tracks and associated access road is characterized as urban land cover (CAL FIRE 2026); however, this area also contains grassland vegetation. The access road contains a mix of exposed and overground gravel (Figure 3.4-3, bottom), and was flooded in portions during the reconnaissance survey and aquatic resource delineation on April 23, 2026 (see "Aquatic and Wetland Habitat" below). The access route is mowed, and the area is anthropogenically disturbed by utility and railroad activities, trespassing, and illegal camping and dumping. Grassland vegetation in the property east of the railroad tracks includes wild oat and other grasses, common stork's-bill, Bermuda buttercup (*Oxalis pes-caprae*), and winter vetch (*Vicia villosa*) (Figure 3.4-4, top).

Electrical Lines

The proposed 69 kV overhead circuit would be installed on existing infrastructure on the north side of Gardendale Road, and on the west sides of 24th Street and 25th Street. The majority of the land cover along both routes is developed, and consists of residential homes, parks, and businesses (Figure 3.4-4, bottom); however, areas of annual grassland are present at the intersection of 24th Street and Meadowview Road. This area of annual grassland is disked and anthropogenically disturbed by trespassing and illegal camping (Figure 3.4-5, top). Vegetation and land cover along the developed portions of 24th Street, 25th Street, and Gardendale Road include ornamental and native trees, manicured lawns, and public parks. Vacant lots are present near the intersection of Gardendale Road and 24th Street, which are barren and support minimal vegetation. Grassland vegetation is present near the intersection of 24th Street and 25th Street (Figure 3.4-5, bottom) which is anthropogenically disturbed by maintenance activities (e.g., access to overhead lines and structures), trespassing, and illegal dumping. A human-made drainage intersects the alignment of the proposed electrical lines approximately 540 feet south of the intersection of Florin Road and 25th Street (see "Riverine Habitat," below).

Riverine Habitat

A human-made drainage classified as riverine intersects the alignment of the planned 69 kV overhead circuit (SFEI 2026) approximately 540 feet south of the intersection of Florin Road and 25th Street. The drainage is concrete-lined and enclosed within chain-link fences. During the reconnaissance survey, land cover between the fences and the channel was largely barren and appeared to be managed to prevent vegetation growth, with only minimal vegetation present along the channel edge and intermittent water (Figure 3.4-6).

Aquatic and Wetland Habitat

Aquatic resource delineations conducted on April 23, 2026 and on June 3, 2026 determined that aquatic resources (e.g., standing water, drainages, depressions) on the project site did not constitute wetland habitat, and are not subject to federal or state protections (Ascent 2026). These features are anthropogenically disturbed (e.g., disking, traffic) and polluted by trash and other refuse.



Source: Photograph taken by Ascent in 2026.

Existing Pocket Substation site and ornamental shrubs.



Source: Photograph taken by Ascent in 2026.

Barren land cover at new Meadowview Substation site.

Figure 3.4-1. Representative Site Photographs



Source: Photograph taken by Ascent in 2026.

Vegetation along western edge of new Meadowview Substation site.



Source: Photograph taken by Ascent in 2026.

Disked land cover within expansion area.

Figure 3.4-2. Representative Site Photographs



Source: Photograph taken by Ascent in 2026.

Aquatic resource area within expansion area.



Source: Photograph taken by Ascent in 2026.

General land cover in property east of railroad tracks.

Figure 3.4-3. Representative Site Photographs



Source: Photograph taken by Ascent in 2026.

Grassland vegetation in property east of railroad tracks.



Source: Photograph taken by Ascent in 2026.

General land cover along route of additional electric lines, on Gardendale Road.

Figure 3.4-4. Representative Site Photographs



Source: Photograph taken by Ascent in 2026.

Grassland land cover at southern end of additional electric lines along 24th Street.



Source: Photograph taken by Ascent in 2026.

Vegetation at intersection of 24th Street and 25th Street, below overhead lines.

Figure 3.4-5. Representative Site Photographs



Source: Photograph taken by Ascent in 2026.

Riverine drainage beneath 25th Street.

Figure 3.4-6. Representative Site Photographs

Special-status Species

Special-status species are species that are legally protected or otherwise considered sensitive by federal, state, or local resource agencies. Special-status species are species, subspecies, or varieties that fall into one or more of the following categories, regardless of their legal or protection status:

- officially listed by California or the federal government as endangered, threatened, or rare;
- a candidate for state or federal listing;
- taxa (i.e., taxonomic categories or groups) that meet the definitions of rare and endangered under the CEQA; CEQA Guidelines Section 15380 provides that a plant or animal species may be treated as "rare or endangered" even if not on one of the official lists;
- species identified by CDFW as a "species of special concern," which is a term applied by CDFW to animals not listed under the federal Endangered Species Act (ESA) or California Endangered Species Act (CESA), but that are declining at a rate that could result in listing or that historically occurred in low numbers and face known threats to their persistence;
- species listed as fully protected under the California Fish and Game Code;
- species afforded protection under local planning documents; and
- plant taxa considered by the CDFW to be "rare, threatened, or endangered in California" and assigned a California Rare Plant Rank (CRPR) of 1A, 1B, 2A, or 2B. The CRPR system includes five rarity and endangerment ranks for categorizing plant species of concern:
    - CRPR 1A—plants presumed to be extinct in California
    - CRPR 1B—plants that are rare, threatened, or endangered in California and elsewhere
    - CRPR 2—plants that are rare, threatened, or endangered in California but more common elsewhere
    - CRPR 3—plants about which more information is needed (a review list)
    - CRPR 4—plants of limited distribution (a watch list).

Special-Status Plants

Appendix B provides a list of special-status plants that have potential to occur in the vicinity of the project site (CNPS 2026; CNDDB 2026) and describes their regulatory status, CRPR ranking, habitat associations, and potential for occurrence on the project site. No special-status plant species were identified as having potential to occur on the project site based on a lack of habitat suitable for the species.

Special-Status Wildlife

Appendix B also provides a list of the special-status wildlife species determined to have potential to occur in the vicinity of the project site (CNDDB 2026; USFWS 2026a) and describes their regulatory status, habitat, and potential for occurrence on the project site. Additionally, native birds without special status, but protected by California Fish and Game Code and the Migratory Bird Treaty Act (MBTA), may nest on the project site. Four special-status wildlife species were identified as having potential to occur on the project site:

- Crotch's bumble bee (*Bombus crotchii*),
- monarch butterfly (*Danaus plexippus*),
- vernal pool tadpole shrimp (*Lepidurus packardi*), and
- Swainson's hawk (*Buteo swainsoni*).

3.4.2 Regulatory Setting

Federal

Endangered Species Act

Pursuant to ESA (16 US Code [USC] Section 1531 et seq.), USFWS and National Oceanic and Atmospheric Administration (NOAA) Fisheries regulate the taking of species listed in ESA as threatened or endangered. In general, people subject to ESA (including private parties) are prohibited from "taking" endangered or threatened fish and wildlife species on private property and from "taking" endangered or threatened plants in areas under federal jurisdiction or in violation of state law. Under Section 9 of ESA, the definition of "take" is to "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct." NOAA Fisheries and USFWS have also interpreted the definition of "harm" to include significant habitat modification that could result in take. ESA requires that recovery plans be developed that describe the steps necessary to restore the species. Similarly, the act provides for the designation of "critical habitat" when prudent and determinable.

Section 10 of ESA applies if a nonfederal agency is the lead agency for an action that results in take and no other federal agencies are involved in permitting the action. Section 7 of ESA applies if a federal discretionary action is required (e.g., a federal agency must issue a permit), in which case the involved federal agency consults with USFWS and NOAA Fisheries.

Migratory Bird Treaty Act

MBTA, first enacted in 1918, provides for the protection of international migratory birds and authorizes the Secretary of the Interior to regulate the taking of migratory birds. MBTA provides that to pursue, take, or kill any migratory bird or any part, nest, or egg of any such bird is unlawful except as permitted by regulations. Under MBTA, "take" is defined as "to pursue, hunt, shoot, wound, kill, trap, capture, or collect, or any attempt to carry out these activities." Take does not include habitat destruction or alteration as long as birds, nests, eggs, or parts thereof are not directly taken. The current list of species protected by MBTA can be found in Title 50 of

the Code of Federal Regulations (CFR), Section 10.13 (50 CFR 10.13). The list includes nearly all birds native to the United States.

State

California Endangered Species Act

Pursuant to CESA, a permit from CDFW is required for projects that could result in the "take" of a plant or animal species that is listed by the state as threatened or endangered. Section 2080 of CESA prohibits unauthorized take of state-listed species. Under CESA, "take" is defined as an activity that would directly or indirectly kill an individual of a species, but does not include "harm" or "harass," as does the federal definition. As a result, the threshold for take is higher under CESA than under ESA.

California Fish and Game Code

Protection of Bird Nests and Raptors:

Section 3503 of the Fish and Game Code states that it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird. Section 3503.4 of the California Fish and Game Code states that it is unlawful to take, possess, or destroy any raptors (i.e., species in the orders Falconiformes and Strigiformes), including their nests or eggs. Typical violations include destruction of active nests as a result of tree removal or disturbance caused by project construction or other activities that cause the adults to abandon the nest, resulting in loss of eggs or young.

Fully Protected Species:

The regulation of fully protected species is described in Sections 3511, 4700, 5050, and 5515 of the California Fish and Game Code. These statutes prohibit take or possession of fully protected species and generally do not provide for authorization of incidental take unless the species is covered and conserved in a natural community conservation plan or the project activities qualify for incidental take permitting under Section 2080.15 of the California Fish and Game Code. CDFW's fully protected status was California's first attempt to identify and protect animals that were rare or facing extinction. Most species listed as fully protected were eventually listed as threatened or endangered under CESA; however, some species remain listed as fully protected but do not have simultaneous listing under CESA.

California Native Plant Protection Act

State listing of plant species began in 1977 with the passage of the California Native Plant Protection Act (NPPA), which directed CDFW to carry out the legislature's intent to "preserve, protect, and enhance endangered plants in this state." NPPA gave the California Fish and Game Commission the power to designate native plants as endangered or rare and to require permits for collecting, transporting, or selling such plants. CESA expanded on the original NPPA and enhanced legal protection for plants. CESA established threatened and endangered species categories and grandfathered all rare animals—but not rare plants—into the act as threatened species. Thus, three listing categories for plants are employed in California: rare, threatened, and endangered. Sixty-four species, subspecies, and varieties of plants are protected as rare under NPPA. The act prohibits take of endangered or rare native plants but

includes exceptions for agricultural and nursery operations; for emergencies; and, after proper notification to CDFW, for vegetation removal from canals, roads, and other building sites; changes in land use; and other situations.

Local

City of Sacramento Code of Ordinances

The City of Sacramento Tree Planting, Maintenance, and Conservation Ordinance (Chapter 12.56) includes provisions to protect City street trees as well as private protected trees. All removal, trimming, pruning, cutting, or other maintenance activities on any City street tree or private protected tree requires a permit from the Director of the Department of Transportation pursuant to City Code Section 12.56.050.

A City tree is defined as any tree partially or completely located in a city park, on real property the city owns in fee, or on a public right-of-way including any street, road, sidewalk, park strip, mow strip, or alley, when measured 4.5 feet above ground. A private protected tree is defined as:

- A tree that is designated by city council resolution to have special historical value, special environmental value, or significant community benefit, and is located on private property;
- Any native Valley oak (*Quercus lobata*), blue oak (*Quercus douglasii*), interior live oak (*Quercus wislizenii*), coast live oak (*Quercus agrifolia*), California buckeye (*Aesculus californica*), or California sycamore (*Platanus racemosa*) that has a diameter at standard height (DSH) of 12 inches or more and is located on private property;
- A tree that has a DSH of 24 inches or more located on private property that is an undeveloped lot or does not include any single unit or duplex dwellings; or
- A tree that has a DSH of 32 inches or more located on private property that includes any single unit or duplex dwellings.

SMUD Operations, Maintenance, and New Construction Habitat Conservation Plan

The project site is located within the permit area of SMUD's Operations, Maintenance, and New Construction Habitat Conservation Plan (SMUD HCP; SMUD 2024). The SMUD HCP supports issuance of Incidental Take Permits (ITP) from USFWS and CDFW for SMUD activities with potential to impact special-status species. The SMUD HCP Covered Species include seven state and federally endangered and threatened species: slender Orcutt grass (*Orcuttia tenuis*), Sacramento Orcutt grass (*Orcuttia viscida*), vernal pool fairy shrimp (*Branchinecta lynchi*), vernal pool tadpole shrimp (*Lepidurus packardi*), valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*), California tiger salamander (*Ambystoma californiense*), and giant garter snake (*Thamnophis gigas*).

With exception of installing new transmission poles, the proposed project will be covered by and implemented in compliance with the SMUD HCP, including all applicable avoidance and minimization measures. The SMUD HCP provides streamlined federal permitting from operations and maintenance and new construction projects such as the proposed project. The SMUD HCP provides a framework for conserving covered species and habitats through impact avoidance, minimization, and mitigation measures association with project implementation. The proposed

project is a covered activity under the SMUD HCP and will adhere to the SMUD HCP procedures for ITP issuance for covered species.

3.4.3 Discussion

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

Less than significant with mitigation incorporated. No special-status plants are expected to occur on the project site. Two special-status invertebrates and one special-status bird have potential to occur on the project site. Additionally, common nesting birds may occur on the project site. Ground disturbing, vegetation removing, and noise generating project activities could result in disturbance to nesting special-status species, or direct harm (e.g., crushing, removal of young) to special-status species if present.

Special-Status Plants

No special-status plants are expected to occur on the project site. The majority of the project site is either developed (e.g., existing substation infrastructure, residential homes, concrete-lined drainages) or barren. Vegetated land cover on the project site is limited and isolated within developed areas, and subject to regular maintenance and disturbance including mowing and disking, vehicle and foot traffic (i.e., access roads), and anthropogenically disturbed by trespassing and illegal camping and dumping. Therefore, there would be **no impact** on special-status plant species.

Special-Status Invertebrates

Three special-status invertebrate species have potential to occur on the project site: Crotch's bumble bee, monarch butterfly, and vernal pool tadpole shrimp.

Crotch's bumble bee, along with three other bumble bee species (which do not have potential to occur on the project site), was designated as a candidate for listing as endangered under CESA by the California Fish and Game Commission on May 31, 2022. In June 2023, CDFW released *Survey Considerations for California Endangered Species Act (CESA) Candidate Bumble Bee Species,* which included survey and mitigation guidance for the four candidate species (CDFW 2023). Although the life history characteristics of Crotch's bumble bees are not well understood, bumble bees have three basic habitat requirements: suitable nesting sites for the colonies, availability of nectar and pollen from floral resources during the colony period (spring, summer, and fall), and suitable overwintering sites for queens. Crotch's bumble bees are generally believed to overwinter near the ground surface in loose soil or under leaf litter or other debris, and nest typically in abandoned rodent burrows or other animal nests. Floral resources in the vegetated areas of the project (i.e., in the property and access road east of the railroad tracks, portions of the expansion area) may provide foraging habitat suitable for Crotch's bumble bees, and burrows or debris on the project site may provide nesting. Suitable overwintering habitat (e.g., tree groves, woodlands) are not present on the project site, and overwintering Crotch's bumble bees are not expected to occur. Ground-disturbing project activities and vegetation removal could result in loss (i.e., take) of Crotch's bumble bee, if present in the project area. Loss of Crotch's bumble bees would be a **potentially significant** impact.

The project site is located outside of the overwintering range of monarch butterfly; however, vegetated areas of the project site may provide breeding and foraging habitat suitable for monarch. No milkweed plants (*Ascelpias* spp.) were observed during reconnaissance surveys; however, if milkweed plants are present on the project site at the time of project implementation, these plants may host breeding monarchs and associated monarch eggs or caterpillars. Loss of monarchs, monarch eggs, or monarch caterpillars would be a **potentially significant** impact.

Vernal pool tadpole shrimp have been reported in the project site, both in 1995. One occurrence was recorded in the vicinity of the existing Pocket Substation, and the second near the intersection of Floring Rd and the access road east of the railroad tracks (CNDDB 2026). Wetlands are not present on the project site and available aquatic resources are not contiguous with known and extant occurrences of vernal pool tadpole shrimp; however, vernal pool tadpole shrimp eggs (cysts) can withstand extreme environmental conditions and may remain viable for multiple years (USFWS 2026b). Loss of vernal pool habitat or vernal pool tadpole shrimp cysts, if present, would be a **potentially significant** impact.

Mitigation

Mitigation Measure 3.4-1: Implement General Avoidance and Minimization Measures from the SMUD HCP

The following General Avoidance and Minimization Measures (AMMs) of the SMUD HCP shall be implemented:

G-AMM1: Annual Environmental Training

- Employees and contractors performing Covered Activities (SMUD field crews) will receive annual environmental training on SMUD's HCP. This training will include a review of permit requirements, avoidance and minimization measures, and other relevant environmental laws and guidelines that must be followed by all personnel to avoid or minimize take of Covered Species during Covered Activities. Crews will be informed on the implementation of the HCP and conditions in the take permits, including use of SMUD's job packet12 (or equally effective documentation) and their responsibilities to ensure compliance. Training will include the importance of the Covered Species and the purpose and necessity of protecting them, handouts or cards containing Covered Species or Modeled Habitat information, as well as penalties for non-compliance. Information will also be presented to inform personnel of methods to minimize the spread of invasive or nonnative plants during Covered Activities. New employees will receive the training prior to the start of work on Covered Activities.

G-AMM2: Minimize Impacts of Work Area

- To the extent possible, SMUD field crews and contractors will reduce the work area footprint and the duration of work at a work area to reduce the potential for take of Covered Species.

G-AMM3: Work Area Access

- SMUD field crews and contractors will use existing paved and unpaved roads to access the work area where available. Vehicles and equipment will be parked on pavement, existing roads, or previously disturbed areas to the maximum extent feasible. When this is not feasible, SMUD will implement G-AMM4: Off Road Speed Limit, VP-AMM1: Avoid Driving

through Vernal Pools, and VP-AMM2: Minimize Vehicle Impacts on Vernal Pools (*See* Mitigation Measure 3.4-4 below).

G-AMM4: Off Road Speed Limit

- When driving off of paved roads in Covered Species habitat, vehicles will not exceed a speed limit of 15 miles per hour.

G-AMM5: Work Area General Guidelines

- Trash dumping, littering, open fires (such as barbecues), hunting, and pets will be prohibited in Covered Activity work areas. All garbage will be removed from the project site at the end of each workday.

G-AMM6: Erosion Control Measures

- SMUD field crews will utilize standard erosion and sediment control best management practices (BMPs) (pursuant to the most current version of the California Stormwater Best Management Practices Handbook) to prevent construction site runoff into SMUD HCP Riverine; Open Water/Fringe; Other Depressional Wetland; and Vernal Pool, Seasonal Wetland, and Swale land cover types when Covered Activities are the source of potential erosion. Soil will be stockpiled within established work area boundaries, and stockpiles will be located so as not to enter water bodies, stormwater inlets, or other standing bodies of water. Stockpiled soil will be covered prior to precipitation events. Erosion control materials will be removed once the site has been stabilized.

G-AMM7: Equipment Refueling

- SMUD field crews will not refuel or conduct equipment maintenance activities within 250 feet of SMUD HCP Vernal Pool, Seasonal Wetland, and Swale, and within 100 feet of any Riverine, Open Water/Fringe, or Other Depressional Wetlands land cover types. If refueling must be conducted closer to wetlands, SMUD field crews will construct a secondary containment area subject to review by an environmental specialist and/or biologist. SMUD field crews will maintain spill prevention and cleanup equipment in refueling areas.

G-AMM8: Hazardous Materials Clean Up

- SMUD field crews will clean up any spilled oil, fuel, or other automotive fluids. SMUD field crews will ensure that all construction areas have proper spill clean-up materials (absorbent pads, sealed containers, booms, etc.) to contain the movement of any spilled substances

Mitigation Measure 3.4-2: Implement Limited Operating Period, Conduct Focused Surveys, and Implement Avoidance Measures for Crotch's Bumble Bee

- Initial ground-disturbing work in vegetated areas within suitable habitat (e.g., Property and Access Road East of the Railroad Tracks, Expansion Area if vegetation grows prior to project implementation), including staging, shall take place between August 15 and March 15, if feasible, to avoid impacts on nesting Crotch's bumble bees. If this limited operating period is determined to be infeasible, then focused surveys for Crotch's bumble bee will be conducted and avoidance measures will be implemented.

- If the limited operating period described above is infeasible, a qualified biologist familiar with bumble bees of California and experienced using survey methods for bumble bees shall conduct focused surveys for Crotch's bumble bee before the start of ground-disturbing activities. Surveys shall be conducted when Crotch's bumble bee is most likely to be identified, typically April through August (i.e., the colony active period), when floral resources and ideal weather conditions are present, and shall follow the methods in *Survey Considerations for California Endangered Species Act (CESA) Candidate Bumble Bee Species* (CDFW 2023). Surveys shall be conducted during the colony activity period closest to the start of planned construction activities.

- CDFW shall be notified within 24 hours if Crotch's bumble bees are detected.

    - If Crotch's bumble bees are not detected during the focused surveys, no additional mitigation is required.

    - If Crotch's bumble bees are detected during the focused surveys, appropriate avoidance measures shall be implemented. Avoidance measures shall include the following:

        - Protective buffers shall be implemented around active nest colonies or overwintering queens until these sites are no longer active. A qualified biologist, in coordination with CDFW, shall determine the appropriate buffer size to protect nesting colonies or overwintering queens; however, the buffer shall be a minimum of 50 feet.

- If impacts on Crotch's bumble bee cannot be avoided, compliance with CESA and consultation with CDFW is required and may involve acquiring an incidental take permit (ITP) from CDFW. SMUD will implement all avoidance measures included in the ITP.

Mitigation Measure 3.4-3: Conduct Surveys for Monarch Butterfly Host Plants and Host Plant Avoidance

- Prior to project activities in vegetated areas within suitable habitat (e.g., Property and Access Road East of the Railroad Tracks, Expansion Area if vegetation grows prior to project implementation), a qualified biologist familiar with monarch butterflies and their host plants (i.e., milkweeds) shall survey for monarch butterfly larval host plants. If milkweed plants are found, the biologist shall conduct surveys for monarch eggs or larvae on the plants. Where eggs or larvae are present, host plants shall be flagged for avoidance and shall not be removed until the plants are no longer being used by any monarch life stage.

Mitigation Measure 3.4-4: Implement Vernal Pool Avoidance and Minimization Measures from the SMUD HCP

The following AMMs of the SMUD HCP shall be implemented:

VP-AMM1: Avoid Driving through Vernal Pools

- SMUD field crews will avoid driving through SMUD HCP Vernal Pool, Seasonal Wetland, and Swale land cover to the maximum extent feasible. When this is not feasible, SMUD will implement VP-AMM2: Minimize Vehicle Impacts on Vernal Pools.

VP-AMM2: Minimize Vehicle Impacts on Vernal Pools

- If a Covered Activity work area or access to the work area is located on SMUD HCP Vernal Pool, Seasonal Wetland, and Swale land cover, SMUD field crews will evaluate site conditions and determine if soil moisture is present. If soil moisture is present, the field crew will coordinate with the Environmental Services team to identify alternative measures to minimize disturbance of Covered Species Modeled Habitat. Alternative measures may include laying down rubber matting, creating temporary bridges of swales, or using alternate access routes as prescribed by SMUD Environmental Services to minimize impacts. If it is not feasible for SMUD to avoid driving through Vernal Pool, Seasonal Wetland, and Swale land cover while moisture is present, SMUD will track the acres of disturbance, and those acres will count towards take limits.

Mitigation Measure 3.4-5: Compensate for Impacts to Wetlands and Aquatic Species Habitat.

- Mitigation for both temporary and permanent vernal pool tadpole shrimp and vernal pool fairy shrimp habitat disturbance would be provided as part of SMUD's HCP. Temporary impacts would be mitigated at a 0.5:1 ratio and permanent impacts would be mitigated at a 3:1 ratio through a combination of preservation and restoration. SMUD will use vernal pool restoration or creation credits at a 1:1 ration (i.e., 2:1 preservation, 1:1 restoration/creation).

Special-Status and Common Nesting Birds

One special-status bird species, Swainson's hawk, has the potential to occur on the project site. No Swainson's hawks have been previously documented nesting on the project site, and grassland habitat on the project site does not provide adequate foraging habitat due to its limited availability and high levels of anthropogenic disturbance; however, the species has been recorded nesting within a mile of the project site within Chorley Park (CNDDB 2026), and large trees on the project site where overhead lines would be installed may provide nesting habitat. Additionally, if nesting nearby, Swainson's hawks may be disturbed by construction-related noise, which could result in nest abandonment or loss of young. Other native nesting birds may also nest in trees near or on the project site, on existing utility infrastructure, or may nest or forage in dense vegetation or grasses on the project site. Project activities including vegetation removal, ground disturbance, and replacement of infrastructure may result in loss of nests or young. This would be a **potentially significant** impact.

Mitigation Measure 3.4-6: Conduct Pre-construction Survey for Migratory Birds and Raptors, Including Special-status Species

For any construction activities that will occur between February 1 and August 31 within the work limits, a qualified biologist shall conduct a pre-construction survey in suitable nesting habitat within 100 feet for passerine nests and within 500 feet for raptor nests and ground nests. If construction activities occur during bird nesting season (between February 1 and August 31), including equipment staging and construction, surveys shall be conducted within 7 days prior to commencement of construction activities.

If no active nests are found during the pre-construction survey, no additional mitigation measures are required.

If an active bird or raptor nest is identified within the construction work area or an active raptor nest is identified within the appropriate survey buffers from the construction work area, a no disturbance buffer shall be established around the nest to avoid disturbance of the nesting birds or raptors until a qualified biologist determines that the young have fledged and are foraging on their own or the nest has failed. The extent of these buffers shall be determined by the biologist and shall depend on the species identified, level of noise or construction disturbance, line-of sight between the nest and the disturbance, ambient levels of noise and other disturbances, and other topographic or artificial barriers. In addition to the establishment of buffers, other avoidance measures may include monitoring the nest during construction and restricting the type of work that can be conducted near the nest site. If a lapse in construction activities for one week or longer occurs during the avian breeding season, another pre-construction survey shall be performed prior to work re-initiation.

Significance after Mitigation

Mitigation Measure 3.4-1 would require SMUD to implement general AMMs of the SMUD HCP, including worker training, limiting environmental hazards, and minimize work footprints. With implementation of Mitigation Measure 3.4-2, impacts on Crotch's bumble bees would be avoided or minimized by conducting project activities outside of the Crotch's bumble bee nest season, conducting surveys for Crotch's bumble bee and implementing avoidance as needed, and by obtaining an ITP if avoidance were infeasible. With implementation of Mitigation Measure 3.4-3, impacts on monarch butterfly would be reduced by identifying monarch host plants and caterpillars, and implementing protective buffers. With implementation of Mitigation Measures 3.4-4 and 3.4-5, impacts on vernal pool tadpole shrimp and potential aquatic habitat would be avoided by restricting driving in suitable habitat, and compensating for unavoidable or lost habitat. With implementation of Mitigation Measure 3.4-6, impacts on both special-status and common nesting birds would be reduced by conducting nesting bird surveys and implementing protective buffers if needed. Therefore, impacts on special-status species would be **less than significant with mitigation incorporated**.

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

No impact. No riparian habitat or other sensitive natural communities are present on the project site. A human-made riverine drainage running under 25th Street intersects the project site; however, this drainage does not support riparian habitat. Therefore, there would be **no impact** on riparian habitat or sensitive natural communities.

c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

No impact. Aquatic resource delineations were conducted on the property and access road east of the railroad tracks on April 23, 2026, and on the expansion area on June 3, 2026 (Ascent 2026). Depressional features on both properties were found to not satisfy the three-parameter wetland criteria of hydric soils, wetland hydrology, and hydrophytic vegetation required for federal jurisdictional determination under Clean Water Act (CWA) (33 U.S.C. Section 1251 et seq.). In addition, they do not qualify as relatively permanent waters with a hydrological connection to a navigable waterway. A human-made, concrete lined ditch crossing under 25th Street intersects

the project site; however, project activities in this area would be limited to the installation of 69 kV circuit to existing overhead infrastructure and would not result in ground-level impacts. Therefore, there would be **no impact** to state or federally protected wetlands.

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

No impact. The project site is located within an urban and disturbed setting, surrounded by urban development, and does not contain any essential connectivity areas (CNDDB 2014) or native wildlife nursery sites or habitat suitable for nursery sites. Therefore, there would be **no impact** on native resident or migratory fish or wildlife species, movement corridors, or nursery sites.

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

Less than significant impact. Implementation of the project is not expected to result in the removal of any trees; however, there is the potential for trees to be pruned or trimmed. This would require a permit from the City of Sacramento. SMUD's compliance with the conditions of the City's tree permit would constitute compliance with the City of Sacramento Code Chapter 12.56. Therefore, the impact would be **less than significant**.

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

No impact. The proposed project is within the permit area of SMUD's Operations, Maintenance, and New Construction Habitat Conservation Plan (SMUD 2024), covering seven state and federally endangered species, none of which are expected to occur on the project site. Therefore, there would be **no impact**.

3.5 Cultural Resources

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

3.5.1 Environmental Setting

Regional Precontact History

Although human occupation of the Central Valley may extend back 10,000 years before present (B.P.), reliable evidence of such an early human presence is lacking and may be deeply buried. The precontact history setting can be categorized into the following periods (Ascent 2026):

- **The Paleo-Indian Period:** The Paleo-Indian Period (12,000 to 10,500 B.P.) saw the first demonstrated entry and spread of humans into California. Characteristic artifacts recovered from archaeological sites of this time period include fluted projectile points (constructed from chipped stones that have a long groove down the center called a “flute”) and large, roughly fashioned cobble and bifacially-flaked stone tools that were used in hunting the mastodon, bison, and mammoth that roamed the land during this time (Ascent 2026).

- **The Lower Archaic Period:** The beginning of the Lower Archaic Period (10,500 to 7,500 B.P.) coincides with that of the Middle Holocene climatic change which resulted in widespread floodplain deposition. This episode resulted in most of the early archaeological deposits being buried. Most tools were manufactured of local materials, and distinctive artifact types include large dart points and the milling slab and handstone (Ascent 2026).

- **The Middle Archaic Period:** The Middle Archaic Period (7,500 to 2,500 B.P.) is characterized by warm, dry conditions which brought about the drying up of pluvial lakes. Economies were more diversified and may have included the introduction of acorn processing technology, although hunting remained an important source of food. Artifacts characteristic of this period include milling stones and pestles and a continued use of a variety of implements interpreted as large dart points (Ascent 2026).

- **The Upper Archaic Period:** The Upper Archaic Period (2,500 to 850 B.P.) corresponds with a sudden turn to a cooler, wetter, and more stable climate. The development of status distinctions based upon wealth is well documented in the archaeological record. The development of specialized tools, such as bone implements and stone plummets, as well as

manufactured shell goods, were prolific during this time. The regional variance of economies was largely because of the seasonality of resources, which were harvested and processed in large quantities (Ascent 2026).

- **The Emergent Period:** Several technological and social changes distinguish the Emergent Period (850 B.P. to Historic era) from earlier cultural manifestations. The bow and arrow were introduced, ultimately replacing the dart and throwing spear, and territorial boundaries between groups became well established. In the latter portion of this Period (450 to 1,800 B.P.), exchange relations became highly regularized and sophisticated. The clam disk bead developed as a monetary unit of exchange and increasing quantities of goods moved greater distances. It was at the end of this Period that contact with Euroamericans became commonplace, eventually leading to intense pressures on Native American populations (Ascent 2026).

Historic Setting

Exploration into the Sacramento Valley began in the early 1800s via colonization and the establishment of missions. One of the early explorers, a Spaniard name Gabriel Moraga, is responsible for naming the valley region “Sacramento,” which means “the Holy Sacrament.” Latin influence in the region continued in the early 1800s as Mexico gained independence from Spain and began sending explorers to Sacramento in 1822. While the area was technically under Mexican rule by 1824, the area was still inhabited by numerous Native Americans. Sacramento history goes back to 1839 when John Sutter arrived on the shore near the confluence of the American and Sacramento rivers. The history of Sacramento has been shaped by its location near the Sacramento and American rivers. These rivers provided transportation, irrigation, and food supply for early settlers (Ascent 2026).

Records Searches and Pedestrian Survey Results

A records search of the project site and a 1/4-mile radius was conducted by the North Central Information Center (NCIC), at California State University, Sacramento (SAC-26-36) on March 9, 2026. The following information was reviewed as part of the records search:

- site records of previously recorded sites,
- previous cultural studies,
- NRHP and CRHR listings,
- Built Environment Resource Directory,
- the California Historic Resources Inventory, and
- the Office of Historic Preservation Historic Properties Directory.

The records search revealed two cultural resources (P-34-005164 and P-34-005225) within the project site, and 12 cultural resources within a 1/4-mile radius of the project site. P-34-005225 is a Tribal cultural landscape and is therefore addressed in Section 3.18 of this document. P-34-005164, an archaeological site, is a historic-era family cemetery dating from the 1860s and 1880s. The site has been subject to subsurface testing, both in 2004 and in 2017. The 2017 testing was

conducted prior to placement of the current power poles and consisted of trenching along the eastern and southern boundaries, adjacent to the sidewalk. Trenching results were negative for human remains and materials. P-34-005164 has not been evaluated for the California Register of Historic Resources (CRHR) or National Register of Historic Places (NRHP). P-34-005225 is a Tribal cultural landscape and is therefore addressed in Section 3.18 of this document.

On March 13, 2026, April 23, 2026, and June 11, 2026, a pedestrian survey was conducted of the undeveloped (e.g., unpaved) portions of the project site. Tribal representatives from the Wilton Rancheria participated in the pedestrian survey in March and April and conducted an independent survey of the expansion area in June 2026. No new archaeological materials or built environment features were discovered during the pedestrian survey.

3.5.2 Discussion

a) Cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5?

No impact. No built environment (historical) resources were identified in the project site as a result of the NCIC record search, background research, or pedestrian survey. Therefore, there would be **no impact** to historical resources as a result of the project, and no mitigation is required.

b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?

Less than Significant with Mitigation Incorporated. One historic era archaeological site is located within the project site (P-34-005164). Minor ground disturbance is proposed in this location, with the potential relocation of up to four poles. However, these poles would be located within areas previously trenched in 2017, where negative results were returned during subsurface testing; additionally, no surface evidence of this resource was observed during the pedestrian survey. Therefore, this site would not be affected by the project. However, components of the project that require earth-moving and excavation may result in the discovery of previously unrecorded archaeological deposits. Earth-moving and excavation activities could damage or destroy previously undiscovered unique archaeological resources pursuant to Section 15064.5. Thus, this impact would be potentially significant.

Mitigation

Mitigation Measure 3.5-1: Unanticipated Discovery of Cultural Resources

In the event that a historic-period archaeological resource (such as concentrated deposits of bottles or bricks with makers marks, amethyst glass, ceramic or metal pipes, or other historic refuse) or a precontact archaeological resource (such as lithic scatters, midden soils), is uncovered during grading or other construction activities, all ground-disturbing activity within 100 feet of the discovery shall be halted until a qualified archaeologist can assess the significance of the find. SMUD will be notified of the potential find and a qualified archeologist shall be retained to investigate its significance. If the find is suspected to be Native American in origin, Mitigation Measure 3.18-1b shall be implemented. Any previously undiscovered archaeological resources found during construction will be recorded on appropriate California Department of Parks and Recreation DPR 523 forms and evaluated for significance under all applicable regulatory criteria if the resource cannot be avoided and preserved in place. If the

archaeologist determines that the find does not meet the CRHR standards of significance for cultural resources, construction may proceed. If the find is determined to be significant by the qualified archaeologist (i.e., because the find is determined to constitute either an historical resource or a unique archaeological resource), the archaeologist shall work with SMUD to follow accepted professional standards such as data recovery. The results of the identification, evaluation, and/or data recovery program for any unanticipated discoveries shall be presented in a professional-quality report that details all methods and findings, evaluates the nature and significance of the resources, analyzes and interprets the results.

Significance after Mitigation

Implementation of Mitigation Measure 3.5-1 would reduce potential impacts to previously undiscovered resources by requiring that steps be taken in the event that archaeological resources are encountered during project construction. With implementation of Mitigation Measure 3.5-1, this impact would be reduced to a **less-than-significant** level.

c) Disturb any human remains, including those interred outside of formal cemeteries?

Less than Significant with Mitigation Incorporated. Based on documented research, P-34-005164 is a historic-era family cemetery dating from the 1860s and 1880s. The project alignment marginally intercepts the known boundary but not the location where these burials are located; as discussed previously, the replacement poles would be located within an area that is known not to contain human remains. Therefore, this site would not be affected by the project. However, other unmarked or previously unknown grave sites and Native American remains could be present within the project site and could be uncovered by project-related construction activities. Thus, this impact would be **potentially significant**.

Mitigation

Mitigation Measure 3.5-2: Unanticipated Discovery of Human Remains

Pursuant to Sections 5097.97 and 5097.98 of the State Public Resources Code, and Section 7050.5 of the State Health and Safety Code, if a human bone or bone of unknown origin is found during construction, all work is to stop and the County Coroner and the District shall be immediately notified. If the remains are determined to be Native American, the coroner shall notify the Native American Heritage Commission within 24 hours, and the Native American Heritage Commission shall identify the person or persons it believes to be the most likely descendent from the deceased Native American. The most likely descendent may make recommendations to the landowner or the person responsible for the excavation work, for means of treating or disposition of, with appropriate dignity, the human remains and any associated grave goods.

Significance after Mitigation

Implementation of Mitigation Measure 3.5-2 would reduce potential impacts to previously undiscovered human resources by ensuring that any discovered human remains are promptly protected, appropriately evaluated, and treated in accordance with legal requirements and cultural traditions. With implementation of Mitigation Measure 3.5-2, this impact would be reduced to a **less-than-significant** level.

3.6 Energy

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

3.6.1 Environmental Setting

Electricity in the project area is provided by SMUD. In 2024, SMUD provided its customers with 40 percent eligible renewable energy (i.e., biomass combustion, geothermal, small scale hydroelectric, solar, and wind) and 22 percent and 38 percent from large-scale hydroelectric and natural gas, respectively (CEC 2025). Pacific Gas & Electric provides natural gas service to Sacramento County; however, the project does not introduce new natural gas demand.

SMUD approved its 2030 Zero Carbon Plan in April 2021. The 2030 Zero Carbon Plan consists of a road map to achieve a zero-carbon power supply by 2030, which exceeds statewide goals to meet zero carbon power supplies by 2045 (see “AB 1279 and 2022 Scoping Plan for Achieving Carbon Neutrality,” below) (SMUD 2021). The 2030 Zero Carbon Plan was filed with the California Energy Commission (CEC) in September 2022 as SMUD’s new Integrated Resource Plan (IRP) per SB 350 (2015), which requires California utilities to file a Board-adopted IRP at least every 5 years. The plan includes solar power, large scale thermal storage, microgrids and fuel cells resources, and is designed to allow for adjustments to the overall scheme, as technological research and progress affect carbon emissions without compromising reliability or affordability (SMUD 2021).

State Regulations

State of California Energy Action Plan

CEC is responsible for preparing the state energy plan, which identifies emerging trends related to energy supply, demand, conservation, public health and safety, and the maintenance of a healthy economy. The current plan is the 2003 California Energy Action Plan (2008 update). The plan calls for the state to assist in the transformation of the transportation system to improve air quality, reduce congestion, and increase the efficient use of fuel supplies with the least environmental and energy costs. To further this policy, the plan identifies a number of strategies, including assistance to public agencies and fleet operators in implementing incentive programs for zero-emission vehicles and addressing their infrastructure needs; and encouragement of urban design that reduces VMT and accommodates pedestrian and bicycle access.

Integrated Energy Policy Report

Senate Bill (SB) 1389 (Chapter 568, Statutes of 2002) required CEC to "conduct assessments and forecasts of all aspects of energy industry supply, production, transportation, delivery and distribution, demand, and prices. The Energy Commission shall use these assessments and forecasts to develop energy policies that conserve resources, protect the environment, ensure energy reliability, enhance the state's economy, and protect public health and safety" (PRC Section 25301[a]). This work culminated in the Integrated Energy Policy Report (IEPR). CEC adopts an IEPR every 2 years and an update every other year. The 2024 IEPR Update. The 2024 IEPR Update provides a summary of priority energy issues currently facing the state and outlines strategies and recommendations to further the state's goal of ensuring reliable, affordable, and environmentally responsible energy sources. The report contains an assessment of major energy trends and issues in California's electricity, natural gas, and transportation fuel sectors. The report provides policy recommendations to conserve resources; protect the environment; ensure reliable, secure, and diverse energy supplies; enhance the state's economy; and protect public health and safety. Topics covered in the 2024 IEPR Update include the accelerated connection of clean energy, the California Energy Demand Forecast, the potential growth of hydrogen in the state, and updates to issues, such as energy efficiency, gas utility decarbonization, and the Clean Transportation Program (CEC 2024a).

AB 1279 and 2022 Scoping Plan for Achieving Carbon Neutrality

AB 1279 and a summary of the 2022 Scoping Plan are related to statewide planning and efforts to reduce GHG emissions, which are directly correlated with energy consumption. See Section 3.8, "Greenhouse Gas Emissions," for a detailed summary of the state's GHG reduction targets under AB 1279 and a summary of the 2022 Scoping Plan.

3.6.2 Discussion

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

Less Than Significant Impact. Energy would be consumed in the form of gasoline, diesel fuel, and electricity during project construction to operate and maintain construction equipment, transport construction materials, and for worker commutes. Energy use during construction was estimated using a combination of methods and energy factors from published best available documentation. Fuel consumption was estimated using the CO_2 emission outputs from the CalEEMod emissions modeling performed to estimate emissions from the project. Energy usage associated with fuel consumption was calculated by converting CO_2 emissions estimated from the construction analysis using the rate of kilograms (kg) of CO_2 emissions per gallon of combusted gasoline (8.78 kg/gallon) and diesel (10.21 kg/gallon) (EPA 2025). It was assumed that all equipment and trucks would be diesel powered, while worker commute vehicles would be gasoline powered. A full list of assumptions and emission and energy calculations for construction can be found in Appendix A. An estimated 8,674 gallons of gasoline and 221,708 gallons of diesel would be consumed during project construction, accounting for both on-site equipment use and off-site vehicle travel. This one-time energy expenditure required to construct the project would be nonrecoverable. Because the energy needs for project construction would be temporary, would not require additional capacity or increase peak or base period demands for electricity or other forms of energy, and would serve the purpose of improving the electric grid and providing reliable

and increasingly renewable power, construction of the project would not result in an inefficient, wasteful, or unnecessary consumption of energy resources.

Because maintenance activities associated with the project would be similar to those required for the existing power line, the project would not substantially increase the level of operational vehicle trips to the alignment. Thus, the project would not consume significantly more energy during operation relative to existing conditions. Therefore, the project would not result in an inefficient, wasteful, or unnecessary consumption of energy resources. This impact would be **less than significant**.

b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency.

No impact. The project would not use land that was otherwise slated for renewable energy production and would not otherwise conflict with any state or local renewable energy plans. The purpose of the project is to meet SMUD's goals of ensuring electrical service reliability to existing and proposed developed in the Sacramento area by 2030. Maintaining electrical service reliability is one of the elements in SMUD's overall 2030 Clean Energy Vision and Zero Carbon Plan. The project would also not impede progress toward the state's RPS or SMUD's clean energy goals, or implementation of energy efficiency programs. Thus, the project would not conflict with any energy-related strategies or obstruct any state or local plans for renewable energy or energy efficiency and there would be **no impact**.

3.7 Geology and Soils

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
VII. Geology and Soils. Would the project:				
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? (Refer to California Geological Survey Special Publication 42.)	☐	☐	☐	☒
ii) Strong seismic ground shaking?	☐	☐	☒	☐
iii) Seismic-related ground failure, including liquefaction?	☐	☐	☒	☐
iv) Landslides?	☐	☐	☐	☒
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?	☐	☐	☒	☐
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994, as updated), creating substantial direct or indirect risks to life or property?	☐	☐	☒	☐
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	☐	☐	☐	☒
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☐	☒	☐

3.7.1 Environmental Setting

Geology

As noted previously, the project site is located in the Meadowview neighborhood of Sacramento, within the southern portion of the Sacramento Valley. The Sacramento Valley represents the northern portion of the Great Valley geomorphic province of California, which is bordered on the east by the foothills of the Sierra Nevada geomorphic province and on the west by the Coast Range geomorphic province. The Great Valley is an asymmetrical trough approximately 400 miles long and 40 miles wide forming the broad valley along the axis of California. Erosion of the Coast Range and the Sierra Nevada has generated alluvial, overbank, and localized lacustrine sediments as thick as 50,000 feet in areas of the Great Valley. The project site, which is located approximately 2.5 miles northeast of the Sacramento River, is underlain by Riverbank Formation (Qr) (Wagner et al. 1981).

Seismicity

The Great Valley is bounded on the west by the Great Valley fault zone and the Coast Ranges and on the east by the Foothills fault zone and the Sierra Nevada. Relatively few faults in the Great Valley have been active during the last 11,700 years. The closest faults to the project site with evidence of displacement during Holocene time are the Green Valley Fault (approximately 45 miles to the west). In general, active faults are located along the western margin of the Central Valley (e.g., the Great Valley Fault) and within the Coast Ranges (CGS 2026a). There are no Alquist-Priolo Earthquake Fault Zones within Sacramento County (CGS 2026b).

According to the California Geological Survey Earthquake Shaking Potential for California, the Sacramento region is distant from known, active faults and would experience lower levels of shaking less frequently that areas closer to major, active faults. However, very infrequent earthquakes could still cause very strong shaking here (CGS 2025). Landslides triggered by seismic events are not expected at the project site due to the site's flat terrain.

Factors determining liquefaction potential are the soil type, the level and duration of seismic ground motions, the type and consistency of soils, and the depth to groundwater. Loose sands, peat deposits, and unconsolidated Holocene-age sediments are the most susceptible to liquefaction, while clayey silts, silty clays, and clays deposited in freshwater environments are generally stable under the influence of seismic ground shaking. The occurrence of liquefaction during an earthquake can potentially cause reduction in or loss of shear strength, seismically induced settlements, formation of boils, or lateral spreading of the liquefied soil. In order for liquefaction of soils due to ground shaking to occur, it is generally understood that subsurface soils must be in a relatively loose state, soils must be saturated, soils must be sand like (e.g. non-plastic or of very low plasticity), and the ground motion is of sufficient intensity to act as a triggering mechanism. The project site is not located in a currently established State of California Seismic Hazard Zone for liquefaction (CGS 2026b).

Soils

A review of Natural Resources Conservation Service (NRCS) soil survey data indicates that the new substation area is San Joaquin silt loam, the expansion area is Galt-Urban land complex, and the project areas east of the rail line is San Joaquin silt loam. The proposed project areas along Gardendale Road and 24th Street are identified as Galt-Urban land complex, and Galt clay (NRCS 2026).

3.7.2 Discussion

a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:

i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? (Refer to California Geological Survey Special Publication 42.)

No Impact. Surface ground rupture along faults is generally limited to a linear zone a few yards wide. There are no Alquist-Priolo Earthquake Fault Zones within Sacramento County (CGS 2026b).

Consequently, the project is not expected to expose people or structures to adverse effects caused by the rupture of a known fault. There would be **no impact** associated with fault rupture.

ii. Strong seismic ground shaking?

Less than Significant. The project site is located in the Sacramento Valley, which has historically experienced a low level of seismic ground shaking. The California Geological Survey has identified the region as an area of very strong earthquake shaking potential (CGS 2025). Depending on the strength of ground shaking, it is possible that structures in the area could be damaged during such an event. However, the project would be constructed in a manner consistent with within California Building Code (CBC) Title 24, which identifies specific design requirements to reduce damage from strong seismic ground shaking, ground failure, landslides, soil erosion, and expansive soils. This impact would be **less than significant**.

iii. Seismic-related ground failure, including liquefaction?

Less than Significant. For the installation of infrastructure improvements and construction of new buildings, SMUD would comply with the CBC, which incorporates seismic engineering and construction parameters designed to protect life and property to the maximum extent practicable. While the project site is underlain by younger alluvium that can be prone to liquefaction, the project would include seismic-resistant design to address potential liquefiable soils, appropriate remediation, and other measures in the CBC to protect life and property.

Active seismic sources are a relatively long distance away and the project site is located on flat land and has low shaking hazard potential. However, in the unlikely event of a significant earthquake, widespread liquefaction could occur resulting in significant damage. The project would comply with CBC Title 24, which includes specific design requirements to reduce damage from ground failure. In addition, emergency shutoffs would be installed to reduce risks involving seismic-related ground failure. Therefore, the potential of adverse effects involving ground failure, including liquefaction is low and this impact would be **less than significant**.

iv. Landslides?

No Impact. The project site is located in a flat area of the Meadowview neighborhood. Implementation of the project would involve grading and installation of drainage features within the project site. Consequently, the project would not expose people or structures to landslides and there would be **no impact** associated with landslide risk.

b) Result in substantial soil erosion or the loss of topsoil?

Less than Significant. Ground disturbance is estimated to increase the amount of non-permeable surfaces by approximately 2.3 acres. Construction activities would involve grading, excavating, trenching, moving, and filling within the project site or construction staging area. Construction activities would remove existing concrete and paving and would expose site soils to erosion via wind in the summer months, and to surface water runoff during storm events. Sediment from construction activities could be transported within stormwater runoff and could drain to off-site areas and degrade local water quality.

However, the project would be subject to the National Pollutant Discharge Elimination System (NPDES) Statewide construction general NPDES permit for stormwater runoff (Order WQ 2022-

0057–DWQ and NPDES No. CAS000002 [Construction General Permit]). In compliance with the Construction General Permit, a Stormwater Pollution Prevention Plan (SWPPP) would be developed for the project by a qualified SWPPP professional. The objectives of the SWPPP are to identify pollutant sources that may affect the quality of stormwater associated with construction activity and identify, construct, and implement stormwater pollution prevention measures to reduce pollutants in stormwater discharges during and after construction. Therefore, the SWPPP would include a description of potential pollutants, the management of excavated soil, and hazardous materials present on the site during construction (including vehicle and equipment fuels). The SWPPP would also include details of any dewatering plans and how BMPs for sediment and erosion control would be implemented. Implementation of the SWPPP would comply with state and federal water quality regulations.

Furthermore, and as noted above, the project would be constructed in accordance with CBC standards. These standards require that appropriate soil and geotechnical reports be prepared and that site-specific engineering design measures, including those related to general site grading, clearing and grubbing, soil stabilization, and general erosion control, be implemented to appropriately minimize potential adverse impacts related to erosion within the disturbance areas of the project site. This, coupled with preparation of a site-specific SWPPP, would minimize potential adverse impacts related to erosion and loss of topsoil within the project site. Impacts would be **less than significant**.

c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?

Less than Significant. As described previously, there are no slopes within the project site and, therefore, there would be no potential for on- or off-site landslide. The project site is not located in a liquefaction hazard zone. In addition, the project would comply all building codes and engineering recommendations. Therefore, this impact would be **less than significant**.

d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994, as updated), creating substantial direct or indirect risks to life or property?

Less than Significant. Expansive soils shrink and swell as a result of moisture change. These volume changes can result in damage over time to building foundations, underground utilities, and other subsurface facilities and infrastructure if they are not designed and constructed appropriately to resist the damage associated with changing soil conditions. A review of NRCS soil survey data indicates that the locations where project-related earthmoving activities would occur are composed of soil classified as San Joaquin silt loam, Galt-urban land complex, and Galt clay (NRCS 2026). After the site is graded, permanent structures and electrical infrastructure would be developed on permanent concrete foundations. The remainder of the site's surface would be covered in aggregate base. Trenches associated with underground infrastructure would be partially backfilled with concrete slurry to reduce the risk of expansive soils.

Prior to final design, SMUD would conduct a geotechnical engineering investigation prepared by a licensed engineer and implement geotechnical recommendations in the final project design. These evaluations would consider subsurface soil, geologic conditions, and other conditions encountered within the project areas to inform recommendations related to design and construction methods to manage any expansive soils. With compliance of with geotechnical

recommendations and building codes, the project would have a **less-than-significant** impact related to unstable and expansive soils.

e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?

No Impact. The project would not require the use of septic tanks or alternative wastewater disposal systems. The proposed employee restroom would connect to existing wastewater infrastructure from the existing substation site. Thus, the project would have **no impact** related to soil suitability for use of septic tanks or alternative wastewater disposal systems.

f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Less than Significant Impact. As described in the City of Sacramento 2040 General Plan EIR (City of Sacramento 2023), Sacramento is a largely developed urban area situated on the alluvial plain of the Sacramento Valley. The City does not contain any known unique geologic features or unusual landforms, and no unique paleontological resources have been identified within its boundaries. The City is underlain by Quaternary sediments of the Great Valley sequence, consisting primarily of gravels and other alluvial deposits laid down by major river systems. These deposits are known to contain well-preserved vertebrate and plant fossils that are generally representative of flora and fauna similar to those found today. Although ground-disturbing activities could potentially encounter or disturb paleontological resources, such impacts can be effectively managed through compliance with applicable regulations. The project would be required to adhere to all relevant state laws, including the Paleontological Resource Protection Act and Section 5097.5 of the California Public Resources Code, which protect vertebrate fossil sites and other paleontological resources. Because the project is not located within an area of high paleontological sensitivity and would comply with applicable state regulations, impacts to paleontological resources would be **less than significant**.

3.8 Greenhouse Gas Emissions

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
VIII. Greenhouse Gas Emissions. Would the project:				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment or conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☒	☐

3.8.1 Environmental Setting

Greenhouse Gas Emissions and Climate Change

Certain gases in the earth's atmosphere, classified as GHGs, play a critical role in determining the earth's surface temperature. Solar radiation enters the atmosphere from space. A portion of the radiation is absorbed by the earth's surface, and a smaller portion of this radiation is reflected toward space. The absorbed radiation is then emitted from the earth as low-frequency infrared radiation. Most solar radiation passes through GHGs; however, infrared radiation is absorbed by these gases. As a result, radiation that otherwise would have escaped back into space is instead "trapped," resulting in a warming of the atmosphere. This phenomenon, known as the greenhouse effect, is responsible for maintaining a habitable climate on Earth.

Prominent GHGs contributing to the greenhouse effect are CO_2, methane, nitrous oxide (NO_2), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6). Human-caused emissions of these GHGs in excess of natural ambient concentrations are found to be responsible for intensifying the greenhouse effect and leading to a trend of unnatural warming of the earth's climate, known as global climate change or global warming. It is very likely that human-induced GHG increases were the main driver of tropospheric warming since comprehensive satellite observations started in 1979, and virtually certain that the human-induced GHG increase is the primary driver of the observed changes in hot and cold extremes on the global scale (IPCC 2023).

Climate change is a global problem. GHGs are global pollutants, unlike criteria air pollutants and TACs, which are pollutants of regional and local concern. Whereas most pollutants with localized air quality effects have relatively short atmospheric lifetimes (approximately 1 day), GHGs have long atmospheric lifetimes (1 year to several thousand years). GHGs persist in the atmosphere long enough to be dispersed around the globe. Although the lifetime of any GHG molecule depends on multiple variables and cannot be determined with any certainty, it is understood that more CO_2 is emitted into the atmosphere than is sequestered by ocean uptake, vegetation, and other forms of sequestration. Of the total annual human-caused CO_2 emissions, approximately 56 percent are estimated to be sequestered through ocean and land uptake every year, averaged over the last 50 years, whereas the remaining 44 percent of human-caused CO_2 emissions remain stored in the atmosphere (IPCC 2023).

The quantity of GHGs in the atmosphere responsible for climate change is not precisely known, but it is considered to be enormous. No single project alone would measurably contribute to an

incremental change in the global average temperature or to global or local climates or microclimates. From the standpoint of CEQA, GHG impacts relative to global climate change are inherently cumulative.

Greenhouse Gas Emission Sources

The City of Sacramento completed a GHG emissions inventory for the year 2016 as part of the preparation of the Sacramento Climate Action & Adaptation Plan (2024 City of Sacramento CAAP). Table 3.8-1 summarizes the City of Sacramento‘s community GHG emissions by sector for 2016.

Table 3.8-1 City of Sacramento Community GHG Emissions by Source (2016)

Sector	Total Emissions ($MTCO_2e$)	Percent of Total
Residential Electricity	318,275	9
Residential Gas	318,304	9
Industrial and Commercial Electricity	489,945	14
Commercial Gas	153,8031	45
District Gas	18,2161	5
Transportation	1,935,870	57
Generated Waste	134,339	4
Waste-In-Place	26,504	1
Wastewater	19,867	1
Water	9,607	<1
Total Emissions	**3,424,729**	100%

Notes: $MTCO_2e$ = metric tons of carbon dioxide equivalent. Totals May not sum due to rounding.
Source: City of Sacramento 2024.

Effects of Climate Change on the Environment

The Intergovernmental Panel on Climate Change (IPCC) predicts that the global mean surface temperature increase (2081–2100) could range from 0.5 to 8.7 degrees Fahrenheit (°F) by the end of the 21st century, relative to 1986–2005. Additionally, IPCC projects that global mean sea level rise will continue during the 21st century, very likely at a faster rate than observed from 1901 to 2015. By 2100, the rise will likely range from 11 to 22 inches (0.28 to 0.55 meters) (IPCC 2023).

According to *California's Fourth Climate Change Assessment*, with global GHGs reduced at a moderate rate, California will experience average daily high temperatures that are warmer than the historic average by 2.5°F from 2006 to 2039, by 4.4°F from 2040 to 2069, and by 5.6°F from 2070 to 2100; if GHG emissions continue at current rates, California will experience average daily high temperatures that are warmer than the historic average by 2.7°F from 2006 to 2039, by 5.8°F from 2040 to 2069, and by 8.8°F from 2070 to 2100 (LCI et al. 2018, formerly OPR et al.). The year 2024 was the warmest year since global records began in 1850 at 1.29 degrees Celsius (°C, or 2.32°F) above the 20th century average of 13.9°C (57.0°F). This value is 0.10°C (0.18°F) more than the previous record set in 2023. The 10 warmest years in the 174-year record have all occurred during the last decade (2014–2024) (NOAA Fisheries 2025). In

contrast, the northern Sierra Nevada experienced one of its wettest years on record during the 2016/2017 water year (CNRA 2018).

These changes in precipitation exacerbate wildfires throughout California through a cycle of high vegetative growth coupled with dry, hot periods, which lowers the moisture content of fuel loads. As a result, the frequency, size, and devastation of forest fires have increased.

As temperatures increase, the amount of precipitation falling as rain rather than snow also increases, which could lead to increased flooding because water that would normally be held in the snowpack of the Sierra Nevada and the Cascade Range until spring would flow into the Central Valley during winter rainstorm events. This scenario would place more pressure on California's levee/flood control system (CNRA 2018). Furthermore, in the extreme scenario involving the rapid loss of the Antarctic ice sheet and the glaciers atop Greenland, the sea level along California's coastline is expected to rise 54 inches by 2100 if GHG emissions continue at current rates (LCI et al. 2018).

Changes in temperature, precipitation patterns, extreme weather events, wildfires, and sea level rise have the potential to threaten transportation and energy infrastructure, crop production, forests and rangelands, and public health (CNRA 2018; LCI et al. 2018). The effects of climate change will also have an indirect adverse impact on the economy as more severe natural disasters cause expensive physical damage to communities and the State.

State Plans, Policies, Laws, and Regulations

Statewide GHG Emission Targets and the Climate Change Scoping Plan

GHG emission targets established by the State legislature include reducing statewide GHG emissions to 1990 levels by 2020 (AB 32 of 2006) and reducing them to 40 percent below 1990 levels by 2030 (SB 32 of 2016). Executive Order S-3-05 calls for statewide GHG emissions to be reduced to 80 percent below 1990 levels by 2050. This target was superseded by AB 1279, which codifies a goal to reduce anthropogenic emissions by 85 percent below 1990 levels and achieve net zero emissions by 2045. These targets are in line with the scientifically established levels needed in the U.S. to limit the rise in global temperature to no more than 2 degrees Celsius, the warming threshold at which major climate disruptions, such as super droughts and rising sea levels, are projected; these targets also pursue efforts to limit the temperature increase even further to 1.5 degrees Celsius (United Nations 2015).

CARB adopted the 2022 Scoping Plan on December 16, 2022, which traces the State's the pathway to achieve its carbon neutrality and an 85 percent reduction in 1990 emissions goal by 2045 using a combined top-down, bottom-up approach under various scenarios. It identifies the reductions needed by each GHG emission sector (e.g., transportation [including off-road mobile source emissions], industry, electricity generation, agriculture, commercial and residential, pollutants with high global warming potential, and recycling and waste) to achieve these goals (CARB 2022).

Local

SMAQMD is the primary agency responsible for addressing air quality concerns in all of Sacramento County. SMAQMD recommends methods for analyzing project-generated GHG emissions in CEQA analyses and offers multiple potential GHG reduction measures for land use

development projects. SMAQMD developed thresholds of significance to provide a uniform scale to measure the significance of GHG emissions from land use and stationary source projects in compliance with CEQA to align with the statewide GHG emissions target of 40 percent below 1990 levels by 2030 with the passage of SB 32 for land use development projects (SMAQMD 2021).

SMAQMD's newly published guidance to address GHGs was released in February 2021. SMAQMD recommends that a 1,100-MTCO2e/year be applied as a bright-line threshold of significance for evaluating construction emissions of GHGs.

In their guidance regarding operational GHG emissions, SMAQMD includes an operational GHG screening levels table which shows the size of development (by land use type) at which 1,100 metric tons (MT) of GHG per year would not be exceeded. If a project is less than or equal to 1,100 MT of GHG per year and implements the District's tier 1 operational GHG Best Management Practices, the District's operational GHG threshold of significance would not be exceeded. If project emissions exceed the District's GHG operational screening levels table, the project would then apply the District's tier 1 and tier 2 Best Management Practices to reduce GHG emissions from the project. These thresholds and BMPs only apply to land use development projects (e.g., housing, industrial, and agricultural land uses) and because the proposed project would not be a land use development project, SMAQMD operational GHG thresholds are not used in this analysis.

City of Sacramento Climate Action and Adaptation Plan

The City of Sacramento's first CAP was adopted in 2012 and served as a stand-alone document that was intended to guide City efforts to reduce greenhouse gas emissions and adapt to climate change. In 2015 the CAP was incorporated into the 2035 General Plan. The City of Sacramento City Council unanimously adopted the Sacramento Climate Action & Adaptation Plan (2024 City of Sacramento CAAP), in tandem with the City of Sacramento's 2040 General Plan, February 27, 2024. The 2024 City of Sacramento CAAP was developed to include reduction goals, strategies, and measures which align with the state's most current GHG reduction goals codified by SB 32 and AB 1279.

2030 Zero Carbon Plan

SMUD approved its 2030 Zero Carbon Plan in April 2021. The 2030 Zero Carbon Plan consists of a road map to achieve a zero-carbon power supply by 2030, which exceeds statewide goals to meet zero carbon power supplies by 2045. The 2030 Zero Carbon Plan was filed with CEC in September 2022 as SMUD's new Integrated Resource Plan (IRP) per SB 350 (2015), which requires California utilities to file a Board-adopted IRP at least every 5 years. On August 14, 2024, CEC determined that the 2030 Zero Carbon Plan meets SB 350 filing requirements (CEC 2024b). The plan includes solar power, large scale thermal storage, microgrids and fuel cells resources, and is designed to allow for adjustments to the overall scheme, as technological research and progress affect carbon emissions without compromising reliability or affordability (SMUD 2021).

The 2030 Zero Carbon Plan is SMUD's strategy to eliminate carbon emissions from its power supply by 2030, which is more ambitious than already aggressive state mandates and is ahead of virtually all other major utilities in the United States. SMUD's 2030 Zero Carbon Plan is a road map to achieve the zero carbon goal while ensuring that all customers and communities SMUD

serves reap the benefits of decarbonization. To achieve zero carbon, SMUD is focused on four main areas: repurposing existing natural gas generation power plants to eliminate GHG emissions; using proven clean technologies including solar, wind, and geothermal energy and battery storage; testing pilot projects and programs to test and prove new and emerging technologies; and identifying savings and pursuing partnerships and grants that support the Zero Carbon Plan.

3.8.2 Discussion

a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment or conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

Less than Significant. The issue of global climate change is inherently a cumulative issue, because the GHG emissions of an individual project cannot be shown to have any material effect on global climate. Thus, the level of GHG emissions associated with implementation of the project is addressed as a cumulative impact.

GHG emissions associated with implementation of the project would be generated during project construction. The project would not generate GHG emissions during operations relative to existing conditions as operation and maintenance activities related to the proposed substation would be similar in scale and frequency to the existing operation and maintenance of the Pocket Substation.

Project-related construction activities would result in GHG emissions from the use of heavy-duty equipment (e.g., excavators, graders, loaders, cranes, dozers, augers, and pavers) as well as from on-road vehicle trips related to worker commutes and material delivery and hauling trips. Construction-related emissions of GHGs were estimated using CalEEMod Version 2022.1.1.41. A detailed discussion of the major construction activities and model assumptions is provided in Section 3.3, “Air Quality.” Model outputs are included in Appendix A. Table 3.8-2 provides a summary of the estimated project-generated construction GHG emissions.

Table 3.8-2 Annual Construction-related GHG Emissions

Construction Year	$MTCO_2e$/year
2027	119
2028	414
2029	234
2030	138
2031	48
Maximum	414
SMAQMD Threshold	1,100
Threshold Exceeds?	No

Notes: $MTCO_2e$ = metric tons of carbon-dioxide-equivalent.
Source: Modeled by Ascent in 2026.

As shown in Table 3.8-2, the maximum annual GHG emissions generated during construction of the project would be 414 metric tons of carbon dioxide equivalent ($MTCO_2e$). SMAQMD has established quantitative significance thresholds for evaluating GHG emissions. For construction of all types, the established significance threshold is 1,100 $MTCO_2e$ annually (SMAQMD 2021).

Because project construction is estimated to emit a maximum of414 $MTCO_2e$ in a single year of construction, construction-related GHG emissions would not exceed SMAQMD's threshold of significance.

The GHG reduction plans applicable to the project are the 2022 Scoping Plan, SMUD's 2030 Zero Carbon Plan, the CAAP, and the 2024 Sacramento County CAP.

The ultimate objective of the 2022 Scoping Plan is to achieve the state's goals of reducing GHG emissions by 85 percent below 1990 levels and achieving carbon neutrality by 2045. As of 2022, California experienced 3 straight years of energy reliability challenges. Because of the increasing stress placed on California's energy grid related to the effects of climate change, the 2022 Scoping Plan identifies a clean, affordable, and reliable electricity grid as one of six "key sectors" targeted for GHG reductions. Furthermore, of these six key sectors, the 2022 Scoping Plan identifies the electricity sector as one of the largest contributors of GHGs in the state and presents some of the largest opportunities for GHG reductions. To support the reduction of GHG emissions from the electricity sector, the 2022 Scoping Plan states that clean energy production and distribution (i.e., electricity transmission infrastructure) would need to grow "at unprecedented rates" to ensure reliability, affordability, and resiliency in California's electricity sector (CARB 2022). To further demonstrate the urgency of implementing GHG-reducing actions, the 2022 Scoping Plan includes an uncertainty analysis, which uses a "reference scenario" that quantifies the increase in GHG emissions that could result from two scenarios: a 5-year delay in renewable capacity and a 5-year delay in transportation electrification. The uncertainty analysis found that a 5-year delay in the statewide implementation of increased renewable capacity and electricity transmission infrastructure would increase emissions by 8 percent in 2030 (25 $MMTCO_2e$) relative to the reference scenario, which estimates emissions in 2030 to be 324 $MMTCO_2e$ (CARB 2022). The analysis concludes that this would jeopardize the state's ability to achieve the 2030 target.

As stated in Section 2.2, "Project Objectives," the project is intended to, among other objectives, contribute to SMUD's goals for ensuring electrical service reliability and provide safe and reliable electrical service to existing and proposed development in the northern Sacramento County and City areas. Therefore, the project would serve the purpose of improving the resilience and reliability of the region's electrical grid. By increasing the reliability of the power system in the project vicinity, existing electricity customers would have access to safe and reliable electricity. This reliable electricity source would be capable of supporting additional electrification of customer operations, which would support the state's overarching goals of mobile source electrification and building decarbonization. This would support reduced GHG emissions and the transition away from fossil fuels. This would be consistent with the goal of the 2022 Scoping Plan to expand clean energy production and distribution infrastructure to ensure reliability, affordability, and resiliency in California's electricity sector. In addition, implementation of the project would aid in addressing the "delayed renewable capacity" scenario in the uncertainty analysis included in the 2022 Scoping Plan by increasing the transmission capacity of the state's grid, allowing for increased generation and distribution of renewable energy.

Furthermore, Appendix D, "Local Actions," of the 2022 Scoping Plan directs local agencies to reduce GHG emissions in several key sectors including transportation electrification and building decarbonization. By increasing load capacity and reliability, the project would be supporting the reduction of GHG emissions in these key areas. In addition, the project would improve the electric transmission infrastructure in the region and would therefore support both existing and future renewable electric generation (e.g., wind, solar, hydro, and thermal). Given

that these are goals identified for the energy sector in the 2022 Scoping Plan, the project would be consistent with the reduction goals of the 2022 Scoping Plan.

The project would be constructed as part of SMUD's electrical network, which the 2030 Zero Carbon Plan is based on. Thus, the project is inherently supportive of the 2030 Zero Carbon Plan's goal to achieve a zero-carbon power supply by 2030, which exceeds statewide goals to meet zero carbon power supplies by 2045.

The 2024 CAAP was developed specifically to align with the GHG reduction targets of AB 1279. Because the above analyses demonstrate the project's consistency with the 2022 Scoping Plan and the 2030 Carbon Plan, which themselves are aligned with the state's GHG reduction targets, those analyses also demonstrate that the project would support the 2024 CAAP's ultimate goal of reducing GHG emissions consistent with current statewide targets. Thus, the project would be consistent with the 2024 CAAP.

As discussed above, construction of the project would not generate GHG emissions in excess of SMQMD's construction GHG threshold. Operation of the project would be consistent with the 2022 Scoping Plan and SMUD's 2030 Zero Carbon Plan, the latter of which exceeds statewide goals to meet zero carbon power supplies by 2045. Therefore, the project's impact related to both GHG emissions and consistency with relevant GHG reduction plans would be **less than significant.**

3.9 Hazards and Hazardous Materials

	ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
IX.	**Hazards and Hazardous Materials. Would the project:**				
a)	Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☒	☐
b)	Create a significant hazard to the public or the environment through reasonably foreseeable upset and/or accident conditions involving the release of hazardous materials into the environment?	☐	☐	☒	☐
c)	Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☒	☐
d)	Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☒	☐
e)	For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?	☐	☐	☐	☒
f)	Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐
g)	Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?	☐	☐	☐	☒

3.9.1 Environmental Setting

The existing Pocket Substation provides electrical infrastructure to manage, protect, operate high-voltage electricity, including using limited amounts of Sulfur Hexaflouride (SF6), an insulating gas for high-voltage electrical systems. SMUD monitors SF6 leaks as part of maintenance and repair operations.

The State Water Resources Control Board's (SWRCB) GeoTracker website, which provides data relating to leaking underground storage tanks (LUSTs) and other types of soil and groundwater contamination, along with associated cleanup activities, was reviewed for this analysis. No open sites were identified within the project area or directly adjacent to the project site. There are two closed LUST sites along the 25th Street alignment of the project (SWRCB 2026a). The ARCO #2096 (T0606700468) and Desert Petroleum #794 (T0606700466) cases have been closed as of March 28, 2014 and July 15, 2016, respectively (SWRCB 2026b, 2026c).

The California Department of Toxic Substances Control's EnviroStor Web site, which provides data related to hazardous materials spills and clean ups, did not identify any active cleanup sites within the project areas or within 0.5 miles of the site (DTSC 2026a). There are two school investigation sites adjacent to the project area. The 24th Street Charter School (60000023) site, located at the northmost section of the 24th street project alignment, has been inactive and withdrawn since October 9, 2024 (DTSC 2026b). The Luther Burbank High School Sports Complex (60001286) site, located adjacent to the northeast access road, has had a "no action required" status as of July 7, 2010 (DTSC 2026c).

A Phase I Environmental Site Assessment (ESA) for the expansion area was completed in February 2026. The site was evaluated for existing or potential recognized environmental conditions and to determine any current and/or former hazardous substances usage, storage, and/or releases of hazardous substances. The assessment did not identify any recognized environmental conditions within the expansion area (Partner 2026).

There are three public schools within the larger project vicinity; Edward Kemble Elementary School and Cesar E Chavez Elementary School, both located approximately 0.25 miles south of Gardendale Road, and Luther Burbank High School located immediately east of the project area.

The closest airport is Sacramento Executive Airport, approximately 2 miles northwest of the project site. The project site is not located within any airport safety zones (SACOG 2024).

3.9.2 Discussion

a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

Less than Significant. Construction activities would involve the use of hazardous materials, such as fuels, solvents, gasoline, asphalt, and oil. The use and storage of these materials could potentially expose and adversely affect workers, the public, or the environment as a result of improper handling or use, accident, environmentally unsound disposal methods, fire, explosion, or other emergencies, resulting in adverse health or environmental effects. Project operation would involve minimal transport, use, and disposal of hazardous materials and waste.

The California Highway Patrol and Caltrans are responsible for enforcing regulations related to the transportation of hazardous materials on local roadways, and the use of these materials is regulated by the California Department of Toxic Substances Control (DTSC), as outlined in CCR Title 22. SMUD and its construction contractors would be required to comply with the California Environmental Protection Agency's (Cal EPA's) Unified Program, which protects Californians from hazardous waste and hazardous materials by ensuring consistency throughout the state regarding the implementation of administrative requirements, permits, inspections, and enforcement at the local regulatory level. Regulated activities would be managed by the Sacramento County Environmental Management Department, which is the designated Certified Unified Program Agency, and in accordance with the regulations included in the Unified Program (e.g., hazardous materials release response plans and inventories, California Uniform Fire Code hazardous material management plans and inventories). Such compliance would reduce the potential for accidental release of hazardous materials during project construction.

Because the project proposes disturbance of greater than 1 acre of land, it would be subject to the requirements of the Construction General Permit CGP. As described in Section 3.10, "Hydrology

and Water Quality," the permit requires preparation and implementation of a SWPPP that includes best management practices for the storage, capture, and disposal of hazardous materials.

Operation of the project would involve limited transport, use, and disposal of hazardous waste. As used in the existing substation, SMUD would use SF6, a common insulating gas for high-voltage electrical systems, to provide equipment insulation within the Meadowview Substation. The continued use of SF6 would be required to comply with recordkeeping, reporting, and leakage emission limit requirements in accordance with CARB's regulations for reduction of SF6 emissions. Project operations and maintenance would involve monitoring to accurately identify and repair any leaks that are discovered.

Similar to the existing Pocket Substation, the proposed project would utilize highly refined mineral oil within transformers and other components. While the oil itself is not toxic, the project would integrate secondary containment and/or diversionary structures or equipment to prevent an oil discharge. With operational use, the transformer oil would require filtering after an extended period of time to remove impurities that would either be removed and recycled, or disposed of in accordance with federal, state, and local hazardous waste disposal requirements.

Due to the battery system which would be located inside the control building or in an enclosure in the substation and amount of SF6 that would be onsite, a Hazardous Materials Business Plan (HMBP) would be required. While there are exceptions, a HMBP is generally required if operation of the project includes the handling or storage of hazardous materials for 30 days or more and equal to or greater than the minimum reportable quantities. These quantities are 55 gallons for liquids, 500 pounds for solids and 200 cubic feet (at standard temperature and pressure) for compressed gases (CalEPA 2024).

The project also may be subject to the US Environmental Protection Agency (EPA) Spill Prevention, Control and Countermeasure (SPCC) rule, which requires preparation and implementation of an SPCC plan, including identification and implementation of appropriate secondary containment measures designed to contain oil releases from the transformers. The SPCC criteria include facilities that store greater than 1,320 gallons of oil and have a reasonable expectation of a discharge to water (EPA 2026c). SMUD's existing SPCC Plan would be revised to incorporate the proposed Meadowview Substation.

The project would be required to comply with existing laws and regulations regarding the transportation, use, and disposal of hazardous materials. These regulations are specifically designed to protect the public health and the environment and must be adhered to during project construction and operation. Compliance with applicable regulations would ensure that this impact would be **less than significant**.

b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and/or accident conditions involving the release of hazardous materials into the environment?

Less than Significant. Project construction would involve use, transport, storage, and disposal of hazardous materials, including, but not limited to, diesel fuel, gasoline, and lubrication oil. These materials would primarily be contained within construction equipment but may also be stored on-site and transported to and from the project site. Use of these materials could potentially result in accidental spills that could release hazardous materials into the environment.

As described in Section 3.10, “Hydrology and Water Quality,” the project would be required to obtain coverage under the Construction General Permit, which requires preparation and implementation of a SWPPP. The SWPPP would include protocols for storage and management of hazardous materials. Implementation of the SWPPP would greatly reduce the potential for construction activities to result in accidental releases of hazardous materials. Should groundwater be encountered during project construction, testing would occur in accordance with DTSC and Regional Water Quality Control Board (RWQCB) requirements prior to dewatering activities. A dewatering plan would be developed prior to any dewatering. This may include seeking coverage under RWQCB’s General Order for Dewatering (R5-2013-0074). If dewatering activities are needed, they would include the potential use of Baker tanks and/or filtration bags, if needed, to treat water prior to discharge into the City’s storm drain system and/or sewer system. Dewatering activities would be temporary, and the volume of groundwater withdrawn would be very small relative to the subbasin’s capacity.

Contaminated soil is not anticipated to be encountered on the project site. If suspected contaminated soil is encountered during construction, SMUD will test soil samples to evaluate soil conditions and potential next steps. Project construction would involve the use of hazardous materials (e.g., fuels, oils, and lubricants), which could be accidentally upset or released into the environment. As discussed in item a) above, compliance with applicable laws and regulations regarding the transport, use, and disposal of hazardous materials would ensure that the project would result in a **less-than-significant** impact.

c) 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. As discussed above, there are three public schools within one-quarter mile of the project site. Small quantities of hazardous materials such as fuels, oils, and lubricants would be used during project construction. SMUD would conduct testing of soils to be removed from the project site. The project would be required to comply with existing regulations associated with the transport, use, and disposal of hazardous materials. Compliance with applicable regulations regarding hazardous materials would reduce the potential for hazardous emissions within one-quarter mile of existing schools. Therefore, this impact would be **less than significant**.

d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code §65962.5 and, as a result, would it create a significant hazard to the public or the environment?

Less than Significant. Government Code Section 65962.5 requires that DTSC compile and maintain a list of hazardous waste facilities subject to corrective action, land designated as hazardous waste property, or hazardous waste disposals on public land. This list is known as the Cortese List, which can be accessed on Cal EPA’s website. As described above, there are no active sites within the project area or adjacent to the project site. While there are listed sites adjacent to the proposed project activities on 24th Street, these sites all have a listed status of closed, withdrawn, or no action required (SWRCB 2026a, DTSC 2026a). Further, the Phase I ESA conducted in February 2026 did not identify any recognized environmental conditions within the expansion area (Partner 2026). If any hazardous materials or conditions are discovered during project construction activities, the project would comply with existing laws and regulations related to the use, disposal, and transport of hazardous materials, as described in item a) and c), above. This impact would be **less than significant**.

e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?

No Impact. The Sacramento Executive Airport is located approximately 2 miles northwest of the project site, outside of the mapped airport safety zone. The project site is not located within an airport land use plan, within 2 miles of a public airport or public use airport, or within the vicinity of a private airstrip. Thus, implementing the project would not result in an aviation-related safety hazard for people residing or working in the project area. Therefore, **no impact** would occur.

f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

Less than Significant. Project construction would require temporary lane closures of 24th Street and Gardendale Road that could interfere with or slow down emergency vehicles, temporarily increasing response times and impeding existing services on these roadways. However, any project activities that may involve public ROW would be required to obtain an encroachment permit from either Caltrans or the City of Sacramento. As part of this encroachment permit application, SMUD would be required to prepare and then later implement a traffic control plan, which would require the provision of temporary traffic controls and maintenance of emergency access during construction. Once project construction is complete, all roads would return to their pre-construction state and project operations would not interfere with emergency repose or evacuation plans. As a result, this impact would be **less than significant**.

g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?

No Impact. The project is located in a developed neighborhood of Sacramento that is not adjacent to wildlands. Therefore, implementation of the project would not expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to developed areas. There would be **no impact** related to wildland fires.

3.10 Hydrology and Water Quality

	ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
X.	**Hydrology and Water Quality. Would the project:**				
a)	Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?	☐	☐	☒	☐
b)	Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	☐	☐	☒	☐
c)	Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:	☐	☐	☒	☐
	i) Result in substantial on- or offsite erosion or siltation;	☐	☐	☒	☐
	ii) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;	☐	☐	☒	☐
	iii) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or	☐	☐	☒	☐
	iv) Impede or redirect flood flows?	☐	☐	☒	☐
d)	In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	☐	☐	☐	☒
e)	Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	☐	☐	☒	☐

3.10.1 Environmental Setting

The city of Sacramento is located at the confluence of the Sacramento and American Rivers within the Sacramento River Basin. The Sacramento River Basin encompasses about 27,000 square miles and is bounded by the Sierra Nevada to the east, the Coast Ranges to the west, the Cascade Range and Trinity Mountains to the north, and the Delta to the southeast. The project site is located approximately 2.5 miles northeast of the Sacramento River and is located within the Lake Greenhaven – Sacramento River watershed. The new Meadowview Substation site and expansion area are both vacant and undeveloped. There are no surface waters within 500 feet of the project site.

The project site is located in an area of the city where there are separated sewer and storm drainage systems that are collected and conveyed to the Sacramento Regional Wastewater Treatment Plant for treatment and ultimately discharged into the Sacramento River (City of Sacramento 2020). The project site is located in the Sacramento Valley groundwater basin and the Sacramento Valley - South American subbasin. Multiple local entities collectively referred to as Groundwater Sustainability Agencies (GSAs) work together to develop and implement the South American Subbasin Groundwater Sustainability Plan.

Flooding

The project is located within an area of minimal and reduced flood hazard due to existing levee infrastructure (Zone X), as identified on Federal Emergency Management Agency (FEMA) flood hazard maps (FEMA 2026).

3.10.2 Discussion

a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality

Less than Significant. Project construction activities would involve the excavation and movement of soil, which could temporarily increase erosion and siltation potential within the new substation site, within the expansion area, and along the project alignment. If not properly controlled, these activities could accidentally discharge waste into waterways through runoff. However, SMUD would comply with existing stormwater regulations, including the City's Stormwater Management and Control Code and the NPDES Regional MS4 Permit, which would necessitate the implementation and maintenance of on-site BMPs to control potential erosion and siltation and prevent discharges off-site.

Because the project involves disturbance of more than one acre, SMUD would be subject to and would comply with the NPDES Statewide Construction General Permit (CGP) for stormwater runoff (Order WQ-2022-0057-DWQ and NPDES No. CAS000002 [Construction General Permit]), which would require preparation and implementation of a formal SWPPP. The SWPPP is a site-specific plan that identifies potential pollution sources and BMPs to prevent/minimize water pollution. SMUD would be required to implement the SWPPP and adhere to permit conditions, thus reducing potential impacts to surface and groundwater quality. Project operations would not substantially degrade water quality; runoff from the Meadowview substation and expansion area would be captured in the planned detention basin that would be designed in accordance with site drainage requirements. Consequently, violation of WDRs or water quality standards would be **less than significant**.

b) 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. The project site is underlain by the South American Groundwater Subbasin, which is part of the larger Sacramento Valley Groundwater Basin. The South American River Subbasin is estimated to have a groundwater storage capacity of 4,816,000 acre-feet (DWR 2004). The project would not increase demand for water supply or otherwise affect groundwater supplies. Water demand associated with the construction phase would be limited to dust control and handwashing stations for construction employees provided by the contractor using a license water carrier. During operations, the substation is anticipated to be operated and maintained by the same number of remote employees and at the same frequency as the existing substation; therefore, project operations would not increase groundwater demand compared to existing conditions.

The project would not involve construction practices or develop facilities that would substantially prevent or otherwise redirect groundwater resources in the project site. Implementation of the project would result in an increase in approximately 2.3 acres of impervious surfaces; however

due to the limited increase in this area, the infiltration characteristics affecting groundwater recharge are not anticipated to be significantly impacted. For these reasons, the project would have a **less-than-significant** impact on groundwater supplies and groundwater recharge.

c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:

i) Result in substantial on- or offsite erosion or siltation;

ii) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;

iii) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or

iv) Impede or redirect flood flows?

Less than Significant. The substation site drainage would be designed such that on-site runoff would be collected into an underground storm drain pipe system and a stormwater detention basin. The stormwater detention basin would be constructed in accordance with site drainage design requirements and could be located within the expansion area, the Meadowview Substation, or the existing Pocket Substation after it is decommissioned. To minimize drainage impacts from the increased amount of non-permeable surfaces (estimated to be approximately 2.3 acres), the proposed on-site detention basin would collect stormwater in the basin. Water in the detention basin would primarily be pumped into the municipal stormwater system and some would percolate into the soil. While the design is not yet finalized, the detention basin may be located within the Meadowview Substation, the expansion area, or the existing Pocket Substation after it is decommissioned. Due to the relatively flat project site, the basin would not be anticipated to capture water beyond runoff flows.

The project site is located in an area with reduced flood risk due to levees and, therefore, the new substation and associated infrastructure would not be subject to significant flood hazards. The project would introduce approximately 2.3 acres of impervious area. Given the limited new impervious area and project drainage features, the project would not substantially alter the local hydrology compared to existing conditions such that the project would result in substantial on- or off-site erosion, flooding off-site, exceed capacity of stormwater drainage systems, or impede flood flows. This impact would be **less than significant**.

d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?

No Impact. The project site is located approximately 83 miles from the Pacific Ocean. The project site is also separated from the Sacramento River by flood control levees and is identified as an area of reduced flood risk (Zone X) (FEMA 2026). The project site is not expected to be inundated; therefore, there would be **no impact**.

e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

Less than Significant. During project construction, SMUD would implement a SWPPP and construct a stormwater runoff detention basin. During operation, the project would not generate wastewater or stormwater runoff. As such, there would be no conflict with or obstruction of a water quality control plan during project operation. As previously described, though project construction could require dewatering, the groundwater removed would be minimal compared with the available groundwater supply. If dewatering is needed, a dewatering plan will be developed prior to dewatering. The project would require a small amount of potable water for use in the employee restroom in the control building, which is substantially similar to the existing demand for facilities in the Pocket Substation. During normal operations, the substation would be operated remotely and continuously, meaning that no permanent employees would be stationed at the site to generate additional potable water demand. Because the project would implement BMPs consistent with local water quality control measures, this impact would be **less than significant**.

3.11 Land Use and Planning

	ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
XI.	**Land Use and Planning. Would the project:**				
a)	Physically divide an established community?	☐	☐	☐	☒
b)	Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☐	☒

3.11.1 Environmental Setting

The project site is located in the Meadowview neighborhood of Sacramento and includes the existing Pocket Substation, the new Meadowview Substation, the expansion area, areas east of the substations and railroad tracks, and alignments along 25th Street and Gardendale Road. The existing Pocket Substation and new Meadowview Substation areas are zoned as R-1 Standard Single Family. The expansion area is zoned as R-2B Multi-Family and is currently undeveloped. The area east of the project site and the Union Pacific Railroad is zoned as Agricultural and is completely developed as a mobile home park (City of Sacramento 2026).

In the City of Sacramento, public utility facilities can be located on residential land with issuance of a conditional use permit. SMUD will coordinate with the City regarding any necessary permits for the project. If permits are determined to be necessary, SMUD will obtain and maintain all required permits and approvals in accordance with City requirements.

3.11.2 Discussion

a) Physically divide an established community?

No Impact. The project would involve the replacement of the existing Pocket Substation to the vacant areas immediately north, with new above and underground electrical equipment in a developed neighborhood of Sacramento. The proposed transmission line work along Gardendale Road would involve lane closures during the construction period; however, these would be temporary in nature and would not impede access along the road to neighborhood. The project would not introduce any barriers (with the exception of site security fencing) within the project area and would not lead to a physical division of an established community. There would be **no impact**.

b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?

No Impact. Project construction would occur within and immediately north of the existing substation site and would include development of a new substation adjacent to the current facility, which would be decommissioned. Upgraded electrical lines and transmission poles would also be installed within the project area, including the property east of the railroad tracks,

and along Gardendale Road and 24th Street. The project would continue utility use of the site while expanding substation operations onto the new substation site and expansion area; no change in land use is proposed. Once operational, the new substation would be similar in scale and type to the existing substation. The project would not conflict with any adopted plans, policies, or regulations adopted for avoiding or mitigating an environmental effect. Therefore, there would be **no impact**.

3.12 Mineral Resources

	ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
XII.	**Mineral Resources. Would the project:**				
a)	Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	☒
b)	Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?	☐	☐	☐	☒

3.12.1 Environmental Setting

The Surface Mining and Reclamation Act directs the State Geologist to classify (identify and map) the non-fuel mineral resources of the State to show where economically significant mineral deposits occur and where they are likely to occur based upon the best available scientific data. Areas known as Mineral Resource Zones (MRZs) are classified on the basis of geologic factors, without regard to existing land use and land ownership. The areas are categorized into four general classifications (MRZ-1 through MRZ-4). Of the four, the MRZ-2 classification is recognized in land use planning because the likelihood for occurrence of significant mineral deposits is high, and the classification may be a factor in the discovery and development of mineral deposits that would tend to be economically beneficial to society. The project site is classified as MRZ-3, which indicates areas containing known or inferred concrete aggregate resources of undetermined mineral resource significance (DOC 2018). There are no mineral resource extraction activities near the project site.

3.12.2 Discussion

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

b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?

No Impact. The project site is classified as MRZ-3. While concrete aggregate resources have been designated as known or inferred within the project area, the mineral resource significance has not been determined. As such, no known significant mineral resources have been identified within the project vicinity and, therefore, mineral resources would not be lost as a result of project implementation. Further, the project site is not located within a locally important delineated mineral resource recovery site. Therefore, there would be **no impact**.

3.13 Noise

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
XIII. Noise. Would the project result in:				
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or in other applicable local, state, or federal standards?	☐	☒	☐	☐
b) Generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☒	☐
c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☒	☐

3.13.1 Environmental Setting

Acoustic Fundamentals

Prior to discussing the noise setting for the project, background information about sound, noise, vibration, and common noise descriptors is needed to provide context and a better understanding of the technical terms referenced throughout this study.

Acoustics is the scientific study that evaluates perception, propagation, absorption, and reflection of sound waves. Sound is a mechanical form of radiant energy, transmitted by a pressure wave through a solid, liquid, or gaseous medium. Sound that is loud, disagreeable, unexpected, or unwanted is generally defined as noise. Noise is typically expressed in decibels (dB), which is a common measurement of sound energy.

A decibel is logarithmic; it does not follow normal algebraic methods and cannot be directly summed. Because decibels are logarithmic units, sound pressure levels (SPLs) cannot be added or subtracted through ordinary arithmetic. Under the decibel scale, a doubling of sound energy corresponds to a 3-dB increase. In other words, when two identical sources are each producing sound of the same loudness at the same time, the resulting sound level at a given distance would be 3 dB higher than if only one of the sound sources was producing sound under the same conditions. For example, if one idling truck generates an SPL of 70 dB, two trucks idling simultaneously would not produce 140 dB; rather, they would combine to produce 73 dB. Under the decibel scale, three sources of equal loudness together produce a sound level approximately 5 dB louder than one source.

The decibel scale alone does not adequately characterize how humans perceive noise. The dominant frequencies of a sound have a substantial effect on the human response to that sound. Although the intensity (energy per unit area) of the sound is a purely physical quantity, the loudness or human response is determined by the characteristics of the human ear. Human hearing is limited in the range of audible frequencies as well as in the way it perceives the SPL

in that range. In general, people are most sensitive to the frequency range of 1,000–8,000 Hz and perceive sounds within this range better than sounds of the same amplitude with frequencies outside of this range. To approximate the response of the human ear, sound levels of individual frequency bands are weighted, depending on the human sensitivity to those frequencies. Then, an "A-weighted" sound level (expressed in units of A-weighted decibels) can be computed based on this information.

The A-weighting network approximates the frequency response of the average young ear when listening to most ordinary sounds. When people make judgments of the relative loudness or annoyance of a sound, their judgment correlates well with the A-scale sound levels of those sounds. Thus, noise levels are typically reported in terms of A weighted decibels. All sound levels discussed in this study are expressed in A-weighted decibels.

Noise in our daily environment fluctuates over time. Various noise descriptors have been developed to describe time-varying noise levels. The following are the noise descriptors used throughout this study.

- **Continuous Sound Level (L_{eq}):** L_{eq} represents an average of the sound energy occurring over a specified period. In effect, L_{eq} is the steady-state sound level containing the same acoustical energy as the time-varying sound level that occurs during the same period (Caltrans 2013: 2-48).

- **Community Noise Equivalent Level (CNEL):** CNEL is the energy average of the A-weighted sound levels occurring over a 24-hour period, with a 10 dBA penalty applied to sound levels occurring during the nighttime hours between 10:00 p.m. and 7:00 a.m. and a 5 dBA penalty applied to the sound levels occurring during evening hours between 7:00 p.m. and 10:00 p.m., to account for added human sensitivity to noise during these periods (Caltrans 2013: 2-48).

- **Percentile-exceeded Sound Level (L_x):** L_x represents the sound level exceeded for a given percentage of a specified period (e.g., L_{10} is the sound level exceeded 10 percent of the time, and L_{90} is the sound level exceeded 90 percent of the time (Caltrans 2013:2-16).

- **Maximum Sound Level (L_{max}):** L_{max} is the highest instantaneous sound level measured during a specific period (Caltrans 2013: 2-48; FTA 2018).

- **Minimum Noise Level (L_{min}):** minimum instantaneous noise level recorded during a noise measurement period.

- **Vibration Decibels (VdB):** VdB is the vibration velocity level in decibel scale (FTA 2018: Table 5-1).

- **Peak Particle Velocity (PPV):** PPV is the peak signal value of an oscillating vibration waveform. Usually expressed in inches/second (in/sec) (FTA 2018: Table 5-1).

- **Sound Exposure Level (SEL):** SEL is the cumulative noise exposure from a single noise event, normalized to one second. SEL contains the same overall sound energy as the actual varying sound energy during the event. It is the primary metric for the measurement of transit vehicle noise emissions and is an intermediate metric in the measurement and calculation of both L_{eq} and L_{dn} (FTA 2018: 208).

Noise Generation and Attenuation

Noise can be generated by many sources, including mobile sources such as automobiles, trucks, and airplanes and stationary sources such as activity at construction sites, machinery, and commercial and industrial operations. As sound travels through the atmosphere from the source to the receiver, noise levels attenuate (i.e., decrease) depending on ground absorption characteristics, atmospheric conditions, and the presence of physical barriers. Sound from a localized source (i.e., a point source) propagates uniformly outward in a spherical pattern. The sound level attenuates at a rate of 6 dB for each doubling of distance from a point source. Noise from a line source, such as a road or highway, propagates outward in a cylindrical pattern, often referred to as cylindrical spreading. Sound levels attenuate at a rate of 3 dB for each doubling of distance from a line source. Noise attenuation from ground absorption and reflective-wave canceling provides additional attenuation associated with geometric spreading. For acoustically absorptive sites such as soft dirt, grass, or scattered bushes and trees, an additional ground-attenuation value of 1.5 dB per doubling of distance is normally assumed. When added to the attenuation rate associated with cylindrical spreading, the additional ground attenuation results in an overall drop-off rate of 4.5 dB per doubling of distance. This would hold true for point sources, resulting in an overall drop-off rate of up to 7.5 dB per doubling of distance.

Atmospheric conditions such as wind speed, wind direction, turbulence, temperature gradients, and humidity also alter the propagation of noise and affect levels at a receiver. Furthermore, the presence of a barrier (e.g., topographic feature, intervening building, and dense vegetation) between the source and the receptor can provide substantial attenuation of noise levels at the receiver. Natural (e.g., berms, hills, and dense vegetation) and human-made features (e.g., buildings and walls) may function as noise barriers.

To provide some context to noise levels described throughout this section, common sources of noise and associated noise levels are presented in Table 3.13-1.

Table 3.13-1 Typical Noise Sources

Common Outdoor Activities	Noise Level (dB)	Common Indoor Activities
	110	Rock band
Jet flyover at 1,000 feet	100	
Gas lawnmower at 3 feet	90	
Diesel truck moving at 50 mph at 50 feet	80	Food blender at 3 feet, garbage disposal at 3 feet
Noisy urban area, gas lawnmower at 100 feet	70	Vacuum cleaner at 10 feet, normal speech at 3 feet
Commercial area, heavy traffic at 300 feet	60	
Quiet urban daytime	50	Large business office, dishwasher in next room
Quiet urban nighttime	40	Theater, large conference room (background)
Quiet suburban nighttime	30	Library, bedroom at night, concert hall (background)
Quiet rural nighttime	20	Broadcast/recording studio
	10	
Threshold of human hearing	0	Threshold of human hearing

Notes: dB = A-weighted decibels; mph = miles per hour
Source: Caltrans 2013.

Single-Event Noise and Sleep Disturbances

A single event is an individual distinct loud activity, such as a blasting event, an aircraft overflight, a train or truck passage, or any other brief and discrete noise-generating activity. Noise exposure quantified in terms of 24-hour-averaged descriptors, such as day-night average sound level (L_{dn}) or community noise equivalent level (CNEL), can mask the potential for annoyance or sleep disturbance associated with individual loud events due to the averaging process.

Extensive studies have been conducted regarding the effects of single-event noise on sleep disturbance, with the Sound Exposure Level (SEL) metric being a common metric used for such assessments. SEL represents the entire sound energy of a given single-event normalized into a one-second period regardless of event duration. As a result, the single-number SEL metric contains information pertaining to both event duration and intensity. Another descriptor utilized to assess single-event noise is the maximum, or L_{max}, noise level associated with the event. A problem with utilizing L_{max} to assess single events is that the duration of the event is not considered.

The Federal Interagency Committee on Aviation Noise (FICAN) has provided estimates of the percentage of people expected to be awakened when exposed to specific SEL inside a home (FICAN 1997). According to the FICAN study, an estimated 5 to 10 percent of the population is affected when interior SEL noise levels are between 65 and 81 dB, and few sleep awakenings (less than 5 percent) are predicted if the interior SEL is less than 65 dB.

Ground Vibration

Vibration is the periodic oscillation of a medium or object with respect to a given reference point. Ground-borne vibration is vibration of and through the ground. Ground-borne vibration can range from levels that are imperceptible by humans to levels that can create substantial damage to buildings and structures. Sources ground-borne of vibration include natural phenomena (e.g., earthquakes, volcanic eruptions, sea waves, landslides) and those introduced by human activity (e.g., explosions, machinery, traffic, trains, construction equipment). Vibration sources may be continuous, (e.g., operating factory machinery) or transient in nature (e.g., explosions). Vibration levels can be depicted in terms of amplitude and frequency, relative to displacement, velocity, or acceleration.

Noise- and Vibration-Sensitive Land Uses and Receptors

Noise-sensitive land uses are generally considered to include those uses where noise exposure could result in health-related risks to individuals, as well as places where quiet is an essential element of their intended purpose. Residential dwellings are of primary concern because of the potential for increased and prolonged exposure of individuals to both interior and exterior noise levels and because of the potential for nighttime noise to result in sleep disruption.
Additional land uses such as schools, transient lodging, historic sites, cemeteries, and places of worship are also generally considered sensitive to increases in noise levels. These land use types are also considered vibration-sensitive land uses in addition to commercial and industrial buildings where vibration would interfere with operations within the building, including levels that may be well below those associated with human annoyance.

The nearest noise sensitive receptors to the project site include the residential land uses north and west of the proposed substation site and expansion area, and the residential land uses to the west and south of the existing substation site.

Existing Ambient Noise Environment

To characterize the existing ambient noise environment at the project site, an ambient noise survey was conducted by an Ascent noise analyst on March 4, 2026, consisting of two long-term (LT) (24-hour) measurements conducted over the course of one 24-hour period and four short-term (ST) (15-minute) measurements. A Soft dB Piccolo II Type 2 precision integrating sound level meter was used for the ambient noise level measurement survey. The meter was calibrated before and after the recording with a Larson Davis Laboratories Model CAL200 acoustical calibrator to ensure measurement accuracy. The measurement equipment meets all pertinent specifications of the American National Standards Institute. The results of the ambient noise survey are summarized in Tables 3.13-2 and 3.13-3. Detailed summaries of the measured noise level data are provided in Appendix C. The measurement locations in relation to the project site are shown in Figure 3.13-1.

Table 3.13-2 Long-Term Noise Measurement Summary

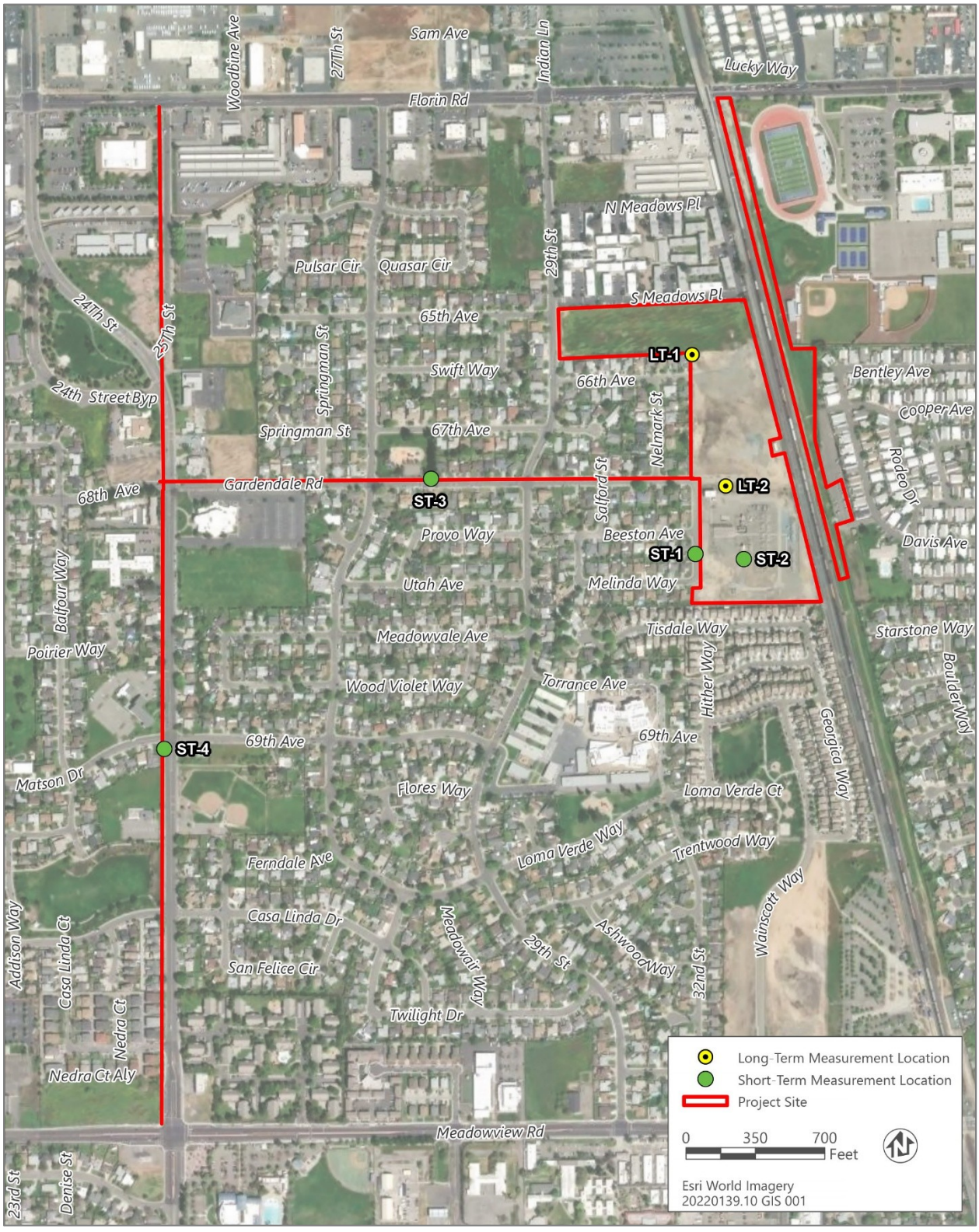
Location IDs	Date and Time	Noise Levels (dBA)			
		CNEL	L_{50} Daytime (7:00 a.m. – 7:00 p.m.)	L_{50} Evening (7:00 a.m. – 10:00 p.m.)	L_{50} Nighttime (10:00 p.m. – 7:00 a.m.)
LT-1	March 4, 2026, 10:00 a.m. to March 5, 2026, 10:00 a.m.	59.5	48.3	48.6	48.7
LT-2	March 4, 2026, 10:00 a.m. to March 5, 2026, 10:00 a.m.	66.4	58.1	58.9	59.4

Notes: dBA = A-weighted decibels; LT = long-term measurement; CNEL = community noise equivalent level; L_{50} = percentile-exceeded sound level.
Source: Data collected by Ascent in 2026.

Table 3.13-3 Short-Term Noise Measurement Summary

Location IDs	Date and Time	Noise Levels (dBA)		
		L_{50}	L_{max}	L_{min}
ST-1	March 4, 2026, 9:47 a.m. to 10:02 a.m.	52.1	69.2	50.4
ST-2	March 4, 2026, 9:20 a.m. to 9:35 a.m.	63.5	68.6	62.8
ST-3	March 4, 2026, 8:30 a.m. to 8:45 a.m.	53.7	86.0	48.3
ST-4	March 4, 2026, 10:10 a.m. to 10:25 a.m.	66.6	92.5	51.9

Notes: dBA = A-weighted decibels; ST = short-term measurement; L_{50} = percentile-exceeded sound level; L_{max} = maximum instantaneous noise level recorded during a noise measurement period; L_{min} = lowest instantaneous noise level recorded during a noise measurement period.
Source: Data collected by Ascent in 2026.



Source: Adapted by Ascent in 2026.

Figure 3.13-1 Noise Measurement Locations

Local Noise Regulations

City of Sacramento Municipal Code

8.68060 Exterior Noise Standards

- The following noise standards unless otherwise specifically indicated in this article shall apply to all agricultural and residential properties.
    - From seven a.m. to ten p.m. the exterior noise standard shall be fifty-five (55) dBA.
    - From ten p.m. to seven a.m. the exterior noise standard shall be fifty (50) dBA.
- It is unlawful for any person at any location to create any noise which causes the noise levels when measured on agricultural or residential property to exceed for the duration of time set forth following the specified exterior noise standards in any one hour by the amount of decibels stated in Table 3.13-4:

Table 3.13-4 Exterior Noise Standards

Cumulative Duration of the Intrusive Sound	Allowance Decibels
Cumulative period of 30 minutes per hour	0
Cumulative period of 15 minutes per hour	+5
Cumulative period of 5 minutes per hour	+10
Cumulative period of 1 minutes per hour	+15
Level not to be exceeded for any time per hour	+20

Notes: Each of the noise limits specified in Each of the noise limits specified in subsection B. of this section shall be reduced by 5 dBA for impulsive or simple tone noises, or for noises consisting of speech or music. If the ambient noise level exceeds that permitted by any of the first four noise limit categories specified in subsection B of this section, the allowable noise limit shall be increased in 5 dBA increments in each category to encompass the ambient noise level. If the ambient noise level exceeds the fifth noise level category, the maximum ambient noise level shall be the noise limit for that category.
Source: City of Sacramento 2026.

- Each of the noise limits specified in subsection B of this section shall be reduced by five dBA for impulsive or simple tone noises, or for noises consisting of speech or music.
- If the ambient noise level exceeds that permitted by any of the first four noise limit categories specified in subsection B of this section, the allowable noise limit shall be increased in five dBA increments in each category to encompass the ambient noise level. If the ambient noise level exceeds the fifth noise level category, the maximum ambient noise level shall be the noise limit for that category. (Prior code § 66.02.201)

8.68080 Exterior Noise Standards

The Following activities shall be exempted from the provisions of this chapter:

- Noise sources due to the erection (including excavation), demolition, alteration or repair of any building or structure between the hours of seven a.m. and six p.m., on Monday, Tuesday, Wednesday, Thursday, Friday and Saturday, and between nine a.m. and six p.m. on Sunday, provided, however, that the operation of an internal combustion engine shall not be exempt pursuant to this subsection if such engine is not equipped with suitable exhaust and intake silencers which are in good working order. The director of building inspections may permit work to be done during the hours not exempt by this subsection in the case of urgent necessity and in the interest of public health and welfare for a period not to exceed three days. Application for this exemption may be made in conjunction with the application for the work permit or during progress of the work.

City of Sacramento General Plan

The City of Sacramento Genera Plan 2024 Noise element includes objectives, goals and policies related to noise. The following Genera Plan Noise policies are relevant to the project.

- **Policy ERC-10.1 Exterior Noise Standards.** The City shall require noise mitigation for all development where the projected exterior noise levels exceed those shown in Table ERC-1 (Presented as Table 3.13-4 in this section), to the extent feasible

- **Policy ERC-10.9 Construction Noise Control.** The City shall limit the potential noise impacts of construction activities on surrounding land uses through noise regulations in the City Code that address permitted days and hours of construction, types of work, construction equipment, and sound attenuation devices.

- **Policy ERC-10.10 Airport Land Use Compatibility**. The City shall restrict new residential development within the 65 dBA CNEL airport noise contour, or in accordance with plans prepared by the Airport Land Use Commission and shall only approve noise compatible land uses

3.13.2 Discussion

a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or in other applicable local, state, or federal standards?

Less than Significant. The project would involve the demolition of the existing substation and the construction of a new substation. This analysis considers the potential long-term operational noise and short-term construction noise generated by the project.

On-site Construction Noise

Construction of the project would generally be limited to the hours of 7:00 a.m. to 6:00 p.m. Monday through Saturday and between the hours of 9:00 a.m. and 6:00 p.m. on Sunday, per the hours of exemption for construction noise stated in section 8.68060 of the City of Sacramento Municipal Code. Construction activities would involve site clearing, grading, excavation, and road improvements. The project would not require either pile driving or blasting work. The equipment required for project construction would include an excavator, dump trucks, front end loader, vibratory compactor, paver, and loader. Short-term construction noise levels on

and near the project site would fluctuate depending on the type, number, and duration of usage for the varying types of heavy-duty equipment. The effects of construction noise largely depend on the type of construction activities being performed, noise levels generated by those activities, distances to noise-sensitive receptors, the relative locations of noise attenuating features such as vegetation and existing structures, and existing ambient noise levels. Table 3.13-5 shows reference noise levels for typical pieces of construction equipment.

Table 3.13-5 Noise Emission Levels from Construction Equipment

Equipment Type	Typical Noise Level (dBA) at 50 feet
Dump Truck	76
Drill Rig Truck	79
Concrete Mixer	85
Crane	85
Dozer	85
Grader	85
Excavator	85
Front End Loader/Backhoe	80
Paver	89
Roller	85
Scraper	89

Notes: dBA = A-weighted decibel. Assumes all equipment is fitted with a properly maintained and operational noise control device, per manufacturer specifications. Noise levels listed are manufacturer-specified noise levels for each piece of heavy construction equipment.
Source: FTA 2018.

The nearest sensitive receptors are the residential land uses located approximately 210 feet west of the project site as measured from the center of construction activity to the nearest residential property line. Construction noise was analyzed using methodologies from FTA's Transit Noise and Vibration Impact Assessment Manual (FTA 2018), which predicts average noise levels at nearby receptors by analyzing equipment types, distance from source to receptor and usage factor. This methodology calculates the composite average noise levels for the two loudest pieces of construction equipment operating simultaneously. The two loudest pieces of equipment during project construction would be a compactor and dozer, which generate combined reference noise levels of 80.1 dBA L_{eq}. Construction noise would attenuate to 67.7 dBA L_{eq} at the nearest sensitive receptor. Detailed calculations are provided in Appendix C. Based on the hours of operation, this impact would therefore be **less than significant**.

Table 3.13-6 Noise Exposure at Off-Site Noise-Sensitive Receptors from Typical Construction Activity

Residential Land Use Location	Distance to Center of Construction Activity (feet)	Daytime Construction Noise Exposure Level at Sensitive Receptor [1] L_{eq} (dBA)
Bordering the Expansion Area to the West	210	67.7
Bordering the Existing Substation Site to the West	270	65.5
Bordering the Existing Substation Site to the South	330	63.8

Notes: dBA = A-weighted decibel; L_{eq} = equivalent continuous sound level; L_{max} = maximum sound level.

[1] Assumes all equipment is fitted with a properly maintained and operational noise control device, per manufacturer specifications. Noise levels listed are manufacturer-specified noise levels for each piece of heavy construction equipment.

Source: Data modeled by Ascent in 2026.

Nighttime Construction

As part of the installation of the proposed transformers, certain activities would need to occur during the more noise-sensitive nighttime hours. Upon arrival at the project site, the transformers would undergo oil processing, a continuous activity that would require a minimum of 24 hours to complete. Oil processing requires the use of a pump and generator to power the pump. Accordingly, noise levels were modeled assuming the combined noise of a generator and a pump, resulting in a combined noise level of 78.6 dBA L_{eq} at 50 feet. Based on the proposed location of the new transformers, oil processing would attenuate to a noise level of 66.2 dBA L_{eq} at the property line of the nearest sensitive receptor (i.e. SR-1) as measured to the center of the three proposed transformers. Note that while the applicable City noise standards are an L_{50}, which is a percentile statistical noise unit that represents a noise level occurring 50 percent of the time during a noise recording, noise levels are modeled in L_{eq} and in practice an L_{eq} (average noise level in an hour) is comparable to an L_{50}.This noise level would exceed nighttime noise standards of the Sacramento City Code of 50 dBA L_{50}. Therefore, this impact would be **potentially significant**.

Off-site Construction

Construction of the project would also include both the modification and replacement of existing poles and overhead powerlines that extend outside of the project site. Off-site construction would require the use of equipment such as an augur truck. For modeling the noise generated by an augur truck, the most representative data available was used (i.e., data from an augur drill rig). Compared to on-site construction where the construction site is fixed, off-site improvements progress linearly resulting in exposure to construction noise at any individual receptor for brief durations. Due to the small work area and spatial constraints associated with operating pieces of heavy equipment near one another, construction noise modeling assumed that one piece of equipment would be operating at a time. Based on the proposed line work, construction activities could occur as close as 20 feet from the property line of a noise sensitive receptor. At this distance, the use of an augur truck would attenuate to 85.0 dBA L_{eq} at the property line. Based on the hours of operation, this impact would therefore be **less than significant**.

Hauling Vehicle Noise

Construction of the project would require the transportation of transformers to the project site via existing roads. It is anticipated that up to three individual transformer deliveries could occur with the use of heavy-duty haul trucks and that these deliveries may be required to occur during the non-exempt nighttime hours of the day (i.e., 6:00 p.m. to 7:00 a.m.). Because transformer deliveries would occur on a very limited basis (i.e., up to three separate deliveries) over a period of a week or multiple weeks, it is more appropriate to analyze hauling noise in terms of SEL, rather than available stationary source standards, to consider the potential singular events to risk sleep disturbances from trucks passing by homes.

Construction vehicles would access the project site by going through either the intersection of Florin Road and 29th Street to Gardendale Drive or from the intersection of Florin Road and 24th Street to Gardendale Drive. A heavy-duty truck would result in an SEL of 75 dBA at 50 feet from the center of the nearest travel lane (FHWA 2019). The nearest sensitive receptor to potential hauling would be located approximately 40 feet away as measured from the center line of hauling route road to the facade of a residential land use as the primary concern of night activities is the risk of creating disturbance during the times people are more likely to be asleep. At this distance, noise from truck hauling would attenuate to 76.0 dBA SEL. Standard buildings can provide a substantial (i.e., 15-20 dB, [Caltrans 2011]) exterior-to-interior attenuation. Applying the lower end of this potential reduction would result in an interior noise level of 61 dBA SEL. This would not exceed the 65 dBA SEL threshold established by FICON. Hauling that would occur during the daytime hours would be exempt from local noise standards based on the City of Sacramento Municipal Code hours of exemption for construction noise. Therefore, this impact would be **less than significant**.

Operational Stationary Noise

The project would introduce a permanent stationary noise source to the existing ambient noise environment by replacing the existing transformers at the existing substation site and installing new transformers at the proposed substation site. The transformer fans are the major noise source associated with project operation. Reference noise levels associated with substation operations were collected by an Ascent noise analyst during a March 2026 site visit to the SMUD Pocket Substation.

These noise measurements were collected with a Soft dB Piccolo II Type 2 precision integrating sound level meter located 40 feet from the nearest face of the transformer. The noise level measured during this recording was 63.5 dBA L_{50} at 40 feet (Appendix C). The project proposes the implementation of three separate transformers operating in close proximity to each other. To account for the simultaneous operation of three transformers, the modeling uses a reference noise level of 68.3 dBA L_{50} which represents the combined noise level for three transformers then uses the center of the three transformers to propagate noise levels off the site. The substation would remain operational for 24 hours a day and, thus, would be subject to both the daytime and nighttime noise standards of the City of Sacramento municipal code of 55 dBA L_{50} and 50 dBA L_{50}, respectively. The nearest sensitive receptor to the new transformers would be residential land uses located approximately 200 feet west from the center of the proposed transformers' location. At this distance, transformer noise would attenuate to 54.3 dBA L_{50}. The attenuated noise value is 54.3 dBA L_{50}. The project would include the development of a concrete wall along the western border of the substation adjacent to the residential land uses. Generally, a barrier that breaks the line of sight between a source and a receiver will result in at

least a 5 dB noise reduction. Reducing operational noise by 5 dB would result in an attenuated noise level of 49.3 dBA L_{50} at the nearest noise sensitive receptor which would not result in an exceedance of either the daytime noise standard of 55 dBA L_{50} or the nighttime noise standard 50 dBA L_{50}. This impact would therefore be **less than significant**.

Operational Transportation Noise

The project would include a new substation that would replace the existing substation. Operation and maintenance of the new substation would not require any additional employees at the site because it would be operated remotely.

A new access roadway would be installed in the expansion area adjacent to the bordering Floring Meadows Apartments. The substation would be operated and monitored remotely and would have no permanently stationed employees. The access roadway would only be used by employees accessing the site for regular maintenance between two to four times a month. This would result in a negligible number of vehicle trips per year that would not be anticipated to have a substantive impact on traffic noise along roadways in the vicinity of the project site (i.e. Gardendale Road and 29th Street). Therefore, project operation would not result in an increase of long-term vehicle trips or transportation noise. This impact would therefore be **less than significant**.

Summary

For the reasons described above, impacts related to on- and off-site construction noise, hauling vehicle noise, operational stationary noise, and operational transportation noise would be **less than significant**. Impacts related to nighttime construction, however, would be **potentially significant**.

Mitigation

Mitigation Measure 3.13-1: Construction Noise Reduction

For oil processing activities that must occur during nighttime hours (6:00 p.m. to 7:00 a.m.), the construction contractor shall ensure that the following measures are implemented:

- Require the use of a temporary soundwall or equipment enclosures around the oil processing equipment for the duration of the process that results in a minimum of 16 dBA noise reduction, such that noise levels do not exceed 50 dBA L_{eq} at the adjacent off-site residences, if the permanent substation perimeter barrier has not been installed.

- Compliance with the noise standard shall be confirmed with either on-site noise monitoring during the oil processing operations or manufacturer specifications of the sound barriers/enclosures that confirm the minimum required noise reduction can be achieved.

- Alternatively, if specific equipment noise levels are determined to be less than what was evaluated in this IS/MND (i.e., 81 dBA L_{eq} for the pump and 73 dBA L_{eq} for the generator at 50 feet for a combined noise level of 78.6 dBA L_{eq}), based on construction contractor specifications, the required noise reduction from the sound barrier may be reduced accordingly, so long as the 50 dBA L_{eq} noise level is not exceeded at off-site residential uses. The adjusted reduction requirement shall be conducted by a qualified acoustics professional.

Significance after Mitigation

Implementation of Mitigation Measure 3.13-1 would reduce nighttime construction noise impacts to a less-than-significant level by requiring soundwalls, equipment enclosures, or other verified noise attenuation measures that ensure noise levels do not exceed 50 dBA L_{eq} at nearby residences. With implementation of Mitigation Measure 3.13-1, this impact would be reduced to a **less-than-significant** level.

b) Generation of excessive groundborne vibration or groundborne noise levels?

Less than Significant. Project operation would not introduce new permanent sources of groundborne vibration or noise and would not locate any new sensitive receptors near existing sources of vibration. Construction of the project would result in the temporary generation of groundborne vibration and noise. The project would not require the use of vibration intensive activities such as pile driving or blasting. Construction of the project would include an excavator, dump trucks, front end loader, vibratory compactor, paver, and loader. The most vibration intensive piece would be a compactor. The use of compactor would result in an exceedance an exceedance of the FTA's recommended 80 VdB threshold for human annoyance at a distance of 73 feet and an exceedance 0.2 PPV in/sec threshold for structural integrity of non-engineered timber and masonry buildings at 26 feet. The nearest sensitive receptor to potential vibration would be located adjacent to the northern project site where the new substation is to be constructed. Project construction would remain within the city code hours of exemption for construction noise of 7:00 a.m. to 6:00 p.m. Monday through Saturday and between the hours of 9:00 a.m. and 6:00 p.m. on Sunday preventing the generation of vibration that may lead to human annoyance during the more noise sensitive hours of the day.

Furthermore, the project would not require vibration intensive activities such as blasting or piledriving. The most vibration intensive equipment required for construction of the project would be vibratory rollers needed in the paving of the project site. The use of a compactor would not pose a significant threat to the structural integrity of most modern buildings. More at risk structures (i.e. historical buildings) would not be located within 100 feet of vibration generating construction activities. Therefore, this impact would be **less than significant**.

c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

Less than Significant. The project site is located within two miles of an airport land use. The nearest airport to the project site would be Sacramento Executive Airport located approximately 2 miles northwest of the project site. At this distance noise associated with airport activities would not affect the noise environment at the project site as the project site remains outside of the 65 dBA CNEL contour of the Sacramento Executive Airport. Therefore, the project would not expose people working in the project area to excessive noise levels from airport operations. This would be a **less-than-significant** impact.

3.14 Population and Housing

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
XIV. Population and Housing. Would the project:				
a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☐	☒
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

3.14.1 Environmental Setting

The project site is located within the Meadowview neighborhood in Sacramento and is surrounded by residential neighborhoods, community-serving land uses, and existing transportation and utility infrastructure. There are no existing residences within the existing and proposed substation site, expansion area, or the SMUD-owned property east of the railroad tracks. The project would also include the installation of transmission lines and transmission poles along residential streets, including Gardendale Road and 24th Street.

3.14.2 Discussion

a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

No Impact. The project involves replacement of the existing electrical substation and transmission lines, and transmission poles, as well as new overhead transmission lines, transmission poles, and underground lines. The project does not include new homes or businesses. Project construction would be completed by SMUD's existing workforce. The project would not generate any new residents in the area or provide any new jobs. Therefore, the project would have **no impact**.

b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

No Impact. No persons or homes would be displaced as a result of project construction or operation. Therefore, the project would have **no impact**.

3.15 Public Services

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
XV. Public Services. Would the project:				
a) Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:				
Fire protection?	☐	☐	☐	☒
Police protection?	☐	☐	☐	☒
Schools?	☐	☐	☐	☒
Parks?	☐	☐	☐	☒
Other public facilities?	☐	☐	☐	☒

3.15.1 Environmental Setting

The project site is located at 3250 Gardendale Road, in the Meadowview neighborhood of Sacramento and is served by City of Sacramento public services (police, fire, schools, parks, and other public facilities).

Fire Protection Services

The Sacramento Fire Department (SFD) provides fire protection services to the project site, the entire city, as well as some small areas outside the city boundaries within Sacramento County. The fire station closest to the proposed project is Sacramento Fire Department Station 16 at 7363 24th Street, located approximately 0.4 miles west of the proposed substation site.

Police Protection Services

The Sacramento Police Department (SPD) is principally responsible for providing police protection services in the city of Sacramento, including the project area. The SPD headquarters is located at 5770 Freeport Boulevard, located approximately 2.5 miles northwest of the project site.

Schools

As previously described, Burbank High School is located across the railroad tracks to the northeast of the site and Cesar Chavez Elementary School is located to the southwest.

Parks

Hampton Park is located approximately 650 feet south of the existing substation site, and includes amenities for basketball, soccer, volleyball and picnicking. Edward Kemble Park is located approximately 1,000 feet southwest of the existing substation site and provides play areas and picnic tables

3.15.2 Discussion

a) Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:

Fire Protection

No Impact. Implementation of the project would not increase demand for SFD fire protection services because the project would not generate new employees or residents, which is the driving factor for expansion of fire protection services. The replacement substation would be similar in size and scale as the existing substation and would not result in the operation of additional structures within the project area that could generate calls for service because the new substation would replace the existing substation. Because the project would not increase demand for fire protection services, no construction of new or expansion of existing fire service facilities would be required. Therefore, the project would have **no impact** on fire protection services.

Police Protection

No Impact. Implementation of the project would not increase demand for SPD police protection services because the project would not generate new employees or residents, which is the driving factor for expansion of police protection services, nor would it result in the operation of additional structures within the project area that could generate calls for service because the new substation would replace the existing substation. Because the project would not increase demand for police protection services, no construction of new or expansion of existing police service facilities would be required. Therefore, the project would have **no impact** on police facilities.

Schools

No Impact. The project would not provide any new housing that would generate new students in the community nor result in an increase in employment opportunities that could indirectly contribute new students to the local school district. Therefore, the project would have **no impact** on school services and facilities.

Parks

No Impact. The project would not provide any new structures that could result in additional residents/employees, which could necessitate new or expanded park facilities. Therefore, the project would have **no impact** on parks.

Other Public Facilities

No Impact. Though the project is located near public transportation facilities, including the Sacramento Regional Transit District Blue light rail line, the project would not result in additional residents or employees that would utilize public facilities, nor would the project attract existing residents toward the area. Therefore, the project would have **no impact** on other public facilities.

3.16 Recreation

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
XVI. Recreation. Would the project:				
a) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☐	☒
b) Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?	☐	☐	☐	☒

3.16.1 Environmental Setting

As previously discussed, the project site is located in the Meadowview neighborhood of Sacramento. The nearest recreational facility is Burbank School Park located just east across the railroad tracks, which includes athletic fields. Hampton Park is located approximately 650 feet south of the existing substation site, and includes amenities for basketball, soccer, volleyball and picnicking. Edward Kemble Park is located approximately 1,000 feet southwest of the existing substation site and provides play areas and picnic tables.

3.16.2 Discussion

a) 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?

No Impact. The project does not include new development (i.e., residential, office, or commercial) that could increase the use of existing local parks or recreational facilities. Therefore, the project would have **no impact**.

b) Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?

No Impact. The project does not include new development that could necessitate new or expanded recreational facilities. Therefore, the project would have **no impact**.

3.17 Transportation

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
XVII. Transportation. Would the project:				
a) Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?	☐	☐	☒	☐
b) Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?	☐	☐	☒	☐
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☒	☐
d) Result in inadequate emergency access?	☐	☐	☒	☐

3.17.1 Environmental Setting

Regional access to the project site is available from the west via Interstate 5 (I-5) and from the east via State Route (SR) 99. The project site is located approximately 2.5 miles east of the I-5/Florin Road interchange and approximately 1.4 miles west of the SR 99/Florin Road interchange. Local access to the project site is provided by Meadowview Road, Florin Road, 24th Street, Loma Verde Way, 29th Street, 66th Avenue, and Gardendale Road. Apart from Florin Road and 24th Street, which are four lanes wide and equipped with designated Class II bicycle lanes, roadways within the vicinity of the project site are paved, two-way streets with one lane of travel in each direction. Sidewalks are present on all roadways within the vicinity of the project site and Class III bicycle routes (i.e., signed and/or marked streets where drivers share the travel lane with people biking) along 29th Street between Florin Road and Meadowview Road and along Gardendale Road between 24th Street and Loma Verde Way (City of Sacramento 2025a: Figure 6).

Sacramento Regional Transit (SacRT) Bus Routes 247 and 248 operate along 24th Street between Florin Road and Meadowview Road, and the nearest bus stop serving these routes is located north of the 24th Street/Gardendale Road intersection, adjacent to the proposed transmission line work between Meadowview Road and the 24th Street/25th Street intersection. SacRT Bus Route 81 also operates along Florin Road, and the nearest bus stop serving this route is near the intersection of Florin Road and 25th Street, approximately 150 feet east of the proposed transmission line work along 25th Street. In addition to SacRT bus routes, the SacRT Blue light rail train (LRT) line traverses through the project site. The Blue LRT line operates Monday through Friday between approximately 4:00 a.m. and midnight, Saturdays between approximately 4:30 a.m. and midnight, and Sundays and federal holidays between approximately 7:00 a.m. and 10:00 p.m. (SacRT 2025). The nearest Blue LRT station to the project site is Meadowview Station, which is located north of Meadowview Road, approximately 0.5 miles southeast of the project site. UPRR also operates along the track line through the project site.

3.17.2 Discussion

a) Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?

Less than significant. Implementation of the project would not require the permanent alteration of the local circulation system aside from the construction of up to two ingress/egress driveways, one off Gardendale Road, and one potentially off 65th Avenue or 29th Street for private access to the substation. Therefore, the project would not permanently alter the surrounding physical transportation network such that existing or planned bicycle, pedestrian, or transit facilities would be permanently adversely affected. In addition, the project is not a land use development project that would result in increased demand for transit, roadway, bicycle, and pedestrian facilities, as there would be no operational activity associated with the project that would generate such trips.

The project would include installation of 69kV circuits on existing overhead infrastructure including 0.5 miles of 69kV circuit along Gardendale Road to 24th Street, 0.7 miles of 69kV circuit on the west side of 24th Street from Meadowview Road to the intersection of 24th Street and 25th Street, and 0.25 miles of 69kV circuit on the west side of 25th Street from the 24th Street/25th Street intersection to Florin Road. In addition, if the 69kV circuit along Gardendale Road is undergrounded, it would be installed via trenching, which involves temporarily removing the surface material. Typically, a construction work area width of 25 feet would be required to allow for the open trench and equipment. Sidewalks are present along Gardendale Road, 24th Street, and 25th Street as well as Class II bicycle lanes along 24th Street between Gardendale Road and Florin Road. In addition, SacRT Bus Routes 247 and 248 operate along 24th Street between Florin Road and Meadowview Road. Temporary lane closures required during project construction could temporarily affect access to these facilities.

As described in Chapter 2, “Project Description,” the construction contractor would be required to obtain a permit from SacRT to access the SacRT right-of-way for proposed construction work and a permit from UPRR for the proposed crossing upgrade. In addition, the construction contractor would also be required to obtain an encroachment permit for any work within the City public right-of-way pursuant to Section 12.12.020 of the City Municipal Code. In accordance with Section 12.20.020 of the City Municipal Code, if construction were to obstruct vehicle or pedestrian traffic on a city street, a traffic control plan approved by the director would be prepared. The City of Sacramento requires the preparation of traffic control plans as part of their Construction Encroachment Permit and specifies that such plans must comply with the California Manual on Uniform Traffic Control Devices (CA-MUTCD) (City of Sacramento 2025b). The CA-MUTCD identifies the necessary traffic-control devices (e.g., signs, barricades, object markers, pavement and curb markings, pedestrian control signs, and flagger control) in and near construction work areas on public streets to minimize disruptions to the circulation system. The construction contractor would also be required to obtain a permit from Sacramento County for any work within the County right-of-way. The County also requires traffic control plans in accordance with the CA-MUTCD to be prepared as part of encroachment permits (Sacramento County 2026). Preparation and approval of a traffic control plan would provide for continued safe movement of roadway users along the roadway network surrounding project construction activities. For these reasons, the project would not adversely affect an existing or planned roadway, transit, bicycle, or pedestrian facility; and would not conflict with any adopted plans, policies, or standards related to such facilities. This impact would be **less than significant**.

b) Conflict or be inconsistent with CEQA Guidelines section 15064.3(b), which pertains to vehicle miles travelled?

Less than significant. Project construction would occur in several phases. The phases could be sequential, or they could overlap, but would include site preparation, substation construction, and subtransmission and transmission line work. Construction activities would not result in permanent increases in vehicular trips along the surrounding roadway network, as construction would be intermittent and temporary. Although different phases of construction would require varying numbers of construction personnel, an estimated 30 workers would be required during peak construction activities associated with on-site demolition, re-grading, and heavy equipment deliveries. This analysis assumes that construction personnel would generate two trips per worker per day and thus would generate an average of 60 daily trips during peak construction. In addition, the VMT of construction personnel would not be newly generated; instead, it would be redistributed throughout the regional roadway network based on the different work sites to which workers travel each day. Therefore, construction personnel would not substantially generate new VMT each day, only redistribute it, and this redistribution would be nominal and temporary.

The new Meadowview Substation would replace the existing Pocket Substation. Therefore, following construction, the new substation would operate in a manner similar to that of the existing Pocket Substation. During normal operations, the substation would be operated remotely and continuously, and no permanent employees would be stationed at the site. Substation maintenance would occur on a regular basis from two to four times per month for internal inspections and four times per year for perimeter maintenance. In addition, restroom and vegetation management may occur with routine operations and maintenance activities. Major maintenance would occur about once every three years. Thus, the project would not result in a substantial increase in daily trips or VMT as compared to existing conditions. Furthermore, the goals of Senate Bill 743, as stated in the legislative text, include reducing GHG emissions and traffic-related air pollution, promoting the development of multimodal transportation systems, and providing clean, efficient access to destinations. Because the project does not involve the development of uses that would result in population or employment growth, the number of daily trips associated with operational and maintenance activities is not expected to substantially increase VMT beyond what was projected in local and regional plans. For these reasons, the project would not conflict or be inconsistent with State CEQA Guidelines Section 15064.3. This impact would be **less than significant**.

c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

Less than significant. The project involves the construction and operation of a new substation that would replace the existing Pocket Substation. Implementation of the project would not result in the construction of any new public roadways. The new private ingress/egress access driveway entrances off Gardendale Road and potentially off 65th Avenue or 29th Street would be designed and constructed in accordance with City design standards and would be subject to review by City staff to ensure design and safety standards are met. Compliance with applicable design standards would minimize transportation hazards due to a geometric design feature. Project construction activities would require the hauling of heavy equipment to the project site and staging area(s) and operation of haul/delivery trucks on the surrounding roadway network. Although substation construction would occur within the project boundary outside the public right-of-way, construction of the ingress/egress driveways and subtransmission and transmission line work could require construction activities within the public right-of-way.

As discussed under Impact (a), the construction contractor would be required to obtain an encroachment permit for any construction work that would occur within the public right-of-way pursuant to Section 12.12.020 of the City Municipal Code and Section 12.20.030 of the Sacramento County Municipal Code. The conditions placed on a construction encroachment permit include that a traffic control plan be prepared and must comply with the latest version of the CA-MUTCD (City of Sacramento 2025b; Sacramento County 2026). The CA-MUTCD identifies the necessary traffic-control devices (e.g., signs, barricades, object markers, pavement and curb markings, pedestrian control signs, and flagger control) in and near construction work areas on public streets to minimize transportation hazards. For example, Section 6B.01 of the CA-MUTCD requires that adequate warning, delineation, and channelization should be provided to assist in guiding road users (e.g., motorists, bicyclists, and pedestrians) in advance of and through the traffic control zone (Caltrans 2026b). Preparation of a traffic control plan that complies with the CA-MUTCD would prioritize the safety of roadway users and would allow for the safe and efficient movement of all modes of travel. In addition, the construction contractor would be required to obtain permits from SacRT and UPRR for proposed work within their respective right-of-way. The contractor would be required to adhere to all parameters associated with these permits, including those related to safety. Therefore, construction would not substantially increase transportation hazards.

Operation and maintenance of the proposed substation would be similar to that of the existing Pocket Substation; thus, the number and types of vehicles accessing the project area during operation and frequency of access would be consistent with those under existing conditions. Because operation and maintenance activities would be similar to those under existing conditions, the project would not result in increased transportation hazards. For these reasons, implementation of the project would not substantially increase transportation hazards due to a design feature or incompatible uses. This impact would be **less than significant**.

d) Result in inadequate emergency access?

Less than significant. Construction of the project would include the implementation of approximately 1.5 miles of new 69kV circuits. As discussed under Impact (c), pursuant to Section 12.12.020 of the City Municipal Code and Section 12.20.030 of the County Municipal Code, the construction contractor would be required to obtain an encroachment permit for any construction work that would occur within City and County public right-of-way, respectively. In accordance with the general provisions for an encroachment permit, traffic control plans would be prepared in compliance with the CA-MUTCD. The CA-MUTCD includes requirements to maintain emergency access during construction activities within the public right-of-way. Thus, adequate emergency access would be provided throughout construction activities. Implementation of the project would not result in the permanent alteration of existing roadways, including those used for emergency access, and operation and maintenance would be similar to that under existing conditions. The project would be designed and constructed in accordance with City design standards and the California Fire Code as adopted by reference in Chapter 15.36 of the Municipal Code. The California Fire Code includes design standards for fire apparatus access (e.g., turning radii, minimum widths) and other general and specialized fire-safety requirements for new and existing buildings and the surrounding premises. Therefore, adequate emergency access would be maintained during operation and maintenance activities. For these reasons, implementation of the project would not result in inadequate emergency access during construction or operation. This impact would be **less than significant**.

3.18 Tribal Cultural Resources

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
XVIII. Tribal Cultural Resources.				
Has a California Native American Tribe requested consultation in accordance with Public Resources Code section 21080.3.1(b)?		☒ Yes		☐ No
Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:				
a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k)?	☐	☐	☒	☐
b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe?	☐	☒	☐	☐

3.18.1 Environmental Setting

Ethnographic Setting

The County and City of Sacramento and the surrounding areas have been occupied by Native American people for thousands of years prior to settlement by non-Native peoples. Archaeological materials, including human burials, have been found throughout the city. Human burials outside of formal cemeteries often occur in precontact contexts. Areas of high sensitivity for Tribal cultural resources are located within close proximity to the Sacramento and American rivers and other watercourses (Ascent 2026).

Although the project site is located in what is ethnographically defined as predominantly Plains Miwok territory, the boundaries documented in ethnographic literature are based on conditions after the Gold Rush, when population pressures would have forced the movements of indigenous groups due to the influx of Euroamericans. In this region, labor demands by John Sutter pushed the Nisenan (northern neighbors of the Plans Miwok) into Plains Miwok areas. Areas where precontact and ethnographic boundaries are not certain are referred to as grey areas; precontact sites identified within these grey areas may offer answers to important research questions (Ascent 2026).

The Plains Miwok are part of the larger Eastern Miwok group that forms one of the two major divisions of the Miwokan subgroup of the Utian speakers. The Plains Miwok lived in the Sacramento Valley along the Sacramento, Cosumnes, and Mokelumne rivers. They built their homes on high ground, with major villages concentrated along the major waterways. Conical

homes were constructed with poles and thatching of brush, grass, or tule, though semisubterranean earth-covered homes were built as well. Major villages contained an assembly house, which was a semisubterranean structure with a diameter of 40 to 50 feet, as well as a sweathouse, which was a scaled-down version of the assembly house. Plains Miwok people utilized the rich resources of the delta and surrounding area for both dietary needs and material culture. Tules were woven into matting and clothing, bundled to form canoes, and used in house and granary construction. Salt, nuts, basketry, and obsidian were obtained through trade with neighboring tribes to the east for shells, basketry, and bows obtained in turn through trade from tribes located to the west (Ascent 2026).

The Plains Miwok gathered food resources as the seasons varied. As with most California tribes, they subsided heavily on the acorn, but also gathered nuts, seeds, roots, greens, berries, and mushrooms. Animal foods included tule elk, pronghorn antelope, jackrabbits, squirrels, beaver, quail, and waterfowl. Salmon was the dominant animal food resource, ranking above other river resources, such as sturgeon. Technological items of the Plains Miwok included wooden digging sticks, poles, and baskets used for gathering vegetal resources, and stone mortars, pestles, and cooking stones used for processing. Items used for obtaining animal resources included nets, snares, seines, bows, and arrows. Arrow points were made primarily of basalt and obsidian (Ascent 2026).

Contemporary Native American Setting

The members of Wilton Rancheria (Wilton) are descendants of the Penutian linguistic family identified as speaking the Miwok dialect. Wilton's Indigenous territory encompasses Sacramento County. The lands of Wilton's ancestors inhabited were located along a path of massive death and destruction of California Indians caused by Spanish, Mexican, and American military incursions, disease and slavery, and the violence accompanying mining and settlements (Wilton Rancheria 2026).

In 1927, an Indian Affairs agent compiled a "List of Landless Indians near Wilton, Sacramento County, California," identifying Native families in the Sacramento area, many of whom later became Wilton distributees. During the late 1920s, the Bureau of Indian Affairs (BIA) sought land to provide a permanent home for these landless Native families. A tract owned by the Cosumnes Company was identified as a suitable location due to its proximity to agricultural employment opportunities. Superintendent Dorrington recommended the property for purchase, noting that approximately 150 landless Native individuals in the area relied on seasonal agricultural work. In 1928, the federal government purchased approximately 38.77 acres for $5,000 to establish Wilton.

By the early 1930s, several families had settled on the rancheria, though residents largely depended on seasonal employment in nearby agricultural fields for their livelihood. Despite economic challenges, the community maintained a cohesive tribal government, holding Tribal Council meetings and adopting a constitution in 1935. Residents also continued traditional subsistence practices such as hunting, fishing, and gathering along the Cosumnes River. In 1964, under the California Rancheria Act, Wilton was terminated from federal trust status, and land parcels were distributed to individual residents. As a result, Wilton lost federal recognition, and many residents eventually lost their lands due to taxation and other financial pressures.

Beginning in the 1980s, Wilton citizens worked to restore federal recognition with assistance from California Indian Legal Services. In 2009, a US District Court restored Wilton's status as a

federally recognized tribe. Wilton adopted a new constitution in 2011 establishing four branches of government. In 2017, land in Elk Grove, Sacramento County, was taken into federal trust for Wilton for economic development purposes. Today, most Wilton citizens reside in Sacramento County, and Wilton's headquarters and economic development activities are located in Elk Grove. Wilton citizens descend from several Native groups, including the Bay Miwok, Plains Miwok, and Northern Sierra Miwok, as well as Valley and Hill Nisenan peoples. Historical displacement, population loss, and intermarriage among these groups contributed to the development of the modern Wilton community (Wilton Rancheria 2026).

Tribal Consultation

Assembly Bill (AB) 52, signed by Governor Edmund G. Brown, Jr., in September 2014, established a new class of resources under CEQA: "[T]ribal cultural resources." AB 52, as provided in PRC Sections 21080.3.1, 21080.3.2, and 21082.3, requires that lead agencies undertaking CEQA review must, upon written request of a California Native American Tribe, begin consultation once the lead agency determines that the application for the project is complete, prior to the issuance of an NOP of an EIR or notice of intent to adopt a negative declaration or mitigated negative declaration.

On February 20, 2026, SMUD sent emails and certified letters to the Ione Band of Miwok Indians, United Auburn Indian Community of the Auburn Rancheria (UAIC), Shingle Springs Band of Miwok Indians, and Wilton. No responses were received from the Ione Band of Miwok Indians or the Shingle Springs Band of Miwok Indians. UAIC declined consultation on the project. Wilton responded on February 23, 2026, to request consultation under AB 52.

The NCIC records search revealed P-34-005225 as a Tribal cultural landscape, identified by contemporary Nisenan as *Hoyo Sayo/Tah Sayo* and contemporary Plains Miwok as *Wake-ce/Waka-Ly*. It was recommended eligible for the CRHR and NRHP under Criterion A/1 for its association with the cultural practices and beliefs of the Nisenan and Plains Miwok, as well as for its ability to help maintain the cultural identity of the living descendants and contribute to our understanding of the broader patterns of prehistory (Tremaine & Associates 2018). Wilton identified this landscape as a Tribal cultural resource.

3.18.2 Discussion

Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:

a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k)?

Less-than-Significant Impact. The Tribal cultural resource P-34-005225 is described as "a landscape encompassing waterways, tule habitat, fisheries, and other wildlife" (Tremaine & Associates 2018). Because the portion of the Tribal cultural landscape that overlaps the project site is developed, the project would not alter these types of characteristics. The project would not introduce new elements into the landscape, such as ones that could cause a new break in

continuity of the landscape, or audible or visual intrusions. Therefore, this impact would be **less than significant**.

b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe?

Less-than-Significant Impact with Mitigation Incorporated. As described above, SMUD sent emails and certified letters to the lone Band of Miwok Indians, UAIC, Shingle Springs Band of Miwok Indians, and Wilton. Out of these four Tribes, Wilton responded on February 23, 2026, with a request for consultation under AB 52. Consultation with Wilton did not result in newly identified Tribal cultural resources. Nevertheless, due to the presence of the Tribal cultural landscape, the general project area is known to be an area of historical Tribal use; therefore, it is still possible that unanticipated Tribal cultural resources could be uncovered during ground disturbing project activities. Therefore, this impact would be **potentially significant**.

Mitigation

Mitigation Measure 3.18-1a: Monitoring During Ground-disturbing Activities

The project area is within a Tribal cultural landscape and buried resources could be encountered. Therefore, a Tribal monitor from Wilton Rancheria will perform monitoring of specific ground-disturbing activities.

Spot check monitoring will be conducted for grading and excavating work during the construction of the substation and installation of the transmission pole foundations.

The frequency and timing of these spot checks will vary based on the scope of work—for instance, more frequent checks will be conducted for deeper excavations, while less frequent monitoring will suffice for general grading. Generally, spot-checks will be limited to up to half a day per session, conducted twice weekly. For trenching activities along Gardendale Road and pole replacements near the historic-era family cemetery, full-time monitoring will be implemented during ground disturbing activities.

The Tribal monitor will complete daily logs. Logs will confirm any finds, the locations of the find, time and date. If Tribal cultural resources are identified that have the potential to be adversely affected by the project, SMUD will implement Mitigation Measure 3.18-1b Unanticipated Discoveries of Tribal Cultural Resources, and monitoring will increase to full time during ground disturbing work in the vicinity of the find.

Mitigation Measure 3.18-1b: Unanticipated Discovery of Tribal Cultural Resources

If any suspected Tribal cultural resources or resources of Tribal cultural significance, including but not limited to features, anthropogenic/cultural soils, cultural belongings or objects (items), shell, bone, shaped stones or bone, or ash/charcoal deposits are discovered by any person during construction activities including ground disturbing activities, all work shall pause immediately within 100 feet of the find, or an agreed upon distance based on the project area and nature of the find. Work shall cease in and within the immediate vicinity of the find

regardless of whether the construction is being actively monitored by a Tribal Monitor, cultural resources specialist, or professional archaeologist. A Tribal Representative from Wilton shall be immediately notified and shall determine if the find is a Tribal cultural resource (PRC §21074). Evaluation and treatment will be performed in coordination with Tribes in accordance with SMUD's Inadvertent Discovery Plan.

When avoidance is infeasible, preservation in place is the preferred option for mitigation of Tribal cultural resources under CEQA, and every effort shall be made to preserve the resources in place, including through project redesign, if feasible. If redesign is determined to not be feasible, SMUD shall consult with the Tribe to determine appropriate treatment of the find.

Culturally appropriate treatment may be, but is not limited to, processing materials for reburial, minimizing handling of cultural objects, leaving objects in place within the landscape, or returning objects to a location within the project area where they will not be subject to future impacts. Permanent curation of Tribal cultural resources will not take place unless approved in writing by Wilton.

The contractor shall implement any measures deemed by the CEQA lead agency to be necessary and feasible to preserve in place, avoid, or minimize impacts to the resource, including, but not limited to, facilitating the appropriate Tribal treatment of the find, as necessary. Treatment that preserves or restores the cultural character and integrity of a Tribal cultural resource may include Tribal Monitoring, culturally appropriate recovery of cultural objects and belongings, and reburial of cultural objects and belongings or cultural soil.

The construction contractor(s) shall provide secure, on-site storage for culturally sensitive soils or objects that are components of Tribal cultural resources that are found or recovered during construction. Only Tribal Representatives shall have access to the storage. Storage size shall be determined by the nature of the Tribal cultural resource and can range from a small lock box or jobsite work box to a conex box (shipping container). A secure (locked), fenced area can also provide adequate on-site storage if larger amounts of material must be stored. The construction contractor(s) and SMUD shall facilitate the respectful reburial of the culturally sensitive soils or objects. This includes providing a reburial location that is consistent with the Tribe's preferences, excavation of the reburial location, and assisting with the reburial, upon request. Any discoveries shall be documented on a Department of Parks and Recreation (DPR) 523 form within 2 weeks of the discovery and submitted to the appropriate CHRIS center in a timely manner.

Work at the Tribal cultural resource discovery location shall not resume until authorization is granted by the Lead Agency in coordination with Wilton. If articulated or disarticulated human remains, or human remains in any state of decomposition or skeletal completeness are discovered during construction activities, the Sacramento County Coroner shall be contacted immediately. Upon determination by the Sacramento County Coroner that the find is Native American in origin, the Native American Heritage Commission will assign the Most Likely Descendent who will work with SMUD to define appropriate treatment and disposition of the burials.

For any work required to be undertaken in an area where shoring and or with hazardous materials, including soils, all archaeologists, Tribal Representatives, and Tribal Monitors shall meet the appropriate level of safety training (e.g., confined spaces, hazardous material exposure, etc.) in compliance with California Division of Occupational Safety and Health State

and federal Occupational Safety and Health Administration requirements prior to entering construction work areas.

Mitigation Measure 3.18-1c: Cultural Resources Awareness Training

A cultural resources awareness respect training program will be provided to all construction personnel involved in ground-disturbing work, prior to such activities. A representative or representatives from culturally affiliated Native American Tribe(s) will be invited to participate in the development and delivery of the cultural resources awareness training program in coordination with a qualified archaeologist meeting the United States Secretary of Interior guidelines for professional archaeologists. The program will include relevant information regarding sensitive Tribal cultural resources, including protocols for resource avoidance, applicable laws regulations, and the consequences of violating them. The program will also underscore the requirement for confidentiality and culturally-appropriate treatment of any find of significance to Native Americans and protocols, consistent, to the extent feasible, with Native American Tribal values.

Significance after Mitigation

Implementation of Mitigation Measures 3.18-1a through 3.18-1c would reduce impacts associated with Tribal cultural resources to a less-than-significant level by requiring the appropriate treatment (pausing work) and proper care (e.g., preservation in place) of significant Tribal cultural resources, in the case of an unanticipated discovery.

3.19 Utilities

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
XIX. Utilities and Service Systems. Would the project:				
a) Require or result in the relocation or construction of construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunication facilities, the construction or relocation of which could cause significant environmental effects?	☐	☐	☒	☐
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	☐	☐	☒	☐
c) Result in a determination by the wastewater treatment provider that serves or may serve the project that it has adequate capacity to serve the project's projected demand, in addition to the provider's existing commitments?	☐	☐	☒	☐
d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	☐	☐	☒	☐
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	☐	☐	☒	☐

3.19.1 Environmental Setting

The City supplies domestic water from a combination of surface water and groundwater sources. Two water treatment plants supply domestic water by diverting water from the American River and Sacramento River. In addition to the surface water diverted from the two rivers, the City operates groundwater supply wells. The City operates and maintains the Sacramento River Water Treatment Plant, E. A. Fairbairn Water Treatment Plant, 26 active operational groundwater wells, 22 non-potable groundwater wells for irrigation of parks, 18 high-lift service pumps at the water treatment plants, 10 storage tanks, and water distribution and transmission mains. (City of Sacramento 2020)

The project area is located in an area where sewer and stormwater is collected separately by the City of Sacramento sewer system. Stormwater within the project vicinity is collected and conveyed by the Sacramento Area Sewer District's system. Flows are conveyed to the Sacramento Regional Wastewater Treatment Plant (City of Sacramento 2020).

Most refuse collected by the City is transported to the Kiefer Landfill. Sacramento County owns and operates the Kiefer Landfill, and the landfill is the primary solid waste disposal facility in the county. The Kiefer Landfill is permitted to accept up to 10,815 tons per day, averaging 2,433 tons per day. December 31, 2023, the landfill has a remaining refuse capacity of approximately 102.3 million cubic yards; therefore, the landfill is anticipated to serve the area through January 2080 (CalRecycle 2026).

3.19.2 Discussion

a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunication facilities, the construction or relocation of which could cause significant environmental effects?

Less than Significant. The project would replace existing electrical equipment aboveground and would include construction of underground and overhead transmission lines. The project would also include one employee restroom in a new control building. The restroom facilities would require connections to City water and wastewater systems. Should groundwater be encountered during project construction, testing would occur in accordance with DTSC and RWQCB requirements prior to dewatering activities. Discharge to the stormdrain system and/or sewer system would be temporary and would not exceed system capacity as water could be retained on the project site until there is adequate capacity. Project operation would have approximately the same demand for water and generate the same amount of wastewater. This water demand and wastewater generation would be substantially similar to existing system demands and flows. Therefore, this impact would be **less than significant**.

b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?

Less than Significant. During construction, the project would require water for activities such as handwashing and dust suppression. Water demand from these activities would generate limited demand and would be constrained to the temporary construction phase of the project. The project would require a small amount of potable water for use in the employee restroom in the control building, which is substantially similar to the existing demand for facilities in the Pocket Substation. During normal operations, the substation would be operated remotely and continuously, meaning that no permanent employees would be stationed at the site to generate additional potable water demand. Because the demand would be substantially similar to existing demand, the impact would be **less than significant**.

c) Result in a determination by the wastewater treatment provider that serves or may serve the project that it has adequate capacity to serve the project's projected demand, in addition to the provider's existing commitments?

Less than Significant. As discussed under item a), project construction could include dewatering and water could be discharged to the City's sewer system. Water discharged to the City's sewer system would be temporary and would not exceed system capacity as water could be retained on the project site until there is adequate capacity. Once operational, the project would use the City's sewer system for the wastewater generated by the restroom in the control building, which is expected to generate a similar amount of wastewater as the existing facilities in the Pocket Substation. Therefore, the project would have a **less-than-significant** impact related to wastewater treatment capacity.

d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?

Less than Significant. The project would generate solid waste during construction activities by the removal of existing equipment on the project site. Construction debris could include asphalt, concrete, scrap lumber, finishing materials, metals, and organic materials. Compliance with the 2025 CALGreen Code and the City Construction and Demolition Debris Recycling Ordinance would result in a reduction of construction waste and demolition debris and an increase of recycling. In addition, the construction contractor would comply with the goals of the Sacramento 2040 General Plan regarding solid waste generation and recycling. These include sensible waste management that reduces disposal in landfills and supports cost-effective sustainability efforts through source waste reduction, mixed and organic recycling, and encouraged use of recycled materials in new construction.

The majority of landfilled waste would be delivered to the Sacramento County Kiefer Landfill, which has a daily throughput capacity and volumetric capacity to operate through January 2080 (CalRecycle 2026). Project operation would include intermittent visits from SMUD personnel, and it is expected that very little solid waste would be generated during operation, similar to existing conditions. Thus, this impact would be **less than significant**.

e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?

Less than Significant. The project would cause a temporary increase in the generation of solid waste as a result of construction activities. However, the operation of the project would not generate solid waste. Compliance with the City of Sacramento policies regarding solid waste would prevent landfills from being overloaded due to the project construction activities. This impact would be **less than significant**.

3.20 Wildfire

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XX. Wildfire.				
Is the project located in or near state responsibility areas or lands classified as high fire hazard severity zones?	☐ Yes		☒ No	
If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:				
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☒
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	☐	☐	☐	☒
c) Require the installation of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	☐	☐	☐	☒
d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	☐	☐	☐	☒

3.20.1 Environmental Setting

The project site is located in a Local Responsibility Area and is not designated as a Fire Hazard Severity Zone by the California Department of Forestry and Fire Protection (CAL FIRE 2026). The project site is located within a developed suburban portion of Sacramento characterized by residential neighborhoods, community-serving land uses, and existing transportation and utility infrastructure. The Sacramento Fire Department provides fire protection services to the project site. The closest fire station is Sacramento Fire Department Station 16 at 7363 24th Street, located approximately 0.5 miles west of the proposed substation site.

3.20.2 Discussion

a-d) Substantially impair an adopted emergency response plan or emergency evacuation plan; 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; Require the installation 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; or Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?

No Impact. The project would not exacerbate wildfire risks because the project site is not located within a high or very high wildfire hazard zone and would not expose people or structures to wildfire risks. The underground electrical infrastructure components of the project would involve temporary lane closures that could impair emergency response plans or evacuation plans, however, as discussed in Section 3.17, “Transportation,” a traffic control plan would be required to be prepared and approved prior construction to provide for the safe movement of roadway users along the roadway network surrounding project construction activities. Additionally, construction equipment would be stored away from vegetation that could provide fire fuel if ignited. Vegetation would be removed or trimmed on the project site, as needed, to ensure that construction activities do not increase risks associated with wildfires. Thus, the project would not affect the potential for wildfires to ignite or spread within areas surrounding the project site. There would be **no impact**.

3.21 Mandatory Findings of Significance

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

Authority: Public Resources Code Sections 21083, 21083.5.

Reference: Government Code Sections 65088.4.
Public Resources Code Sections 21080, 21083.5, 21095; *Eureka Citizens for Responsible Govt. v. City of Eureka* (2007) 147 Cal.App.4th 357; *Protect the Historic Amador Waterways v. Amador Water Agency* (2004) 116 Cal.App.4th at 1109; *San Franciscans Upholding the Downtown Plan v. City and County of San Francisco* (2002) 102 Cal.App.4th 656.

3.21.1 Discussion

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

Less than Significant with Mitigation Incorporated. As discussed in Section 3.4, "Biological Resources," of this IS/MND, Mitigation Measure 3.4-1 would require SMUD to implement general AMMs of the SMUD HCP, including worker training, limiting environmental hazards, and minimize work footprints. No special-status plants are expected to occur on the project site. Three special-status invertebrates (Crotch's bumble bee, monarch butterfly, and vernal pool tadpole shrimp) and one special-status bird (Swainson's hawk) have potential to occur on the project site. Additionally, common nesting birds may occur on the project site. Ground disturbing, vegetation removing, and noise generating project activities could result in disturbance to nesting special-status species, or direct harm (e.g., crushing, removal of young) to special-status species if present. Implementation of Mitigation Measures 3.4-2 through 3.4-6, would reduce impacts to these species to a **less-than-significant** level because SMUD would conduct project activities outside of the Crotch's bumble bee nest season; conduct

surveys for Crotch's bumble bee and implement avoidance as needed; obtain an ITP if avoidance is infeasible; identify monarch host plants and caterpillars, and implement protective buffers; restrict driving in suitable habitat for vernal pool tadpole shrimp and compensate for unavoidable or lost potential aquatic habitat; and conduct nesting bird surveys and implement protective buffers if needed.

As discussed in Section 3.5, "Cultural Resources," one historic era archaeological site is located within the project site (P-34-005164). However, no ground disturbance is proposed in this location, and no surface evidence of this resource was observed during the pedestrian survey. Therefore, this site would not be affected by the project. However, components of the project that require earth-moving and excavation may result in the discovery of previously unrecorded archaeological deposits or human resources. Earth-moving and excavation activities could damage or destroy previously undiscovered unique archaeological resources pursuant to Section 15064.5 or previously undiscovered human resources. Mitigation Measure 3.5-1 would reduce potential impacts to archaeological resources discovered during Project construction activities to a **less-than-significant** level by requiring construction monitoring and, in the case of a discovery, preservation options (including data recovery, mapping, capping, or avoidance) and proper curation if significant artifacts are recovered. Mitigation Measure 3.5-2 would reduce potential impacts to previously undiscovered human resources to a **less-than-significant** level by ensuring that any discovered human remains are promptly protected, appropriately evaluated, and treated in accordance with legal requirements and cultural traditions.

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

Less than Significant with Mitigation Incorporated. Project impacts would be individually limited and not cumulatively considerable due to the site-specific nature of the potential impacts. The potentially significant impacts to air quality, biological resources, cultural resources, noise, and tribal cultural resources can be reduced to a less-than-significant level with implementation of recommended mitigation measures. These impacts would primarily be related to construction activities, would be temporary in nature, and would not substantially contribute to any potential cumulative impacts associated with these topics.

Potentially significant impacts to air quality would be reduced to a less-than-significant level with implementation of Mitigation Measure 3.3-1. Potentially significant impacts to biological resources would be reduced to a less-than-significant level with implementation of Mitigation Measures 3.4-1 through 3.4-6. Potentially significant cultural resources impacts would be reduced to less-than-significant levels with implementation of Mitigation Measures 3.5-1 and 3.5-2. Potentially significant noise impacts would be reduced to a less-than-significant level with implementation of Mitigation Measure 3.13-1. Potentially significant tribal cultural resources impacts would be reduced to a less-than-significant level with implementation of Mitigation Measures 3.18-1a through 3.18-1c.

The Project would have no impact or less-than-significant impacts to the following environmental areas: aesthetics, agriculture and forestry resources, energy, geology and soils, GHG emissions, hazards and hazardous materials, hydrology and water quality, land use and planning, mineral resources, population and housing, public services, recreation, transportation, utilities and service systems, and wildfire. Therefore, the Project would not substantially

contribute to any potentially cumulative impacts for these topics. All environmental impacts that could occur as a result of the Project would be reduced to a less-than-significant level through the implementation of the mitigation measures recommended in this document. Implementation of these measures would ensure that the impacts of the Project would be below established thresholds of significance and that these impacts would not combine with the impacts of other cumulative projects to result in a cumulatively considerable impact on the environment. Therefore, this impact would be **less than significant**.

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

Less than Significant with Mitigation Incorporated. The Project would have potentially significant impacts related to air quality, biological resources, cultural resources, noise, and tribal cultural resources. However, all of these impacts would be reduced to less-than-significant levels with incorporation of the mitigation measures identified herein. No other direct or indirect impacts on human beings were identified in this IS/MND. Therefore, this impact would be **less than significant**.

4.0 ENVIRONMENTAL JUSTICE EVALUATION

4.1 Introduction

At present, there are no direct references to the evaluation of Environmental Justice (EJ) as an environmental topic in the Appendix G Environmental Checklist, CEQA statute, or State CEQA Guidelines; however, requirements to evaluate inconsistencies with general, regional, or specific plans (State CEQA Guidelines Section 15125[d]) and determine whether there is a "conflict" with a "policy" "adopted for the purpose of avoiding or mitigating an environmental effect" (Environmental Checklist Section XI[b]) can implicate EJ policies. As additional cities and counties comply with Senate Bill (SB) 1000 (2016), which requires local jurisdictions to adopt EJ policies when two or more general plan elements are amended, environmental protection policies connected to EJ will become more common.

"Environmental Justice" is defined in California law as the fair treatment and meaningful involvement of people of all races, cultures, incomes, and national origins with respect to the development, adoption, implementation, and enforcement of environmental laws, regulations, and policies (California Government Code Section 30107.3[a]). "Fair treatment" can be defined as a condition under which no group of people, including racial, ethnic, or socioeconomic group, shall bear a disproportionate burden of environmental harms and risks resulting from industrial, municipal, and commercial operations or the execution of federal, state, local, and tribal programs and policies (EPA 2011).

SMUD created the Sustainable Communities Initiative, which encompasses the framework of EJ, to help bring environmental equity and economic vitality to all communities in SMUD's service area with special attention given to historically underserved neighborhoods. The initiative focuses on the development of holistically sustainable neighborhoods through partnerships and collaboration. The goal of this effort is to ensure the advancement of prosperity in the Sacramento region regardless of zip code or socioeconomic status by focusing on equitable access to mobility, a prosperous economy, a healthy environment, and social well-being. To support the initiative, SMUD teams are working internally and with community partners to improve equitable access to healthy neighborhood environments, energy efficiency programs and services, environmentally friendly transit modes (including electric vehicles), and energy-related workforce development and economic development prospects. To the extent these goals seek to avoid environmental impacts affecting vulnerable communities, the State CEQA Guidelines already require consideration of whether a project may conflict with goals that support sustainable communities.

The following analysis has been provided by SMUD, as a proactive evaluation in excess of CEQA requirements, to identify any localized existing conditions to which the project, as proposed, may worsen adverse conditions and negatively affect the local community. This analysis also identifies the need for implementation of additional site or local considerations, where necessary. EJ issues are being considered in this CEQA document to help inform decision makers about whether the project supports SMUD's goal of helping to advance EJ and economic vitality to all communities in SMUD's service area with special attention to historically underserved neighborhoods.

4.2 Regulatory Context

California legislation, state agency programs, and guidance have been issued in recent years that aim to more comprehensively address EJ issues. These include SB 1000 (2016), SB 535 (2012), Assembly Bill (AB) 1550 (2016), AB 617 (2017), the California Department of Justice Bureau of Environmental Justice, the California Communities Environmental Health Screening Tool (CalEnviroScreen), and the Governor's Office of Planning and Research (OPR) 2020 General Plan Guidelines, Environmental Justice Element. SB 1000 has provided an impetus to more broadly address EJ; coupled with the existing requirements of CEQA, it is now time to elevate the coverage of significant environmental impacts in the context of EJ in environmental documents. These other bills have also provided the necessary policy direction to address EJ under CEQA.

4.2.1 Senate Bill 1000

SB 1000, which was enacted in 2016, amended California Government Code Section 65302(h) to require that general plans include an EJ element or EJ-related goals, policies, and objectives in other elements of general plans with respect to disadvantaged communities (DACs) beginning in 2018. The EJ policies are required when a city or county adopts or revises two or more general plan elements and the city or county contains a DAC. EJ-related policies must aim to reduce the disproportionate health risks in DACs, promote civic engagement in the public decision-making process, and prioritize improvements that address the needs of DACs (California Government Code Section 65302[h]). Policies should focus on improving the health and overall well-being of vulnerable and at-risk communities through reductions in pollution exposure, increased access to healthy foods and homes, improved air quality, and increased physical activity.

4.2.2 Senate Bill 535 and Assembly Bill 1550

In 2012, the California Legislature passed SB 535 (de Leon) established requirements for directing minimum levels of Greenhouse Gas Reduction Fund (GGRF) investments to projects that provide a benefit to disadvantaged communities (DACs). In 2016, the legislature passed AB 1550 (Gomez), which requires that 25 percent of proceeds from the GGRF be spent on projects located in DACs. The law requires the investment plan to allocate (1) a minimum of 25 percent of the available moneys in the fund to projects located within and benefiting individuals living in DACs; (2) an additional minimum of 5 percent to projects that benefit low-income households or to projects located within, and benefiting individuals living in, low-income communities located anywhere in the state; and (3) an additional minimum of 5 percent either to projects that benefit low-income households that are outside of, but within 0.5 miles of, DACs, or to projects located within the boundaries of, and benefiting individuals living in, low-income communities that are outside of, but within 0.5 miles of, DACs.

4.2.3 Assembly Bill 617

AB 617 of 2017 aims to help protect air quality and public health in communities disproportionately affected by air pollution. AB 617 imposes a new state-mandated local program to address nonvehicular sources (e.g., refineries, manufacturing facilities) of criteria air pollutants and toxic air contaminants. The bill requires the California Air Resources Board (CARB) to identify high-pollution areas and directs air districts to focus air quality improvement

efforts through the adoption of community emission reduction programs in these identified areas. Currently, air districts review individual stationary sources and impose emissions limits on emitters based on best available control technology, pollutant type, and proximity to nearby existing land uses. This bill addresses the cumulative and additive nature of air pollutant health effects by requiring communitywide air quality assessment and emission reduction planning. CARB has developed a statewide blueprint that outlines the process for identifying affected communities, statewide strategies to reduce emissions of criteria air pollutants and toxic air contaminants, and criteria for developing community emissions reduction programs and community air monitoring plans.

4.2.4 California Department of Justice's Bureau of Environmental Justice

In February 2018, then California Attorney General Xavier Becerra announced the establishment of a Bureau of Environmental Justice within the Environmental Section at the California Department of Justice. The purpose of the bureau is to enforce environmental laws, including CEQA, to protect people and communities disproportionately burdened by environmental pollution and public health hazards. The bureau accomplishes this through oversight and investigation and by using the law enforcement powers of the Attorney General's Office to identify and pursue matters affecting vulnerable communities. In 2021, Attorney General Bonta announced the expansion of the Bureau to increase oversight and take on more EJ cases.

4.2.5 California Communities Environmental Health Screening Tool

CalEnviroScreen is a mapping tool developed by the California Office of Environmental Health Hazard Assessment to help identify communities in California that are disproportionately burdened by and vulnerable to multiple sources of pollution. It uses environmental, health, and socioeconomic information based on data sets available from state and federal government sources to produce scores for every census tract in the state. Scores are generated using 21 statewide indicators that fall into four categories: exposures, environmental effects, sensitive populations, and socioeconomic factors. The exposures and environmental effects categories characterize the pollution burden that a community faces, whereas the sensitive populations and socioeconomic factors categories define population characteristics. There are 13 pollution burden indicators and eight population characteristic indicators in CalEnviroScreen 4.0. CalEnviroScreen assigns a percentile score for each indicator and combines them into an overall cumulative score for each census tract relative to all others in the state. Tracts scoring in the top 25 percent statewide are identified by the California Environmental Protection Agency as DACs, which are targeted for investment proceeds under SB 535. A draft update of CalEnviroScreen 5.0 was released in January 2026. However, because this version is not yet finalized, CalEnviroScreen 4.0 was used in this analysis.

4.2.6 Governor's Office of Planning and Research's 2020 Updated EJ Element Guidelines

The Governor's Office of Land Use and Climate Innovation (LCI; formerly OPR) published updated General Plan Guidelines in June 2020 that include revised EJ guidance in response to SB 1000. OPR has also published example policy language in an appendix document along with several case studies to highlight EJ-related policies and initiatives that can be considered by other jurisdictions. Section 4.8 of the General Plan Guidelines contains EJ guidance. The

guidelines offer recommendations for identifying vulnerable communities and reducing pollution exposure related to health conditions, air quality, project siting, water quality, and land use compatibility related to industrial and large-scale agricultural operations, childcare facilities, and schools, among other things. It provides many useful resources, including links to research, tools, reports, and sample general plans.

4.3 Sensitivity of Project Location

4.3.1 Community Description

As part of its Sustainable Communities Initiative, SMUD created and maintains the Sustainable Communities Resource Priorities Map,[1] which reflects several data sets related to community attributes that SMUD uses to identify historically under-resourced communities. The map was launched in 2020 and most recently updated in February 2025. One of the key components of the map is CalEnviroScreen 4.0, which identifies communities that are disproportionately burdened by multiple sources of pollution and socioeconomic vulnerability. The SMUD Sustainable Communities Resource Priorities map provides an analysis of current data sets to indicate areas ranging from low to high sensitivity and can be used to describe the relevant socioeconomic characteristics and current environmental burdens of the project area. SMUD has determined that it will evaluate EJ effects for projects located in, adjacent to, or proximate to (e.g., within 500 feet of) a high-sensitivity area as shown on the Sustainable Communities Resource Priorities Map or located in a census tract with a CalEnviroScreen score of 71 percent or greater.

The project site is located within a medium-high (on a scale of low, medium-low, medium, medium-high, and high) sensitivity area per the Sustainable Communities Resource Priorities Map (SMUD 2026). The nearest high-sensitivity area is located approximately 0.25 miles north of the northeastern portion of project site. The project site and proposed electrical line alignments are located within census tract 6067004203 and census tract 6067004903. Census tract 6067004203 received an overall CalEnviroScreen 4.0 score of 57 percent and Census Tract 6067004903 received a score of 64 percent, indicating that the project area is not considered to be substantially burdened by vulnerabilities due to environmental pollutants. The pollution burden of census tract 6067004203 received a score of 19, with the most significant indicators being from groundwater threats and lead in housing. The population characteristics of census tract 6067004203 that contribute to a community's pollution burden and vulnerability received a score of 87, which include a high number of people experiencing asthma, low birth weight, cardiovascular disease, education, linguistic isolation, poverty, unemployment, and housing burden. The pollution burden of census tract 6067004903 also received a score of 19, with the most significant indicators being from drinking water and traffic. The population characteristics of census tract 6067004903 received a score of 96, which include a high number of people experiencing asthma, low birth weight, cardiovascular disease, education, linguistic isolation, poverty, unemployment, and housing burden.

Additional indicators were utilized by the Sustainable Communities Resource Priorities Map in identifying and targeting communities with a greater sensitivity to social, economic, and environmental vulnerabilities. These other sources, which are used as tools for targeting economic development, indicate that the project site is not located in a Sacramento Promise Zone, an area designated as a DAC by SB 535, or an area designed as a Medically

[1] The Sustainable Communities Resource Priorities Map is available at https://storymaps.arcgis.com/stories/1c80bac9a600492e9dfe30eabcce8318.

Underserved Area or as having a Medically Underserved Population. The project site is located within an Opportunity Zone and is designated as an area with consistent high rates of poor health outcomes on the Health Equity index by Be Healthy Sacramento. In addition, the project site is located in a high sensitivity area for social vulnerability as designed by the Centers for Disease Control and Prevention and Agency for Toxic Substances and Disease Registry (CDC/ATSDR) Social Vulnerability Index (SVI), which identifies areas with a population that is highly vulnerable and susceptible to harm from exposure to a hazard.

4.4 Environmental Conditions

This discussion references the analysis conducted in the Environmental Checklist of the IS/MND and provides additional detail with respect to the current environmental conditions in the project area. The focus of this discussion is on EJ issues relevant to the project.

- **Aesthetics:** The visual character of the project site and the surrounding area is typical of the Sacramento County metropolitan area, which includes commercial and industrial buildings, residences, roads, utility lines, trees, and landscaping. The project site is surrounded by residential and public uses. The project area does not include a scenic vista or designated scenic highway.

- **Air Quality:** The project site is in Sacramento County, which is currently designated as nonattainment for both the federal and state ozone standards and the state PM_{10} standard. The region is designated as in attainment or unclassifiable for all other NAAQS and CAAQS. The project site is in an area adjacent to residential and industrial areas. Nearby industrial uses can contribute toxic air contaminants to the area during operation. Nearby sensitive receptors include residential land uses west of the northern project and the residential land uses to the west and south of the southern project site.

- **Cultural Resources:** As noted in Section 3.5, “Cultural Resources,” there are two known cultural resources within the project site and 12 cultural resources within a 0.25-mile radius of the project site. In 2026, three pedestrian surveys of the undeveloped (e.g., unpaved) portions of the project site were conducted. No new archaeological sites or built environment features were discovered during these pedestrian surveys.

- **Energy:** The project area is served by SMUD for electricity, which offers the Greenergy program that provides electricity generated by 100 percent renewable and carbon-free resources. PG&E provides natural gas service to the area.

- **Greenhouse Gas Emissions:** The project would be located in an area that would likely be subject to increased heat stress from climate change.

- **Hazards and Hazardous Materials:** The project site is not listed as a hazardous materials site and there are no active listed sites within 0.5-miles of the project site. There are two inactive leaking underground storage tank (LUST) cleanup sites within 0.5-miles of the site, though both have been inactive since at least 2016. A Phase I Environmental Site Assessment (ESA) for the expansion area was completed in February 2026. The site was evaluated for existing or potential recognized environmental conditions and to determine any current and/or former hazardous substances usage, storage, and/or releases of hazardous

substances. The assessment did not identify any recognized environmental conditions within the expansion area (Partner 2026).

- **Hydrology and Water Quality:** The project site is within the Sacramento Valley groundwater basin and the Sacramento Valley - South American subbasin. The project site is located within the Lake Greenhaven – Sacramento River watershed (CDFW 2025). The proposed substation site and potential expansion area are both vacant and undeveloped. The project is located within an area of minimal and reduced flood hazard due to existing levee infrastructure (Zone X), as identified on FEMA flood hazard maps (FEMA 2026).

- **Noise:** The existing noise environment in the project area is influenced by vehicle and rail traffic, aircraft noise from the Sacramento Executive Airport as well as noise associated with nearby public uses. Sensitive receptors (i.e., residences) are located adjacent to the western frontage of the project site as well as approximately 280 feet east of the site, beyond the rail tracks. In addition, Luther Burbank High School is located approximately 175 feet east of the project site.

- **Public Services:** Public services such as police and fire protection are available in the area. Sacramento Fire Station 16 is located approximately 0.4 miles west of the project site northeast of the 24th Street/Gardendale Road intersection.

- **Recreation:** The project site is within the City of Sacramento Parks and Recreation District. The nearest parks to the project site are Martin Luther King Jr. Park, located at 2705 Gardendale Road, and Hampton Park, located at 7510 Wainscott Way; both are located within 0.25 miles of the project site.

- **Transportation:** The project area includes paved roads, bicycle facilities, and pedestrian sidewalks. The nearest public transit access point is approximately 0.5 miles west of the project site and serves the SacRT Bus Route 247 and Route 248. Although the project site is adjacent to the SacRT Blue light rail line, the nearest access point to this system is Meadowview Station, which is located north of Meadowview Road, approximately 0.5 miles southeast of the project site.

- **Tribal Cultural Resources:** P-34-005225 is a Tribal cultural landscape, and was identified as a Tribal cultural resource by Wilton. Due to the presence of the Tribal cultural landscape, the general project area is known to be an area of historical Tribal use; therefore, it is still possible that unanticipated Tribal cultural resources could be uncovered during ground disturbing project activities.

- **Utilities:** Electricity in the area is provided by SMUD, gas service is provided by PG&E, and sewer service is provided by Sacramento County Water Agency.

- **Wildfire:** The project site is located in a Local Responsibility Area and is not designated as a Fire Hazard Severity Zone by the California Department of Forestry and Fire Protection (CAL FIRE 2026). The Sacramento Fire Department provides fire protection services in the project area. The closest fire station is Sacramento Fire Department Station 16 at 7363 24th Street, located approximately 0.5 miles west of the proposed substation site.

4.5 Evaluation of the Project's Contribution to a Community's Sensitivity

The project would involve the construction and operation of a new 230 kilovolt (kV) substation that would replace the existing Pocket Substation located at 3250 Gardendale Road in Sacramento, California. The project would also include the installation and reconstruction of electrical lines to tie the proposed substation into the existing grid and integrate the new capacity into the existing 230kV and 69kV system. The project's contributions to the community's sensitivity are as follows:

- **Aesthetics:** There would be temporary and minor modification of views at the project site and along the proposed electrical line alignment during construction activities due to presence of construction equipment, which is common in urban areas. Once operational, direct public views of the project components would be available from adjacent roadways, nearby residences, and the railroad corridor. Views of the new substation would generally be similar to existing views of the Pocket Substation, although the new substation facilities would be located north of Gardendale Road and would be more prominent from neighboring residences along 66th Avenue, Nelmark Street, 29th Street, and South Meadows Place. However, these improvements would occur within areas of low to moderately low visual quality that already contain more distant views of similar utility infrastructure. The new 69 kV circuits would be within roadway corridors that currently include overhead utility lines, poles, street lighting, and transportation infrastructure; therefore, the proposed improvements would be visually consistent with existing conditions and would not affect the visual character or quality of the corridors. In addition, the project would be developed in accordance with applicable zoning regulations and other regulations governing scenic quality. Impacts to aesthetics would be less than significant.

- **Air Quality:** Construction-related activities would result in temporary emissions of ROG, NO_X, PM_{10}, and $PM_{2.5}$ from construction activities (e.g., digging holes for pole installation, pouring cement), off-road equipment, material delivery, and worker commute trips, as discussed in Section 3.3., "Air Quality," criterion (a). The project, without the application of BMPs, would generate daily and annual emissions of PM_{10} and $PM_{2.5}$ that exceed the SMAQMD thresholds during construction activities (i.e., 0 lb/day). Implementation of Mitigation Measure 3.3-1, which would require incorporation of SMAQMD's BMPs during construction, would reduce air quality impacts to a less-than-significant level.

- **Cultural Resources:** The project would not affect known cultural resources. However, components of the project that require earthmoving and excavation could affect previously unrecorded cultural resources. Mitigation measures identified in Section 3.5, "Cultural Resources," would be implemented to reduce potentially significant impacts related to accidental discovery of previously unknown cultural resources to a less-than-significant level.

- **Energy**: The project would not affect access to electricity because electrical service would be maintained throughout construction. The energy needs for project construction would be temporary and would not require additional capacity or increase peak or base period demands for electricity or other forms of energy. Because maintenance activities associated with the project would be similar to those required for the existing substation and power lines, the project would not substantially increase the level of operational vehicle trips to the project site or electrical line alignment. The project would be developed with the goals of the

2030 Zero Carbon Plan and would not adversely affect current or future renewable energy resources. Thus, the project would not result in inefficient, wasteful, or unnecessary consumption of energy resources or conflict with or obstruct a plan for renewable energy or energy efficiency.

- **Greenhouse Gas Emissions:** Construction of the project would not exceed SMAQMD construction thresholds and operation of the project would be consistent with the 2022 Scoping Plan and the SMUD 2030 Zero Carbon Plan, the latter of which exceeds statewide goals to meet zero carbon power supplies by 2045. Therefore, the project's impact related to GHG emissions and consistency with relevant GHG reduction plans would be less than significant.

- **Hazards and Hazardous Materials:** The use and handling of hazardous materials during construction and operation would be conducted in a manner consistent with existing regulations. These regulations are specifically designed to protect the public health and the environment and must be adhered to during project construction and operation. There are no active hazardous waste sites located within or adjacent to the project area. Therefore, the project's impact related to hazards and hazardous material would be less than significant.

- **Noise:** Noise and vibration would be generated during construction, but it would be temporary, conducted in compliance with the City of Sacramento and County of Sacramento noise ordinances, and similar to other construction type noise that would occur within the surrounding area. Mitigation Measure 3.13-1 would require SMUD to implement measures to reduce exposure of noise-sensitive receptors to construction noise. Implementation of these measures would reduce the impact to a less-than-significant level.

- **Public Services:** The project would not increase demand for public services or otherwise affect the provision of public services to the area.

- **Recreation:** The project does not include any development that would necessitate new or expanded recreational facilities and would not affect any parks or recreational opportunities.

- **Transportation:** The project would not adversely affect an existing or planned roadway, transit, bicycle, or pedestrian facility; and would not conflict with any adopted plans, policies, or standards related to such facilities. In addition, the project would not conflict or be inconsistent with CEQA Guidelines Section 15064.3 related to VMT or result in transportation hazards or inadequate emergency access.

- **Utilities:** The project would not adversely affect the provision of utilities to existing and future uses in the project area. Overall, the project would improve consistency and necessary electrical capacity to the Sacramento area.

- **Wildfire:** The project would not exacerbate wildfire risks because the project site is not located within a high or very high wildfire hazard zone and would not expose people or structures to wildfire risks. Temporary lane closures during construction could disrupt emergency or evacuation routes, but a required, approved traffic control plan would ensure safe roadway use. Safety measures such as storing equipment away from vegetation and trimming or removing vegetation as needed would reduce fire risks.

As described for each environmental resource area above, the project would not contribute to the community's current sensitivity.

4.6 Summary of Environmental Justice Assessment

According to SMUD's Sustainable Communities Resource Priorities Map,[2] which reflects several data sets related to community attributes that SMUD uses to identify historically underserved communities, the project is located within areas designated as medium/high sensitivity areas (SMUD 2026). This is due in part to the area's designation as an Opportunity Zone and an area within high zones for social vulnerability to climate change. The project has the potential to affect previously undiscovered cultural and tribal cultural resources, exceed air quality and greenhouse gas emissions thresholds, and expose sensitive receptors to increased noise in the area; however, mitigation measures would be implemented to reduce the potential project-generated impacts to less-than-significant levels. The project would increase electrical capacity to meet projected load growth and provide safe and reliable electrical service to existing and proposed development in the Sacramento area. Therefore, no existing EJ conditions would be worsened as a result of the project.

[2] The Sustainable Communities Resource Priorities Map is available at https://storymaps.arcgis.com/stories/1c80bac9a600492e9dfe30eabcce8318.

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Appendix A

Air Quality, Energy, and Greenhouse Gas Modeling

Transmission Pole Installation 0.57

Proposed number of new transmission poles	6	source: PD				
Temporary work area per transmission pole	0.25	acres	source: PD			
Total work acres	1.5	acres	Source: calculation			
69kV Circuits						
New 69kV circuits	1.5	miles	or	7920	feet	conservatively assumed to be undergrounded per PD
Width of work area for new 69 kV circuits	25	feet	source: PD			
Sf of work area	198000	sf	source: calculation			
Total work area	4.5	acres	source: calculation			
230kV Line						
Reconductoring 1,100 ft of 230kV conductor	0.2	miles	source: PD			

Conversions	
feet per 1 mile	5280
sf per 1 acre	43,560

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Nar	SMUD Pocket Substation
Constructio	########
Lead Agency	
Land Use S	Project/site
Analysis Le	County
Windspeed	3
Precipitatio	36.6
Location	38.489718225313624, -121.47017952003765
County	Sacramento
City	Sacramento
Air District	Sacramento Metropolitan AQMD
Air Basin	Sacramento Valley
TAZ	773
EDFZ	13
Electric Uti	Sacramento Municipal Utility District
Gas Utility	Pacific Gas & Electric
App Versio	2022.1.1.44

1.2. Land Use Types

Land Use S	Size	Unit	Lot Acreag	Building Ar	Landscape	Special Lan	Population	Description
Unrefrigera	4	1000sqft	6	4000	0			New Substation
Road Const	0.209	Mile	6	0				Access Roads
Road Const	1.5	Mile	4.5	0	0			69kV Line Undergrounding
Road Const	0.2	Mile	0.3	0	0			230 kV Reconductoring
Other Non-	1.5	Acre	1.5	0	0			Pole Installation

1.3. User-Selected Emission Reduction Measures by Emissions Sector

Sector	#	Measure Title
Constructic	C-1-A	Use Electric or Hybrid Powered Equipment
Constructic	C-2*	Limit Heavy-Duty Diesel Vehicle Idling
Constructic	C-4*	Use Local and Sustainable Building Materials
Constructic	C-5	Use Advanced Engine Tiers
Constructic	C-10-A	Water Exposed Surfaces
Constructic	C-10-B	Water Active Demolition Sites
Constructic	C-10-C	Water Unpaved Construction Roads
Constructic	C-11	Limit Vehicle Speeds on Unpaved Roads
Constructic	C-12	Sweep Paved Roads

* Qualitative or supporting measure. Emission reductions not included in the mitigated emissions results.

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

Un/Mit.	TOG	ROG	NOx	CO	SO_2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO_2	$NBCO_2$	CO_2T	CH_4	N_2O	R	CO_2e
Daily, Summer (Max)																		
Unmit.	1.902542	1.59779	11.86657	18.23575	0.037337	0.411379	1.612831	1.956939	0.378489	0.257444	0.576471		4403.83	4403.83	0.244111	0.273437	3.184237	4494.601

Mit.	1.556511	1.366879	8.26798	35.62432	0.057653	0.289601	1.37198	1.557374	0.272449	0.23111	0.410435	6297.019	6297.019	0.320905	0.288796	3.184237	6394.287
% Reduced	18.1878	14.45187	30.32545	-95.3544	-54.4139	29.60236	14.93343	20.41787	28.01669	10.22898	28.80212	-42.9896	-42.9896	-31.4589	-5.61678		-42.2659
Daily, Winter (Max)																	
Unmit.	3.099346	2.492339	23.22254	29.3453	0.058671	0.880321	2.875401	3.755722	0.812383	0.419318	1.231702	7068.035	7068.035	0.358907	0.314836	0.109347	7170.938
Mit.	1.867951	1.568372	13.35458	54.9306	0.090588	0.42709	2.194442	2.621533	0.40634	0.345463	0.751803	10577.68	10577.68	0.501268	0.343306	0.109347	10692.63
% Reduced	39.7308	37.0723	42.49303	-87.187	-54.4006	51.48472	23.68221	30.19897	49.98171	17.61317	38.96222	-49.6552	-49.6552	-39.6652	-9.04283		-49.1106
Average Daily (Max)																	
Unmit.	0.968119	0.770287	7.235542	9.05156	0.020409	0.254237	0.999742	1.253979	0.234943	0.147259	0.382201	2461.105	2461.105	0.126652	0.122875	0.637434	2501.525
Mit.	0.577603	0.488894	5.144522	19.8086	0.034091	0.115462	0.777256	0.892718	0.111635	0.123101	0.234736	3945.871	3945.871	0.186879	0.13492	0.637434	3991.386
% Reduced	40.33762	36.53092	28.89928	-118.842	-67.0444	54.58473	22.25431	28.80912	52.48417	16.40505	38.58321	-60.3292	-60.3292	-47.5536	-9.80266		-59.5581
Annual (Max)																	
Unmit.	0.176682	0.140577	1.320486	1.65191	0.003725	0.046398	0.182453	0.228851	0.042877	0.026875	0.069752	407.464	407.464	0.020969	0.020343	0.105534	414.156
Mit.	0.105413	0.089223	0.938875	3.61507	0.006222	0.021072	0.141849	0.162921	0.020373	0.022466	0.042839	653.2839	653.2839	0.03094	0.022338	0.105534	660.8195
% Reduced	40.33762	36.53092	28.89928	-118.842	-67.0444	54.58473	22.25431	28.80912	52.48417	16.40505	38.58321	-60.3292	-60.3292	-47.5536	-9.80266		-59.5581

2.2. Construction Emissions by Year

2.2.1. Total Construction Emissions by Year, Unmitigated

Includes both onsite and offsite emissions.

Year	TOG	ROG	NOx	CO	SO_2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO_2	$NBCO_2$	CO_2T	CH_4	N_2O	R	CO_2e
Daily - Summer (Max)																		
2028	1.405383	1.077675	11.22914	13.98459	0.03569	0.344108	1.612831	1.956939	0.319027	0.257444	0.576471		4403.83	4403.83	0.244111	0.273437	3.184237	4494.601
2029	1.902542	1.59779	11.86657	18.23575	0.037337	0.411379	0.122975	0.534354	0.378489	0.028998	0.407487		4085.732	4085.732	0.162696	0.035316	0.373367	4100.697
2030													0	0	0	0		0
Daily - Winter (Max)																		
2027	3.099346	2.492339	23.22254	29.3453	0.058667	0.880321	2.875401	3.755722	0.812383	0.419318	1.231702		7068.035	7068.035	0.358907	0.314836	0.109347	7170.938
2028	2.973579	2.395795	21.85926	29.20613	0.058671	0.7953	2.875401	3.670701	0.734164	0.419318	1.153482		7017.803	7017.803	0.347547	0.304641	0.099789	7117.374
2029	2.441614	2.048321	15.91391	23.52136	0.049852	0.554947	0.144916	0.699863	0.510592	0.034314	0.544906		5410.829	5410.829	0.217869	0.053061	0.01173	5432.1
2030	2.933269	2.467873	20.88116	22.26808	0.041785	0.832187	0.201703	1.03389	0.765624	0.045733	0.811357		4592.654	4592.654	0.183387	0.044962	0.012456	4610.65
2031	2.867753	2.413001	20.13848	21.83006	0.041783	0.810076	0.201703	1.011779	0.745287	0.045733	0.79102		4589.257	4589.257	0.18327	0.044855	0.011049	4607.216
Average Daily																		
2027	0.257102	0.200601	1.957723	2.085661	0.005751	0.066549	0.250969	0.317517	0.061566	0.038872	0.100438		704.7827	704.7827	0.038777	0.040203	0.21353	717.9462
2028	0.968119	0.770287	7.235542	9.05156	0.020409	0.254237	0.999742	1.253979	0.234943	0.147259	0.382201		2461.105	2461.105	0.126652	0.122875	0.637434	2501.525
2029	0.699156	0.585556	4.881523	7.022936	0.013349	0.176374	0.01992	0.196294	0.162279	0.004788	0.167067		1409.847	1409.847	0.057089	0.013682	0.030716	1415.383
2030	0.529098	0.444384	3.758139	4.011297	0.007523	0.149825	0.035552	0.185377	0.137842	0.008043	0.145885		827.6116	827.6116	0.032948	0.007102	0.037372	830.5889
2031	0.17961	0.151132	1.261015	1.367901	0.002617	0.050729	0.012366	0.063095	0.046672	0.002798	0.049469		287.6479	287.6479	0.011453	0.002463	0.011548	288.6798
Annual																		
2027	0.046921	0.03661	0.357285	0.380633	0.001049	0.012145	0.045802	0.057947	0.011236	0.007094	0.01833		116.6848	116.6848	0.00642	0.006656	0.035352	118.8642
2028	0.176682	0.140577	1.320486	1.65191	0.003725	0.046398	0.182453	0.228851	0.042877	0.026875	0.069752		407.464	407.464	0.020969	0.020343	0.105534	414.156
2029	0.127596	0.106864	0.890878	1.281686	0.002436	0.032188	0.003635	0.035824	0.029616	0.000874	0.03049		233.4163	233.4163	0.009452	0.002265	0.005085	234.3327
2030	0.09656	0.0811	0.68586	0.732062	0.001373	0.027343	0.006488	0.033831	0.025156	0.001468	0.026624		137.0205	137.0205	0.005455	0.001176	0.006187	137.5135
2031	0.032779	0.027582	0.230135	0.249642	0.000478	0.009258	0.002257	0.011515	0.008518	0.000511	0.009028		47.62338	47.62338	0.001896	0.000408	0.001912	47.79424

2.2.2. Onsite Construction Emissions by Year, Unmitigated

Year	TOG	ROG	NOx	CO	SO_2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO_2	$NBCO_2$	CO_2T	CH_4	N_2O	R	CO_2e
Daily - Summer (Max)																		
2028	1.188385	0.998574	8.587752	13.18534	0.024984	0.338916	1.072863	1.399416	0.311803	0.116381	0.426312		2704.964	2704.964	0.109725	0.021945	0	2714.247
2029	1.858235	1.559059	11.81512	17.67641	0.03721	0.411124	0	0.411124	0.378235	0	0.378235		3945.79	3945.79	0.160059	0.032012	0	3959.331

Daily - Winter (Max)																	
2027	2.803681	2.354228	20.1418	27.03748	0.04796	0.849222	2.133363	2.982585	0.781284	0.23089	1.012175	5140.571	5140.571	0.208524	0.041705	0	5158.212
2028	2.691927	2.260329	18.94939	26.99317	0.047965	0.764201	2.133363	2.897564	0.703065	0.23089	0.933955	5140.762	5140.762	0.208532	0.041706	0	5158.404
2029	2.393985	2.008324	15.82284	23.03802	0.049597	0.554438	0	0.554438	0.510083	0	0.510083	5251.733	5251.733	0.213033	0.042607	0	5269.756
2030	2.881016	2.418422	20.81095	21.68557	0.041676	0.831973	0.020413	0.852387	0.765416	0.003091	0.768507	4416.704	4416.704	0.179161	0.035832	0	4431.861
2031	2.817924	2.365478	20.07579	21.27888	0.041673	0.809868	0.020413	0.830282	0.745079	0.003091	0.74817	4416.393	4416.393	0.179148	0.03583	0	4431.549
Average Daily																	
2027	0.224712	0.188779	1.551595	1.85765	0.004284	0.062289	0.173947	0.236235	0.057305	0.018856	0.076161	462.5116	462.5116	0.018761	0.003752	0	464.0989
2028	0.865313	0.726841	6.046441	8.285567	0.015871	0.241182	0.738507	0.979688	0.221887	0.079962	0.301849	1709.944	1709.944	0.069363	0.013873	0	1715.812
2029	0.692418	0.580293	4.857733	6.956135	0.013257	0.176189	0	0.176189	0.162094	0	0.162094	1381.465	1381.465	0.056038	0.011208	0	1386.206
2030	0.518696	0.435411	3.746786	3.904251	0.007503	0.149788	0.003675	0.153463	0.137805	0.000557	0.138361	795.1795	795.1795	0.032256	0.006451	0	797.9084
2031	0.176465	0.148132	1.257192	1.332533	0.00261	0.050716	0.001278	0.051994	0.046659	0.000194	0.046852	276.5647	276.5647	0.011219	0.002244	0	277.5138
Annual																	
2027	0.04101	0.034452	0.283166	0.339021	0.000782	0.011368	0.031745	0.043113	0.010458	0.003441	0.013899	76.57408	76.57408	0.003106	0.000621	0	76.83686
2028	0.15792	0.132648	1.103475	1.512116	0.002896	0.044016	0.134777	0.178793	0.040494	0.014593	0.055087	283.1008	283.1008	0.011484	0.002297	0	284.0723
2029	0.126366	0.105903	0.886536	1.269495	0.002419	0.032155	0	0.032155	0.029582	0	0.029582	228.7173	228.7173	0.009278	0.001856	0	229.5022
2030	0.094662	0.079462	0.683788	0.712526	0.001369	0.027336	0.000671	0.028007	0.025149	0.000102	0.025251	131.651	131.651	0.00534	0.001068	0	132.1028
2031	0.032205	0.027034	0.229438	0.243187	0.000476	0.009256	0.000233	0.009489	0.008515	3.53E-05	0.008551	45.78845	45.78845	0.001857	0.000371	0	45.94558

2.2.3. Offsite Construction Emissions by Year, Unmitigated

Year	TOG	ROG	NOx	CO	SO_2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO_2	$NBCO_2$	CO_2T	CH_4	N_2O	R	CO_2e
Daily - Summer (Max)																		
2028	0.216998	0.079102	2.641386	1.601005	0.010706	0.030589	0.539969	0.570558	0.030589	0.141063	0.171652		1698.866	1698.866	0.134386	0.251492	3.184237	1780.355
2029	0.044307	0.038731	0.051455	0.559333	0.000127	0.000254	0.122975	0.12323	0.000254	0.028998	0.029252		139.9414	139.9414	0.002638	0.003305	0.373367	141.3655
2030													0	0	0	0		0
Daily - Winter (Max)																		
2027	0.295665	0.138111	3.080742	2.307821	0.010706	0.031099	0.742038	0.773137	0.031099	0.188428	0.219527		1927.464	1927.464	0.150383	0.273131	0.109347	2012.726
2028	0.281652	0.135466	2.909879	2.212953	0.010706	0.031099	0.742038	0.773137	0.031099	0.188428	0.219527		1877.041	1877.041	0.139015	0.262934	0.099789	1958.971
2029	0.04763	0.039996	0.091077	0.483341	0.000254	0.000509	0.144916	0.145424	0.000509	0.034314	0.034823		159.096	159.096	0.004836	0.010455	0.01173	162.3441
2030	0.052254	0.049452	0.070213	0.582516	0.000109	0.000213	0.18129	0.181503	0.000208	0.042642	0.04285		175.9506	175.9506	0.004226	0.00913	0.012456	178.7894
2031	0.04983	0.047523	0.062687	0.551179	0.000109	0.000208	0.18129	0.181498	0.000208	0.042642	0.04285		172.8638	172.8638	0.004122	0.009026	0.011049	175.6676
Average Daily																		
2027	0.03239	0.011822	0.406129	0.228011	0.001467	0.00426	0.077022	0.081282	0.00426	0.020016	0.024276		242.271	242.271	0.020015	0.036451	0.21353	253.8473
2028	0.102806	0.043447	1.189101	0.765993	0.004537	0.013056	0.261235	0.274291	0.013056	0.067297	0.080352		751.1607	751.1607	0.057289	0.109003	0.637434	785.7131
2029	0.006738	0.005263	0.02379	0.066801	9.25E-05	0.000185	0.01992	0.020105	0.000185	0.004788	0.004973		28.38227	28.38227	0.001051	0.002475	0.030716	29.17668
2030	0.010403	0.008974	0.011353	0.107047	1.97E-05	3.75E-05	0.031877	0.031914	3.75E-05	0.007487	0.007524		32.43204	32.43204	0.000692	0.00065	0.037372	32.68055
2031	0.003145	0.003001	0.003823	0.035368	6.84E-06	1.3E-05	0.011088	0.011101	1.3E-05	0.002604	0.002617		11.08312	11.08312	0.000234	0.00022	0.011548	11.166
Annual																		
2027	0.005911	0.002158	0.074118	0.041612	0.000268	0.000777	0.014056	0.014834	0.000777	0.003653	0.00443		40.11074	40.11074	0.003314	0.006035	0.035352	42.02732
2028	0.018762	0.007929	0.217011	0.139794	0.000828	0.002383	0.047675	0.050058	0.002383	0.012282	0.014664		124.3632	124.3632	0.009485	0.018047	0.105534	130.0838
2029	0.00123	0.000961	0.004342	0.012191	1.69E-05	3.38E-05	0.003635	0.003669	3.38E-05	0.000874	0.000908		4.699008	4.699008	0.000174	0.00041	0.005085	4.830533
2030	0.001899	0.001638	0.002072	0.019536	3.59E-06	6.84E-06	0.005818	0.005824	6.84E-06	0.001366	0.001373		5.369494	5.369494	0.000115	0.000108	0.006187	5.410637
2031	0.000574	0.000548	0.000698	0.006455	1.25E-06	2.38E-06	0.002023	0.002026	2.38E-06	0.000475	0.000478		1.834938	1.834938	3.87E-05	3.64E-05	0.001912	1.848658

2.2.4. Total Construction Emissions by Year, Mitigated

Includes both onsite and offsite emissions.

Year	TOG	ROG	NOx	CO	SO_2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO_2	$NBCO_2$	CO_2T	CH_4	N_2O	R	CO_2e

Daily - Summer (Max)																	
2028	0.896374	0.713008	7.823387	33.75071	0.053175	0.185394	1.37198	1.557374	0.179325	0.23111	0.410435	6297.019	6297.019	0.320905	0.288796	3.184237	6394.287
2029	1.556511	1.366879	8.26798	35.62432	0.057653	0.289601	0.122975	0.412576	0.272449	0.028998	0.301447	6285.081	6285.081	0.251911	0.053159	0.373367	6307.593
2030												0	0	0	0		0
Daily - Winter (Max)																	
2027	1.867951	1.568372	13.35458	54.9306	0.090588	0.42709	2.194442	2.621533	0.40634	0.345463	0.751803	10577.68	10577.68	0.501268	0.343306	0.109347	10692.63
2028	1.807615	1.526802	12.89728	54.8351	0.090586	0.389464	2.194442	2.583907	0.371724	0.345463	0.717187	10526.13	10526.13	0.489859	0.333102	0.099789	10637.75
2029	1.744594	1.541444	9.339328	42.84838	0.070168	0.329673	0.144916	0.474588	0.311235	0.034314	0.345548	7610.178	7610.178	0.307085	0.070904	0.01173	7638.996
2030	0.863131	0.784726	5.673616	23.76088	0.041785	0.136531	0.194354	0.330885	0.131264	0.04462	0.175885	4592.654	4592.654	0.183387	0.044962	0.012456	4610.65
2031	0.838286	0.764029	5.642089	23.70642	0.041783	0.128032	0.194354	0.322387	0.123451	0.04462	0.168071	4589.257	4589.257	0.18327	0.044855	0.011049	4607.216
Average Daily																	
2027	0.174862	0.141461	1.253092	4.477513	0.008866	0.037352	0.206779	0.244131	0.035698	0.034056	0.069754	1043.604	1043.604	0.05252	0.042951	0.21353	1057.93
2028	0.577603	0.488894	5.144522	19.8086	0.034091	0.115462	0.777256	0.892718	0.111635	0.123101	0.234736	3945.871	3945.871	0.186879	0.13492	0.637434	3991.386
2029	0.431558	0.376877	2.723143	9.571323	0.015013	0.092609	0.01992	0.112529	0.086835	0.004788	0.091623	1589.973	1589.973	0.064396	0.015144	0.030716	1596.126
2030	0.156392	0.141352	1.020185	4.280059	0.007523	0.02458	0.034229	0.058809	0.023633	0.007843	0.031476	827.6116	827.6116	0.032948	0.007102	0.037372	830.5889
2031	0.05252	0.04787	0.353218	1.485403	0.002617	0.008018	0.011906	0.019923	0.007731	0.002728	0.010459	287.6479	287.6479	0.011453	0.002463	0.011548	288.6798
Annual																	
2027	0.031912	0.025817	0.228689	0.817146	0.001618	0.006817	0.037737	0.044554	0.006515	0.006215	0.01273	172.7806	172.7806	0.008695	0.007111	0.035352	175.1524
2028	0.105413	0.089223	0.938875	3.61507	0.006222	0.021072	0.141849	0.162921	0.020373	0.022466	0.042839	653.2839	653.2839	0.03094	0.022338	0.105534	660.8195
2029	0.078759	0.06878	0.496974	1.746766	0.00274	0.016901	0.003635	0.020536	0.015847	0.000874	0.016721	263.2382	263.2382	0.010661	0.002507	0.005085	264.257
2030	0.028542	0.025797	0.186184	0.781111	0.001373	0.004486	0.006247	0.010733	0.004313	0.001431	0.005744	137.0205	137.0205	0.005455	0.001176	0.006187	137.5135
2031	0.009585	0.008736	0.064462	0.271086	0.000478	0.001463	0.002173	0.003636	0.001411	0.000498	0.001909	47.62338	47.62338	0.001896	0.000408	0.001912	47.79424

2.2.5. Onsite Construction Emissions by Year, Mitigated

Year	TOG	ROG	NOx	CO	SO_2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO_2	$NBCO_2$	CO_2T	CH_4	N_2O	R	CO_2e
Daily - Summer (Max)																		
2028	0.679376	0.633906	7.66142	32.95145	0.043518	0.154805	0.832012	0.986817	0.148736	0.090047	0.238783		4712.653	4712.653	0.191166	0.038233	0	4728.826
2029	1.512204	1.328149	8.216525	35.06499	0.057526	0.289347	0	0.289347	0.272194	0	0.272194		6145.139	6145.139	0.249274	0.049855	0	6166.228
Daily - Winter (Max)																		
2027	1.572286	1.43026	10.27384	52.62278	0.079882	0.395991	1.452404	1.848396	0.375241	0.157035	0.532276		8649.295	8649.295	0.350853	0.070171	0	8678.977
2028	1.525963	1.391336	9.987406	52.62215	0.079879	0.358365	1.452404	1.810769	0.340625	0.157035	0.49766		8648.859	8648.859	0.350836	0.070167	0	8678.54
2029	1.696965	1.501448	9.248251	42.36504	0.069914	0.329164	0	0.329164	0.310726	0	0.310726		7451.082	7451.082	0.302248	0.06045	0	7476.652
2030	0.810877	0.735275	5.603403	23.17837	0.041676	0.136317	0.013065	0.149382	0.131056	0.001978	0.133035		4416.704	4416.704	0.179161	0.035832	0	4431.861
2031	0.788456	0.716506	5.579402	23.15524	0.041673	0.127824	0.013065	0.140889	0.123243	0.001978	0.125221		4416.393	4416.393	0.179148	0.03583	0	4431.549
Average Daily																		
2027	0.142471	0.129639	0.846963	4.249502	0.007399	0.033092	0.129757	0.162849	0.031438	0.014039	0.045478		801.1428	801.1428	0.032498	0.0065	0	803.8921
2028	0.474797	0.445448	3.955421	19.04261	0.029554	0.102407	0.516021	0.618428	0.098579	0.055804	0.154384		3194.52	3194.52	0.129584	0.025917	0	3205.482
2029	0.42482	0.371614	2.699353	9.504522	0.01492	0.092424	0	0.092424	0.08665	0	0.08665		1561.591	1561.591	0.063345	0.012669	0	1566.95
2030	0.14599	0.132378	1.008832	4.173013	0.007503	0.024542	0.002352	0.026895	0.023595	0.000356	0.023951		795.1795	795.1795	0.032256	0.006451	0	797.9084
2031	0.049375	0.044869	0.349395	1.450035	0.00261	0.008005	0.000818	0.008823	0.007718	0.000124	0.007842		276.5647	276.5647	0.011219	0.002244	0	277.5138
Annual																		
2027	0.026001	0.023659	0.154571	0.775534	0.00135	0.006039	0.023681	0.02972	0.005737	0.002562	0.0083		132.6383	132.6383	0.00538	0.001076	0	133.0935
2028	0.08665	0.081294	0.721864	3.475277	0.005394	0.018689	0.094174	0.112863	0.017991	0.010184	0.028175		528.8892	528.8892	0.021454	0.004291	0	530.7042
2029	0.07753	0.06782	0.492632	1.734575	0.002723	0.016867	0	0.016867	0.015814	0	0.015814		258.5392	258.5392	0.010487	0.002097	0	259.4264
2030	0.026643	0.024159	0.184112	0.761575	0.001369	0.004479	0.000429	0.004908	0.004306	6.5E-05	0.004371		131.651	131.651	0.00534	0.001068	0	132.1028
2031	0.009011	0.008189	0.063765	0.264631	0.000476	0.001461	0.000149	0.00161	0.001408	2.26E-05	0.001431		45.78845	45.78845	0.001857	0.000371	0	45.94558

2.2.6. Offsite Construction Emissions by Year, Mitigated

Year	TOG	ROG	NOx	CO	SO_2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO_2	$NBCO_2$	CO_2T	CH_4	N_2O	R	CO_2e
Daily - Summer (Max)																		
2028	0.216998	0.079102	2.641386	1.601005	0.010706	0.030589	0.539969	0.570558	0.030589	0.141063	0.171652		1699.101	1699.101	0.134394	0.251493	3.184237	1780.59
2029	0.044307	0.038731	0.051455	0.559333	0.000127	0.000254	0.122975	0.12323	0.000254	0.028998	0.029252		139.9414	139.9414	0.002638	0.003305	0.373367	141.3655
2030													0	0	0	0		0
Daily - Winter (Max)																		
2027	0.295665	0.138111	3.080742	2.307821	0.010706	0.031099	0.742038	0.773137	0.031099	0.188428	0.219527		1928.387	1928.387	0.150415	0.273135	0.109347	2013.651
2028	0.281652	0.135466	2.909879	2.212953	0.010706	0.031099	0.742038	0.773137	0.031099	0.188428	0.219527		1877.275	1877.275	0.139023	0.262935	0.099789	1959.205
2029	0.04763	0.039996	0.091077	0.483341	0.000254	0.000509	0.144916	0.145424	0.000509	0.034314	0.034823		159.096	159.096	0.004836	0.010455	0.01173	162.3441
2030	0.052254	0.049452	0.070213	0.582516	0.000109	0.000213	0.18129	0.181503	0.000208	0.042642	0.04285		175.9506	175.9506	0.004226	0.00913	0.012456	178.7894
2031	0.04983	0.047523	0.062687	0.551179	0.000109	0.000208	0.18129	0.181498	0.000208	0.042642	0.04285		172.8638	172.8638	0.004122	0.009026	0.011049	175.6676
Average Daily																		
2027	0.03239	0.011822	0.406129	0.228011	0.001467	0.00426	0.077022	0.081282	0.00426	0.020016	0.024276		242.4614	242.4614	0.020022	0.036452	0.21353	254.0382
2028	0.102806	0.043447	1.189101	0.765993	0.004537	0.013056	0.261235	0.274291	0.013056	0.067297	0.080352		751.3511	751.3511	0.057295	0.109003	0.637434	785.9039
2029	0.006738	0.005263	0.02379	0.066801	9.25E-05	0.000185	0.01992	0.020105	0.000185	0.004788	0.004973		28.38227	28.38227	0.001051	0.002475	0.030716	29.17668
2030	0.010403	0.008974	0.011353	0.107047	1.97E-05	3.75E-05	0.031877	0.031914	3.75E-05	0.007487	0.007524		32.43204	32.43204	0.000692	0.00065	0.037372	32.68055
2031	0.003145	0.003001	0.003823	0.035368	6.84E-06	1.3E-05	0.011088	0.011101	1.3E-05	0.002604	0.002617		11.08312	11.08312	0.000234	0.00022	0.011548	11.166
Annual																		
2027	0.005911	0.002158	0.074118	0.041612	0.000268	0.000777	0.014056	0.014834	0.000777	0.003653	0.00443		40.14226	40.14226	0.003315	0.006035	0.035352	42.05892
2028	0.018762	0.007929	0.217011	0.139794	0.000828	0.002383	0.047675	0.050058	0.002383	0.012282	0.014664		124.3947	124.3947	0.009486	0.018047	0.105534	130.1154
2029	0.00123	0.000961	0.004342	0.012191	1.69E-05	3.38E-05	0.003635	0.003669	3.38E-05	0.000874	0.000908		4.699008	4.699008	0.000174	0.00041	0.005085	4.830533
2030	0.001899	0.001638	0.002072	0.019536	3.59E-06	6.84E-06	0.005818	0.005824	6.84E-06	0.001366	0.001373		5.369494	5.369494	0.000115	0.000108	0.006187	5.410637
2031	0.000574	0.000548	0.000698	0.006455	1.25E-06	2.38E-06	0.002023	0.002026	2.38E-06	0.000475	0.000478		1.834938	1.834938	3.87E-05	3.64E-05	0.001912	1.848658

3. Construction Emissions Details

3.1. Demolition (2030)

3.1.1. Onsite - Unmitigated

Location	TOG	ROG	NOx	CO	SO_2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO_2	$NBCO_2$	CO_2T	CH_4	N_2O	R	CO_2e
Daily, Summer (Max)																		
Daily, Winter (Max)																		
Off-Road E	2.881016	2.418422	20.81095	21.68557	0.041676	0.831973		0.831973	0.765416		0.765416		4416.704	4416.704	0.179161	0.035832		4431.861
Demolition							0.020413	0.020413		0.003091	0.003091							
Onsite truc	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Average Daily																		
Off-Road E	0.518696	0.435411	3.746786	3.904251	0.007503	0.149788		0.149788	0.137805		0.137805		795.1795	795.1795	0.032256	0.006451		797.9084
Demolition							0.003675	0.003675		0.000557	0.000557							
Onsite truc	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Annual																		
Off-Road E	0.094662	0.079462	0.683788	0.712526	0.001369	0.027336		0.027336	0.025149		0.025149		131.651	131.651	0.00534	0.001068		132.1028
Demolition							0.000671	0.000671		0.000102	0.000102							
Onsite truc	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0

3.1.2. Offsite - Unmitigated

Location	TOG	ROG	NOx	CO	SO_2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO_2	$NBCO_2$	CO_2T	CH_4	N_2O	R	CO_2e
Daily, Summer (Max)																		
Daily, Winter (Max)																		

Worker	0.050657	0.049113	0.044677	0.571962	0	0	0.176811	0.176811	0	0.041444	0.041444	160.6739	160.6739	0.003086	0.006674	0.011834	162.7519
Vendor	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hauling	0.001597	0.000338	0.025536	0.010555	0.000109	0.000213	0.004479	0.004692	0.000208	0.001198	0.001406	15.27671	15.27671	0.001139	0.002455	0.000622	16.03749
Average Daily																	
Worker	0.010113	0.008912	0.006842	0.105157	0	0	0.031085	0.031085	0	0.007275	0.007275	29.68173	29.68173	0.000486	0.000208	0.03551	29.79149
Vendor	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hauling	0.000289	6.18E-05	0.004511	0.00189	1.97E-05	3.75E-05	0.000792	0.00083	3.75E-05	0.000212	0.00025	2.750309	2.750309	0.000206	0.000442	0.001862	2.889053
Annual																	
Worker	0.001846	0.001626	0.001249	0.019191	0	0	0.005673	0.005673	0	0.001328	0.001328	4.914149	4.914149	8.05E-05	3.45E-05	0.005879	4.932322
Vendor	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hauling	5.28E-05	1.13E-05	0.000823	0.000345	3.59E-06	6.84E-06	0.000145	0.000151	6.84E-06	3.87E-05	4.55E-05	0.455345	0.455345	3.41E-05	7.32E-05	0.000308	0.478316

3.1.3. Onsite - Mitigated

Location	TOG	ROG	NOx	CO	SO_2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO_2	$NBCO_2$	CO_2T	CH_4	N_2O	R	CO_2e
Daily, Summer (Max)																		
Daily, Winter (Max)																		
Off-Road E	0.810877	0.735275	5.603403	23.17837	0.041676	0.136317		0.136317	0.131056		0.131056		4416.704	4416.704	0.179161	0.035832		4431.861
Demolition							0.013065	0.013065		0.001978	0.001978							
Onsite truc	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Average Daily																		
Off-Road E	0.14599	0.132378	1.008832	4.173013	0.007503	0.024542		0.024542	0.023595		0.023595		795.1795	795.1795	0.032256	0.006451		797.9084
Demolition							0.002352	0.002352		0.000356	0.000356							
Onsite truc	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Annual																		
Off-Road E	0.026643	0.024159	0.184112	0.761575	0.001369	0.004479		0.004479	0.004306		0.004306		131.651	131.651	0.00534	0.001068		132.1028
Demolition							0.000429	0.000429		6.5E-05	6.5E-05							
Onsite truc	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0

3.1.4. Offsite - Mitigated

Location	TOG	ROG	NOx	CO	SO_2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO_2	$NBCO_2$	CO_2T	CH_4	N_2O	R	CO_2e
Daily, Summer (Max)																		
Daily, Winter (Max)																		
Worker	0.050657	0.049113	0.044677	0.571962	0	0	0.176811	0.176811	0	0.041444	0.041444		160.6739	160.6739	0.003086	0.006674	0.011834	162.7519
Vendor	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Hauling	0.001597	0.000338	0.025536	0.010555	0.000109	0.000213	0.004479	0.004692	0.000208	0.001198	0.001406		15.27671	15.27671	0.001139	0.002455	0.000622	16.03749
Average Daily																		
Worker	0.010113	0.008912	0.006842	0.105157	0	0	0.031085	0.031085	0	0.007275	0.007275		29.68173	29.68173	0.000486	0.000208	0.03551	29.79149
Vendor	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Hauling	0.000289	6.18E-05	0.004511	0.00189	1.97E-05	3.75E-05	0.000792	0.00083	3.75E-05	0.000212	0.00025		2.750309	2.750309	0.000206	0.000442	0.001862	2.889053
Annual																		
Worker	0.001846	0.001626	0.001249	0.019191	0	0	0.005673	0.005673	0	0.001328	0.001328		4.914149	4.914149	8.05E-05	3.45E-05	0.005879	4.932322
Vendor	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Hauling	5.28E-05	1.13E-05	0.000823	0.000345	3.59E-06	6.84E-06	0.000145	0.000151	6.84E-06	3.87E-05	4.55E-05		0.455345	0.455345	3.41E-05	7.32E-05	0.000308	0.478316

3.2. Demolition (2031)

3.2.1. Onsite - Unmitigated

Location	TOG	ROG	NOx	CO	SO_2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO_2	$NBCO_2$	CO_2T	CH_4	N_2O	R	CO_2e

Daily, Summer (Max)																	
Daily, Winter (Max)																	
Off-Road E	2.817924	2.365478	20.07579	21.27888	0.041673	0.809868		0.809868	0.745079		0.745079	4416.393	4416.393	0.179148	0.03583		4431.549
Demolition							0.020413	0.020413		0.003091	0.003091						
Onsite truc	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Average Daily																	
Off-Road E	0.176465	0.148132	1.257192	1.332533	0.00261	0.050716		0.050716	0.046659		0.046659	276.5647	276.5647	0.011219	0.002244		277.5138
Demolition							0.001278	0.001278		0.000194	0.000194						
Onsite truc	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Annual																	
Off-Road E	0.032205	0.027034	0.229438	0.243187	0.000476	0.009256		0.009256	0.008515		0.008515	45.78845	45.78845	0.001857	0.000371		45.94558
Demolition							0.000233	0.000233		3.53E-05	3.53E-05						
Onsite truc	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

3.2.2. Offsite - Unmitigated

Location	TOG	ROG	NOx	CO	SO_2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO_2	$NBCO_2$	CO_2T	CH_4	N_2O	R	CO_2e
Daily, Summer (Max)																		
Daily, Winter (Max)																		
Worker	0.048342	0.047184	0.038774	0.54102	0	0	0.176811	0.176811	0	0.041444	0.041444		158.0786	158.0786	0.003086	0.006674	0.010493	160.1552
Vendor	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Hauling	0.001488	0.000338	0.023913	0.010159	0.000109	0.000208	0.004479	0.004687	0.000208	0.001198	0.001406		14.78521	14.78521	0.001035	0.002351	0.000556	15.51233
Average Daily																		
Worker	0.003051	0.002979	0.002356	0.034735	0	0	0.010812	0.010812	0	0.00253	0.00253		10.1573	10.1573	0.000169	7.25E-05	0.010968	10.1941
Vendor	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Hauling	9.38E-05	2.18E-05	0.001467	0.000633	6.84E-06	1.3E-05	0.000276	0.000289	1.3E-05	7.38E-05	8.68E-05		0.92582	0.92582	6.48E-05	0.000147	0.00058	0.971899
Annual																		
Worker	0.000557	0.000544	0.00043	0.006339	0	0	0.001973	0.001973	0	0.000462	0.000462		1.681658	1.681658	2.8E-05	1.2E-05	0.001816	1.687749
Vendor	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Hauling	1.71E-05	3.98E-06	0.000268	0.000115	1.25E-06	2.38E-06	5.03E-05	5.27E-05	2.38E-06	1.35E-05	1.58E-05		0.15328	0.15328	1.07E-05	2.44E-05	9.61E-05	0.160909

3.2.3. Onsite - Mitigated

Location	TOG	ROG	NOx	CO	SO_2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO_2	$NBCO_2$	CO_2T	CH_4	N_2O	R	CO_2e
Daily, Summer (Max)																		
Daily, Winter (Max)																		
Off-Road E	0.788456	0.716506	5.579402	23.15524	0.041673	0.127824		0.127824	0.123243		0.123243		4416.393	4416.393	0.179148	0.03583		4431.549
Demolition							0.013065	0.013065		0.001978	0.001978							
Onsite truc	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Average Daily																		
Off-Road E	0.049375	0.044869	0.349395	1.450035	0.00261	0.008005		0.008005	0.007718		0.007718		276.5647	276.5647	0.011219	0.002244		277.5138
Demolition							0.000818	0.000818		0.000124	0.000124							
Onsite truc	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Annual																		
Off-Road E	0.009011	0.008189	0.063765	0.264631	0.000476	0.001461		0.001461	0.001408		0.001408		45.78845	45.78845	0.001857	0.000371		45.94558
Demolition							0.000149	0.000149		2.26E-05	2.26E-05							
Onsite truc	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0

3.2.4. Offsite - Mitigated

Location	TOG	ROG	NOx	CO	SO_2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO_2	$NBCO_2$	CO_2T	CH_4	N_2O	R	CO_2e
Daily, Summer (Max)																		
Daily, Winter (Max)																		
Worker	0.048342	0.047184	0.038774	0.54102	0	0	0.176811	0.176811	0	0.041444	0.041444		158.0786	158.0786	0.003086	0.006674	0.010493	160.1552
Vendor	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Hauling	0.001488	0.000338	0.023913	0.010159	0.000109	0.000208	0.004479	0.004687	0.000208	0.001198	0.001406		14.78521	14.78521	0.001035	0.002351	0.000556	15.51233
Average Daily																		
Worker	0.003051	0.002979	0.002356	0.034735	0	0	0.010812	0.010812	0	0.00253	0.00253		10.1573	10.1573	0.000169	7.25E-05	0.010968	10.1941
Vendor	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Hauling	9.38E-05	2.18E-05	0.001467	0.000633	6.84E-06	1.3E-05	0.000276	0.000289	1.3E-05	7.38E-05	8.68E-05		0.92582	0.92582	6.48E-05	0.000147	0.00058	0.971899
Annual																		
Worker	0.000557	0.000544	0.00043	0.006339	0	0	0.001973	0.001973	0	0.000462	0.000462		1.681658	1.681658	2.8E-05	1.2E-05	0.001816	1.687749
Vendor	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Hauling	1.71E-05	3.98E-06	0.000268	0.000115	1.25E-06	2.38E-06	5.03E-05	5.27E-05	2.38E-06	1.35E-05	1.58E-05		0.15328	0.15328	1.07E-05	2.44E-05	9.61E-05	0.160909

3.3. Site Preparation (2027)

3.3.1. Onsite - Unmitigated

Location	TOG	ROG	NOx	CO	SO_2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO_2	$NBCO_2$	CO_2T	CH_4	N_2O	R	CO_2e
Daily, Summer (Max)																		
Daily, Winter (Max)																		
Off-Road E	0.659409	0.554087	3.48924	4.963132	0.015334	0.118237		0.118237	0.108778		0.108778		1659.978	1659.978	0.067336	0.013467		1665.674
Dust From Material Movement							0	0		0	0							
Onsite truc	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Average Daily																		
Off-Road E	0.028906	0.024289	0.152953	0.217562	0.000672	0.005183		0.005183	0.004768		0.004768		72.76614	72.76614	0.002952	0.00059		73.01586
Dust From Material Movement							0	0		0	0							
Onsite truc	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Annual																		
Off-Road E	0.005275	0.004433	0.027914	0.039705	0.000123	0.000946		0.000946	0.00087		0.00087		12.04727	12.04727	0.000489	9.77E-05		12.08861
Dust From Material Movement							0	0		0	0							
Onsite truc	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0

3.3.2. Offsite - Unmitigated

Location	TOG	ROG	NOx	CO	SO_2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO_2	$NBCO_2$	CO_2T	CH_4	N_2O	R	CO_2e
Daily, Summer (Max)																		
Daily, Winter (Max)																		
Worker	0.017924	0.015796	0.016469	0.194304	0	0	0.050517	0.050517	0	0.011841	0.011841		48.54474	48.54474	0.001102	0.002017	0.004689	49.17812
Vendor	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Hauling	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Average Daily																		
Worker	0.000781	0.000692	0.000633	0.008725	0	0	0.002162	0.002162	0	0.000506	0.000506		2.183617	2.183617	3.87E-05	8.36E-05	0.003419	2.212914
Vendor	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Hauling	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Annual																		
Worker	0.000143	0.000126	0.000116	0.001592	0	0	0.000395	0.000395	0	9.24E-05	9.24E-05		0.361523	0.361523	6.4E-06	1.38E-05	0.000566	0.366373
Vendor	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Hauling	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0

3.3.3. Onsite - Mitigated

Location	TOG	ROG	NOx	CO	SO_2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO_2	$NBCO_2$	CO_2T	CH_4	N_2O	R	CO_2e
Daily, Summer (Max)																		
Daily, Winter (Max)																		
Off-Road E	0.653466	0.566604	3.068584	11.16437	0.023379	0.110341		0.110341	0.103267		0.103267		2530.92	2530.92	0.102665	0.020533		2539.605
Dust From Material Movement							0	0		0	0							
Onsite truc	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Average Daily																		
Off-Road E	0.028645	0.024837	0.134513	0.489397	0.001025	0.004837		0.004837	0.004527		0.004527		110.9444	110.9444	0.0045	0.0009		111.3252
Dust From Material Movement							0	0		0	0							
Onsite truc	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Annual																		
Off-Road E	0.005228	0.004533	0.024549	0.089315	0.000187	0.000883		0.000883	0.000826		0.000826		18.36812	18.36812	0.000745	0.000149		18.43115
Dust From Material Movement							0	0		0	0							
Onsite truc	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0

3.3.4. Offsite - Mitigated

Location	TOG	ROG	NOx	CO	SO_2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO_2	$NBCO_2$	CO_2T	CH_4	N_2O	R	CO_2e
Daily, Summer (Max)																		
Daily, Winter (Max)																		
Worker	0.017924	0.015796	0.016469	0.194304	0	0	0.050517	0.050517	0	0.011841	0.011841		48.54474	48.54474	0.001102	0.002017	0.004689	49.17812
Vendor	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Hauling	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Average Daily																		
Worker	0.000781	0.000692	0.000633	0.008725	0	0	0.002162	0.002162	0	0.000506	0.000506		2.183617	2.183617	3.87E-05	8.36E-05	0.003419	2.212914
Vendor	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Hauling	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Annual																		
Worker	0.000143	0.000126	0.000116	0.001592	0	0	0.000395	0.000395	0	9.24E-05	9.24E-05		0.361523	0.361523	6.4E-06	1.38E-05	0.000566	0.366373
Vendor	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Hauling	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0

3.4. Grading (2027)

3.4.1. Onsite - Unmitigated

Location	TOG	ROG	NOx	CO	SO_2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO_2	$NBCO_2$	CO_2T	CH_4	N_2O	R	CO_2e
Daily, Summer (Max)																		
Daily, Winter (Max)																		
Off-Road E	1.115951	0.937709	7.944955	8.536799	0.021441	0.318264		0.318264	0.292803		0.292803		2321.623	2321.623	0.094175	0.018835		2329.59
Dust From Material Movement							1.072863	1.072863		0.116381	0.116381							
Onsite truc	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Average Daily																		
Off-Road E	0.15287	0.128453	1.08835	1.169425	0.002937	0.043598		0.043598	0.04011		0.04011		318.0306	318.0306	0.012901	0.00258		319.122
Dust From Material Movement							0.146967	0.146967		0.015943	0.015943							
Onsite truc	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Annual																		
Off-Road E	0.027899	0.023443	0.198624	0.21342	0.000536	0.007957		0.007957	0.00732		0.00732		52.65359	52.65359	0.002136	0.000427		52.83428

Dust From Material Movement							0.026822	0.026822		0.00291	0.00291						
Onsite truc	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

3.4.2. Offsite - Unmitigated

Location	TOG	ROG	NOx	CO	SO_2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO_2	$NBCO_2$	CO_2T	CH_4	N_2O	R	CO_2e
Daily, Summer (Max)																		
Daily, Winter (Max)																		
Worker	0.026885	0.023694	0.024703	0.291457	0	0	0.075776	0.075776	0	0.017762	0.017762		72.81712	72.81712	0.001653	0.003026	0.007033	73.76719
Vendor	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Hauling	0.188123	0.043335	2.981931	1.141995	0.010706	0.031099	0.438934	0.470033	0.031099	0.117381	0.14848		1636.196	1636.196	0.143769	0.261027	0.081215	1717.657
Average Daily																		
Worker	0.00366	0.003246	0.002969	0.0409	0	0	0.010136	0.010136	0	0.002372	0.002372		10.23571	10.23571	0.000181	0.000392	0.016026	10.37303
Vendor	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Hauling	0.02591	0.006076	0.400871	0.1556	0.001467	0.00426	0.059076	0.063336	0.00426	0.015817	0.020077		224.149	224.149	0.019694	0.035757	0.185156	235.4821
Annual																		
Worker	0.000668	0.000592	0.000542	0.007464	0	0	0.00185	0.00185	0	0.000433	0.000433		1.694638	1.694638	3E-05	6.49E-05	0.002653	1.717374
Vendor	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Hauling	0.004729	0.001109	0.073159	0.028397	0.000268	0.000777	0.010781	0.011559	0.000777	0.002887	0.003664		37.11042	37.11042	0.003261	0.00592	0.030655	38.98675

3.4.3. Onsite - Mitigated

Location	TOG	ROG	NOx	CO	SO_2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO_2	$NBCO_2$	CO_2T	CH_4	N_2O	R	CO_2e
Daily, Summer (Max)																		
Daily, Winter (Max)																		
Off-Road E	0.661849	0.613333	4.043896	21.70732	0.038929	0.162987		0.162987	0.155677		0.155677		4214.922	4214.922	0.170976	0.034195		4229.386
Dust From Material Movement							0.832012	0.832012		0.090047	0.090047							
Onsite truc	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Average Daily																		
Off-Road E	0.090664	0.084018	0.553958	2.973606	0.005333	0.022327		0.022327	0.021326		0.021326		577.3865	577.3865	0.023421	0.004684		579.368
Dust From Material Movement							0.113974	0.113974		0.012335	0.012335							
Onsite truc	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Annual																		
Off-Road E	0.016546	0.015333	0.101097	0.542683	0.000973	0.004075		0.004075	0.003892		0.003892		95.59293	95.59293	0.003878	0.000776		95.92098
Dust From Material Movement							0.0208	0.0208		0.002251	0.002251							
Onsite truc	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0

3.4.4. Offsite - Mitigated

Location	TOG	ROG	NOx	CO	SO_2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO_2	$NBCO_2$	CO_2T	CH_4	N_2O	R	CO_2e
Daily, Summer (Max)																		
Daily, Winter (Max)																		
Worker	0.026885	0.023694	0.024703	0.291457	0	0	0.075776	0.075776	0	0.017762	0.017762		72.81712	72.81712	0.001653	0.003026	0.007033	73.76719
Vendor	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Hauling	0.188123	0.043335	2.981931	1.141995	0.010706	0.031099	0.438934	0.470033	0.031099	0.117381	0.14848		1636.196	1636.196	0.143769	0.261027	0.081215	1717.657
Average Daily																		
Worker	0.00366	0.003246	0.002969	0.0409	0	0	0.010136	0.010136	0	0.002372	0.002372		10.23571	10.23571	0.000181	0.000392	0.016026	10.37303
Vendor	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Hauling	0.02591	0.006076	0.400871	0.1556	0.001467	0.00426	0.059076	0.063336	0.00426	0.015817	0.020077		224.149	224.149	0.019694	0.035757	0.185156	235.4821
Annual																		

Worker	0.000668	0.000592	0.000542	0.007464	0	0	0.00185	0.00185	0	0.000433	0.000433		1.694638	1.694638	3E-05	6.49E-05	0.002653	1.717374
Vendor	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Hauling	0.004729	0.001109	0.073159	0.028397	0.000268	0.000777	0.010781	0.011559	0.000777	0.002887	0.003664		37.11042	37.11042	0.003261	0.00592	0.030655	38.98675

3.5. Grading (2028)

3.5.1. Onsite - Unmitigated

Location	TOG	ROG	NOx	CO	SO_2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO_2	$NBCO_2$	CO_2T	CH_4	N_2O	R	CO_2e
Daily, Summer (Max)																		
Off-Road E	1.07319	0.901777	7.418894	8.458322	0.021443	0.287633		0.287633	0.264622		0.264622		2321.695	2321.695	0.094178	0.018836		2329.662
Dust From Material Movement							1.072863	1.072863		0.116381	0.116381							
Onsite truc	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Daily, Winter (Max)																		
Off-Road E	1.07319	0.901777	7.418894	8.458322	0.021443	0.287633		0.287633	0.264622		0.264622		2321.695	2321.695	0.094178	0.018836		2329.662
Dust From Material Movement							1.072863	1.072863		0.116381	0.116381							
Onsite truc	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Average Daily																		
Off-Road E	0.441037	0.370593	3.04886	3.476023	0.008812	0.118205		0.118205	0.108749		0.108749		954.1211	954.1211	0.038703	0.007741		957.3954
Dust From Material Movement							0.440902	0.440902		0.047828	0.047828							
Onsite truc	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Annual																		
Off-Road E	0.080489	0.067633	0.556417	0.634374	0.001608	0.021572		0.021572	0.019847		0.019847		157.9656	157.9656	0.006408	0.001282		158.5077
Dust From Material Movement							0.080465	0.080465		0.008729	0.008729							
Onsite truc	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0

3.5.2. Offsite - Unmitigated

Location	TOG	ROG	NOx	CO	SO_2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO_2	$NBCO_2$	CO_2T	CH_4	N_2O	R	CO_2e
Daily, Summer (Max)																		
Worker	0.028539	0.025678	0.016452	0.3737	0	0	0.075776	0.075776	0	0.017762	0.017762		80.29082	80.29082	0.000992	0.000496	0.244797	80.70824
Vendor	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Hauling	0.178946	0.044864	2.61945	1.102738	0.010706	0.030589	0.438934	0.469523	0.030589	0.117381	0.14797		1591.812	1591.812	0.133063	0.250831	2.857841	1672.744
Daily, Winter (Max)																		
Worker	0.026059	0.023033	0.022008	0.275005	0	0	0.075776	0.075776	0	0.017762	0.017762		71.32524	71.32524	0.001488	0.003026	0.006357	72.2705
Vendor	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Hauling	0.177417	0.043335	2.821848	1.112935	0.010706	0.031099	0.438934	0.470033	0.031099	0.117381	0.14848		1591.74	1591.74	0.133063	0.250831	0.074362	1669.889
Average Daily																		
Worker	0.010641	0.009466	0.007869	0.115373	0	0	0.030409	0.030409	0	0.007116	0.007116		30.07818	30.07818	0.000544	0.001176	0.043492	30.48558
Vendor	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Hauling	0.07333	0.018228	1.136617	0.454856	0.0044	0.01278	0.177227	0.190008	0.01278	0.04745	0.06023		654.1567	654.1567	0.054683	0.103081	0.508132	686.7501
Annual																		
Worker	0.001942	0.001727	0.001436	0.021056	0	0	0.00555	0.00555	0	0.001299	0.001299		4.979786	4.979786	9E-05	0.000195	0.007201	5.047235
Vendor	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Hauling	0.013383	0.003327	0.207433	0.083011	0.000803	0.002332	0.032344	0.034676	0.002332	0.00866	0.010992		108.3031	108.3031	0.009053	0.017066	0.084127	113.6993

3.5.3. Onsite - Mitigated

Location	TOG	ROG	NOx	CO	SO_2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO_2	$NBCO_2$	CO_2T	CH_4	N_2O	R	CO_2e
Daily, Summer (Max)																		
Off-Road E	0.642779	0.59731	3.933847	21.70689	0.038928	0.147486		0.147486	0.141416		0.141416		4214.649	4214.649	0.170965	0.034193		4229.113

Dust From Material Movement							0.832012	0.832012		0.090047	0.090047						
Onsite truc	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Daily, Winter (Max)																	
Off-Road E	0.642779	0.59731	3.933847	21.70689	0.038928	0.147486		0.147486	0.141416		0.141416	4214.649	4214.649	0.170965	0.034193		4229.113
Dust From Material Movement							0.832012	0.832012		0.090047	0.090047						
Onsite truc	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Average Daily																	
Off-Road E	0.264156	0.24547	1.616649	8.92064	0.015998	0.060611		0.060611	0.058116		0.058116	1732.048	1732.048	0.070259	0.014052		1737.992
Dust From Material Movement							0.341923	0.341923		0.037006	0.037006						
Onsite truc	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Annual																	
Off-Road E	0.048208	0.044798	0.295039	1.628017	0.00292	0.011061		0.011061	0.010606		0.010606	286.7602	286.7602	0.011632	0.002326		287.7443
Dust From Material Movement							0.062401	0.062401		0.006754	0.006754						
Onsite truc	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

3.5.4. Offsite - Mitigated

Location	TOG	ROG	NOx	CO	SO_2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO_2	$NBCO_2$	CO_2T	CH_4	N_2O	R	CO_2e
Daily, Summer (Max)																		
Worker	0.028539	0.025678	0.016452	0.3737	0	0	0.075776	0.075776	0	0.017762	0.017762		80.29082	80.29082	0.000992	0.000496	0.244797	80.70824
Vendor	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Hauling	0.178946	0.044864	2.61945	1.102738	0.010706	0.030589	0.438934	0.469523	0.030589	0.117381	0.14797		1591.812	1591.812	0.133063	0.250831	2.857841	1672.744
Daily, Winter (Max)																		
Worker	0.026059	0.023033	0.022008	0.275005	0	0	0.075776	0.075776	0	0.017762	0.017762		71.32524	71.32524	0.001488	0.003026	0.006357	72.2705
Vendor	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Hauling	0.177417	0.043335	2.821848	1.112935	0.010706	0.031099	0.438934	0.470033	0.031099	0.117381	0.14848		1591.74	1591.74	0.133063	0.250831	0.074362	1669.889
Average Daily																		
Worker	0.010641	0.009466	0.007869	0.115373	0	0	0.030409	0.030409	0	0.007116	0.007116		30.07818	30.07818	0.000544	0.001176	0.043492	30.48558
Vendor	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Hauling	0.07333	0.018228	1.136617	0.454856	0.0044	0.01278	0.177227	0.190008	0.01278	0.04745	0.06023		654.1567	654.1567	0.054683	0.103081	0.508132	686.7501
Annual																		
Worker	0.001942	0.001727	0.001436	0.021056	0	0	0.00555	0.00555	0	0.001299	0.001299		4.979786	4.979786	9E-05	0.000195	0.007201	5.047235
Vendor	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Hauling	0.013383	0.003327	0.207433	0.083011	0.000803	0.002332	0.032344	0.034676	0.002332	0.00866	0.010992		108.3031	108.3031	0.009053	0.017066	0.084127	113.6993

3.6. Building Construction (2028)

3.6.1. Onsite - Unmitigated

Location	TOG	ROG	NOx	CO	SO_2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO_2	$NBCO_2$	CO_2T	CH_4	N_2O	R	CO_2e
Daily, Summer (Max)																		
Daily, Winter (Max)																		
Off-Road E	1.010164	0.846317	7.252151	9.971271	0.018141	0.276056		0.276056	0.253971		0.253971		1881.397	1881.397	0.076318	0.015264		1887.854
Onsite truc	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Average Daily																		
Off-Road E	0.067212	0.056311	0.482531	0.66345	0.001207	0.018368		0.018368	0.016898		0.016898		125.181	125.181	0.005078	0.001016		125.6106
Onsite truc	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Annual																		
Off-Road E	0.012266	0.010277	0.088062	0.12108	0.00022	0.003352		0.003352	0.003084		0.003084		20.72515	20.72515	0.000841	0.000168		20.79627
Onsite truc	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0

3.6.2. Offsite - Unmitigated

Location	TOG	ROG	NOx	CO	SO_2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO_2	$NBCO_2$	CO_2T	CH_4	N_2O	R	CO_2e
Daily, Summer (Max)																		
Daily, Winter (Max)																		
Worker	0.005837	0.005159	0.00493	0.061601	0	0	0.016974	0.016974	0	0.003979	0.003979		15.97685	15.97685	0.000333	0.000678	0.001424	16.18859
Vendor	0.001763	0.000642	0.030159	0.011664	0.000127	0.000254	0.004967	0.005221	0.000254	0.001337	0.001591		17.67244	17.67244	0.001107	0.002659	0.000928	18.49356
Hauling	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Average Daily																		
Worker	0.000386	0.000343	0.000285	0.004184	0	0	0.001103	0.001103	0	0.000258	0.000258		1.090835	1.090835	1.97E-05	4.26E-05	0.001577	1.10561
Vendor	0.000118	4.37E-05	0.001975	0.000763	8.46E-06	1.69E-05	0.000324	0.000341	1.69E-05	8.74E-05	0.000104		1.175922	1.175922	7.37E-05	0.000177	0.001026	1.23152
Hauling	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Annual																		
Worker	7.04E-05	6.26E-05	5.21E-05	0.000764	0	0	0.000201	0.000201	0	4.71E-05	4.71E-05		0.1806	0.1806	3.26E-06	7.06E-06	0.000261	0.183046
Vendor	2.16E-05	7.97E-06	0.00036	0.000139	1.54E-06	3.09E-06	5.91E-05	6.22E-05	3.09E-06	1.59E-05	1.9E-05		0.194687	0.194687	1.22E-05	2.93E-05	0.00017	0.203892
Hauling	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0

3.6.3. Onsite - Mitigated

Location	TOG	ROG	NOx	CO	SO_2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO_2	$NBCO_2$	CO_2T	CH_4	N_2O	R	CO_2e
Daily, Summer (Max)																		
Daily, Winter (Max)																		
Off-Road E	0.620665	0.539076	4.099173	12.71607	0.019549	0.146871		0.146871	0.13713		0.13713		2033.837	2033.837	0.082501	0.0165		2040.817
Onsite truc	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Average Daily																		
Off-Road E	0.041297	0.035868	0.272743	0.846079	0.001301	0.009772		0.009772	0.009124		0.009124		135.3238	135.3238	0.005489	0.001098		135.7882
Onsite truc	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Annual																		
Off-Road E	0.007537	0.006546	0.049776	0.154409	0.000237	0.001783		0.001783	0.001665		0.001665		22.4044	22.4044	0.000909	0.000182		22.48129
Onsite truc	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0

3.6.4. Offsite - Mitigated

Location	TOG	ROG	NOx	CO	SO_2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO_2	$NBCO_2$	CO_2T	CH_4	N_2O	R	CO_2e
Daily, Summer (Max)																		
Daily, Winter (Max)																		
Worker	0.005837	0.005159	0.00493	0.061601	0	0	0.016974	0.016974	0	0.003979	0.003979		15.97685	15.97685	0.000333	0.000678	0.001424	16.18859
Vendor	0.001763	0.000642	0.030159	0.011664	0.000127	0.000254	0.004967	0.005221	0.000254	0.001337	0.001591		17.67244	17.67244	0.001107	0.002659	0.000928	18.49356
Hauling	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Average Daily																		
Worker	0.000386	0.000343	0.000285	0.004184	0	0	0.001103	0.001103	0	0.000258	0.000258		1.090835	1.090835	1.97E-05	4.26E-05	0.001577	1.10561
Vendor	0.000118	4.37E-05	0.001975	0.000763	8.46E-06	1.69E-05	0.000324	0.000341	1.69E-05	8.74E-05	0.000104		1.175922	1.175922	7.37E-05	0.000177	0.001026	1.23152
Hauling	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Annual																		
Worker	7.04E-05	6.26E-05	5.21E-05	0.000764	0	0	0.000201	0.000201	0	4.71E-05	4.71E-05		0.1806	0.1806	3.26E-06	7.06E-06	0.000261	0.183046
Vendor	2.16E-05	7.97E-06	0.00036	0.000139	1.54E-06	3.09E-06	5.91E-05	6.22E-05	3.09E-06	1.59E-05	1.9E-05		0.194687	0.194687	1.22E-05	2.93E-05	0.00017	0.203892
Hauling	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0

3.7. Building Construction (2029)

3.7.1. Onsite - Unmitigated

Location	TOG	ROG	NOx	CO	SO_2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO_2	$NBCO_2$	CO_2T	CH_4	N_2O	R	CO_2e
Daily, Summer (Max)																		
Off-Road E	0.981642	0.822478	6.923425	9.945928	0.018143	0.253001		0.253001	0.232761		0.232761		1881.523	1881.523	0.076323	0.015265		1887.98
Onsite truc	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Daily, Winter (Max)																		
Off-Road E	0.981642	0.822478	6.923425	9.945928	0.018143	0.253001		0.253001	0.232761		0.232761		1881.523	1881.523	0.076323	0.015265		1887.98
Onsite truc	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Average Daily																		
Off-Road E	0.582069	0.487692	4.10528	5.897488	0.010758	0.150018		0.150018	0.138017		0.138017		1115.658	1115.658	0.045256	0.009051		1119.487
Onsite truc	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Annual																		
Off-Road E	0.106228	0.089004	0.749214	1.076291	0.001963	0.027378		0.027378	0.025188		0.025188		184.71	184.71	0.007493	0.001499		185.3438
Onsite truc	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0

3.7.2. Offsite - Unmitigated

Location	TOG	ROG	NOx	CO	SO_2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO_2	$NBCO_2$	CO_2T	CH_4	N_2O	R	CO_2e
Daily, Summer (Max)																		
Worker	0.006133	0.005493	0.003611	0.078879	0	0	0.016974	0.016974	0	0.003979	0.003979		17.66195	17.66195	0.000222	0.000111	0.04923	17.74985
Vendor	0.001665	0.000543	0.026349	0.010936	0.000127	0.000254	0.004967	0.005221	0.000254	0.001337	0.001591		17.14874	17.14874	0.001093	0.002532	0.031102	17.96177
Hauling	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Daily, Winter (Max)																		
Worker	0.005578	0.0049	0.004363	0.057953	0	0	0.016974	0.016974	0	0.003979	0.003979		15.69321	15.69321	0.000333	0.000678	0.001272	15.9048
Vendor	0.001636	0.000515	0.02819	0.011239	0.000127	0.000254	0.004967	0.005221	0.000254	0.001337	0.001591		17.1488	17.1488	0.001093	0.002532	0.000806	17.93153
Hauling	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Average Daily																		
Worker	0.003329	0.002927	0.002185	0.035257	0	0	0.009828	0.009828	0	0.0023	0.0023		9.548297	9.548297	0.000154	0.00038	0.012575	9.677936
Vendor	0.00097	0.000314	0.016429	0.006561	7.54E-05	0.000151	0.002888	0.003039	0.000151	0.000779	0.000929		10.16839	10.16839	0.000648	0.001502	0.007959	10.64
Hauling	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Annual																		
Worker	0.000608	0.000534	0.000399	0.006434	0	0	0.001794	0.001794	0	0.00042	0.00042		1.58083	1.58083	2.55E-05	6.29E-05	0.002082	1.602293
Vendor	0.000177	5.72E-05	0.002998	0.001197	1.38E-05	2.75E-05	0.000527	0.000555	2.75E-05	0.000142	0.00017		1.683493	1.683493	0.000107	0.000249	0.001318	1.761573
Hauling	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0

3.7.3. Onsite - Mitigated

Location	TOG	ROG	NOx	CO	SO_2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO_2	$NBCO_2$	CO_2T	CH_4	N_2O	R	CO_2e
Daily, Summer (Max)																		
Off-Road E	0.607752	0.528353	4.007637	12.72477	0.019551	0.13548		0.13548	0.12665		0.12665		2033.978	2033.978	0.082507	0.016501		2040.958
Onsite truc	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Daily, Winter (Max)																		
Off-Road E	0.607752	0.528353	4.007637	12.72477	0.019551	0.13548		0.13548	0.12665		0.12665		2033.978	2033.978	0.082507	0.016501		2040.958
Onsite truc	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Average Daily																		
Off-Road E	0.360369	0.313289	2.376348	7.545218	0.011593	0.080333		0.080333	0.075098		0.075098		1206.057	1206.057	0.048923	0.009785		1210.196
Onsite truc	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Annual																		
Off-Road E	0.065767	0.057175	0.433684	1.377002	0.002116	0.014661		0.014661	0.013705		0.013705		199.6765	199.6765	0.0081	0.00162		200.3618

Onsite truc	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

3.7.4. Offsite - Mitigated

Location	TOG	ROG	NOx	CO	SO_2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO_2	$NBCO_2$	CO_2T	CH_4	N_2O	R	CO_2e
Daily, Summer (Max)																		
Worker	0.006133	0.005493	0.003611	0.078879	0	0	0.016974	0.016974	0	0.003979	0.003979		17.66195	17.66195	0.000222	0.000111	0.04923	17.74985
Vendor	0.001665	0.000543	0.026349	0.010936	0.000127	0.000254	0.004967	0.005221	0.000254	0.001337	0.001591		17.14874	17.14874	0.001093	0.002532	0.031102	17.96177
Hauling	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Daily, Winter (Max)																		
Worker	0.005578	0.0049	0.004363	0.057953	0	0	0.016974	0.016974	0	0.003979	0.003979		15.69321	15.69321	0.000333	0.000678	0.001272	15.9048
Vendor	0.001636	0.000515	0.02819	0.011239	0.000127	0.000254	0.004967	0.005221	0.000254	0.001337	0.001591		17.1488	17.1488	0.001093	0.002532	0.000806	17.93153
Hauling	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Average Daily																		
Worker	0.003329	0.002927	0.002185	0.035257	0	0	0.009828	0.009828	0	0.0023	0.0023		9.548297	9.548297	0.000154	0.00038	0.012575	9.677936
Vendor	0.00097	0.000314	0.016429	0.006561	7.54E-05	0.000151	0.002888	0.003039	0.000151	0.000779	0.000929		10.16839	10.16839	0.000648	0.001502	0.007959	10.64
Hauling	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Annual																		
Worker	0.000608	0.000534	0.000399	0.006434	0	0	0.001794	0.001794	0	0.00042	0.00042		1.58083	1.58083	2.55E-05	6.29E-05	0.002082	1.602293
Vendor	0.000177	5.72E-05	0.002998	0.001197	1.38E-05	2.75E-05	0.000527	0.000555	2.75E-05	0.000142	0.00017		1.683493	1.683493	0.000107	0.000249	0.001318	1.761573
Hauling	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0

3.8. Building Construction - Pole Install (2029)

3.8.1. Onsite - Unmitigated

Location	TOG	ROG	NOx	CO	SO_2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO_2	$NBCO_2$	CO_2T	CH_4	N_2O	R	CO_2e
Daily, Summer (Max)																		
Daily, Winter (Max)																		
Off-Road E	0.53575	0.449265	4.00772	5.361604	0.012388	0.143314		0.143314	0.131849		0.131849		1305.943	1305.943	0.052975	0.010595		1310.424
Onsite truc	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Average Daily																		
Off-Road E	0.071923	0.060312	0.538023	0.719777	0.001663	0.019239		0.019239	0.0177		0.0177		175.3183	175.3183	0.007112	0.001422		175.92
Onsite truc	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Annual																		
Off-Road E	0.013126	0.011007	0.098189	0.131359	0.000303	0.003511		0.003511	0.00323		0.00323		29.02595	29.02595	0.001177	0.000235		29.12556
Onsite truc	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0

3.8.2. Offsite - Unmitigated

Location	TOG	ROG	NOx	CO	SO_2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO_2	$NBCO_2$	CO_2T	CH_4	N_2O	R	CO_2e
Daily, Summer (Max)																		
Daily, Winter (Max)																		
Worker	0.005578	0.0049	0.004363	0.057953	0	0	0.016974	0.016974	0	0.003979	0.003979		15.69321	15.69321	0.000333	0.000678	0.001272	15.9048
Vendor	0.001636	0.000515	0.02819	0.011239	0.000127	0.000254	0.004967	0.005221	0.000254	0.001337	0.001591		17.1488	17.1488	0.001093	0.002532	0.000806	17.93153
Hauling	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Average Daily																		
Worker	0.000754	0.000663	0.000495	0.007982	0	0	0.002225	0.002225	0	0.000521	0.000521		2.16176	2.16176	3.48E-05	8.6E-05	0.002847	2.19111
Vendor	0.00022	7.1E-05	0.00372	0.001486	1.71E-05	3.41E-05	0.000654	0.000688	3.41E-05	0.000176	0.00021		2.30215	2.30215	0.000147	0.00034	0.001802	2.408923
Hauling	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Annual																		

Worker	0.000138	0.000121	9.03E-05	0.001457	0	0	0.000406	0.000406	0	9.5E-05	9.5E-05		0.357904	0.357904	5.76E-06	1.42E-05	0.000471	0.362763
Vendor	4.01E-05	1.3E-05	0.000679	0.000271	3.12E-06	6.23E-06	0.000119	0.000126	6.23E-06	3.22E-05	3.84E-05		0.381147	0.381147	2.43E-05	5.63E-05	0.000298	0.398825
Hauling	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0

3.8.3. Onsite - Mitigated

Location	TOG	ROG	NOx	CO	SO_2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO_2	$NBCO_2$	CO_2T	CH_4	N_2O	R	CO_2e
Daily, Summer (Max)																		
Daily, Winter (Max)																		
Off-Road E	0.18476	0.173299	1.031726	7.300048	0.012388	0.039817		0.039817	0.038531		0.038531		1305.943	1305.943	0.052975	0.010595		1310.424
Onsite truc	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Average Daily																		
Off-Road E	0.024803	0.023265	0.138506	0.980006	0.001663	0.005345		0.005345	0.005173		0.005173		175.3183	175.3183	0.007112	0.001422		175.92
Onsite truc	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Annual																		
Off-Road E	0.004527	0.004246	0.025277	0.178851	0.000303	0.000976		0.000976	0.000944		0.000944		29.02595	29.02595	0.001177	0.000235		29.12556
Onsite truc	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0

3.8.4. Offsite - Mitigated

Location	TOG	ROG	NOx	CO	SO_2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO_2	$NBCO_2$	CO_2T	CH_4	N_2O	R	CO_2e
Daily, Summer (Max)																		
Daily, Winter (Max)																		
Worker	0.005578	0.0049	0.004363	0.057953	0	0	0.016974	0.016974	0	0.003979	0.003979		15.69321	15.69321	0.000333	0.000678	0.001272	15.9048
Vendor	0.001636	0.000515	0.02819	0.011239	0.000127	0.000254	0.004967	0.005221	0.000254	0.001337	0.001591		17.1488	17.1488	0.001093	0.002532	0.000806	17.93153
Hauling	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Average Daily																		
Worker	0.000754	0.000663	0.000495	0.007982	0	0	0.002225	0.002225	0	0.000521	0.000521		2.16176	2.16176	3.48E-05	8.6E-05	0.002847	2.19111
Vendor	0.00022	7.1E-05	0.00372	0.001486	1.71E-05	3.41E-05	0.000654	0.000688	3.41E-05	0.000176	0.00021		2.30215	2.30215	0.000147	0.00034	0.001802	2.408923
Hauling	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Annual																		
Worker	0.000138	0.000121	9.03E-05	0.001457	0	0	0.000406	0.000406	0	9.5E-05	9.5E-05		0.357904	0.357904	5.76E-06	1.42E-05	0.000471	0.362763
Vendor	4.01E-05	1.3E-05	0.000679	0.000271	3.12E-06	6.23E-06	0.000119	0.000126	6.23E-06	3.22E-05	3.84E-05		0.381147	0.381147	2.43E-05	5.63E-05	0.000298	0.398825
Hauling	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0

3.9. Linear, Grubbing & Land Clearing (2028)

3.9.1. Onsite - Unmitigated

Location	TOG	ROG	NOx	CO	SO_2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO_2	$NBCO_2$	CO_2T	CH_4	N_2O	R	CO_2e
Daily, Summer (Max)																		
Off-Road E	0.115195	0.096796	1.168858	2.406838	0.003541	0.025886		0.025886	0.023815		0.023815		383.2691	383.2691	0.015547	0.003109		384.5843
Dust From Material Movement							0	0		0	0							
Onsite truc	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Daily, Winter (Max)																		
Average Daily																		
Off-Road E	0.006312	0.005304	0.064047	0.131882	0.000194	0.001418		0.001418	0.001305		0.001305		21.00104	21.00104	0.000852	0.00017		21.07311
Dust From Material Movement							0	0		0	0							
Onsite truc	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Annual																		
Off-Road E	0.001152	0.000968	0.011689	0.024068	3.54E-05	0.000259		0.000259	0.000238		0.000238		3.476963	3.476963	0.000141	2.82E-05		3.488895

Dust From Material Movement							0	0		0	0							
Onsite truc	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

3.9.2. Offsite - Unmitigated

Location	TOG	ROG	NOx	CO	SO_2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO_2	$NBCO_2$	CO_2T	CH_4	N_2O	R	CO_2e
Daily, Summer (Max)																		
Worker	0.009513	0.008559	0.005484	0.124567	0	0	0.025259	0.025259	0	0.005921	0.005921		26.76361	26.76361	0.000331	0.000165	0.081599	26.90275
Vendor	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Hauling	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Daily, Winter (Max)																		
Average Daily																		
Worker	0.000473	0.000421	0.00035	0.005128	0	0	0.001352	0.001352	0	0.000316	0.000316		1.336808	1.336808	2.42E-05	5.22E-05	0.001933	1.354914
Vendor	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Hauling	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Annual																		
Worker	8.63E-05	7.68E-05	6.38E-05	0.000936	0	0	0.000247	0.000247	0	5.77E-05	5.77E-05		0.221324	0.221324	4E-06	8.65E-06	0.00032	0.224322
Vendor	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Hauling	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0

3.9.3. Onsite - Mitigated

Location	TOG	ROG	NOx	CO	SO_2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO_2	$NBCO_2$	CO_2T	CH_4	N_2O	R	CO_2e
Daily, Summer (Max)																		
Off-Road E	0.036597	0.036597	0.190303	2.708158	0.003541	0.007319		0.007319	0.007319		0.007319		383.2691	383.2691	0.015547	0.003109		384.5843
Dust From Material Movement							0	0		0	0							
Onsite truc	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Daily, Winter (Max)																		
Average Daily																		
Off-Road E	0.002005	0.002005	0.010428	0.148392	0.000194	0.000401		0.000401	0.000401		0.000401		21.00104	21.00104	0.000852	0.00017		21.07311
Dust From Material Movement							0	0		0	0							
Onsite truc	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Annual																		
Off-Road E	0.000366	0.000366	0.001903	0.027082	3.54E-05	7.32E-05		7.32E-05	7.32E-05		7.32E-05		3.476963	3.476963	0.000141	2.82E-05		3.488895
Dust From Material Movement							0	0		0	0							
Onsite truc	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0

3.9.4. Offsite - Mitigated

Location	TOG	ROG	NOx	CO	SO_2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO_2	$NBCO_2$	CO_2T	CH_4	N_2O	R	CO_2e
Daily, Summer (Max)																		
Worker	0.009513	0.008559	0.005484	0.124567	0	0	0.025259	0.025259	0	0.005921	0.005921		26.76361	26.76361	0.000331	0.000165	0.081599	26.90275
Vendor	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Hauling	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Daily, Winter (Max)																		
Average Daily																		
Worker	0.000473	0.000421	0.00035	0.005128	0	0	0.001352	0.001352	0	0.000316	0.000316		1.336808	1.336808	2.42E-05	5.22E-05	0.001933	1.354914
Vendor	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Hauling	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Annual																		

Worker	8.63E-05	7.68E-05	6.38E-05	0.000936	0	0	0.000247	0.000247	0	5.77E-05	5.77E-05	0.221324	0.221324	4E-06	8.65E-06	0.00032	0.224322
Vendor	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hauling	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

3.10. Linear, Grading & Excavation (2028)

3.10.1. Onsite - Unmitigated

Location	TOG	ROG	NOx	CO	SO_2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO_2	$NBCO_2$	CO_2T	CH_4	N_2O	R	CO_2e
Daily, Summer (Max)																		
Off-Road E	1.152309	0.96826	7.994247	13.18534	0.01848	0.338916		0.338916	0.311803		0.311803		2001.362	2001.362	0.081184	0.016237		2008.23
Dust From Material Movement							1.0605	1.0605		0.114509	0.114509							
Onsite truc	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Daily, Winter (Max)																		
Off-Road E	1.152309	0.96826	7.994247	13.18534	0.01848	0.338916		0.338916	0.311803		0.311803		2001.362	2001.362	0.081184	0.016237		2008.23
Dust From Material Movement							1.0605	1.0605		0.114509	0.114509							
Onsite truc	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Average Daily																		
Off-Road E	0.255718	0.214874	1.774066	2.926061	0.004101	0.075211		0.075211	0.069195		0.069195		444.1379	444.1379	0.018016	0.003603		445.6621
Dust From Material Movement							0.235344	0.235344		0.025412	0.025412							
Onsite truc	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Annual																		
Off-Road E	0.046669	0.039215	0.323767	0.534006	0.000748	0.013726		0.013726	0.012628		0.012628		73.5321	73.5321	0.002983	0.000597		73.78444
Dust From Material Movement							0.04295	0.04295		0.004638	0.004638							
Onsite truc	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0

3.10.2. Offsite - Unmitigated

Location	TOG	ROG	NOx	CO	SO_2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO_2	$NBCO_2$	CO_2T	CH_4	N_2O	R	CO_2e
Daily, Summer (Max)																		
Worker	0.057078	0.051357	0.032904	0.7474	0	0	0.151552	0.151552	0	0.035524	0.035524		160.5816	160.5816	0.001984	0.000992	0.489594	161.4165
Vendor	0.008201	0.003069	0.129063	0.051853	0.000582	0.001164	0.022727	0.023891	0.001164	0.006118	0.007282		80.87679	80.87679	0.005066	0.01217	0.163129	84.79309
Hauling	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Daily, Winter (Max)																		
Worker	0.052117	0.046066	0.044015	0.550009	0	0	0.151552	0.151552	0	0.035524	0.035524		142.6505	142.6505	0.002976	0.006052	0.012713	144.541
Vendor	0.008069	0.002937	0.138005	0.053374	0.000582	0.001164	0.022727	0.023891	0.001164	0.006118	0.007282		80.8684	80.8684	0.005066	0.01217	0.004245	84.62582
Hauling	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Average Daily																		
Worker	0.011492	0.010223	0.008498	0.124603	0	0	0.032842	0.032842	0	0.007686	0.007686		32.48443	32.48443	0.000587	0.00127	0.046971	32.92442
Vendor	0.001805	0.000666	0.030136	0.011639	0.000129	0.000258	0.004946	0.005204	0.000258	0.001333	0.001592		17.94712	17.94712	0.001124	0.002701	0.015663	18.79568
Hauling	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Annual																		
Worker	0.002097	0.001866	0.001551	0.02274	0	0	0.005994	0.005994	0	0.001403	0.001403		5.378169	5.378169	9.72E-05	0.00021	0.007777	5.451014
Vendor	0.000329	0.000122	0.0055	0.002124	2.36E-05	4.71E-05	0.000903	0.00095	4.71E-05	0.000243	0.00029		2.971351	2.971351	0.000186	0.000447	0.002593	3.111839
Hauling	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0

3.10.3. Onsite - Mitigated

Location	TOG	ROG	NOx	CO	SO_2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO_2	$NBCO_2$	CO_2T	CH_4	N_2O	R	CO_2e
Daily, Summer (Max)																		
Off-Road E	0.520411	0.520411	7.66142	32.95145	0.043518	0.08671		0.08671	0.08671		0.08671		4712.653	4712.653	0.191166	0.038233		4728.826

Dust From Material Movement							0.620393	0.620393		0.066988	0.066988						
Onsite truc	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Daily, Winter (Max)																	
Off-Road E	0.520411	0.520411	7.66142	32.95145	0.043518	0.08671		0.08671	0.08671		0.08671	4712.653	4712.653	0.191166	0.038233		4728.826
Dust From Material Movement							0.620393	0.620393		0.066988	0.066988						
Onsite truc	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Average Daily																	
Off-Road E	0.115488	0.115488	1.700205	7.312514	0.009657	0.019243		0.019243	0.019243		0.019243	1045.822	1045.822	0.042423	0.008485		1049.411
Dust From Material Movement							0.137676	0.137676		0.014866	0.014866						
Onsite truc	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Annual																	
Off-Road E	0.021077	0.021077	0.310288	1.334534	0.001762	0.003512		0.003512	0.003512		0.003512	173.1477	173.1477	0.007024	0.001405		173.7419
Dust From Material Movement							0.025126	0.025126		0.002713	0.002713						
Onsite truc	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

3.10.4. Offsite - Mitigated

Location	TOG	ROG	NOx	CO	SO_2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO_2	$NBCO_2$	CO_2T	CH_4	N_2O	R	CO_2e
Daily, Summer (Max)																		
Worker	0.057078	0.051357	0.032904	0.7474	0	0	0.151552	0.151552	0	0.035524	0.035524		160.5816	160.5816	0.001984	0.000992	0.489594	161.4165
Vendor	0.008201	0.003069	0.129063	0.051853	0.000582	0.001164	0.022727	0.023891	0.001164	0.006118	0.007282		80.87679	80.87679	0.005066	0.01217	0.163129	84.79309
Hauling	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Daily, Winter (Max)																		
Worker	0.052117	0.046066	0.044015	0.550009	0	0	0.151552	0.151552	0	0.035524	0.035524		142.6505	142.6505	0.002976	0.006052	0.012713	144.541
Vendor	0.008069	0.002937	0.138005	0.053374	0.000582	0.001164	0.022727	0.023891	0.001164	0.006118	0.007282		80.8684	80.8684	0.005066	0.01217	0.004245	84.62582
Hauling	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Average Daily																		
Worker	0.011492	0.010223	0.008498	0.124603	0	0	0.032842	0.032842	0	0.007686	0.007686		32.48443	32.48443	0.000587	0.00127	0.046971	32.92442
Vendor	0.001805	0.000666	0.030136	0.011639	0.000129	0.000258	0.004946	0.005204	0.000258	0.001333	0.001592		17.94712	17.94712	0.001124	0.002701	0.015663	18.79568
Hauling	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Annual																		
Worker	0.002097	0.001866	0.001551	0.02274	0	0	0.005994	0.005994	0	0.001403	0.001403		5.378169	5.378169	9.72E-05	0.00021	0.007777	5.451014
Vendor	0.000329	0.000122	0.0055	0.002124	2.36E-05	4.71E-05	0.000903	0.00095	4.71E-05	0.000243	0.00029		2.971351	2.971351	0.000186	0.000447	0.002593	3.111839
Hauling	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0

3.11. Linear, Drainage, Utilities, & Sub-Grade (2027)

3.11.1. Onsite - Unmitigated

Location	TOG	ROG	NOx	CO	SO_2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO_2	$NBCO_2$	CO_2T	CH_4	N_2O	R	CO_2e
Daily, Summer (Max)																		
Daily, Winter (Max)																		
Off-Road E	1.68773	1.416519	12.19685	18.50068	0.026519	0.530958		0.530958	0.488481		0.488481		2818.948	2818.948	0.114349	0.02287		2828.622
Dust From Material Movement							1.0605	1.0605		0.114509	0.114509							
Onsite truc	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Average Daily																		
Off-Road E	0.042936	0.036037	0.310292	0.470663	0.000675	0.013508		0.013508	0.012427		0.012427		71.71491	71.71491	0.002909	0.000582		71.96102
Dust From Material Movement							0.026979	0.026979		0.002913	0.002913							
Onsite truc	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Annual																		

Off-Road E	0.007836	0.006577	0.056628	0.085896	0.000123	0.002465		0.002465	0.002268		0.002268		11.87322	11.87322	0.000482	9.63E-05		11.91397
Dust From Material Movement							0.004924	0.004924		0.000532	0.000532							
Onsite truc	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0

3.11.2. Offsite - Unmitigated

Location	TOG	ROG	NOx	CO	SO_2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO_2	$NBCO_2$	CO_2T	CH_4	N_2O	R	CO_2e
Daily, Summer (Max)																		
Daily, Winter (Max)																		
Worker	0.080656	0.071083	0.074108	0.87437	0	0	0.227328	0.227328	0	0.053285	0.053285		218.4513	218.4513	0.00496	0.009078	0.021099	221.3016
Vendor	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Hauling	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Average Daily																		
Worker	0.002039	0.001808	0.001654	0.022787	0	0	0.005647	0.005647	0	0.001322	0.001322		5.70275	5.70275	0.000101	0.000218	0.008929	5.779261
Vendor	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Hauling	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Annual																		
Worker	0.000372	0.00033	0.000302	0.004159	0	0	0.001031	0.001031	0	0.000241	0.000241		0.944155	0.944155	1.67E-05	3.61E-05	0.001478	0.956823
Vendor	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Hauling	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0

3.11.3. Onsite - Mitigated

Location	TOG	ROG	NOx	CO	SO_2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO_2	$NBCO_2$	CO_2T	CH_4	N_2O	R	CO_2e
Daily, Summer (Max)																		
Daily, Winter (Max)																		
Off-Road E	0.910438	0.816927	6.229944	30.91546	0.040953	0.233005		0.233005	0.219564		0.219564		4434.373	4434.373	0.179878	0.035976		4449.591
Dust From Material Movement							0.620393	0.620393		0.066988	0.066988							
Onsite truc	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Average Daily																		
Off-Road E	0.023162	0.020783	0.158492	0.786499	0.001042	0.005928		0.005928	0.005586		0.005586		112.8118	112.8118	0.004576	0.000915		113.199
Dust From Material Movement							0.015783	0.015783		0.001704	0.001704							
Onsite truc	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Annual																		
Off-Road E	0.004227	0.003793	0.028925	0.143536	0.00019	0.001082		0.001082	0.001019		0.001019		18.67729	18.67729	0.000758	0.000152		18.74138
Dust From Material Movement							0.00288	0.00288		0.000311	0.000311							
Onsite truc	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0

3.11.4. Offsite - Mitigated

Location	TOG	ROG	NOx	CO	SO_2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO_2	$NBCO_2$	CO_2T	CH_4	N_2O	R	CO_2e
Daily, Summer (Max)																		
Daily, Winter (Max)																		
Worker	0.080656	0.071083	0.074108	0.87437	0	0	0.227328	0.227328	0	0.053285	0.053285		218.4513	218.4513	0.00496	0.009078	0.021099	221.3016
Vendor	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Hauling	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Average Daily																		
Worker	0.002039	0.001808	0.001654	0.022787	0	0	0.005647	0.005647	0	0.001322	0.001322		5.70275	5.70275	0.000101	0.000218	0.008929	5.779261
Vendor	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Hauling	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0

Annual																	
Worker	0.000372	0.00033	0.000302	0.004159	0	0	0.001031	0.001031	0	0.000241	0.000241	0.944155	0.944155	1.67E-05	3.61E-05	0.001478	0.956823
Vendor	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hauling	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

3.12. Linear, Drainage, Utilities, & Sub-Grade (2028)

3.12.1. Onsite - Unmitigated

Location	TOG	ROG	NOx	CO	SO_2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO_2	$NBCO_2$	CO_2T	CH_4	N_2O	R	CO_2e
Daily, Summer (Max)																		
Daily, Winter (Max)																		
Off-Road E	1.618738	1.358552	11.53049	18.53485	0.026522	0.476568		0.476568	0.438442		0.438442		2819.067	2819.067	0.114354	0.022871		2828.742
Dust From Material Movement							1.0605	1.0605		0.114509	0.114509							
Onsite truc	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0

Unmit. Daily and Annual Construction-related Air Pollutant Emissions

Construction Year	ROG (lb/day) Emissions	NO_X (lb/day) Emissions	PM_{10} (lb/day) Emissions	PM_{10} (tpy) Emissions	$PM_{2.5}$ (lb/day) Emissions	$PM_{2.5}$ (tpy) Emissions
2027	3	2	4	0	1	0
2028	3	2	4	0	1	0
2029	2	2	1	0	1	0
2030	3	2	1	0	1	0
2031	3	2	1	0	1	0
Maximum	**3**	**2**	**4**	**0**	**1**	**0**
SMAQMD Thresholds of Significance without BMPs[2]	**None**	**85**	**0**	**0**	**0**	**0**
Threshold Exceeded?	**N/A**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**
SMAQMD Thresholds of Significance with BMPs[3]	**None**	**85**	**80**	**14.6**	**82**	**15**
Threshold Exceeded?	**N/A**	**Yes**	**No**	**No**	**No**	**No**

Unmit. Annual Construction-related GHG Emissions

Construction Year	$MTCO_2e$/year
2027	119
2028	414
2029	234
2030	138
2031	48
SMAQMD Threshold	**1,100**
Threshold Exceeded?	**No**

Energy Tables

= from caleemod
= calculated

Construction Energy

Element	Fuel Assumed	CO_2e	CO2 (kg)	fuel (Gallons)
Off-Road Equipment	Diesel	768	768,460	75,265
Onsite truck	Diesel	0	0	0
Hauling	Diesel	153	153,325	15,017
Vendor	Diesel	5	5,476	536
Worker	Gasoline	25	25,399	2,893
Total	Diesel	927	927,261	90,819
	Gasoline	25	25,399	2,893

Methods for section

Energy use during construction was estimated using a combination of methods and energy factors from published best available documentation. Fuel consumption was estimated using the CO2 emission outputs from the GHG construction estimates. Energy usage associated with fuel consumption was calculated by converting CO2 emissions estimated from the construction analysis using the rate of CO2 emissions per gallon of combusted gasoline (8.78 kilograms/gallon) and diesel (10.21 kilograms/gallon) (EPA 2024). It was assumed that all equipment and trucks would be diesel powered, while worker commute vehicles would be gasoline powered. A full list of assumptions and emission and energy calculations for construction can be found in Appendix X.

Conversions

MT to kg	1000		
kgCO2 to Gal gasoline	8.78	EPA 2024	gasoline
kgCO2 to Gal diesel	10.21	EPA 2024	diesel

EPA 2024. GHG Emission Factor Hub (2024). Available: https://www.epa.gov/climateleadership/ghg-emission-factors-hub. Accessed August 5, 2024

diesel gas/btu	137,381	EIA 2023	
gasoline gal/btu	120,214	EIA 2023	
	motor gas	distallate	
btu per barrel	5,049,000	5,770,000	
gallons per barrel	42	42	
btu per gallon	120,214	137,381	

EPA 2024 GHG Emission Factors Hub
https://www.epa.gov/climateleadership/ghg-emission-factors-hub

EIA 2023 Table A3, Approximate Heat Content of Petroleum Consumption and Fuel Ethanol. Available:
https://www.eia.gov/totalenergy/data/monthly/pdf/sec12_4.pdf

3. Construction Emissions Details	
3.1. Demolition (2030)	
3.1.1. Onsite - Unmitigated	
Annual	MTCO2e
Off-Road Equipment	132.1028399
Demolition	
Onsite truck	0
3.1.2. Offsite - Unmitigated	
Annual	
Worker	4.932321711
Vendor	0
Hauling	0.478315661
3.2. Demolition (2031)	
3.2.1. Onsite - Unmitigated	
Annual	
Off-Road Equipment	45.94558106
Demolition	
Onsite truck	0
3.2.2. Offsite - Unmitigated	
Annual	
Worker	1.687749436
Vendor	0
Hauling	0.160909009
3.3. Site Preparation (2027)	
3.3.1. Onsite - Unmitigated	
Annual	
Off-Road Equipment	12.08860826
Dust From Material Movement	
Onsite truck	0
3.3.2. Offsite - Unmitigated	
Annual	
Worker	0.366373102
Vendor	0
Hauling	0
3.4. Grading (2027)	
3.4.1. Onsite - Unmitigated	
Annual	
Off-Road Equipment	52.83428494
Dust From Material Movement	
Onsite truck	0
3.4.2. Offsite - Unmitigated	
Annual	
Worker	1.717373916
Vendor	0
Hauling	38.98675186
3.5. Grading (2028)	
3.5.1. Onsite - Unmitigated	
Annual	
Off-Road Equipment	158.5077368

Dust From Material Movement	
Onsite truck	0
3.5.2. Offsite - Unmitigated	
Annual	
Worker	5.047234939
Vendor	0
Hauling	113.6993201
3.6. Building Construction (2028)	
3.6.1. Onsite - Unmitigated	
Annual	
Off-Road Equipment	20.79627248
Onsite truck	0
3.6.2. Offsite - Unmitigated	
Annual	
Worker	0.183046387
Vendor	0.203892245
Hauling	0
3.7. Building Construction (2029)	
3.7.1. Onsite - Unmitigated	
Annual	
Off-Road Equipment	185.3438404
Onsite truck	0
3.7.2. Offsite - Unmitigated	
Annual	
Worker	1.602292774
Vendor	1.761572878
Hauling	0
3.8. Building Construction - Pole Install (2029)	
3.8.1. Onsite - Unmitigated	
Annual	
Off-Road Equipment	29.12556021
Onsite truck	0
3.8.2. Offsite - Unmitigated	
Annual	
Worker	0.362763315
Vendor	0.398824751
Hauling	0
3.9. Linear, Grubbing & Land Clearing (2028)	
3.9.1. Onsite - Unmitigated	
Annual	
Off-Road Equipment	3.488894625
Dust From Material Movement	
Onsite truck	0
3.9.2. Offsite - Unmitigated	
Annual	
Worker	0.224321553
Vendor	0
Hauling	0
3.10. Linear, Grading & Excavation (2028)	

3.10.1. Onsite - Unmitigated	
Annual	
Off-Road Equipment	73.78443906
Dust From Material Movement	
Onsite truck	0
3.10.2. Offsite - Unmitigated	
Annual	
Worker	5.451013734
Vendor	3.111839253
Hauling	0
3.11. Linear, Drainage, Utilities, & Sub-Grade (2027)	
3.11.1. Onsite - Unmitigated	
Annual	
Off-Road Equipment	11.91396781
Dust From Material Movement	
Onsite truck	0
3.11.2. Offsite - Unmitigated	
Annual	
Worker	0.95682261
Vendor	0
Hauling	0
3.12. Linear, Drainage, Utilities, & Sub-Grade (2028)	
3.12.1. Onsite - Unmitigated	
Annual	
Off-Road Equipment	27.49493773
Dust From Material Movement	
Onsite truck	0
3.12.2. Offsite - Unmitigated	
Annual	
Worker	2.163100688
Vendor	0
Hauling	0
3.13. Linear, Paving (2029)	
3.13.1. Onsite - Unmitigated	
Annual	
Off-Road Equipment	15.03280769
Onsite truck	0
3.13.2. Offsite - Unmitigated	
Annual	

Appendix B

Biological Resources

Table B-1 Special-Status Plants and Their Potential for Occurrence on the Project Site

Species	Federal Status[1]	State Status[1]	CRPR[1]	Habitat	Potential for Occurrence
Ferris' milk-vetch *Astragalus tener* var. *ferrisiae*	—	—	1B.1	Wetland. Meadows and seeps, valley and foothill grassland. Subalkaline flats on overflow land in the Central Valley; usually seen in dry, adobe soil. 15–245 ft in elevation. Blooms April–May. Annual.	Not expected to occur. The project site lacks meadow or seep habitat suitable for Ferris' milk-vetch.
Watershield *Brasenia schreberi*	—	—	2B.3	Wetland. Freshwater marshes and swamps. Aquatic from water bodies both natural and artificial in California. 100–7,220 ft in elevation. Blooms June–September. Geophyte.	Not expected to occur. The project site does not contain wetland habitat suitable for watershield.
Bristly sedge *Carex comosa*	—	—	2B.1	Wetland. Marshes and swamps, coastal prairie, valley and foothill grassland. Lake margins, wet places; site below sea level is on a Delta island. 15–5,315 ft in elevation. Blooms May–September. Geophyte.	Not expected to occur. The project site does not contain wetland habitat suitable for bristly sedge.
Pappose tarplant *Centromadia parryi* ssp. *parryi*	—	—	1B.2	Chaparral, coastal prairie, meadows and seeps, coastal salt marsh, valley and foothill grassland. Vernally mesic, often alkaline sites. 5–1,380 ft in elevation. Blooms May–November. Annual.	Not expected to occur. Grassland vegetation on the project site is limited, within areas of heavy development and use, and regularly disturbed by anthropogenic activities including mowing and disking, and does not provide suitable habitat for pappose tarplant.
Bolander's water-hemlock *Cicuta maculata* var. *bolanderi*	—	—	2B.1	Salt marsh, Wetland. Marshes and swamps, fresh or brackish water. 0–655 ft in elevation. Blooms July–September. Perennial.	Not expected to occur. The project site does not contain wetland or marsh habitat suitable for Bolander's water-hemlock.
Peruvian dodder *Cuscuta obtusiflora* var. *glandulosa*	—	—	2B.2	Wetland. Freshwater marsh. 50–920 ft in elevation. Blooms July–October. Annual.	Not expected to occur. The project site does not contain wetland habitat suitable for Peruvian dodder.
Dwarf downingia *Downingia pusilla*	—	—	2B.2	Wetland. Valley and foothill grassland (mesic sites), vernal pools. Vernal lake and pool margins with a variety of associates. In several types of vernal pools. 5–1,610 ft in elevation. Blooms March–May. Annual.	Not expected to occur. The project site does not contain wetland or vernal pool habitat suitable for dwarf dowingia.
Boggs Lake hedge-hyssop *Gratiola heterosepala*	—	SE	1B.2	Wetland. Marshes and swamps (freshwater), vernal pools. Clay soils; usually in vernal pools, sometimes on lake margins. 35–7,790 ft in elevation. Blooms April–August. Annual.	Not expected to occur. The project site does not contain wetland habitat suitable for Boggs Lake hedge-hyssop.

Species	Federal Status[1]	State Status[1]	CRPR[1]	Habitat	Potential for Occurrence
Woolly rose-mallow *Hibiscus lasiocarpos* var. *occidentalis*	—	—	1B.2	Wetland. Marshes and swamps (freshwater). Moist, freshwater-soaked river banks and low peat islands in sloughs; can also occur on riprap and levees. In California, known from the delta watershed. 0–510 ft in elevation. Blooms June–September. Geophyte.	Not expected to occur. The project site does not contain wetland habitat suitable for woolly rose-mallow.
Ahart's dwarf rush *Juncus leiospermus* var. *ahartii*	—	—	1B.2	Valley and foothill grassland. Restricted to the edges of vernal pools in grassland. 100–330 ft in elevation. Blooms March–May. Annual.	Not expected to occur. The project site does not contain vernal pools suitable for Ahart's dwarf rush.
Alkali-sink goldfields *Lasthenia chrysantha*	—	—	1B.1	Vernal pools. Alkaline. 0–655 ft in elevation. Blooms February–June. Annual.	Not expected to occur. The project site does not contain vernal pools suitable for alkali-sink goldfields.
Delta tule pea *Lathyrus jepsonii* var. *jepsonii*	—	—	1B.2	Wetland. Freshwater and brackish marshes. Often found with *Typha, Aster lentus, Rosa californica, Juncus* spp., and *Scirpus*. Usually on marsh and slough edges. 0–15 ft in elevation. Blooms May–July. Perennial.	Not expected to occur. The project site does not contain wetland habitat suitable for Delta tule pea.
Legenere *Legenere limosa*	—	—	1B.1	Vernal pools, wetland. In beds of vernal pools. 5–2,885 ft in elevation. Blooms April–June. Annual.	Not expected to occur. The project site does not contain vernal pool habitat suitable for legenere.
Heckard's pepper-grass *Lepidium latipes* var. *heckardii*	—	—	1B.2	Valley and foothill grassland, vernal pools. Grassland, and sometimes vernal pool edges. Alkaline soils. 5–100 ft in elevation. Blooms March–May. Annual.	Not expected to occur. Grassland vegetation on the project site is limited, within areas of heavy development and use, and regularly disturbed by anthropogenic activities including mowing and disking, and does not provide suitable habitat for Heckard's pepper-grass.
Mason's lilaeopsis *Lilaeopsis masonii*	—	SR	1B.1	Wetland. Freshwater and brackish marshes, riparian scrub. Tidal zones, in muddy or silty soil formed through river deposition or river bank erosion. 0–35 ft in elevation. Blooms April–November. Geophyte.	Not expected to occur. The project site does not contain wetland or riparian habitat suitable for Mason's lilaeopsis.
Delta mudwort *Limosella australis*	—	—	2B.1	Wetland. Riparian scrub, marshes and swamps. Usually on mud banks of the Delta in marshy or scrubby riparian associations; often with *Lilaeopsis masonii*. 0–15 ft in elevation. Blooms May–August. Perennial.	Not expected to occur. The project site does not contain wetland habitat suitable for Delta mudwort.

Species	Federal Status[1]	State Status[1]	CRPR[1]	Habitat	Potential for Occurrence
Slender Orcutt grass *Orcuttia tenuis*	FT	SE	1B.1	Vernal pools, wetland. Often in gravelly substrate. 80–5,760 ft in elevation. Blooms May–September. Annual.	Not expected to occur. The project site does not contain vernal pool or wetland habitat suitable for slender Orcutt grass.
Sacramento Orcutt grass *Orcuttia viscida*	FE	SE	1B.1	Vernal pools, wetland. 50–280 ft in elevation. Blooms April–July. Annual.	Not expected to occur. The project site does not contain vernal pool or wetland habitat suitable for Sacramento Orcutt grass.
Sanford's arrowhead *Sagittaria sanfordii*	—	—	1B.2	Wetland. Marshes and swamps. In standing or slow-moving freshwater ponds, marshes, and ditches. 0–2,135 ft in elevation. Blooms May–October. Geophyte.	Not expected to occur. The project site does not contain wetland habitat suitable for Sanford's arrowhead.
Marsh skullcap *Scutellaria galericulata*	—	—	2B.2	Wetland. Marshes and swamps, lower montane coniferous forest, meadows and seeps. Swamps and wet places. 0–6,400 ft in elevation. Blooms June–September. Geophyte.	Not expected to occur. The project site does not contain wetland habitat suitable for marsh skullcap.
Side-flowering skullcap *Scutellaria lateriflora*	—	—	2B.2	Wetland. Meadows and seeps, marshes and swamps. Wet meadows and marshes. In the Delta, often found on logs. 0–1,640 ft in elevation. Blooms July–September. Geophyte.	Not expected to occur. The project site does not contain wetland habitat suitable for side-flowering skullcap.
Suisun Marsh aster *Symphyotrichum lentum*	—	—	1B.2	Wetland. Marshes and swamps (brackish and freshwater). Most often seen along sloughs with Phragmites, *Scirpus*, blackberry, *Typha*, etc. 0–100 ft in elevation. Blooms, May–November. Geophyte.	Not expected to occur. The project site does not contain wetland habitat suitable for Suisun Marsh aster.
Saline clover *Trifolium hydrophilum*	—	—	1B.2	Wetland. Marshes and swamps, valley and foothill grassland, vernal pools. Mesic, alkaline sites. 0–985 ft in elevation. Blooms April–June. Annual.	Not expected to occur. The project site does not contain wetland habitat suitable for saline clover.

Notes: CESA = California Endangered Species Act; CEQA = California Environmental Quality Act; CRPR = California Rare Plant Rank; CNDDB = California Natural Diversity Database; ESA = Endangered Species Act; NPPA = Native Plant Protection Act; subsp. = subspecies; var. = variety.

[1] Legal Status Definitions

Federal:
FE Endangered (legally protected)
FT Threatened (legally protected)

State:
SE Endangered (legally protected)
SR State-listed as rare (legally protected by NPPA)

California Rare Plant Ranks:
1B Plant species considered rare or endangered in California and elsewhere (protected under CEQA, but not legally protected under ESA or CESA)
2B Plant species considered rare or endangered in California but more common elsewhere (protected under CEQA, but not legally protected under ESA or CESA)

Threat Ranks:
0.1 Seriously threatened in California (more than 80% of occurrences threatened; high degree and immediacy of threat)
0.2 Moderately threatened in California (20–80% occurrences threatened; moderate degree and immediacy of threat)
0.3 Not very threatened in California (less than 20% of occurrences threatened/low degree and immediacy of threat or no current threats known)

Sources: CNDDB 2026; CNPS 2026.

Table B-2 Special-Status Wildlife and Their Potential for Occurrence on the Project Site

Species	Federal Status[1]	State Status[1]	Habitat	Potential for Occurrence
Invertebrates				
Crotch's bumble bee *Bombus crotchii*	—	SC	Found primarily in California: mediterranean, Pacific coast, western desert, Great Valley, and adjacent foothills through most of southwestern California. Habitat includes open grassland and scrub. Nests underground.	May occur. Flowering vegetation present on the project site may provide foraging resources and habitat suitable for Crotch's bumble bee, and small burrows and debris in the project site may provide suitable nesting habitat.
Vernal pool fairy shrimp *Branchinecta lynchi*	FT	—	Valley and foothill grassland, vernal pool, wetland. Endemic to the grasslands of the Central Valley, Central Coast mountains, and South Coast mountains, in astatic rain-filled pools. Inhabit small, clear-water sandstone-depression pools and grassed swale, earth slump, or basalt-flow depression pools.	Not expected to occur. The project site does not contain vernal pool habitat suitable for vernal pool fairy shrimp.
Monarch *Danaus plexippus*	FP	—	Habitat requirements include host plants for larvae (primarily milkweeds [*Asclepias* spp.]); adult nectar sources (i.e., flowering plants); and sites for roosting, thermoregulation, mating, hibernation, and predator escape. Additionally, monarch butterfly requires conditions and resources for initiating and completing migration both to and from winter roosting areas. Winter roost sites extend along the coast from northern Mendocino to Baja California, Mexico. Roosts located in wind-protected tree groves (eucalyptus, Monterey pine, cypress), with nectar and water sources nearby.	May occur. Flowering vegetation may provide foraging resources and habitat suitable for monarch butterflies. The project site is outside of the overwintering range of this species, and no milkweed species were observed during reconnaissance surveys..
Valley elderberry longhorn beetle *Desmocerus californicus dimorphus*	FT	—	Riparian scrub. Occurs only in the Central Valley of California, in association with blue elderberry (*Sambucus mexicana*). Prefers to lay eggs in elderberries 2–8 inches in diameter; some preference shown for "stressed" elderberries.	Not expected to occur. The project site does not include riparian scrub or blue elderberry shrubs suitable for valley elderberry longhorn beetle.
Vernal pool tadpole shrimp *Lepidurus packardi*	FE	—	Valley and foothill grassland, vernal pool, wetland. Inhabits vernal pools and swales in the Sacramento Valley containing clear to highly turbid water. Pools commonly found in grass bottomed swales of unplowed grasslands. Some pools are mud-bottomed and highly turbid.	May occur. The project site does not currently contain vernal pool habitat suitable for vernal pool tadpole shrimp and is not contiguous with known, extant populations; however, the species has been previously reported on the project site (CNDDB 2026), and vernal pool tadpole shrimp cysts can withstand extreme environmental conditions and may remain viable for multiple years (USFWS 2026b).

Species	Federal Status[1]	State Status[1]	Habitat	Potential for Occurrence
Fish				
Green sturgeon - southern DPS *Acipenser medirostris* pop. 1	FT	SSC	Aquatic, estuary, marine bay, Sacramento/San Joaquin flowing waters Spawns in the Sacramento, Feather and Yuba Rivers. Presence in upper Stanislaus and San Joaquin Rivers may indicate spawning. Non-spawning adults occupy marine/estuarine waters. Delta Estuary is important for rearing juveniles. Spawning occurs primarily in cool (11–15 C) sections of mainstem rivers in deep pools (25–30 feet) with substrate containing small to medium sized sand, gravel, cobble, or boulder.	Not expected to occur. The project site does not contain aquatic waterways suitable for green sturgeon.
Sacramento perch *Archoplites interruptus*	—	SSC	Sacramento/San Joaquin flowing waters, Sacramento/San Joaquin standing waters. Historically found in the sloughs, slow-moving rivers, and lakes of the Central Valley. Prefers warm water. Aquatic vegetation is essential for young. Tolerates wide range of physio-chemical water conditions.	Not expected to occur. The project site does not contain aquatic waterways suitable for Sacramento perch.
Delta smelt *Hypomesus transpacificus*	FT	SE	Estuary. Sacramento-San Joaquin Delta. Seasonally in Suisun Bay, Carquinez Strait and San Pablo Bay. Seldom found at salinities greater than 10 ppt. Most often at salinities less than 2 ppt.	Not expected to occur. The project site does not contain aquatic waterways suitable for Delta smelt.
Steelhead - Central Valley DPS *Oncorhynchus mykiss irideus* pop. 11	FT	SSC	Sacramento/San Joaquin flowing waters. Populations in the Sacramento and San Joaquin rivers and their tributaries.	Not expected to occur. The project site does not contain aquatic waterways suitable for steelhead.
Chinook salmon - Central Valley spring-run ESU *Oncorhynchus tshawytscha* pop. 11	FT	ST	Adult numbers depend on pool depth and volume, amount of cover, and proximity to gravel. Water temps greater than 27 C are lethal to adults. Federal listing refers to populations spawning in Sacramento River and tributaries.	Not expected to occur. The project site does not contain aquatic waterways suitable for Chinook salmon.
Chinook salmon - Sacramento River winter-run ESU *Oncorhynchus tshawytscha* pop. 7	FE	SE	Sacramento/San Joaquin flowing waters. Sacramento River below Keswick Dam. Spawns in the Sacramento River, but not in tributary streams. Requires clean, cold water over gravel beds with water temperatures between 6 and 14 C for spawning.	Not expected to occur. The project site does not contain aquatic waterways suitable for Chinook salmon.
Sacramento splittail *Pogonichthys macrolepidotus*	—	SSC	Estuary, freshwater marsh, Sacramento/San Joaquin flowing waters. Endemic to the lakes and rivers of the Central Valley, but now confined to the Delta, Suisun Bay and associated marshes. Slow moving river sections, dead end sloughs. Requires flooded vegetation for spawning and foraging for young.	Not expected to occur. The project site does not contain aquatic waterways suitable for Sacramento splittail.

Species	Federal Status[1]	State Status[1]	Habitat	Potential for Occurrence
Longfin smelt - San Francisco Bay Delta DPS *Spirinchus thaleichthys* pop. 2	FE	ST SSC	Estuary. Euryhaline, nektonic and anadromous. Found in open waters of estuaries, mostly in middle or bottom of water column. Prefer salinities of 15-30 ppt, but can be found in completely freshwater to almost pure seawater.	Not expected to occur. The project site does not contain aquatic waterways suitable for longfin smelt.
Amphibians				
California tiger salamander - central California DPS *Ambystoma californiense* pop. 1	FT	ST	Lives in vacant or mammal-occupied burrows throughout most of the year; in grassland, savanna, or open woodland habitats. Need underground refuges, especially ground squirrel burrows, and vernal pools or other seasonal water sources for breeding.	Not expected to occur. The project site does not contain aquatic or upland habitat suitable for California tiger salamander.
Western spadefoot *Spea hammondii*	FP	SSC	Cismontane woodland, coastal scrub, valley and foothill grassland, vernal pool, and wetlands. Occurs primarily in grassland habitats, but can be found in valley-foothill hardwood woodlands. Vernal pools are essential for breeding and egg-laying.	Not expected to occur. The project site does not contain vernal pool habitat suitable for western spadefoot.
Reptiles				
Northwestern pond turtle *Actinemys marmorata*	FP	SSC	Ponds, marshes, rivers, streams and irrigation ditches, usually with aquatic vegetation, below 6,000 ft elevation. Needs basking sites and suitable (sandy banks or grassy open fields) upland habitat up to approximately 0.3 miles (0.5 km) from water for egg-laying.	Not expected to occur. The project site does not contain aquatic habitat, or upland habitat within 0.3 miles (0.5 kilometers) of such habitat, suitable for northwestern pond turtle.
Giant gartersnake *Thamnophis gigas*	FT	ST	Marsh and swamp, riparian scrub, wetland. Prefers freshwater marsh and low gradient streams. Has adapted to drainage canals and irrigation ditches. This is the most aquatic of the garter snakes in California.	Not expected to occur. The project site does not contain stream, wetland, or riparian habitat suitable for giant gartersnake.
Birds				
Tricolored blackbird *Agelaius tricolor*	—	ST SSC	Freshwater marsh, marsh and swamp, swamp, wetland. Highly colonial species, most numerous in Central Valley and vicinity. Largely endemic to California. Requires open water, protected nesting substrate, and foraging area with insect prey within a few kilometers of the colony.	Not expected to occur. The project site does not contain wetland habitat or nesting substrates suitable for tricolored blackbirds.
Grasshopper sparrow *Ammodramus savannarum*	—	SSC	Valley and foothill grassland. Dense grasslands on rolling hills, lowland plains, in valleys and on hillsides on lower mountain slopes. Favors native grasslands with a mix of grasses, forbs and scattered shrubs. Loosely colonial when nesting.	Not expected to occur. The project site does not contain dense or native grasslands suitable for grasshopper sparrow.
Golden eagle *Aquila chrysaetos*	—	FP	Broadleaved upland forest, cismontane woodland, coastal prairie, Great Basin grassland, Great Basin scrub, lower montane	Not expected to occur. The project site does not contain

Species	Federal Status[1]	State Status[1]	Habitat	Potential for Occurrence
			coniferous forest, pinyon and juniper woodlands, upper montane coniferous forest, and valley and foothill grassland. Rolling foothills, mountain areas, sage-juniper flats, and desert. Cliff-walled canyons provide nesting habitat in most parts of range; also, large trees in open areas.	large trees or cliffsides suitable for nesting golden eagles.
Short-eared owl *Asio flammeus*	—	SSC	Great Basin grassland, marsh and swamp, meadow and seep, valley and foothill grassland, and wetlands. Found in swamp lands, both fresh and salt; lowland meadows; irrigated alfalfa fields. Tule patches/tall grass needed for nesting/daytime seclusion. Nests on dry ground in depression concealed in vegetation.	Not expected to occur. The project site does not contain wetland or tall grassland habitat suitable for short-eared owls.
Long-eared owl *Asio otus*	—	SSC	Cismontane woodland, Great Basin scrub, riparian forest, riparian woodland, and upper montane coniferous forest. Riparian bottomlands grown to tall willows and cottonwoods; also, belts of live oak paralleling stream courses. Require adjacent open land productive of mice and the presence of old nests of crows, hawks, or magpies for breeding.	Not expected to occur. The project site does not contain woodland or forest habitat suitable for long-eared owls.
Burrowing owl *Athene cunicularia*	—	SC SSC	Coastal prairie, coastal scrub, Great Basin grassland, Great Basin scrub, Mojavean desert scrub, Sonoran desert scrub, and valley and foothill grassland. Open, dry annual or perennial grasslands, deserts and scrublands characterized by low-growing vegetation. Subterranean nester, dependent upon burrowing mammals, most notably, the California ground squirrel.	Not expected to occur. The project site does not contain sufficient open, undisturbed grassland habitat with small mammal abundance suitable for burrowing owls.
Swainson's hawk *Buteo swainsoni*	—	ST	Great Basin grassland, riparian forest, riparian woodland, valley and foothill grassland. Breeds in grasslands with scattered trees, juniper-sage flats, riparian areas, savannahs, and agricultural or ranch lands with groves or lines of trees. Requires adjacent suitable foraging areas such as grasslands, or alfalfa or grain fields supporting rodent populations.	May occur. The project site does not contain foraging habitat suitable for Swainson's hawks; however, trees in and surrounding the project site may provide nesting habitat suitable for the species.
Northern harrier *Circus hudsonius*	—	SSC	Coastal salt and freshwater marsh. Nest and forage in grasslands, from salt grass in desert sink to mountain cienagas. Nests on ground in shrub vegetation, usually at marsh edge; nest built of a large mound of sticks in wet areas.	Not expected to occur. The project site does not contain shrub vegetation or undisturbed grassland suitable for northern harriers.
Western yellow-billed cuckoo *Coccyzus americanus occidentalis*	FT	SE	Riparian forest. Riparian forest nester, along the broad, lower flood-bottoms of larger river systems. Nests in riparian jungles of	Not expected to occur. The project site does not contain

Species	Federal Status[1]	State Status[1]	Habitat	Potential for Occurrence
			willow, often mixed with cottonwoods, with lower story of blackberry, nettles, or wild grape.	riparian forest habitat suitable for western yellow-billed cuckoos.
White-tailed kite *Elanus leucurus*	—	FP	Cismontane woodland, marsh and swamp, riparian woodland, valley and foothill grassland, and wetlands. Rolling foothills and valley margins with scattered oaks and river bottomlands or marshes next to deciduous woodland. Open grasslands, meadows, or marshes for foraging close to isolated, dense-topped trees for nesting and perching.	Not expected to occur. The project site does not contain foraging habitat suitable for White-tailed kite, or nesting habitat proximate to suitable foraging habitat.
Bald eagle *Haliaeetus leucocephalus*	FD	SE FP	Lower montane coniferous forest, old growth. Ocean shore, lake margins, and rivers for both nesting and wintering. Most nests within 1 mile of water. Nests in large, old-growth, or dominant live tree with open branches, especially ponderosa pine. Roosts communally in winter.	Not expected to occur. The project site does not contain large trees suitable for nesting bald eagles, and is not near open water suitable for foraging.
Yellow-breasted chat *Icteria virens*	—	SSC	Riparian forest, riparian scrub, riparian woodland. Summer resident; inhabits riparian thickets of willow and other brushy tangles near watercourses. Nests in low, dense riparian, consisting of willow, blackberry, wild grape; forages and nests within 10 feet of ground.	Not expected to occur. The project site does not include riparian habitat suitable for yellow-breasted chats.
Loggerhead shrike *Lanius ludovicianus*	—	SSC	Broadleaved upland forest, desert wash, Joshua tree woodland, Mojavean desert scrub, pinyon and juniper woodlands, riparian woodland, Sonoran desert scrub. Broken woodlands, savannah, pinyon-juniper, Joshua tree, and riparian woodlands, desert oases, scrub and washes. Prefers open country for hunting, with perches for scanning, and fairly dense shrubs and brush for nesting.	Not expected to occur. The project site does not contain forest or scrub habitat suitable for loggerhead shrikes.
California black rail *Laterallus jamaicensis coturniculus*	—	ST FP	Brackish marsh, freshwater marsh, marsh and swamp, salt marsh, wetland. Inhabits freshwater marshes, wet meadows and shallow margins of saltwater marshes bordering larger bays. Needs water depths of about 1 inch that do not fluctuate during the year and dense vegetation for nesting habitat.	Not expected to occur. The project site does not contain marsh or wetland habitat suitable for California black rails.
Song sparrow ("Modesto" population) *Melospiza melodia* pop. 1	—	SSC	Artificial flowing waters, freshwater marsh, riparian forest, riparian scrub, riparian woodland, Sacramento/San Joaquin flowing waters, Sacramento/San Joaquin standing waters Central lower basin of Great Valley, from Colusa County south to Stanislaus County and east of Suisun Marshes. Breeds	Not expected to occur. The project site does not contain wetland or riparian habitat suitable for the "Modesto" population of song sparrows.

Species	Federal Status[1]	State Status[1]	Habitat	Potential for Occurrence
			chiefly below 200 feet elevation. Freshwater marshes, riparian thickets, sparsely vegetated irrigation canals, and valley oak restoration sites. Cover consists of willow and nettle thickets, growths of tules and cattails, and riparian oak forests with sufficient understory of blackberry.	
Purple martin *Progne subis*		SSC	Broadleaved upland forest, lower montane coniferous forest. Inhabits woodlands, low elevation coniferous forest of Douglas fir, ponderosa pine, and Monterey pine. Nests in old woodpecker cavities mostly, also in human-made structures. Nest often located in tall, isolated tree/snag.	Not expected to occur. The project site does not contain isolated trees or human-made structures (e.g., bridges) suitable for purple martin.
Bank swallow *Riparia riparia*	—	ST	Riparian scrub, riparian woodland. Colonial nester; nests primarily in riparian and other lowland habitats west of the desert. Requires vertical banks/cliffs with fine-textured/sandy soils near streams, rivers, lakes, and ocean to dig nesting hole.	Not expected to occur. The project site does not contain vertical bank or cliff habitat suitable for bank swallows.
Least Bell's vireo *Vireo bellii pusillus*	FE	SE	Riparian forest, riparian scrub, riparian woodland. Summer resident of southern California in low riparian in vicinity of water or in dry river bottoms; below 2,000 feet. Nests placed along margins of bushes or on twigs projecting into pathways, usually willow, coyote brush, mesquite.	Not expected to occur. The project site does not contain riparian habitat suitable for least Bell's vireo.
Yellow-headed blackbird *Xanthocephalus xanthocephalus*	—	SSC	Marsh and swamp, wetland. Nests in freshwater emergent wetlands with dense vegetation and deep water. Often along borders of lakes or ponds. Nests only where large insects such as Odonata are abundant, nesting timed with maximum emergence of aquatic insects.	Not expected to occur. The project site does not contain wetland habitat suitable for yellow-headed blackbird.
Mammals				
Pallid bat *Antrozous pallidus*	—	SSC	Deserts, grasslands, shrublands, woodlands and forests. Most common in open, dry habitats with rocky areas for roosting. Tree roosting has also been documented in large conifer snags, inside basal hollows of redwoods and giant sequoias, and bole cavities in oaks. Roosts must protect bats from high temperatures. Very sensitive to disturbance of roosting sites.	Not expected to occur. The project site is highly disturbed by anthropogenic activity, and does not contain rocky habitat or large trees suitable for roosting pallid bats.
Ringtail *Bassariscus astutus*	—	FP	Riparian habitats, forest habitats, and shrub habitats in lower to middle elevations.	Not expected to occur. The project site does not contain riparian, forest, or shrub habitat suitable for ringtails.
Western red bat *Lasiurus frantzii*	—	SSC	Cismontane woodland, lower montane coniferous forest, riparian forest, riparian	Not expected to occur. The project site does not contain

Species	Federal Status[1]	State Status[1]	Habitat	Potential for Occurrence
			woodland. Roosts primarily in trees, 2–40 feet above ground, from sea level up through mixed conifer forests. Prefers habitat edges and mosaics with trees that are protected from above and open below with open areas for foraging.	forest or riparian habitat suitable for roosting western red bats.
American badger *Taxidea taxus*	—	SSC	American badgers are most commonly found in treeless areas including tallgrass and shortgrass prairies, grass-dominated meadows and fields within forested habitats, and shrub-steppe communities. Most abundant in drier open stages of most shrub, forest, and herbaceous habitats, with friable soils. Needs sufficient food, friable soils and open, uncultivated ground. Preys on burrowing rodents. Digs burrows.	Not expected to occur. Grassland vegetation in the project site is within a development and highly anthropogenically disturbed area, and does not support sufficient prey or provide suitable habitat for American badger.

Notes: CEQA = California Environmental Quality Act; CNDDB = California Natural Diversity Database; DPS = distinct population segment; ESU = evolutionarily significant unit; pop. = population.

[1] Legal Status Definitions

Federal:
FE Endangered (legally protected)
FT Threatened (legally protected)
FP Federally proposed for listing (no formal protection other than CEQA consideration)
FD Federally delisted

State:
SE Endangered (legally protected)
ST Threatened (legally protected)
SC State candidate for listing (legally protected)
FP Fully protected (legally protected)
SSC Species of special concern (no formal protection other than CEQA consideration)

Sources: CNDDB 2026; USFWS 2026a, USFWS 2026b.

Appendix C

Noise Calculations

Long-Term Noise Measurement Raw Data

KEY: Orange cells are for input.

Measurement Site: LT-1
Measurement Date: 3/4/2026 - 3/5/2026
Project Name: SMUD Pocket Rebuild

Number	Start Date	Start Time	End Time	Meas Mc	Input Rai	Input Ty	SPL Time Weight	LN% Freq Weig	Overload	UnderRange	Sensitivity	LZeq	LCeq	LAeq	LZSmax	LCSmax	LASmax	LZSmin	LCSmin	LASmin	LZE	LCE	LAE	LZpk	LCpk	LApk	LAS1%	LAS2%	LAS5%	LAS8%	LAS10%	LAS25%	LAS50%
3	3/4/2026	10:00:00 AM	11:00:00 AM	Auto	Low	Mic	Slow	dBA	No	No	18.66mV/Pa	72	70.5	55.8	92.9	92.5	75.4	60.6	59.5	42.4	107.6	106.1	91.4	103.5	102.4	87.2	70.1	67.8	56.8	53	51.3	48.5	47.1
4	3/4/2026	11:00:00 AM	12:00:00 PM	Auto	Low	Mic	Slow	dBA	No	No	18.66mV/Pa	65.4	63.7	48.9	80.5	73.7	65.9	59.3	58.1	40.4	101	99.3	84.5	93.2	86.5	83.9	58.6	56.7	51.4	49.8	49.2	47.8	46.8
5	3/4/2026	12:00:00 PM	1:00:00 PM	Auto	Low	Mic	Slow	dBA	No	No	18.66mV/Pa	70.9	69.2	52.7	88	87.1	70.4	60.9	59.6	43.1	106.5	104.8	88.3	98.9	97.6	87.2	64.5	62.1	56.9	55.2	54.4	50.3	48
6	3/4/2026	1:00:00 PM	2:00:00 PM	Auto	Low	Mic	Slow	dBA	No	No	18.66mV/Pa	67.6	64.8	50.4	90.5	84	65.1	58.6	57.1	40.8	103.2	100.4	86	106.1	98.8	79.5	60.8	59.2	56.1	54.5	53.7	49.4	46.4
7	3/4/2026	2:00:00 PM	3:00:00 PM	Auto	Low	Mic	Slow	dBA	No	No	18.66mV/Pa	72.5	71.1	53.5	96.6	96.2	77.8	59.6	58.6	41.2	108.1	106.7	89.1	106.6	105.7	89.3	60.7	59	55.6	52.4	51.2	47.9	46.6
8	3/4/2026	3:00:00 PM	4:00:00 PM	Auto	Low	Mic	Slow	dBA	No	No	18.66mV/Pa	69	65.1	48.3	87.6	81.2	62.9	58.3	56.3	39.6	104.6	100.7	83.9	103.3	95.1	78.3	58.3	56.4	53	50.8	50	47.5	45.9
9	3/4/2026	4:00:00 PM	5:00:00 PM	Auto	Low	Mic	Slow	dBA	No	No	18.66mV/Pa	72.7	70.4	50.5	91.1	89.3	67	58.5	56.9	40.4	108.3	106	86.1	102.7	96.8	85.6	60.6	59.3	56.4	54.3	53.2	49.7	46.6
10	3/4/2026	5:00:00 PM	6:00:00 PM	Auto	Low	Mic	Slow	dBA	No	No	18.66mV/Pa	65.7	63.8	51.3	80.2	76.1	70.4	59.8	58.5	41.2	101.3	99.4	86.9	91.9	90.8	85.2	64.1	59.9	54.7	52.1	51.2	48.3	46.8
11	3/4/2026	6:00:00 PM	7:00:00 PM	Auto	Low	Mic	Slow	dBA	No	No	18.66mV/Pa	70.2	68.5	50.2	91.9	90.1	66.9	60.7	59.5	43.4	105.8	104.1	85.8	99.8	98	81.8	62.8	59.6	53.8	51.3	50.3	47.7	46.5
12	3/4/2026	7:00:00 PM	8:00:00 PM	Auto	Low	Mic	Slow	dBA	No	No	18.66mV/Pa	72.6	71.6	56.6	96.7	96.2	78	60.8	59	44.2	108.2	107.2	92.2	106.2	105.7	91.8	69.1	67.9	58.6	54.6	53.2	50	48.6
13	3/4/2026	8:00:00 PM	9:00:00 PM	Auto	Low	Mic	Slow	dBA	No	No	18.66mV/Pa	70.5	69.1	50	90	88.6	68	60.6	59.5	44.6	106.1	104.7	85.6	97.7	95.8	81.7	59.2	57	51.7	50.6	50	49	48.3
14	3/4/2026	9:00:00 PM	10:00:00 PM	Auto	Low	Mic	Slow	dBA	Yes	No	18.66mV/Pa	76.7	70.8	52.7	97.2	91.3	72.3	60.4	58.8	45.6	112.3	106.4	88.3	110.5	105.4	85.9	64.2	59.2	55.6	53.6	52.2	49.8	48.9
15	3/4/2026	10:00:00 PM	11:00:00 PM	Auto	Low	Mic	Slow	dBA	Yes	No	18.66mV/Pa	79.7	73.9	52.3	104.3	98.5	72.5	59	57.6	44.8	115.3	109.5	87.9	115.5	110.5	88.3	64.2	60.8	56	53.8	52.9	49.6	48.1
16	3/4/2026	11:00:00 PM	12:00:00 AM	Auto	Low	Mic	Slow	dBA	Yes	No	18.66mV/Pa	77.5	71.8	51	97.5	91.6	70.3	59.3	57.9	43.8	113.1	107.4	86.6	111.5	106.7	85.2	63	59.5	54.6	52.3	51.4	48.7	47.2
17	3/5/2026	12:00:00 AM	1:00:00 AM	Auto	Low	Mic	Slow	dBA	No	No	18.66mV/Pa	67.8	63.3	47.7	86.2	80.4	65.8	58.9	57.4	43.2	103.4	98.9	83.3	100.2	92.8	78.6	55.9	53.7	49.6	48.4	48.1	46.9	46.2
18	3/5/2026	1:00:00 AM	2:00:00 AM	Auto	Low	Mic	Slow	dBA	No	No	18.66mV/Pa	66.9	64	47.4	87.4	86.9	67.4	58.9	57.5	43.2	102.5	99.6	83	97.1	96.5	77.9	49.6	48.9	48.4	48.1	48	47.3	46.4
19	3/5/2026	2:00:00 AM	3:00:00 AM	Auto	Low	Mic	Slow	dBA	Yes	No	18.66mV/Pa	73.9	73.2	58.1	99.4	98.9	80.7	60.4	59	44.5	109.5	108.8	93.7	111	110.2	93.5	71.7	69.5	49.9	49.3	49.1	48.3	47.5
20	3/5/2026	3:00:00 AM	4:00:00 AM	Auto	Low	Mic	Slow	dBA	No	No	18.66mV/Pa	68.6	64.1	47.7	90	82.4	59.7	59.7	57.7	44	104.2	99.7	83.3	104.4	99.4	79.4	51	50.2	49.6	49.2	49	48.2	47.4
21	3/5/2026	4:00:00 AM	5:00:00 AM	Auto	Low	Mic	Slow	dBA	No	No	18.66mV/Pa	68.4	64.3	49.8	89.1	83.5	65.2	60.7	59.1	45.2	104	99.9	85.4	100.8	98.2	80	56.4	52.9	50.8	50.4	50.3	49.6	48.9
22	3/5/2026	5:00:00 AM	6:00:00 AM	Auto	Low	Mic	Slow	dBA	No	No	18.66mV/Pa	71.7	66.8	52.8	93.2	85.7	68.9	60.9	59.3	47.1	107.3	102.4	88.4	106.3	101.7	82.7	63.7	60.5	55.4	53.5	52.9	51.5	50.7
23	3/5/2026	6:00:00 AM	7:00:00 AM	Auto	Low	Mic	Slow	dBA	Yes	No	18.66mV/Pa	81.8	75.8	54.6	101	96.4	71.2	63.5	61.7	48.8	117.4	111.4	90.2	115.1	109.6	87	65.1	63	58.5	56.6	55.9	53.4	52
24	3/5/2026	7:00:00 AM	8:00:00 AM	Auto	Low	Mic	Slow	dBA	Yes	No	18.66mV/Pa	79.6	74.9	59.1	97.6	93.2	77.6	64.1	62.3	48.4	115.2	110.5	94.7	112.9	105.4	94	73.1	70.4	61.3	58.6	57.6	53.1	51.5
25	3/5/2026	8:00:00 AM	9:00:00 AM	Auto	Low	Mic	Slow	dBA	Yes	No	18.66mV/Pa	82.4	76.9	57.1	100.7	96.7	75.8	64.8	62.9	48.3	118	112.5	92.7	115	110.1	96.9	70.3	67.8	61.5	58.5	57.3	53.4	51.5
26	3/5/2026	9:00:00 AM	10:00:00 AM	Auto	Low	Mic	Slow	dBA	No	No	18.66mV/Pa	78.9	74.2	55.4	96.1	95.6	75.8	62.4	60.1	45.4	114.5	109.8	91	108.3	106.1	87.4	66.9	64.9	59.4	57	56	52.2	50.3

Long-Term Noise Measurement Calculations

KEY: Orange cells are for input.
Grey cells are intermediate calculations performed by the model.
Green cells are data to present in a written analysis (output).

Measurement Site: LT-1
Measurement Date: 3/4/2026 - 3/5/2026
Project Name: SMUD Pocket Rebuild

Hour of Day 24-hr Format	L_{dn} Start	L_{dn} End	C_{NEL} Start	C_{NEL} End
Daytime	7	22	7	19
Evening	N/A	N/A	19	22
Nighttime	22	7	22	7

Hour of Day (24-hr Format)	Sound Levels Descriptors L_{eq}	L_{max}	L_{50}	L_{min}
10:00	56	75	47	42
11:00	49	66	47	40
12:00	53	70	48	43
13:00	50	65	46	41
14:00	54	78	47	41
15:00	48	63	46	40
16:00	51	67	47	40
17:00	51	70	47	41
18:00	50	67	47	43
19:00	57	78	49	44
20:00	50	68	48	45
21:00	53	72	49	46
22:00	52	73	48	45
23:00	51	70	47	44
0:00	48	66	46	43
1:00	47	67	46	43
2:00	58	81	48	45
3:00	48	60	47	44
4:00	50	65	49	45
5:00	53	69	51	47
6:00	55	71	52	49
7:00	59	78	52	48
8:00	57	76	52	48
9:00	55	76	50	45

Sound Power[1]
$=10*\text{Log}(L_{eq,\ 1hr}/10)$

Equivalent Noise Level (L_{eq}) Day	Night	Day	Evening	Night
380189.3963		380189.3963		
77624.71166		77624.71166		
186208.7137		186208.7137		
109647.8196		109647.8196		
223872.1139		223872.1139		
67608.29754		67608.29754		
112201.8454		112201.8454		
134896.2883		134896.2883		
104712.8548		104712.8548		
457088.1896			457088.1896	
100000			100000	
186208.7137			186208.7137	
	169824.3652			169824.3652
	125892.5412			125892.5412
	58884.36554			58884.36554
	54954.08739			54954.08739
	645654.229			645654.229
	58884.36554			58884.36554
	95499.2586			95499.2586
	190546.0718			190546.0718
	288403.1503			288403.1503
812830.5162				
512861.384		512861.384		
346736.8505		346736.8505		

Day Night Average (L_{dn})[2] Day	Night	Community Noise Equivalent Level (CNEL)[3] Day	Evening	Night
Sum of Sound Power during Period w/o Penalty				
3,812,688	1,688,542	2,256,560	743,297	1,688,542
Log Factor for CNEL Penalty (i.e., 10*log(x))[4]				
1	10	1	3	10
Sound Power during Period with penalty				
3,812,688	16,885,424	2,256,560	2,229,891	16,885,424
Number of Hours				
		24		
L_{dn}	59.4	CNEL	59.5	

Notes:
[1] Computation of Sound Power are based on equation 7-1 on pg. 7-9 of Caltrans 2013
[2] Computation of the L_{dn} based on 1-hour L_{eq} measurements for each hour of a day are based on equation 2-23 on pg. 2-52 of Caltrans 2013.
[3] Computation of the CNEL based on 1-hour L_{eq} measurements for each hour of a day are based on equation 2-24 on pg. 2-53 of Caltrans 2013.
[4] Log factors for the L_{dn} and CNEL penalties are provided in Table 2-11 on pg. 2-48 of Caltrans 2013.
[5] Average noise level descriptors were logarithmicly averaged over the total number of hours
Source:
California Department of Transportation (Caltrans), Division of Environmental Analysis. 2013 (September). *Technical Noise Supplement to the Traffic Noise Analysis Protocol* . Sacramento, CA. Available: <https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/env/tens-sep2013-a11y.pdf>. Accessed Febuary 26, 2025.

Sound Power[1]
$=10*\text{Log}(L_{eq,\ 1hr}/10)$

Hour of Day	Maximum Noise Levels (L_{max}) Day	Night	Day	Evening	Night	Sound Pressure Level Exceeded 50% of a Specific Time Period (L_{50}) Day	Night	Day	Evening	Night	Mininum Noise Levels (L_{min}) Day	Night	Day	Evening	Night
10:00	34673685		34673685.05			51286.1384		51286.1384			17378.00829		17378.00829		
11:00	3890451		3890451.45			47863.00923		47863.00923			10964.78196		10964.78196		
12:00	10964782		10964781.96			63095.73445		63095.73445			20417.37945		20417.37945		
13:00	3235937		3235936.569			43651.58322		43651.58322			12022.64435		12022.64435		
14:00	60255959		60255958.61			45708.81896		45708.81896			13182.56739		13182.56739		
15:00	1949845		1949844.6			38904.5145		38904.5145			9120.108394		9120.108394		
16:00	5011872		5011872.336			45708.81896		45708.81896			10964.78196		10964.78196		
17:00	10964782		10964781.96			47863.00923		47863.00923			13182.56739		13182.56739		
18:00	4897788		4897788.194			44668.35922		44668.35922			21877.61624		21877.61624		
19:00	63095734			63095734.45		72443.59601			72443.59601		26302.67992			26302.67992	
20:00	6309573			6309573.445		67608.29754			67608.29754		28840.31503			28840.31503	
21:00	16982437			16982436.52		77624.71166			77624.71166		36307.80548			36307.80548	
22:00		17782794.1			17782794.1		64565.4229			64565.4229		30199.5172			30199.5172
23:00		10715193.05			10715193.05		52480.74602			52480.74602		23988.32919			23988.32919
0:00		3801893.963			3801893.963		41686.93835			41686.93835		20892.96131			20892.96131
1:00		5495408.739			5495408.739		43651.58322			43651.58322		20892.96131			20892.96131
2:00		117489755.5			117489755.5		56234.13252			56234.13252		28183.82931			28183.82931
3:00		933254.3008			933254.3008		54954.08739			54954.08739		25118.86432			25118.86432
4:00		3311311.215			3311311.215		77624.71166			77624.71166		33113.11215			33113.11215
5:00		7762471.166			7762471.166		117489.7555			117489.7555		51286.1384			51286.1384
6:00		13182567.39			13182567.39		158489.3192			158489.3192		75857.7575			75857.7575
7:00	57543994		57543993.73			141253.7545		141253.7545			69183.09709		69183.09709		
8:00	38018940		38018939.63			141253.7545		141253.7545			67608.29754		67608.29754		
9:00	38018940		38018939.63			107151.9305		107151.9305			34673.68505		34673.68505		

Average Sound Level Descriptors[5]

L_{eq} Day	Night	Day	Evening	Night	L_{50} Day	Night	Day	Evening	Night
54	53	53	54	53	48	49	48	49	49

L_{max} Day	Night	Day	Evening	Night	L_{min} Day	Night	Day	Evening	Night
74	73	74	75	73	44	45	44	45	45

Long-Term Noise Measurement Summary

KEY: Orange cells are for input.

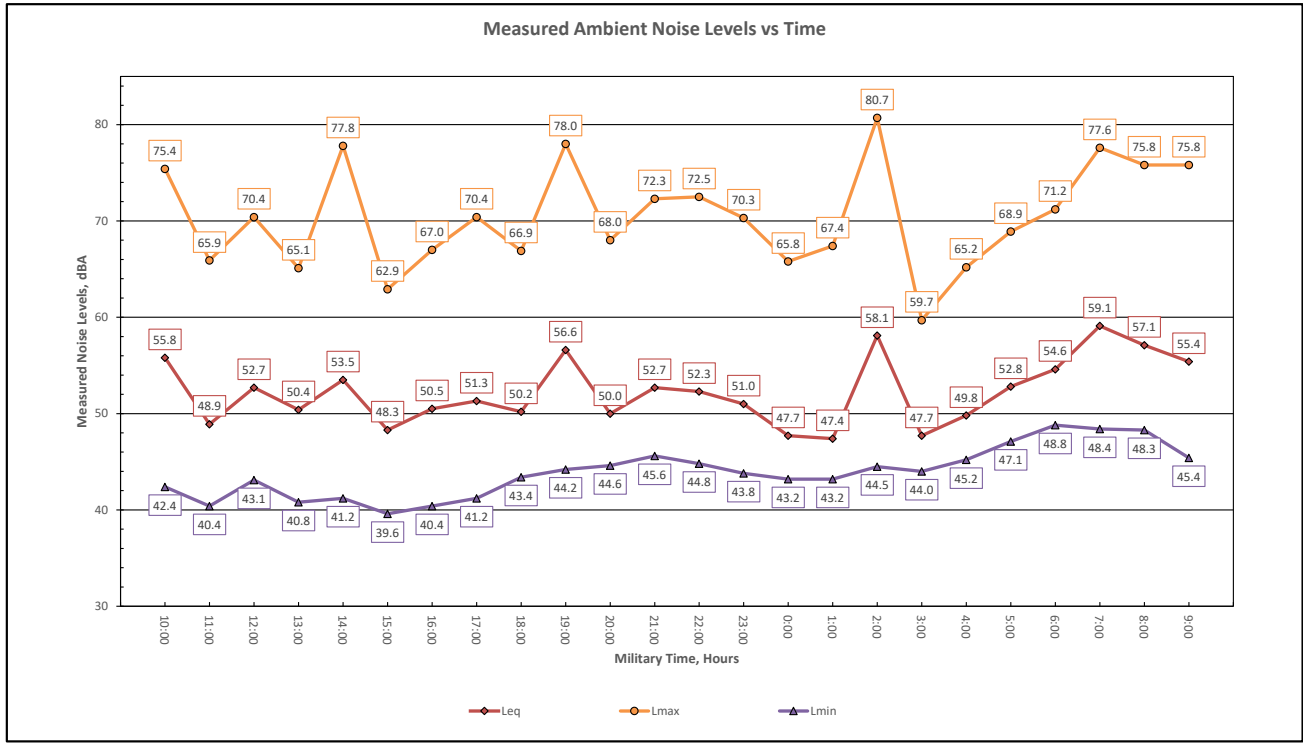
Green cells are data to present in a written analysis (output).

Measurement Site:	LT-1
Measurement Date:	3/4/2026 - 3/5/2026
Project Name:	SMUD Pocket Rebuild
Coordinates	38.492239 -121.471111

Hour of Day (military time)	Measured Level, dBA L_{eq}	L_{max}	L_{50}	L_{min}
10:00	55.8	75.4	47.1	42.4
11:00	48.9	65.9	46.8	40.4
12:00	52.7	70.4	48.0	43.1
13:00	50.4	65.1	46.4	40.8
14:00	53.5	77.8	46.6	41.2
15:00	48.3	62.9	45.9	39.6
16:00	50.5	67.0	46.6	40.4
17:00	51.3	70.4	46.8	41.2
18:00	50.2	66.9	46.5	43.4
19:00	56.6	78.0	48.6	44.2
20:00	50.0	68.0	48.3	44.6
21:00	52.7	72.3	48.9	45.6
22:00	52.3	72.5	48.1	44.8
23:00	51.0	70.3	47.2	43.8
0:00	47.7	65.8	46.2	43.2
1:00	47.4	67.4	46.4	43.2
2:00	58.1	80.7	47.5	44.5
3:00	47.7	59.7	47.4	44.0
4:00	49.8	65.2	48.9	45.2
5:00	52.8	68.9	50.7	47.1
6:00	54.6	71.2	52.0	48.8
7:00	59.1	77.6	51.5	48.4
8:00	57.1	75.8	51.5	48.3
9:00	55.4	75.8	50.3	45.4

Metrics	L_{eq}	L_{max}	L_{50}	L_{min}
Day Average	53	74	48	44
Evening Average	54	75	49	45
Night Average	53	73	49	45

CNEL	59.5
Day %	69.3%
Night %	30.7%



Notes: Primary noises include ambient natural noise such as birds chirping or blowing winds. A seconday noise source includes the periodic activity on the lightrail line east of the project site.

Long-Term Noise Measurement Raw Data

KEY: Orange cells are for input.

Measurement Site: LT-2
Measurement Date: 3/4/2026 - 3/5/2026
Project Name: SMUD Pocket Rebuild

Number	Start Date	Start Time	End Time	Meas Mo	Input Ra	Input Ty	SPL Time Weight	LN% Freq Weig	Overload	UnderRange	Sensitivity	LZeq	LCeq	LAeq	LZSmax	LCSmax	LASmax	LZSmin	LCSmin	LASmin	LZE	LCE	LAE	LZpk	LCpk	LApk	LAS1%	LAS2%	LAS5%	LAS8%	LAS10%	LAS25%	LAS50%
3	3/4/2026	10:00:00 AM	11:00:00 AM	Auto	Low	Mic	Slow	dBA	No	No	21.18mV/Pa	75.8	74.4	61.6	91.1	90.6	74.6	71.1	70.7	57.3	111.4	110	97.2	102.5	100.7	87.6	70.3	69.5	66.6	64	63.1	60.3	59.4
4	3/4/2026	11:00:00 AM	12:00:00 PM	Auto	Low	Mic	Slow	dBA	No	No	21.18mV/Pa	73.1	71.9	58.9	86	85.8	71	69.6	69.2	55.8	108.7	107.5	94.5	98.6	95	93.1	63.8	62.9	61.1	59.7	59.5	59	58.4
5	3/4/2026	12:00:00 PM	1:00:00 PM	Auto	Low	Mic	Slow	dBA	No	No	21.18mV/Pa	72.9	72.1	58.6	87.3	86.6	71.5	68.8	68.2	54.7	108.5	107.7	94.2	98.9	97.3	96	66.1	64.7	61.8	59.8	59.3	58.3	57.5
6	3/4/2026	1:00:00 PM	2:00:00 PM	Auto	Low	Mic	Slow	dBA	No	No	21.18mV/Pa	72.6	71.3	57.7	87.1	82.5	74.3	68.3	67.9	53.6	108.2	106.9	93.3	98	95.1	91.4	63.9	62.2	59.9	59.2	58.9	57.4	56.5
7	3/4/2026	2:00:00 PM	3:00:00 PM	Auto	Low	Mic	Slow	dBA	No	No	21.18mV/Pa	73.9	73.1	58.5	92.6	92.1	74.8	68.6	68.1	54.1	109.5	108.7	94.1	103.1	102.9	87.5	64.9	62.5	60.8	59.8	59.5	57.9	57.3
8	3/4/2026	3:00:00 PM	4:00:00 PM	Auto	Low	Mic	Slow	dBA	No	No	21.18mV/Pa	72.8	71.5	57.4	82.8	78.2	64.7	68.3	68	55.1	108.4	107.1	93	95.6	91.4	79.6	61.4	60	58.7	58.2	58	57.6	57.2
9	3/4/2026	4:00:00 PM	5:00:00 PM	Auto	Low	Mic	Slow	dBA	No	No	21.18mV/Pa	73.3	72.2	58	82.9	80.3	66	69.9	69.3	56	108.9	107.8	93.6	96	92.5	82.9	62.2	61.3	59.7	59	58.7	58	57.7
10	3/4/2026	5:00:00 PM	6:00:00 PM	Auto	Low	Mic	Slow	dBA	No	No	21.18mV/Pa	72.1	71.5	58.3	82	77.5	69.6	69.5	69.1	55.4	107.7	107.1	93.9	93.9	89.6	81.7	64.4	62.3	59.6	59	58.7	58.2	57.9
11	3/4/2026	6:00:00 PM	7:00:00 PM	Auto	Low	Mic	Slow	dBA	No	No	21.18mV/Pa	70.6	70	58.1	81.6	79.9	66.5	68.1	67.7	56.5	106.2	105.6	93.7	90.4	89.3	79.8	62.4	60.9	58.9	58.7	58.6	58.2	57.8
12	3/4/2026	7:00:00 PM	8:00:00 PM	Auto	Low	Mic	Slow	dBA	No	No	21.18mV/Pa	74.4	73.7	60.9	94.7	94.2	76.4	69.2	68.8	56.8	110	109.3	96.5	104.5	103.3	89	71.4	69.3	62.3	60.7	60.2	59.5	59.1
13	3/4/2026	8:00:00 PM	9:00:00 PM	Auto	Low	Mic	Slow	dBA	No	No	21.18mV/Pa	73	72.5	59.5	80.7	79.5	70.1	70.6	70.3	57.4	108.6	108.1	95.1	99.6	99.1	91.3	63.5	61.3	60.2	60	60	59.7	59.3
14	3/4/2026	9:00:00 PM	10:00:00 PM	Auto	Low	Mic	Slow	dBA	No	No	21.18mV/Pa	75.2	72.5	58.7	92.9	87.1	70	70.3	69.6	55.4	110.8	108.1	94.3	105.2	100.1	82.8	64.9	61.6	59.8	59.5	59.4	58.8	58.2
15	3/4/2026	10:00:00 PM	11:00:00 PM	Auto	Low	Mic	Slow	dBA	No	No	21.18mV/Pa	76.8	72.7	57.8	91.7	85.7	72.9	69.8	69.1	54.4	112.4	108.3	93.4	102.8	100.6	87.2	65.8	62.3	59	58.3	58.1	57.5	57
16	3/4/2026	11:00:00 PM	12:00:00 AM	Auto	Low	Mic	Slow	dBA	No	No	21.18mV/Pa	74.9	72.3	57.7	92.4	86.8	66.9	69.8	69.3	55	110.5	107.9	93.3	107.2	101.2	82.4	63.5	60.6	58.9	58.6	58.4	57.8	57.3
17	3/5/2026	12:00:00 AM	1:00:00 AM	Auto	Low	Mic	Slow	dBA	No	No	21.18mV/Pa	72.4	71.8	58.8	78.6	75.4	67.2	70.2	69.7	55.9	108	107.4	94.4	91.4	86.9	80	60.9	60.2	59.7	59.5	59.4	59.1	58.7
18	3/5/2026	1:00:00 AM	2:00:00 AM	Auto	Low	Mic	Slow	dBA	No	No	21.18mV/Pa	74.1	73.7	60	94.2	93.6	75.4	70.8	70.4	56	109.7	109.3	95.6	104.6	103.3	91.8	61.4	61	60.7	60.6	60.5	60.2	59.8
19	3/5/2026	2:00:00 AM	3:00:00 AM	Auto	Low	Mic	Slow	dBA	No	No	21.18mV/Pa	75.7	75.2	61.8	97.1	96.6	78.8	72.2	71.9	58.2	111.3	110.8	97.4	107.1	106.9	90.7	72.1	71.1	60.9	60.7	60.6	60.3	60
20	3/5/2026	3:00:00 AM	4:00:00 AM	Auto	Low	Mic	Slow	dBA	No	No	21.18mV/Pa	74.5	73.8	60.2	84.5	80.2	62.9	72.5	72.1	58.2	110.1	109.4	95.8	97.5	92.8	75.7	61.3	61.1	61	60.9	60.8	60.5	60.2
21	3/5/2026	4:00:00 AM	5:00:00 AM	Auto	Low	Mic	Slow	dBA	No	No	21.18mV/Pa	74.1	73.5	60.4	83.1	78.2	66.5	71.5	70.8	57.4	109.7	109.1	96	95.8	90.9	79.2	62	61.5	61.2	61.1	61	60.7	60.3
22	3/5/2026	5:00:00 AM	6:00:00 AM	Auto	Low	Mic	Slow	dBA	No	No	21.18mV/Pa	73.3	72.4	60.2	85.2	79.9	69.5	70.4	69.5	57.4	108.9	108	95.8	97.3	92.3	81	65.8	63.9	61.2	60.9	60.8	60.3	59.8
23	3/5/2026	6:00:00 AM	7:00:00 AM	Auto	Low	Mic	Slow	dBA	No	No	21.18mV/Pa	78	75.2	60.3	95	88.9	69.2	71.2	70.4	57.9	113.6	110.8	95.9	107.6	102.9	82.8	65.8	63.8	61.4	61	60.9	60.4	60
24	3/5/2026	7:00:00 AM	8:00:00 AM	Auto	Low	Mic	Slow	dBA	No	No	21.18mV/Pa	77.8	75.7	61.3	91.3	90.6	75.2	72.6	71.8	56.8	113.4	111.3	96.9	103.4	102.1	91.4	72	70.9	63.4	61.1	60.4	59.6	59.2
25	3/5/2026	8:00:00 AM	9:00:00 AM	Auto	Low	Mic	Slow	dBA	No	No	21.18mV/Pa	78.9	75.8	60.5	95.2	91.1	75	72.2	71	56.4	114.5	111.4	96.1	108.4	103.2	88.2	70.6	68.7	63.8	61	60.3	59.2	58.7
26	3/5/2026	9:00:00 AM	10:00:00 AM	Auto	Low	Mic	Slow	dBA	No	No	21.18mV/Pa	77.4	74.9	60.4	91.4	90.8	76.2	71.2	70.2	55.2	113	110.5	96	104.8	101.4	98.5	70.6	67.9	63.5	60.9	60.1	59.1	58.4

Long-Term Noise Measurement Calculations

KEY: Orange cells are for input.
Grey cells are intermediate calculations performed by the model.
Green cells are data to present in a written analysis (output).

Measurement Site: LT-2
Measurement Date: 3/4/2026 - 3/5/2026
Project Name: SMUD Pocket Rebuild

Hour of Day 24-hr Format	L_{dn} Start	L_{dn} End	C_{NEL} Start	C_{NEL} End
Daytime	7	22	7	19
Evening	N/A	N/A	19	22
Nighttime	22	7	22	7

Hour of Day (24-hr Format)	Sound Levels Descriptors L_{eq}	L_{max}	L_{50}	L_{min}
10:00	62	75	59	57
11:00	59	71	58	56
12:00	59	72	58	55
13:00	58	74	57	54
14:00	59	75	57	54
15:00	57	65	57	55
16:00	58	66	58	56
17:00	58	70	58	55
18:00	58	67	58	57
19:00	61	76	59	57
20:00	60	70	59	57
21:00	59	70	58	55
22:00	58	73	57	54
23:00	58	67	57	55
0:00	59	67	59	56
1:00	60	75	60	56
2:00	62	79	60	58
3:00	60	63	60	58
4:00	60	67	60	57
5:00	60	70	60	57
6:00	60	69	60	58
7:00	61	75	59	57
8:00	61	75	59	56
9:00	60	76	58	55

Sound Power[1]
$=10*\text{Log}(L_{eq,\ 1hr}/10)$

Equivalent Noise Level (L_{eq}) Day	Night	Day	Evening	Night
1445439.771		1445439.771		
776247.1166		776247.1166		
724435.9601		724435.9601		
588843.6554		588843.6554		
707945.7844		707945.7844		
549540.8739		549540.8739		
630957.3445		630957.3445		
676082.9754		676082.9754		
645654.229		645654.229		
1230268.771			1230268.771	
891250.9381			891250.9381	
741310.2413			741310.2413	
	602559.5861			602559.5861
	588843.6554			588843.6554
	758577.575			758577.575
	1000000			1000000
	1513561.248			1513561.248
	1047128.548			1047128.548
	1096478.196			1096478.196
	1047128.548			1047128.548
	1071519.305			1071519.305
1348962.883				
1122018.454		1122018.454		
1096478.196		1096478.196		

Day Night Average (L_{dn})[2] Day	Night	Community Noise Equivalent Level (CNEL)[3] Day	Evening	Night
Sum of Sound Power during Period w/o Penalty				
13,175,437	8,725,797	8,963,644	2,862,830	8,725,797
Log Factor for CNEL Penalty (i.e., 10*log(x))[4]				
1	10	1	3	10
Sound Power during Period with penalty				
13,175,437	87,257,967	8,963,644	8,588,490	87,257,967
Number of Hours				
		24		
L_{dn}	66.2	CNEL	66.4	

Notes:
[1] Computation of Sound Power are based on equation 7-1 on pg. 7-9 of Caltrans 2013
[2] Computation of the L_{dn} based on 1-hour L_{eq} measurements for each hour of a day are based on equation 2-23 on pg. 2-52 of Caltrans 2013.
[3] Computation of the CNEL based on 1-hour L_{eq} measurements for each hour of a day are based on equation 2-24 on pg. 2-53 of Caltrans 2013.
[4] Log factors for the L_{dn} and CNEL penalties are provided in Table 2-11 on pg. 2-48 of Caltrans 2013.
[5] Average noise level descriptors were logarithmicly averaged over the total number of hours
Source:
California Department of Transportation (Caltrans), Division of Environmental Analysis. 2013 (September). *Technical Noise Supplement to the Traffic Noise Analysis Protocol* . Sacramento, CA. Available: <https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/env/tens-sep2013-a11y.pdf>. Accessed Febuary 26, 2025.

Sound Power[1]
$=10*\text{Log}(L_{eq,\ 1hr}/10)$

Hour of Day	Maximum Noise Levels (L_{max}) Day	Night	Day	Evening	Night	Sound Pressure Level Exceeded 50% of a Specific Time Period (L_{50}) Day	Night	Day	Evening	Night	Mininum Noise Levels (L_{min}) Day	Night	Day	Evening	Night
10:00	28840315		28840315.03			870963.59		870963.59			537031.7964		537031.7964		
11:00	12589254		12589254.12			691830.9709		691830.9709			380189.3963		380189.3963		
12:00	14125375		14125375.45			562341.3252		562341.3252			295120.9227		295120.9227		
13:00	26915348		26915348.04			446683.5922		446683.5922			229086.7653		229086.7653		
14:00	30199517		30199517.2			537031.7964		537031.7964			257039.5783		257039.5783		
15:00	2951209		2951209.227			524807.4602		524807.4602			323593.6569		323593.6569		
16:00	3981072		3981071.706			588843.6554		588843.6554			398107.1706		398107.1706		
17:00	9120108		9120108.394			616595.0019		616595.0019			346736.8505		346736.8505		
18:00	4466836		4466835.922			602559.5861		602559.5861			446683.5922		446683.5922		
19:00	43651583			43651583.22		812830.5162			812830.5162		478630.0923			478630.0923	
20:00	10232930			10232929.92		851138.0382			851138.0382		549540.8739			549540.8739	
21:00	10000000			10000000		660693.448			660693.448		346736.8505			346736.8505	
22:00		19498446			19498446		501187.2336			501187.2336		275422.8703			275422.8703
23:00		4897788.194			4897788.194		537031.7964			537031.7964		316227.766			316227.766
0:00		5248074.602			5248074.602		741310.2413			741310.2413		389045.145			389045.145
1:00		34673685.05			34673685.05		954992.586			954992.586		398107.1706			398107.1706
2:00		75857757.5			75857757.5		1000000			1000000		660693.448			660693.448
3:00		1949844.6			1949844.6		1047128.548			1047128.548		660693.448			660693.448
4:00		4466835.922			4466835.922		1071519.305			1071519.305		549540.8739			549540.8739
5:00		8912509.381			8912509.381		954992.586			954992.586		549540.8739			549540.8739
6:00		8317637.711			8317637.711		1000000			1000000		616595.0019			616595.0019
7:00	33113112		33113112.15			831763.7711		831763.7711			478630.0923		478630.0923		
8:00	31622777		31622776.6			741310.2413		741310.2413			436515.8322		436515.8322		
9:00	41686938		41686938.35			691830.9709		691830.9709			331131.1215		331131.1215		

Average Sound Level Descriptors[5]

L_{eq} Day	Night	Day	Evening	Night	L_{50} Day	Night	Day	Evening	Night
59	60	59	60	60	58	59	58	59	59

L_{max} Day	Night	Day	Evening	Night	L_{min} Day	Night	Day	Evening	Night
73	73	73	73	73	56	57	56	57	57

Long-Term Noise Measurement Summary

KEY: Orange cells are for input.

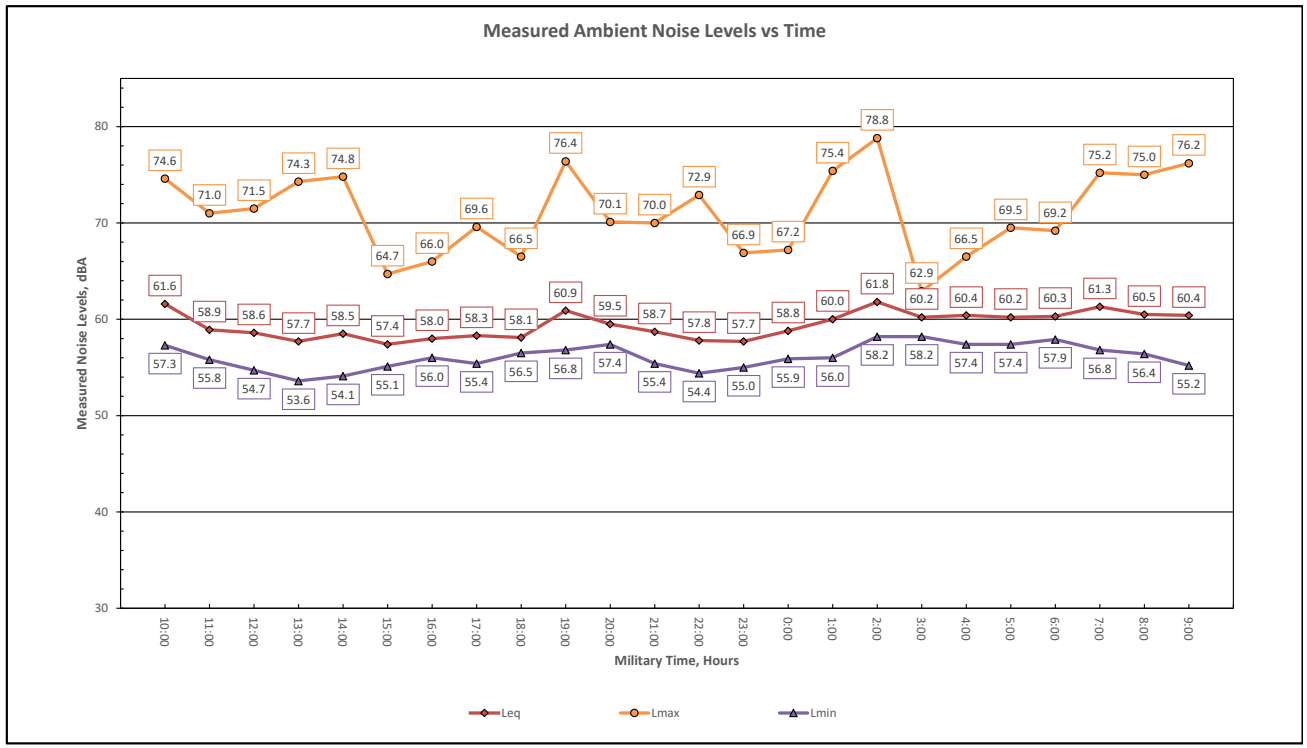
Green cells are data to present in a written analysis (output).

Measurement Site: LT-2
Measurement Date: 3/4/2026 - 3/5/2026
Project Name: SMUD Pocket Rebuild
Coordinates 38.490403 -121.470686

Hour of Day (military time)	Measured Level, dBA L_{eq}	L_{max}	L_{50}	L_{min}
10:00	61.6	74.6	59.4	57.3
11:00	58.9	71.0	58.4	55.8
12:00	58.6	71.5	57.5	54.7
13:00	57.7	74.3	56.5	53.6
14:00	58.5	74.8	57.3	54.1
15:00	57.4	64.7	57.2	55.1
16:00	58.0	66.0	57.7	56.0
17:00	58.3	69.6	57.9	55.4
18:00	58.1	66.5	57.8	56.5
19:00	60.9	76.4	59.1	56.8
20:00	59.5	70.1	59.3	57.4
21:00	58.7	70.0	58.2	55.4
22:00	57.8	72.9	57.0	54.4
23:00	57.7	66.9	57.3	55.0
0:00	58.8	67.2	58.7	55.9
1:00	60.0	75.4	59.8	56.0
2:00	61.8	78.8	60.0	58.2
3:00	60.2	62.9	60.2	58.2
4:00	60.4	66.5	60.3	57.4
5:00	60.2	69.5	59.8	57.4
6:00	60.3	69.2	60.0	57.9
7:00	61.3	75.2	59.2	56.8
8:00	60.5	75.0	58.7	56.4
9:00	60.4	76.2	58.4	55.2

Metrics	L_{eq}	L_{max}	L_{50}	L_{min}
Day Average	59	73	58	56
Evening Average	60	73	59	57
Night Average	60	73	59	57

CNEL	66.4
Day %	60.2%
Night %	39.8%



Notes: Primary noises include transformer operational noise and ambient natural noise such as bird chirping or blowing winds. A secondary noise source includes the periodic activity on the lightrail east of the project site.

Short-Term Noise Measurement Summary Sheet

KEY: Orange cells are for input.

Measurement Date: 3/4/2026
Project Name: SMUD Pocket Rebuild
Analyst: Sergio Gomez
SLM: Piccolo 3

Measurement Site	Coordinates	Run ID	Start Date	Start Time	End Time	Duration	L_{eq}	L_{max}	L_{min}	L_{10}	L_{25}	L_{50}	L_{90}
ST-1	38.489503 N 12:	4	3/4/2026	9:47:34 AM	10:02:34 AM	0:15:00	54.2	69.2	50.4	55.5	52.7	52.1	51.3
ST-2	38.489399 N	3	3/4/2026	9:20:21 AM	9:35:21 AM	0:15:00	63.7	68.6	62.8	63.9	63.7	63.5	63.2
ST-3	38.490535 N 12:	1	3/4/2026	8:30:20 AM	8:45:20 AM	0:15:00	64.3	86.0	48.3	64.7	58.5	53.7	50.3
ST-4	38.486758 N 12:	5	3/4/2026	10:10:01 AM	10:25:01 AM	0:15:00	72.1	92.5	51.9	75.5	71.7	66.6	58.4



Short-Term Noise Measurement Summary

KEY: Orange cells are for input.

Green cells are data to present in a written analysis (output).

Measurement Site: ST-1
Measurement Date: 3/4/2026
Project Name: SMUD Pocket Rebuild
Coordinates: 38.489503 N 121.471125 W
Analyst: Sergio Gomez
SLM: Piccolo 3

Start Time	9:47
End Time	10:02
Duration	0:15

Measured Results, dBA	
Leq	54.2
Lmax	69.2
Lmin	50.4
L10	55.5
L50	52.1
L90	51.3

Noise Environment Characteristcs

Primary Noise Sources: The primary noise source is operational noise from the transformer

Secondary Noise Sources: A secondary noise source is occasioanal traffic noise from Melinda Way

Etc:





Short-Term Noise Measurement Summary

KEY: Orange cells are for input.

Green cells are data to present in a written analysis (output).

Measurement Site: ST-2
Measurement Date: 3/4/2026
Project Name: SMUD Pocket Rebuild
Coordinates: 38.489399 N 121.470247W
Analyst: Sergio Gomez
SLM: Piccolo 3

Start Time	9:20
End Time	9:35
Duration	0:15

Measured Results, dBA	
Leq	63.7
Lmax	68.6
Lmin	62.8
L10	63.9
L50	63.5
L90	63.2

Noise Environment Characteristcs

Primary Noise Sources: The primary noise source is operational noise from the transformer

Etc:





Short-Term Noise Measurement Summary

KEY: Orange cells are for input.

Green cells are data to present in a written analysis (output).

Measurement Site: ST-3
Measurement Date: 3/4/2026
Project Name: SMUD Pocket Rebuild
Coordinates: 38.490535 N 121.475742 W
Analyst: Sergio Gomez
SLM: Piccolo 3

Start Time	8:30
End Time	8:45
Duration	0:15

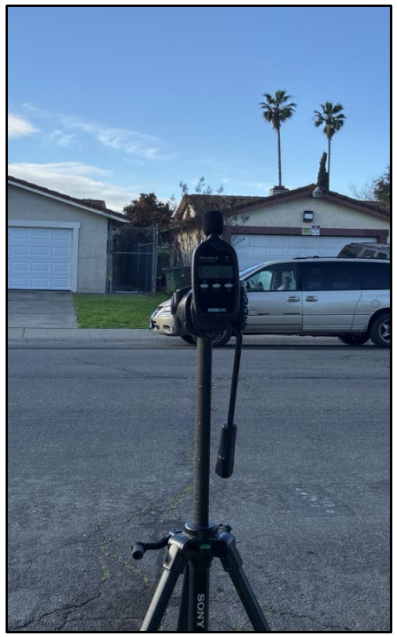
Measured Results, dBA	
Leq	64.3
Lmax	86.0
Lmin	48.3
L10	64.7
L50	53.7
L90	50.3

Noise Environment Characteristcs

Primary Noise Sources: A primary noise source is amient natural noise including bird chirping and winds blowing

Secondary Noise Sources: An emergency vehicle generated that Lmax at 6 minutes

Etc:





Short-Term Noise Measurement Summary

KEY: Orange cells are for input.

Green cells are data to present in a written analysis (output).

Measurement Site: ST-4
Measurement Date: 3/4/2026
Project Name: SMUD Pocket Rebuild
Coordinates: 38.486758 N 121.480474 W
Analyst: Sergio Gomez
SLM: Piccolo 3

Start Time	10:10
End Time	10:25
Duration	0:15

Measured Results, dBA	
Leq	72.1
Lmax	92.5
Lmin	51.9
L10	75.5
L50	66.6
L90	58.4

Noise Environment Characteristcs

Primary Noise Sources: The primary noise source is traffic noise at the intersection of Matson Drive and 24th Street.

Etc:





Construction Equipment Average Noise Levels

Project Name: SMUD Pocket Rebuild

KEY: Orange cells are for input.
Grey cells are intermediate calculations performed by the model.
Green cells are data to present in a written analysis (output).

Location	Distance to Nearest Receptor in feet	Combined Predicted Noise Level (dBA L_{eq})
Thresholds		
Daytime Standard	16	90.0
Nighttime Standard	51	80.0
Sensitive Receptors		
SR-1	210	67.7
SR-2	270	65.5
SR-3	330	63.8

Equipment[1]	Reference Emission Noise Levels (dBA L_{max}) at 50 feet[2]	Usage Factor[2]
Compactor (ground)	83	0.2
Dozer	82	0.4

Ground Type	Hard
Source Height	5
Receiver Height	5
Ground Factor[3]	0.00

Predicted Noise Level [4]	dBA L_{eq} at 50 feet[4]
Compactor (ground)	76.0
Dozer	78.0

Combined Predicted Noise Level (dBA L_{eq} at 50 feet)
80.1

Sources:

[1] Where measured values are not available, noise levels based on the Construction Noise Control Specifiction 721.560 were used.

[2] Obtained from the FHWA Roadway Construction Noise Model, January 2006. Table 1.

[3] Based on Figure 4-26 from the Federal Transit Noise and Vibration Impact Assessment, 2018 (pg 86).

[4] Based on the following from the Federal Transit Noise and Vibration Impact Assessment, 2018 (pg 177).

L_{eq}(equip) = E.L.+10*log (U.F.) - 20*log (D/50) - 10*G*log (D/50)

Where: E.L. = Emission Level;

U.F.= Usage Factor;

G = Constant that accounts for topography and ground effects (FTA 2018: pg 86); and

D = Distance from source to receiver.

Construction Equipment Average Noise Levels

Project Name: SMUD Pocket Rebuild

KEY: Orange cells are for input.
Grey cells are intermediate calculations performed by the model.
Green cells are data to present in a written analysis (output).

Location	Distance to Nearest Receptor in feet	Combined Predicted Noise Level (dBA L_{eq})
Thresholds		
Daytime Standard	11	90.0
Nighttime Standard	35	80.0
Sensitive Receptors		
Nearest Noise Receptor	20	85.0

Equipment[1]	Reference Emission Noise Levels (dBA L_{max}) at 50 feet[2]	Usage Factor[2]
Excavator	81	0.4

Ground Type	Hard
Source Height	5
Receiver Height	5
Ground Factor[3]	0.00

Predicted Noise Level [4]	dBA L_{eq} at 50 feet[4]
Excavator	77.0

Combined Predicted Noise Level (dBA L_{eq} at 50 feet)
77.0

Sources:

[1] Where measured values are not available, noise levels based on the Construction Noise Control Specifiction 721.560 were used.

[2] Obtained from the FHWA Roadway Construction Noise Model, January 2006. Table 1.

[3] Based on Figure 4-26 from the Federal Transit Noise and Vibration Impact Assessment, 2018 (pg 86).

[4] Based on the following from the Federal Transit Noise and Vibration Impact Assessment, 2018 (pg 177).

L_{eq}(equip) = E.L.+10*log (U.F.) - 20*log (D/50) - 10*G*log (D/50)

Where: E.L. = Emission Level;

U.F.= Usage Factor;

G = Constant that accounts for topography and ground effects (FTA 2018: pg 86); and

D = Distance from source to receiver.

Construction Equipment Average Noise Levels

Project Name: SMUD Pocket Rebuild

KEY: Orange cells are for input.

Grey cells are intermediate calculations performed by the model.

Green cells are data to present in a written analysis (output).

Location	Distance to Nearest Receptor in feet	Combined Predicted Noise Level (dBA L_{eq})
Thresholds		
Daytime Standard	5	90.0
Nighttime Standard	16	80.0
Sensitive Receptors		
Nearest Noise Receptor	25	76.0

Equipment[1]	Reference Emission Noise Levels (dBA L_{max}) at 50 feet[2]	Usage Factor[2]
Flat Bed Truck	74	0.4

Ground Type	Hard
Source Height	5
Receiver Height	5
Ground Factor[3]	0.00

Predicted Noise Level [4]	dBA L_{eq} at 50 feet[4]
Flat Bed Truck	70.0

Combined Predicted Noise Level (dBA L_{eq} at 50 feet)
70.0

Sources:

[1] Where measured values are not available, noise levels based on the Construction Noise Control Specifiction 721.560 were used.

[2] Obtained from the FHWA Roadway Construction Noise Model, January 2006. Table 1.

[3] Based on Figure 4-26 from the Federal Transit Noise and Vibration Impact Assessment, 2018 (pg 86).

[4] Based on the following from the Federal Transit Noise and Vibration Impact Assessment, 2018 (pg 177).

L_{eq}(equip) = E.L.+10*log (U.F.) - 20*log (D/50) - 10*G*log (D/50)

Where: E.L. = Emission Level;

U.F.= Usage Factor;

G = Constant that accounts for topography and ground effects (FTA 2018: pg 86); and

D = Distance from source to receiver.

Equipment Description	Acoustical Usage Factor (%)	Spec 721.560 Lmax @ 50ft (dBA slow)	Actual Measured Lmax @ 50ft (dBA slow)	No. of Actual Data Samples (count)	Spec 721.560 LmaxCalc	Spec 721.560 Leq	Distance	Actual Measured LmaxCalc	Actual Measured Leq
Auger Drill Rig	20	85	84	36	85.0	78.0	50	84.0	77.0
Backhoe	40	80	78	372	80.0	76.0	50	78.0	74.0
Bar Bender	20	80	80	0	80.0	73.0	50	80.0	73.0
Blasting	100	94	94	0	94.0		50	94.0	94.0
Boring Jack Power Unit	50	80	83	1	80.0	77.0	50	83.0	80.0
Chain Saw	20	85	84	46	85.0	78.0	50	84.0	77.0
Clam Shovel (dropping)	20	93	87	4	93.0	86.0	50	87.0	80.0
Compactor (ground)	20	80	83	57	80.0	73.0	50	83.0	76.0
Compressor (air)	40	80	78	18	80.0	76.0	50	78.0	74.0
Concrete Batch Plant	15	83	83	0	83.0	74.8	50	83.0	74.8
Concrete Mixer Truck	40	85	79	40	85.0	81.0	50	79.0	75.0
Concrete Pump Truck	20	82	81	30	82.0	75.0	50	81.0	74.0
Concrete Saw	20	90	90	55	90.0	83.0	50	90.0	83.0
Crane	16	85	81	405	85.0	77.0	50	81.0	73.0
Dozer	40	85	82	55	85.0	81.0	50	82.0	78.0
Drill Rig Truck	20	84	79	22	84.0	77.0	50	79.0	72.0
Drum Mixer	50	80	80	1	80.0	77.0	50	80.0	77.0
Dump Truck	40	84	76	31	84.0	80.0	50	76.0	72.0
Excavator	40	85	81	170	85.0	81.0	50	81.0	77.0
Flat Bed Truck	40	84	74	4	84.0	80.0	50	74.0	70.0
Front End Loader	40	80	79	96	80.0	76.0	50	79.0	75.0
Generator	50	82	81	19	82.0	79.0	50	81.0	78.0
Generator (<25KVA, VMS signs)	50	70	73	74	70.0	67.0	50	73.0	70.0
Gradall	40	85	83	70	85.0	81.0	50	83.0	79.0
Grader	40	85	85	0	85.0	81.0	50	85.0	81.0
Grapple (on Backhoe)	40	85	87	1	85.0	81.0	50	87.0	83.0
Horizontal Boring Hydr. Jack	25	80	82	6	80.0	74.0	50	82.0	76.0
Hydra Break Ram	10	90	90	0	90.0	80.0	50	90.0	80.0
Impact Pile Driver	20	95	101	11	95.0	88.0	50	101.0	94.0
Jackhammer	20	85	89	133	85.0	78.0	50	89.0	82.0
Man Lift	20	85	75	23	85.0	78.0	50	75.0	68.0
Mounted Impact Hammer (hoe ram)	20	90	90	212	90.0	83.0	50	90.0	83.0
Pavement Scarafier	20	85	90	2	85.0	78.0	50	90.0	83.0
Paver	50	85	77	9	85.0	82.0	50	77.0	74.0
Pickup Truck	40	55	75	1	55.0	51.0	50	75.0	71.0
Pneumatic Tools	50	85	85	90	85.0	82.0	50	85.0	82.0
Pumps	50	77	81	17	77.0	74.0	50	81.0	78.0
Refrigerator Unit	100	82	73	3	82.0	82.0	50	73.0	73.0
Rivit Buster/chipping gun	20	85	79	19	85.0	78.0	50	79.0	72.0
Rock Drill	20	85	81	3	85.0	78.0	50	81.0	74.0
Roller	20	85	80	16	85.0	78.0	50	80.0	73.0
Sand Blasting (Single Nozzle)	20	85	96	9	85.0	78.0	50	96.0	89.0
Scraper	40	85	84	12	85.0	81.0	50	84.0	80.0
Shears (on backhoe)	40	85	96	5	85.0	81.0	50	96.0	92.0
Slurry Plant	100	78	78	1	78.0	78.0	50	78.0	78.0
Slurry Trenching Machine	50	82	80	75	82.0	79.0	50	80.0	77.0
Soil Mix Drill Rig	50	80	80	0	80.0	77.0	50	80.0	77.0
Tractor	40	84	84	0	84.0	80.0	50	84.0	80.0
Vacuum Excavator (Vac-truck)	40	85	85	149	85.0	81.0	50	85.0	81.0
Vacuum Street Sweeper	10	80	82	19	80.0	70.0	50	82.0	72.0
Ventilation Fan	100	85	79	13	85.0	85.0	50	79.0	79.0
Vibrating Hopper	50	85	87	1	85.0	82.0	50	87.0	84.0
Vibratory Concrete Mixer	20	80	80	1	80.0	73.0	50	80.0	73.0
Vibratory Pile Driver	20	95	101	44	95.0	88.0	50	101.0	94.0
Warning Horn	5	85	83	12	85.0	72.0	50	83.0	70.0
Welder / Torch	40	73	74	5	73.0	69.0	50	74.0	70.0

Attenuation Calculations for Stationary Noise Sources

KEY: Orange cells are for input.
Grey cells are intermediate calculations performed by the model.
Green cells are data to present in a written analysis (output).

Project Name: SMUD Pocket Rebuild

STEP 1: Identify the noise source and enter the reference noise level (dBA and distance).

STEP 2: Select the ground type (hard or soft), and enter the source and receiver heights.

STEP 3: Select the distance to the receiver.

Noise Source/ID	Reference Noise Level			Attenuation Characteristics				Attenuated Noise Level at Receptor		
	noise level (dBA)	@	distance (ft)	Ground Type (soft/hard)	Source Height (ft)	Receiver Height (ft)	Ground Factor	noise level (dBA)	@	distance (ft)
Transformer (Reference Data L50)	63.7	@	40	hard	5	5	0.00	53.5	@	130
Transformer (Three Adjacent to eachother L50)	68.3	@	40	hard	5	5	0.00	54.3	@	200
Transformer (Three Adjacent to eachother L50) Distance to nighttime noise exceedance	68.3	@	40	hard	5	5	0.00	50.0	@	330

Notes:

Estimates of attenuated noise levels do not account for reductions from intervening barriers, including walls, trees, vegetation, or structures of any type.

Computation of the attenuated noise level is based on the equation presented on pg. 176 and 177 of FTA 2018.

Computation of the ground factor is based on the equation presentd in Table 4-26 on pg. 86 of FTA 2018, where the distance of the reference noise leve can be adjusted and the usage factor is not applied (i.e., the usage factor is equal to 1).

Sources:

Federal Transit Association (FTA). 2018 (September). Transit Noise and Vibration Impact Assessment. Washington, D.C. Available: <http://www.transit.dot.gov/sites/fta.dot.gov/files/docs/research-innovation/118131/transit-noise-and-vibration-impact-assessment-manual-fta-report-no-0123_0.pdf>Accessed: March 5, 2020.

Ground Vibration Distance Propagation Calculations for Stationary Sources

KEY: Orange cells are for input.

Grey cells are intermediate calculations performed by the model.

Green cells are data to present in a written analysis (output).

Project Name: SMUD Pocket Rebuild

STEP 1: Determine units in which to perform calculation.

— If vibration decibels (VdB), then use Table A and proceed to Steps 2A and 3A.

— If peak particle velocity (PPV), then use Table B and proceed to Steps 2B and 3B.

STEP 2A: Identify the vibration source and enter the reference vibration level (VdB) and distance.

STEP 3A: Select the distance to the receiver.

Table A. Propagation of vibration decibels (VdB) with distance

Vibration Source/ID	Reference Vibration Level			Attenuated Vibration Level at Receptor		
	vibration level (VdB)	@	distance (ft)	vibration level (VdB)	@	distance (ft)
Vibratory Roller	94	@	25	80	@	73

**The Lv metric (VdB) is used to assess the likelihood for vibration to result in human annoyance.*

Land Use Category	Human Annoyance Criteria GBV Impact Levels (VdB re 1 micro-inch/sec)		
	Frequent Events	Occacional Events	Infrequent Events
Category 1: Buildings where vibration would interfere with interior operations.	65 VdB	65 VdB	65 VdB
Category 2: Residences and buildings where people normally sleep.	72 VdB	75 VdB	80 VdB
Category 3: Institutional land uses with primarily daytime use.	75 VdB	78 VdB	83 VdB

Source: Federal Transit Administration, pg 126

STEP 3B: Select the distance to the receiver.

Table B. Propagation of peak particle velocity (PPV) with distance

Vibration Source/ID	Reference Vibration Level			Attenuated Vibration Level at Receptor		
	vibration level (PPV)	@	distance (ft)	vibration level (PPV)	@	distance (ft)
Vibratory Roller	0.210	@	25	0.2	@	26

**The PPV metric (in/sec) is used for assessing the likelihood for the potential of structural damage.*

Building/Structural Category	Construction Vibration Damage Criteria PPV, in/sec	Approximate Lv
I. Reinforced-concrete, steel or timber (no plaster)	0.5	102
II. Engineered concrete and masonry (no plaster)	0.3	98
III. Non-engineered timber and masonry buildng	0.2	94
IV. Buildings extremely susceptible to vibration damage	0.12	90

Source: Federal Transit Administration, pg 186

Notes:

- Computation of propagated vibration levels is based on the equations presented on pg. 185 of FTA 2018.
- Estimates of attenuated vibration levels do not account for reductions from intervening underground barriers or other underground structures of any type, or changes in soil type.
- Frequent Events are defined as more than 70 events per day; occasional events as 30-70 events per day; and infrequent events as fewer than 30 events per day

Reference:

Federal Transit Association (FTA). 2018 (September). Transit Noise and Vibration Impact Assessment Manual. FTA Report No. 0123. Washington, D.C. Accessed: December 20, 2020. Page Available: https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/research-innovation/118131/transit-noise-and-vibration-impact-assessment-manual-fta-report-no-0123_0.pdf

Equipment	PPV at 25 ft, in/sec	Approximate LV at 25 ft	Reference
Pile Driver (impact - upper range)	1.518	112	FTA Noise and Vibration Manual Page 184
Pile Driver (Sonic - upper range)	0.734	105	FTA Noise and Vibration Manual Page 184
Pile Driver (impact - typical)	0.644	104	FTA Noise and Vibration Manual Page 184
Vibratory Roller	0.21	94	FTA Noise and Vibration Manual Page 184
Clam Shovel	0.202	94	FTA Noise and Vibration Manual Page 184
Clam Shovel	0.202	94	FTA Noise and Vibration Manual Page 184
Pile Driver (Sonic - typical)	0.17	93	FTA Noise and Vibration Manual Page 184
Hoe Ram	0.089	87	FTA Noise and Vibration Manual Page 184
Large Bulldozer	0.089	87	FTA Noise and Vibration Manual Page 184
Caisson Drilling	0.089	87	FTA Noise and Vibration Manual Page 184
Loaded Trucks	0.076	86	FTA Noise and Vibration Manual Page 184
Jackhammer	0.035	79	FTA Noise and Vibration Manual Page 184
Hydromill (Slurry Wall)	0.008	66	FTA Noise and Vibration Manual Page 184
Small Bulldozer	0.003	58	FTA Noise and Vibration Manual Page 184

Notes:
Computation of propagated vibration levels is based on the equations presented on pg. 185

Federal Transit Association (FTA). 2018 (September). Transit Noise and Vibration Impact Assessment Manual. FTA Report No. 0123. Washington, D.C. Accessed: December 20, 2020. Page Available:

https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/research-innovation/118131/transit-noise-and-vibration-impact-assessment-manual-fta-report-no-0123_0.pdf

Truck Attenuation

		Noise Level			
				Wall	Residual
FHWA Truck @ 15 mph		dBA SEL	FT	Reduction	Noise dBA
Reference Noise Level[1]		75	50		
Calculated noise level	*(attenuation to nearest bld.)*	**76.0**	40		76.0

Sources

Attenuation Formula

Lp(R2)=Lp(R1)-10*Log10^(R2/R1)

Lp(R1)	=	reference noise level at known distance
Lp(R2)	=	noise level at second location
R1	=	reference level distance
R2	=	distance to second location

1 Federal Highway Administration. 2019. (December). TECHNICAL MANUAL. Traffic Noise Model 3.0, Figure 6.. U.S. Department of Transportation. Office of Natural Environment. Washington, D.C.

Citation #	Citations	
1	Caltrans Technical Noise Supplement. 2009 (November). Table (5-11), Pg 5-60.	Caltrans Technical Noise Supplement. 2013 (September). Table (4-2), Pg 4-17.
2	Caltrans Technical Noise Supplement. 2009 (November). Equation (5-26), Pg 5-60.	Caltrans Technical Noise Supplement. 2013 (September). Equation (4-5), Pg 4-17.
3	Caltrans Technical Noise Supplement. 2009 (November). Equation (2-16), Pg 2-32.	FHWA 2004 TNM Version 2.5
4	Caltrans Technical Noise Supplement. 2009 (November). Equation (5-11), Pg 5-47, 48.	FHWA 2004 TNM Version 2.5
5	Caltrans Technical Noise Supplement. 2009 (November). Equation (2-26), Pg 2-55, 56.	Caltrans Technical Noise Supplement. 2013 (September). Equation (2-23), Pg 2-51, 52.
6	Caltrans Technical Noise Supplement. 2009 (November). Equation (2-27), Pg 2-57.	Caltrans Technical Noise Supplement. 2013 (September). Equation (2-24), Pg 2-53.
7	Caltrans Technical Noise Supplement. 2009 (November). Pg 2-53.	Caltrans Technical Noise Supplement. 2013 (September). Pg 2-57.
8	Caltrans Technical Noise Supplement. 2009 (November). Equation (5-7), Pg 5-45.	FHWA 2004 TNM Version 2.5
9	Caltrans Technical Noise Supplement. 2009 (November). Equation (5-8), Pg 5-45.	FHWA 2004 TNM Version 2.5
10	Caltrans Technical Noise Supplement. 2009 (November). Equation (5-9), Pg 5-45.	FHWA 2004 TNM Version 2.5
11	Caltrans Technical Noise Supplement. 2009 (November). Equation (5-13), Pg 5-49.	FHWA 2004 TNM Version 2.5
12	Caltrans Technical Noise Supplement. 2009 (November). Equation (5-14), Pg 5-49.	FHWA 2004 TNM Version 2.5
13	Federal Highway Administration Traffic Noise Model Technical Manual. Report No. FHWA-PD-96-010. 1998 (January). Equation (16), Pg 67	
14	Federal Highway Administration Traffic Noise Model Technical Manual. Report No. FHWA-PD-96-010. 1998 (January). Equation (20), Pg 69	
15	Federal Highway Administration Traffic Noise Model Technical Manual. Report No. FHWA-PD-96-010. 1998 (January). Equation (18), Pg 69	

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California Department of Transportation (Caltrans). 2009 (November). Technical Noise Supplement. Available: http://www.dot.ca.gov/hq/env/noise/pub/tens_complete.pdf. Accessed August 17, 2017.

California Department of Transportation (Caltrans). 2013 (September). Technical Noise Supplement. Available: http://www.dot.ca.gov/hq/env/noise/pub/TeNS_Sept_2013A.pdf. Accessed August 17, 2017.

Federal Highway Administration. 2004. Traffic Noise Model Version 2.5. Available: https://www.fhwa.dot.gov/environment/noise/traffic_noise_model/tnm_v25/. Accessed August 17, 2017.