Sacramento Municipal Utility District

Station J Bulk Transmission Substation Project

Recirculated Draft Environmental Impact Report • November 2024

State Clearinghouse No. 2023020549

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November 2024

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TABLE OF CONTENTS

Appendices

Tables

Figures

ACRONYMS AND OTHER ABBREVIATIONS

°F	degrees Fahrenheit
AB	Assembly Bill
AB 32	California Global Warming Solutions Act of 2006
ACM	asbestos containing materials
Alquist-Priolo Act	Alquist-Priolo Earthquake Fault Zoning Act
APC	Area Planning Commission
APE	Area of Potential Effect
ASTM	American Society for Testing and Materials International
B.P.	before present
BACT	best available control technology for toxics
Basin Plan	Sacramento River Basin and San Joaquin River Basin
bgs	below ground surface
BIOS	Biogeographic Information and Observation System
BMPs	best management practices
Board	SMUD Board of Directors
BSA	Biological Study Area
Btus	British thermal units
C-4 – SPD	Heavy Commercial – Special Planning District
ca.	circa
CAA	federal Clean Air Act
CAAP	Climate Action & Adaptation Plan
CAAQS	California Ambient Air Quality Standard
CAFE	Corporate Average Fuel Economy
CAL FIRE	California Department of Forestry and Fire Protection
Cal/OSHA	California Division of Occupational Safety and Health
CalEEMod	California Emissions Estimator Model
CalEnviroScreen	California Communities Environmental Health Screening Tool
CalEPA	California Environmental Protection Agency
CALGreen	California Green Building Code
CALGreen Code	California Green Building Standards Code
CalRecycle	California Department of Resources Recycling and Recovery
CalRecycle	California Integrated Waste Management Board
Caltrans	California Department of Transportation
CALVENO	California Vehicle Noise
CARB	California Air Resources Board
CaRFG	California Reformulated Gasoline

CBC	California Building Standards Code
CCAA	California Clean Air Act
CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife
CEC	California Energy Commission
CEQ	Council on Environmental Quality
CEQA	California Environmental Quality Act
CEQA Guide	California Environmental Quality Act Guide to Air Quality Assessment in Sacramento County
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act of 1980
CESA	California Endangered Species Act
cfm	cubic feet per minute
CFR	Code of Federal Regulations
CGS	California Geological Survey
CH_4	methane
CHABA	Committee of Hearing, Bio Acoustics, and Bio Mechanics
CHP	California Highway Patrol
CHRIS	California Historical Resources Information System
CNDDB	California Natural Diversity Database
CNEL	Community Noise Equivalent Level
CNPS	California Native Plant Society
CO	carbon monoxide
CO_2	carbon dioxide
CPUC	California Public Utilities Commission
CRHR	California Register of Historical Resources
CSS	combined sewer system
CUPA	Certified Unified Program Agency
CWA	Clean Water Act of 1972
DACs	disadvantaged communities
dB	decibel
dBA	A-weighted sound levels
DDT	dichlorodiphenyltrichloroethane
DOC	California Department of Conservation
DOU	Department of Utilities
DPM	diesel particulate matter
DPR	Department of Parks and Recreation
DTSC	California Department of Toxic Substances Control

EIA	U.S. Energy Information Administration
EIR	environmental impact report
EJ	environmental justice
EPA	U.S. Environmental Protection Agency
EPCRA	Emergency Planning and Community Right-to-Know Act of 1986
ESC	Erosion and Sediment Control
EV	electric vehicle
FAA	Federal Aviation Administration
FAR	floor area ratio
FEMA	Federal Emergency Management Agency
FESA	Federal Endangered Species Act
FHWA	Federal Highway Administration
FHWA-RD-77-108	Federal Highway Administration Highway Traffic Noise Prediction Model
FIRMs	Flood Insurance Rate Maps
FTA	Federal Transit Administration
GGRF	Greenhouse Gas Reduction Fund
GHG	greenhouse gas
GLO	General Land Office
GWP	Global Warming Potential
H&S monitor	health and safety monitor
HAER	Historic American Engineering Record
HAPs	hazardous air pollutants
HFCs	hydrofluorocarbons
HMBP	Hazardous Materials Business Plan
hp	horsepower
HSCER	Hazardous Substance Control and Emergency Response
HSCERP	Hazardous Substance Control and Emergency Response Plan
I-	Interstate
in/sec	inches per second
Ione	Ione Band of Miwok Indians
IPaC	Information, Planning, and Conservation System
IPCC	Intergovernmental Panel on Climate Change
IS	Initial Study
ITE	Institute of Transportation Engineers
kV	Kilovolt
LBP	lead-based paint

L_{dn}	Day-Night Noise Level
L_{eq}	Equivalent Sound Level
LID	Low Impact Development
L_{max}	Maximum Noise Level
L_{min}	Minimum Noise Level
L_n	Statistical Descriptor
LOS	level of service
LT	long-term
LUC	Land use covenant
LUST	leaking underground tank
MACT	maximum available control technology for toxics
MBTA	Migratory Bird Treaty Act
MCL	maximum contaminant level
MCLs	maximum contaminant levels
MDO	Medium Density Overlay
mg/kg	milligrams per kilogram
mgd	million gallons per day
MLD	most likely descendants
mph	miles per hour
MRZ	mineral resource zone
MT CO_2e	metric tons of carbon dioxide equivalent
MVA	megavolt-amperes
N_2O	nitrous oxide
NAAQS	national ambient air quality standards
NAHC	Native American Heritage Commission
NCIC	North Central Information Center
NEPA	National Environmental Policy Act
NFIP	National Flood Insurance Program
NHTSA	National Highway Traffic Safety Administration
NMFS	National Marine Fisheries Service
NO_2	nitrogen dioxide
NOA	naturally occurring asbestos
NOI	notice of intent
NOP	Notice of Preparation
NO_X	nitrogen oxides
NPDES	National Pollutant Discharge Elimination System
NRCS	U.S. National Resources Conservation Service
NRHP	National Register of Historic Places

OEHHA	Office of Environmental Health Hazard Assessment
OPR	Governor's Office of Planning and Research's
OSHA	Occupational Safety and Health Administration
P.V.	photovoltaic
PBDB	Paleobiology Database
PC	Post-Construction Erosion and Sediment Control
PCBs	Polychlorinated biphenyls
PCE	passenger car equivalent
PCE	tetrachloroethylene
PFCs	perfluorocarbons
PG&E	Pacific, Gas & Electric Company
Phase I ESA	Phase I Environmental Site Assessment
PM	particulate matter
PM_{10}	particulate matter less than 10 micrometers in diameter
$PM_{2.5}$	particulate matter particulate matter less than 2.5 micrometers in diameter
Porter-Cologne Act	Porter-Cologne Water Quality Control Act
PPV	peak particle velocity
PRC	Public Resources Code
PRMTP	Paleontological Resource Mitigation and Treatment Plan
project	Station J Bulk Transmission Substation Project
RA Tech Memo	Risk Assessment Technical Memorandum
RCRA	Resource Conservation and Recovery Act of 1976
RECs	Recognized Environmental Conditions
Regional Bicycle Plan	Regional Bicycle, Pedestrian and Trails Master Plan
Regional San	Sacramento County Regional Sanitation District
RMS	root mean square
ROG	reactive organic gases
RPS	Renewables Portfolio Standard
RWQCB	Regional Water Quality Control Board
SACOG	Sacramento Area Council of Governments
SARA	Superfund Amendments and Reauthorization Act
SASD	Sacramento Area Sewer District
SB	Senate Bill
SCADA	Supervisory Control and Data Acquisition
SCAQMD	South Coast Air Quality Management District
SCEMD	Sacramento County Environmental Management Department
Scoping Plan	Climate Change Scoping Plan

SCS	sustainable communities strategies
SEL	Sound Exposure Level
SF_6	sulfur hexafluoride
SFL	Sacred Lands File
SFNA	Sacramento Federal Nonattainment Area
SHRA	Sacramento Housing and Redevelopment Agency
SHS	State Highway System
SIP	state implementation plan
SITF	Sacramento Intermodal Transportation Facility
Small MS4s	Small Municipal Separate Storm Sewer Systems
SMAQMD	Sacramento Metropolitan Air Quality Management District
SMUD	Sacramento Municipal Utility District
SO_2	sulfur dioxide
SPCC	Spill Prevention, Control, and. Countermeasure
SPD	Special Planning District
SPRP	Spill Prevention and Response Plan
SQIP	Stormwater Quality Improvement Program
SRWTP	Sacramento Regional Wastewater Treatment Plan
SSBMI	Shingle Springs Band of Miwok Indians
SSHSP	site-specific health and safety plan
ST	short-term
STAA	Surface Transportation Assistance Act
STC	Sound Transmission Class
STLC	Soluble threshold limit concentration
Superfund Act	Comprehensive Environmental Response, Compensation, and Liability Act of 1980
SVAB	Sacramento Valley Air Basin
SVP	Society of Vertebrate Paleontology
SWPPP	Storm Water Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TACs	Toxic Air Contaminants
TCLP	toxicity characteristic leaching procedure
TCRs	tribal cultural resources
THRIS	Tribal Historic Information System
TIA	transportation impact analysis
TMDL	total maximum daily loads
TPH	total petroleum hydrocarbons
TPHmo	TPH quantified as motor oil

TSCA	Toxic Substances Control Act of 1976
UAIC	United Auburn Indian Community
UCMP	University of California Museum of Paleontology
Unified Program	Unified Hazardous Waste and Hazardous Materials Management Regulatory Program
UPRR	Union Pacific Railroad
US-50	U.S. Highway 50
USACE	U.S. Army Corps of Engineers
USC	U.S. Code
USGS	U.S. Geological Survey
UST	underground storage tank
UWMP	Urban Water Management Plan
VdB	vibration decibels
VELB	Valley Elderberry Longhorn Beetle
VES	Vapor Encroachment Screening
VMT	vehicle miles traveled
VOCs	Volatile organic compounds
WDR	Waste Discharge Requirements
μin/sec	microinch per second

EXECUTIVE SUMMARY

Introduction

This summary is provided in accordance with the California Environmental Quality Act (CEQA) Guidelines Section 15123. As stated in the State CEQA Guidelines Section 15123(a), "an environmental impact report (EIR) shall contain a brief summary of the proposed actions and its consequences. The language of the summary should be as clear and simple as reasonably practical." As required by the Guidelines, this section includes: (1) a summary description of the project; (2) a synopsis of environmental impacts and recommended mitigation measures; (3) identification of the alternatives evaluated and of the environmentally superior alternative; and (4) a discussion of the areas of controversy associated with the project.

This Recirculated Draft EIR evaluates the potential environmental impacts of the Sacramento Municipal Utility District's (SMUD's) proposed Station J Bulk Transmission Substation Project ("Station J Substation Project" or "project"). Pursuant to CEQA Guidelines Section 15088.5 (a), a lead agency is required to recirculate an EIR when significant new information is added to the EIR after public notice is given of the availability of the EIR for public review under Section 15087 but before certification of the EIR. New "information" can include changes in the project or environmental setting as well as additional data or other information. New information added to an EIR is not "significant" unless the EIR is changed in a way that deprives the public of a meaningful opportunity to comment upon a substantial adverse environmental effect of the project or a feasible way to mitigate or avoid such an effect (including a feasible project alternative) that the project's proponents have declined to implement. SMUD has decided to revise portions of and recirculate the Draft EIR to address "significant new information", as described below.

All chapters and sections of this Recirculated Draft EIR indicate changes to the original Draft EIR. Text that has been modified and deleted is shown in ~~strikethrough~~ and new text is shown as underlined. This format is intended to provide clear identification of the changes since the circulation of the Draft EIR and will simplify the reader's review of the revisions.

Summary Description of the Project

The Sacramento Municipal Utility District (SMUD) is proposing the Station J Bulk Transmission Substation Project ("Station J Substation Project" or "project"). SMUD's goals for the project are to demolish the existing on-site structures and construct new infrastructure to support up to ~~five~~ six 40 megavolt-amperes (MVA) 115/21 kiloVolt (kV) transformers for a total of up to ~~200~~ 240 MVA, including up to ~~8~~ 9 miles of overhead and underground 115kV and 21kV connections into the substation from nearby existing SMUD facilities and infrastructure.

Project Objectives

SMUD's objectives for the project include the following:

- provide safe and reliable electrical service to existing and proposed development in the downtown Sacramento area;
- meet SMUD's goals of ensuring electrical service reliability in the downtown Sacramento area by 2030;
- provide greater operational flexibility between circuits and substations in the area;

- maximize the use of available SMUD property and resources;
- minimize impacts to nearby sensitive receptors; and,
- minimize potential conflicts with existing planning efforts within the City of Sacramento.

Project Location

The project would be located on a 10.3-acre site at 1220 North B Street and within surrounding streets in a developed area of downtown Sacramento. The ~~project~~ proposed substation site is bordered by North B Street to the north, North 14th Street to the east, Union Pacific Railroad (UPRR) tracks to the south, and North 12th Street to the west.

The ~~project~~ proposed substation site is relatively flat and sparsely vegetated with a limited number of trees along the southern project perimeter. The site consists of 11 contiguous Assessor's parcels, currently containing two buildings, an approximately 5,580 square foot single story maintenance shop building and an approximately 66,000 square foot single story distribution warehouse with loading docks, and office space. Both buildings are situated towards the front of the property along North B Street. The rear of the property consists of approximately 3.9 acres of yard storage and is adjacent to UPRR to the south. Adjacent land uses include the Salvation Army Center of Hope homeless shelter to the northwest, City of Sacramento Fire Station No. 14 to the east, leased and unleased industrial warehouses across B Street to the north, First Step Communities homeless shelter and Quinn Cottages transitional housing to the southeast, and Sims Metal recycling center across North 12th Street to the west. The project site also includes surface streets located adjacent to the proposed substation site, such as North B Street, Ahern Street, Thornton Avenue, and 7th Street, which would be utilized to install transmission lines and connect to other SMUD facilities. These surrounding areas primarily consist of industrial and commercial land uses, with some residential neighborhoods intermixed. There are several SMUD facilities nearby the project site including the Station E electrical substation located approximately 0.5 miles to the east and Station G electrical substation ~~(under construction) and Station H (future substation)~~ located approximately 0.7 miles to the southwest.

Project Characteristics

The proposed substation would include demolition of all existing on-site structures and construction of new infrastructure to include sizing for ~~five~~ six 40 MVA 115/21kV transformers, (~~200~~ 240 MVA). Initial installation of ~~two~~ up to three 40 MVA transformers is anticipated to occur by ~~2030~~ 2028. The project may also include up to ~~8~~ 9 miles of overhead and underground 115kV and 21kV connections into the substation from nearby existing SMUD facilities and infrastructure. The site includes space for expansion as future needs are identified.

~~As part of the project, SMUD may use limited amounts of Sulfur Hexafluoride (SF_6), a common insulating gas for high-voltage electrical systems, at the project site. Use of the proposed electrical equipment would comply with recordkeeping, reporting, and leakage emission limit requirements in accordance with California Air Resources Board regulations for reduction of SF_6 emissions. As part of substation operations and maintenance activities, SMUD would monitor existing substation equipment to accurately and immediately identify any SF_6 leaks and immediately repair leaks that are discovered. SMUD is also an active member of the SF_6 Emission Reduction Partnership, which focuses on reducing emissions of SF6 from transmission and distribution sources.~~

Potential Approvals and Permits Required

State

- **California Department of Transportation (Caltrans):** Permits and/or transportation management plan for any oversized equipment or excessive loads on State Highways.

Local

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

- **City of Sacramento:**
  - Encroachment permit.
  - Design review.
  - Improvement plans.
  - National Pollution Discharge Elimination System (NPDES) permit.
  - Demolition permit.
  - Tree removal permit—to comply with the City of Sacramento Tree Ordinance.
  - Transmission Facilities Permit – to comply with Sacramento City Code requirements.

Summary of Alternatives

Alternatives evaluated in this Draft EIR are:

- Alternative A (No Project), which assumes no substation development occurs on the Station J site or in surrounding streets along the proposed transmission line route to Station E, and the site remains in use as it exists or is redeveloped as allowed by the existing General Plan and zoning; and

- Alternative B (Site 4 Substation Location), which assumes that an alternative, 5- to 6-acre site owned by Union Pacific Railroad at the corner of North 7th Street and North B Street is developed as the Station J site; and

- Alternative C (Transmission Line Routing Option), which assumes that a slightly modified alternative transmission line alignment is implemented from the current Station J site to the interconnection with Station E.

The following summary provides brief descriptions of the alternatives. For a more thorough discussion of project alternatives, see Chapter 6, "Alternatives."

Alternative A (No Project)

Under the No Project Alternative, no new substation equipment would be installed. The prior produce operation on the site would remain inactive; however, future use of the project site in a no project scenario would be consistent with the General Plan and could conceivably include redevelopment per the existing General Plan designation and zoning to accommodate additional industrial warehouse uses on-site. This alternative would also not allow SMUD to provide reliable electrical supplies to the anticipated level of development within the downtown Sacramento area.

Alternative B (Site 4 Substation Location)

Under Alternative B, an alternative, 5- to 6-acre site owned by Union Pacific Railroad at the corner of North 7th Street and North B Street is developed as the Station J site. This alternative site is located approximately 0.5-mile west of the proposed Station J site. The transmission line alignment for this alternative would follow a similar path in surface streets (North B Street, North 16th Street, Thornton Avenue, and North 18th Street) before interconnecting with Station E. This alternative would allow for most of the project objectives to be met; however, greater environmental impacts would occur due to the site's inclusion on the Cortese List and the presence of contamination and clean-up requirements.

Alternative C (Alternate Transmission Routing Option)

Under Alternative C, a slightly modified alternative transmission line alignment would be implemented from the current Station J site to the interconnection with Station E. Under this alternative, the Station J site would remain in the currently proposed location. The alternate transmission line alignment would extend from the Station J site east on North A Street, travel north on Ahem Street until McCormack Avenue, then travel east on McCormack Avenue and Dreher Street until North 18th Street, at which point it would align with the proposed alignment and interconnect with Station E. This alternative would allow for most of the project objectives to be met but would not offer an appreciable environmental benefit relative to the proposed project.

Areas of Controversy

In accordance with Public Resources Code Section 21092 and CCR Section 15082, SMUD issued a notice of preparation (NOP) on February 22, 2023, to inform agencies and the general public that an EIR was being prepared and to invite comments on the scope and content of the document (Appendix A).

SMUD accepted comments on the scope of the EIR between February 22 and March 23, 2023. A noticed virtual scoping meeting for the EIR occurred on March 9, 2023. Based on the comments received during the NOP comment period, no major areas of controversy have been identified for the project.

Areas of controversy that fall within the scope of CEQA are addressed in this Draft EIR and its appendices. Issues that fall outside the scope of CEQA are not evaluated in this Draft EIR; however, SMUD will continue to respond to these issues through the project planning process. All of the substantive environmental issues raised in the NOP comment letters have been addressed or otherwise considered during preparation of this Draft EIR.

Environmental Impacts and Recommended Mitigation Measures

The environmental impacts and mitigation measures identified in the EIR analysis are summarized in the table on the following pages.

Table ES-1. Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
3.1 Aesthetics			
Impact 3.1-1. Have a substantial adverse effect on a scenic vista?	LTS	None required	LTS
Impact 3.1-2. Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State scenic highway?	LTS	None required	LTS
Impact 3.1-3. In nonurbanized areas, substantially degrade the existing visual character or quality of the site and its surroundings? If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	LTS	None required	LTS
Impact 3.1-4. Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	LTS	None required	LTS
3.2 Air Quality			
Impact 3.2-1. Conflict with or obstruct implementation of the applicable air quality plan?	PS	Mitigation Measure 3.2-1a: SMAQMD Basic Construction Emission Control Practices Mitigation Measure 3.2-1b: SMAQMD PM Operational Best Management Practices	LTS
Impact 3.2-2. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?	PS	Mitigation Measure 3.2-1a: SMAQMD Basic Construction Emission Control Practices Mitigation Measure 3.2-1b: SMAQMD PM Operational Best Management Practices	LTS
Impact 3.2-3. Expose sensitive receptors to substantial pollutant concentrations?	LTS	None required	LTS

N/A = Not applicable NI = No impact LTS = Less than significant PS = Potential significant S = Significant SU = Significant and unavoidable

Table ES-1. Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
Impact 3.2-4. Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	LTS	None required	N/A
3.3 Biological Resources			
Impact 3.3-1. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or the U.S. Fish and Wildlife Service?	PS	Mitigation Measure 3.3-1a: Valley Elderberry Longhorn Beetle Mitigation Measure 3.3-1b: Nesting Birds	LTS
Impact 3.3-2. 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?	NI	None required	N/A
Impact 3.3-3. Have a substantial adverse effect on federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	NI	None required	N/A
Impact 3.3-4. Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	NI	None required	N/A
Impact 3.3-5. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	PS	Mitigation Measure 3.3-5: Tree Removal	LTS

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Table ES-1. Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
Impact 3.3-6. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	NI	None required	N/A
3.4 Cultural Resources			
Impact 3.4-1. Cause a substantial adverse change in the significance of a historical resource pursuant to § 15064.5?	NI	None required	N/A
Impact 3.4-2. Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?	PS	Mitigation Measure 3.4-2: Halt ground-disturbing activity upon discovery of subsurface archaeological features	LTS
Impact 3.4-3. Disturb any human remains, including those interred outside of formal cemeteries?	PS	Mitigation Measure 3.12-1a: TCRs and Human Remains (refer to Section 3-12) Mitigation Measure 3.12-1b: Forensic Canines (refer to Section 3-12)	LTS
3.5 Energy			
Impact 3.5-1. Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	LTS	None required	N/A
Impact 3.5-2. Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	NI	None required	N/A

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Table ES-1. Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
3.6 Geology and Soils			
Impact 3.6-1. Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving: Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? (Refer to Division of Mines and Geology Special Publication 42.)	LTS	None required	N/A
Strong seismic ground shaking?	LTS	None required	N/A
Seismic-related ground failure, including liquefaction?	LTS	None required	N/A
Landslides?	LTS	None required	N/A
Impact 3.6-2. Result in substantial soil erosion or the loss of topsoil?	LTS	None required	N/A
Impact 3.6-3. Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?	LTS	None required	N/A
Impact 3.6-4. Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	LTS	None required	N/A
Impact 3.6-5. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	PS	Mitigation Measure 3.5-1: Pre-Construction Training and Resource Evaluation by Qualified Paleontologist	LTS

N/A = Not applicable NI = No impact LTS = Less than significant PS = Potential significant S = Significant SU = Significant and unavoidable

Table ES-1. Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
3.7 Greenhouse Gas Emissions			
Impact 3.7-1. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	LTS	None required	N/A
Impact 3.7-2. Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	LTS	None required	N/A
3.8 Hazards and Hazardous Materials			
Impact 3.8-1. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	PS	Mitigation Measure 3.8-1a: Implement a Soil Management Plan Mitigation Measure 3.8-1b: Manage Accidental Discovery of Hazardous Materials	LTS
Impact 3.8-2. 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?	PS	Mitigation Measure 3.8-1a: Implement a Soil Management Plan Mitigation Measure 3.8-1b: Manage Accidental Discovery of Hazardous Materials	LTS
Impact 3.8-3. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	LTS	None required	N/A
Impact 3.8-4. 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?	PS	Mitigation Measure 3.8-1a: Implement a Soil Management Plan Mitigation Measure 3.8-1b: Manage Accidental Discovery of Hazardous Materials	LTS

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Table ES-1. Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
Impact 3.8-5. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	NI	None required	N/A
Impact 3.8-6. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	LTS	None required	N/A
Impact 3.8-7. Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?	LTS	None required	N/A
3.9 Hydrology and Water Quality			
Impact 3.9-1. Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	LTS	None required	N/A
Impact 3.9-2. Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	LTS	None required	N/A
Impact 3.9-3. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would: Result in a substantial erosion or siltation on- or off-site;	LTS	None required	N/A
Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;	LTS	None required	N/A

Table ES-1. Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
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	LTS	None required	N/A
Impede or redirect flood flows?	LTS	None required	N/A
Impact 3.9-4. In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	NI	None required	N/A
Impact 3.9-5. Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	LTS	None required	N/A
3.10 Noise			
Impact 3.10-1. Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	PS	Mitigation Measure 3.10-1a: Construction Noise Reduction Mitigation Measure 3.10-1b: Employ Noise-Reducing Construction Measures for Project Construction Truck Traffic	LTS
Impact 3.10-2. Generation of excessive groundborne vibration or groundborne noise levels?	~~LTS~~ PS	~~None required~~ Mitigation Measure 3.10-2: Employ Vibration-Reducing Construction Measures for Demolition and Construction Adjacent to Impacted Building	N/A
3.11 Transportation			
Impact 3.11-1. Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?	LTS	None required	N/A
Impact 3.11-2. Conflict or be inconsistent with CEQA Guidelines§ 15064.3, subdivision (b)?	NI	None required	N/A

N/A = Not applicable   NI = No impact   LTS = Less than significant   PS = Potential significant   S = Significant   SU = Significant and unavoidable

Table ES-1. Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
Impact 3.11-3. Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	PS	Mitigation Measure 3.11-3a: Protect Bike Facilities Mitigation Measure 3.11-3b: Repair Damaged Roadways and Bike Paths Following Construction	LTS
Impact 3.11-4. Result in inadequate emergency access?	LTS	None required	N/A
3.12 Tribal Cultural Resources			
Impact 3.12-1. Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code § 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is: Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or 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 § 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code § 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	PS	Mitigation Measure 3.12-1a: TCRs and Human Remains Mitigation Measure 3.12-1b: Forensic Canines Mitigation Measure 3.12-1c: Cultural Resources Awareness Training	LTS

Table ES-1. Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
3.13 Utilities and Service Systems			
Impact 3.13-1. Require or result in the relocation or construction of new or expanded water, or wastewater treatment facilities or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	LTS	None required	N/A
Impact 3.13-2. Have sufficient water supplies available to serve the project and reasonably foresee future development during normal, dry and multiple dry years?	LTS	None required	N/A
Impact 3.13-3. Result in a determination by the waste water treatment provider, which serves or may serve the project that it has adequate capacity to serve the project's projected demand, in addition to the provider's existing commitments?	LTS	None required	N/A
Impact 3.13-4. Generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	LTS	None required	N/A
Impact 3.13-5. Comply with federal, State, and local management and reductions statutes and regulations related to solid waste?	LTS	None required	N/A

N/A = Not applicable NI = No impact LTS = Less than significant PS = Potential significant S = Significant SU = Significant and unavoidable

1.0 INTRODUCTION

This recirculated draft environmental impact report (Recirculated Draft EIR; EIR) evaluates the potential environmental impacts of the Sacramento Municipal Utility District's (SMUD's) proposed Station J Bulk Transmission Substation Project. This Recirculated Draft EIR has been prepared under the direction of SMUD in accordance with the requirements of the California Environmental Quality Act (CEQA) (Public Resources Code [PRC] Section 21000-21177) and the State CEQA Guidelines (California Code of Regulations [CCR], Title 14, Division 6, Chapter 3, Sections 15000-15387) ("CEQA Guidelines"). SMUD is the lead agency under CEQA for consideration of this EIR and potential project approval.

Pursuant to the Guidelines for California Environmental Quality Act (CEQA Guidelines) Section 15088.5 (a), a lead agency is required to recirculate an EIR when significant new information is added to the EIR after public notice is given of the availability of the EIR for public review under Section 15087 but before certification of the EIR. New "information" can include changes in the project or environmental setting as well as additional data or other information. New information added to an EIR is not "significant" unless the EIR is changed in a way that deprives the public of a meaningful opportunity to comment upon a substantial adverse environmental effect of the project or a feasible way to mitigate or avoid such an effect (including a feasible project alternative) that the project's proponents have declined to implement. As identified in Section 15088 (a) of the CEQA Guidelines, "Significant new information" requiring recirculation is defined to include disclosures of any of the following:

(1) A new significant environmental impact would result from the project or from a new mitigation measure proposed to be implemented.

(2) A substantial increase in the severity of an environmental impact would result unless mitigation measures are adopted that reduce the impact to a level of insignificance.

(3) A feasible project alternative or mitigation measure considerably different from others previously analyzed would clearly lessen the environmental impacts of the project, but the project's proponents decline to adopt it.

(4) The draft EIR was so fundamentally and basically inadequate and conclusory in nature that meaningful public review and comment were precluded.

SMUD has decided to revise portions of the Draft EIR to address new information, as described below.

1.1 Purpose and Intended Uses of the Recirculated Draft EIR

CEQA requires that public agencies consider the potentially significant adverse environmental effects of projects over which they have discretionary approval authority before taking action on those projects (PRC Section 21000 et seq.). CEQA also requires that each public agency avoid or mitigate to less-than-significant levels, wherever feasible, the significant adverse environmental effects of projects it approves or implements. If a project would result in significant and unavoidable environmental impacts (i.e., significant effects that cannot be feasibly mitigated to less-than-significant levels), the project can still be approved, but the lead agency's decision-maker, in this case the SMUD Board of Directors, must prepare findings and issue a “statement of overriding considerations” explaining in writing the specific economic, social, or other considerations that they believe, based on substantial evidence, make those significant effects acceptable (PRC Section 21002, CCR Section 15093).

According to 14 CCR Section 15064(f)(1), preparation of an EIR is required whenever a project may result in a significant adverse environmental impact. An EIR is an informational document used to inform public agency decision makers and the general public of the significant environmental effects of a project, identify possible ways to mitigate or avoid the significant effects, and describe a range of reasonable alternatives to the project that could feasibly attain most of the basic objectives of the project while substantially lessening or avoiding any of the significant environmental impacts. Public agencies are required to consider the information presented in the EIR when determining whether to approve a project.

In accordance with 14 CCR Section 15161, this document is a project EIR that examines the environmental impacts of a specific project. This type of EIR focuses on the changes in the environment that would result from a specific project. In accordance with CCR Section 15161, a project EIR must examine the environmental effects of all phases of the project, including construction and operation.

Because SMUD has the principal authority over approval or denial of the project, SMUD is the lead agency, as defined by CEQA, for this EIR. Other public agencies with jurisdiction over the project are listed below in Section 1.3, “Agency Roles and Responsibilities.”

1.2 Scope of the Recirculated Draft EIR

Pursuant to CEQA and the CEQA Guidelines, a lead agency shall focus an EIR’s discussion on significant environmental effects and may limit discussion on other effects to brief explanations about why they are not significant (PRC Section 21002.1, CCR Section 15128). A determination of which impacts would be potentially significant was made for this project based on comments received as part of the public scoping process (Appendix A) and the information presented in the Initial Study (IS) Checklist prepared for the project (Appendix A), as well as additional research and analysis of relevant project data during preparation of this Recirculated Draft EIR. Accordingly, SMUD has determined that the project has the potential to result in significant environmental impacts on aesthetics, air quality, biological resources, cultural resources, energy, geology and soils, greenhouse gas emissions, hazards and hazardous materials, hydrology and water quality, noise, transportation, tribal cultural resources, and utilities and service systems, which are addressed in this Recirculated Draft EIR.

The IS Checklist (Appendix A) presents the reasons that possible significant effects of the project were determined not to be significant and therefore were not discussed in detail in this EIR, pursuant to the State CEQA Guidelines Sections 15126.2(a) and 15128. Effects dismissed from detailed consideration in an IS as clearly insignificant or unlikely to occur need not be discussed further in the EIR unless the lead agency subsequently receives information inconsistent with the finding in the IS (CEQA Guidelines Section 15143).

The following resources would not experience any significant environmental impacts from the project, as explained in the IS Checklist:

- Agriculture and Forest Resources
- Land Use and Planning

- Mineral Resources
- Population and Housing
- Public Services
- Recreation
- Wildfire

Chapter 3, "Existing Environmental Setting, Impacts, and Mitigation" summarizes the rationale as to why significant impacts to each of the aforementioned resources would not occur.

All chapters and sections of this Recirculated Draft EIR indicate changes to the original Draft EIR. Text that has been modified and deleted is shown in ~~strikethrough~~ and new text is shown as underlined. This format is intended to provide clear identification of the changes since the circulation of the Draft EIR and will simplify the reader's review of the revisions.

1.3 Agency Roles and Responsibilities

This Recirculated Draft EIR will be used by SMUD and CEQA responsible and trustee agencies to ensure that they have met their requirements under CEQA before deciding whether to approve or permit project elements over which they have jurisdiction. It may also be used by other state and local agencies, which may have an interest in resources that could be affected by the project, or that have jurisdiction over portions of the project. In addition, federal agencies may use information included in the EIR to assist in their environmental evaluation in connection with permits they would need to issue. As the lead agency pursuant to CEQA, SMUD is responsible for considering the adequacy of the EIR and determining if the project should be approved.

Under CEQA, a responsible agency is a public agency, other than the lead agency, that has responsibility to carry out or approve a project (PRC Section 21069). A trustee agency is a state agency that has jurisdiction by law over natural resources that are held in trust for the people of the State of California (PRC Section 21070).

The following agencies may serve as responsible and trustee agencies for the project:

1.3.1 State

- California Department of Transportation, District 3

1.3.2 Local

- City of Sacramento
- Sacramento Municipal Air Quality Management District

While not a state or local agency, the federal agencies listed below may use environmental information in this EIR to inform their permitting actions.

1.3.3 Federal

- U.S. Army Corps of Engineers

- U.S. Fish and Wildlife Service
- State Historic Preservation Office
- Federal Emergency Management Agency

1.4 CEQA Public Review Process

1.4.1 Notice of Preparation

The purpose of a Notice of Preparation (NOP) is to provide sufficient information about the project and its potential environmental impacts to allow agencies and interested parties the opportunity to provide a meaningful response related to the scope and content of the EIR, including mitigation measures that should be considered and alternatives that should be addressed (CCR Section 15082[b]). Comments submitted in response to the NOP are used by the lead agency to identify broad topics to be addressed in the EIR.

In accordance with PRC Section 21092 and CCR Section 15082, SMUD issued an NOP on February 22, 2023 to inform agencies and the general public that an EIR was being prepared and to invite comments on the scope and content of the document (Appendix A). The NOP was submitted to the State Clearinghouse, which then distributed the NOP to potential responsible and trustee agencies; posted on the SMUD's website (http: https://www.smud.org/-/media/Documents/Corporate/Environmental-Leadership/Power-Sources/Station-J/SMUD_Station-J_NOP-JSSP_Final.ashx); posted with the Sacramento County Clerk; and made available at SMUD's offices. In addition, the NOP was distributed directly to Native American Tribes and other various stakeholders and responsible agencies. The NOP was circulated for a 30-day review period, with comments accepted through March 23, 2023.

In accordance with Title 14 CCR Section 15082(c), a noticed virtual scoping meeting for the EIR occurred on March 9, 2023.

Comments on environmental issues received during the NOP public comment period are considered and addressed in this Draft EIR. Appendix A contains the comment letters submitted during the NOP public comment period.

1.4.2 Public Review of this Recirculated Draft EIR

This Draft EIR is being recirculated for public review and comment for a period of 45 days, from November 18 to January 6.

A public meeting will be held on December 11 to receive input from agencies and the public on the Recirculated Draft EIR.

During the public comment period, written comments from the public as well as organizations and agencies on the Recirculated Draft EIR's accuracy and completeness may be submitted to SMUD. Written comments (including via email) must be received by 5:00 p.m. on November 25, 2024. Written comments should be addressed to:

Sacramento Municipal Utility District (SMUD)
6201 S Street, MS B203
Sacramento, CA 95817-1899

Attn: Rob Ferrera

Email comments may be addressed to rob.ferrera@smud.org and should contain "Station J Bulk Transmission Substation Project" in the title. If you have questions regarding the Recirculated Draft EIR, please call Rob Ferrera at (916) 732-6676. Digital copies of the Recirculated Draft EIR are available at: http://smud.org/StationJ. Printed copies of the Recirculated Draft EIR are available for public review at the following locations:

SMUD Customer Service Center
6301 S Street
Sacramento, CA 95817

SMUD East Campus Operations Center
4401 Bradshaw Road
Sacramento, CA 95827

Central Library
828 I Street
Sacramento, CA 95814

1.4.3 Final EIR

After the end of the public comment period, responses to comments on environmental issues will be prepared. Consistent with CCR Section 15088(b), commenting agencies will be provided a minimum of 10 days to review the proposed responses to their comments before any action is taken on the Final EIR or project. The Final EIR (containing any changes to this Recirculated Draft EIR and the Responses to Comments document) will then be considered for possible certification and approval by SMUD's Board of Directors. If the Board finds that the Final EIR is "adequate and complete," the Board may certify the Final EIR in accordance with CEQA. The rule of adequacy generally holds that an EIR can be certified if:

1. The EIR shows a good faith effort at full disclosure of environmental information; and

2. The EIR provides sufficient analysis to allow decisions to be made regarding the proposed project with consideration given to its environmental impacts. The level of detail contained throughout this EIR is consistent with Section 15151 of the CEQA Guidelines and recent court decisions, which provide the standard of adequacy on which this document is based. ~~The Guidelines states as follows:~~

The level of detail contained throughout this EIR is consistent with Section 15151 of the State CEQA Guidelines and recent court decisions, which provide the standard of adequacy on which this document is based. The State CEQA Guidelines state as follows:

> An EIR should be prepared with a sufficient degree of analysis to provide decision makers with information which enables them to make a decision which intelligently takes account of the environmental consequences. An evaluation of the environmental effects of a proposed project need not be exhaustive, but the sufficiency of an EIR is to be

> reviewed in the light of what is reasonably feasible. Disagreement among experts does not make an EIR inadequate, but the EIR should summarize the main points of disagreement among the experts. The courts have looked not for perfection but for adequacy, completeness, and a good faith effort at full disclosure.

CEQA states that when a public agency makes findings based on an EIR, the public agency must adopt a reporting or monitoring program for those measures it has adopted or made a condition of the project approval to mitigate significant adverse effects on the environment. The reporting or monitoring program must be designed to ensure compliance during project implementation.

1.5 Organization of the Recirculated Draft EIR

This Recirculated Draft EIR is organized as follows:

Executive Summary. This chapter introduces the proposed Station J Bulk Transmission Substation Project; provides a summary of the environmental review process, effects found not to be significant, and key environmental issues; and lists significant environmental impacts and mitigation measures to reduce significant impacts to a less-than-significant level.

Chapter 1: Introduction. This chapter describes the legal authority and purpose of the EIR, the scope of the environmental analysis, agency roles and responsibilities, the CEQA public review process, and organization of this Recirculated Draft EIR.

Chapter 2: Project Description. This chapter describes the project background, objectives, and location, and provides a detailed description of the characteristics associated with the proposed Station J Bulk Transmission Substation Project.

Chapter 3: Environmental Setting, Impacts, and Mitigation Measures. The resource sections within this chapter evaluate the potential environmental impacts resulting from the project. Each subsection of Chapter 3 describes the regulatory setting, environmental setting, methods and assumptions, and the thresholds of significance. Each resource section then evaluates the anticipated changes to the existing environmental conditions after development of the project for each resource. For any significant or potentially significant impact that would result from project implementation, mitigation measures are presented along with the remaining level of significance. Environmental impacts are numbered sequentially throughout the sections of Chapter 3 (e.g., Impact 3.1-1, Impact 3.1-2, etc.). Any required mitigation measures are numbered to correspond to the impact numbering; therefore, the mitigation measure for Impact 3.1-1 would be Mitigation Measure 3.1-1.

Chapter 4: Cumulative Impacts. This chapter provides information about the potential cumulative impacts that would result from implementation of the project together with other past, present, and reasonably foreseeable future projects.

Chapter 5: Other CEQA Sections. This chapter provides a discussion of potential significant and unavoidable impacts, significant and irreversible commitment of resources, and growth-inducing impacts.

Chapter 6: Alternatives. This chapter provides a discussion of alternatives to the project, including the No Project Alternative; alternatives considered but rejected from further consideration; and the environmentally superior alternative.

Chapter 7: List of Preparers. This chapter identifies the individuals who contributed to the preparation of this Recirculated Draft EIR.

Chapter 8: References. This chapter lists the references used in preparation of this Recirculated Draft EIR.

2.0 PROJECT DESCRIPTION

2.1 Introduction

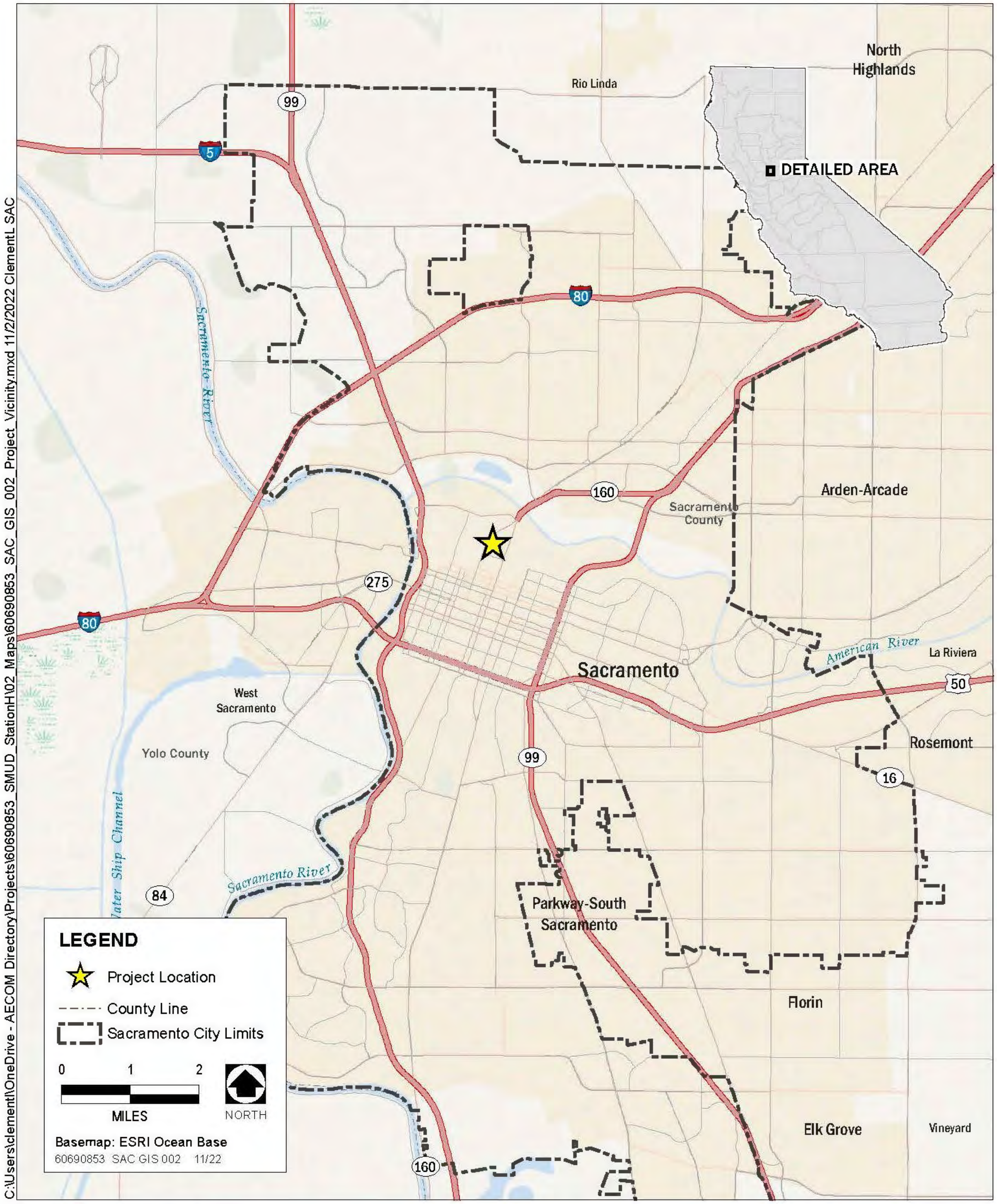
This chapter presents a detailed description of the Sacramento Municipal Utility District (SMUD) Station J Bulk Transmission Substation Project (project) located in Sacramento, California. It is SMUD's goal for the project to provide consistent and reliable electrical service to much of downtown Sacramento through the effective use of SMUD's existing assets. This chapter describes the project's location, background, objectives, components, and anticipated schedule for construction and operation.

The project would include demolition of existing on-site structures and construction of new infrastructure to support up to ~~five~~ six 40 megavolt-amperes (MVA) 115/21 Kilovolt (kV) transformers for a total of up to ~~200~~ 240 MVA, including up to ~~7~~ 9 miles of overhead and underground 115kV and 21kV connections into the substation from nearby existing SMUD facilities and infrastructure.

2.2 Project Location and Setting

The project would be located on a 10.3-acre site at 1220 North B Street and within surrounding streets in a developed area of downtown Sacramento, as shown on Figure 2-1 and Table 2-1. The ~~project~~ proposed substation site is bordered by North B Street to the north, North 14th Street to the east, Union Pacific Railroad (UPRR) tracks to the south, and North 12th Street to the west.

The ~~project~~ proposed substation site is relatively flat and sparsely vegetated with a limited number of trees along the southern ~~project~~ site perimeter. The site consists of 11 contiguous Assessor's parcels, currently containing two buildings, an approximately 5,580 square foot single story maintenance shop building and an approximately 66,000 square foot single story cold storage distribution warehouse with loading docks, and office space. Both buildings are situated towards the front of the property along North B Street. The rear of the property consists of approximately 3.9 acres of yard storage and is adjacent to UPRR to the south. Adjacent land uses include the Salvation Army Center of Hope homeless shelter to the northwest, Sacramento Fire Station No. 14 to the ~~north~~east, leased and unleased industrial warehouses across B Street to the north, First Step Communities homeless shelter and Quinn Cottages transitional housing to the southeast, and Sims Metal recycling center across North 12th Street to the west. The project site also includes surface streets located adjacent to the proposed substation site, such as North B Street, Ahern Street, Thornton Avenue, and 7th Street, which would be utilized to install transmission lines and connect to other SMUD facilities. These surrounding areas primarily consist of industrial and commercial land uses, with some residential neighborhoods intermixed. There are several SMUD facilities nearby the project site including the Station E electrical substation located approximately 0.5 miles to the east, and Station G electrical substation ~~and Station H (future substation, formerly Station A)~~ located approximately 0.7 miles to the southwest.



Source: Sacramento County 2022

Figure 2-1: Regional Location Map – Station J Substation

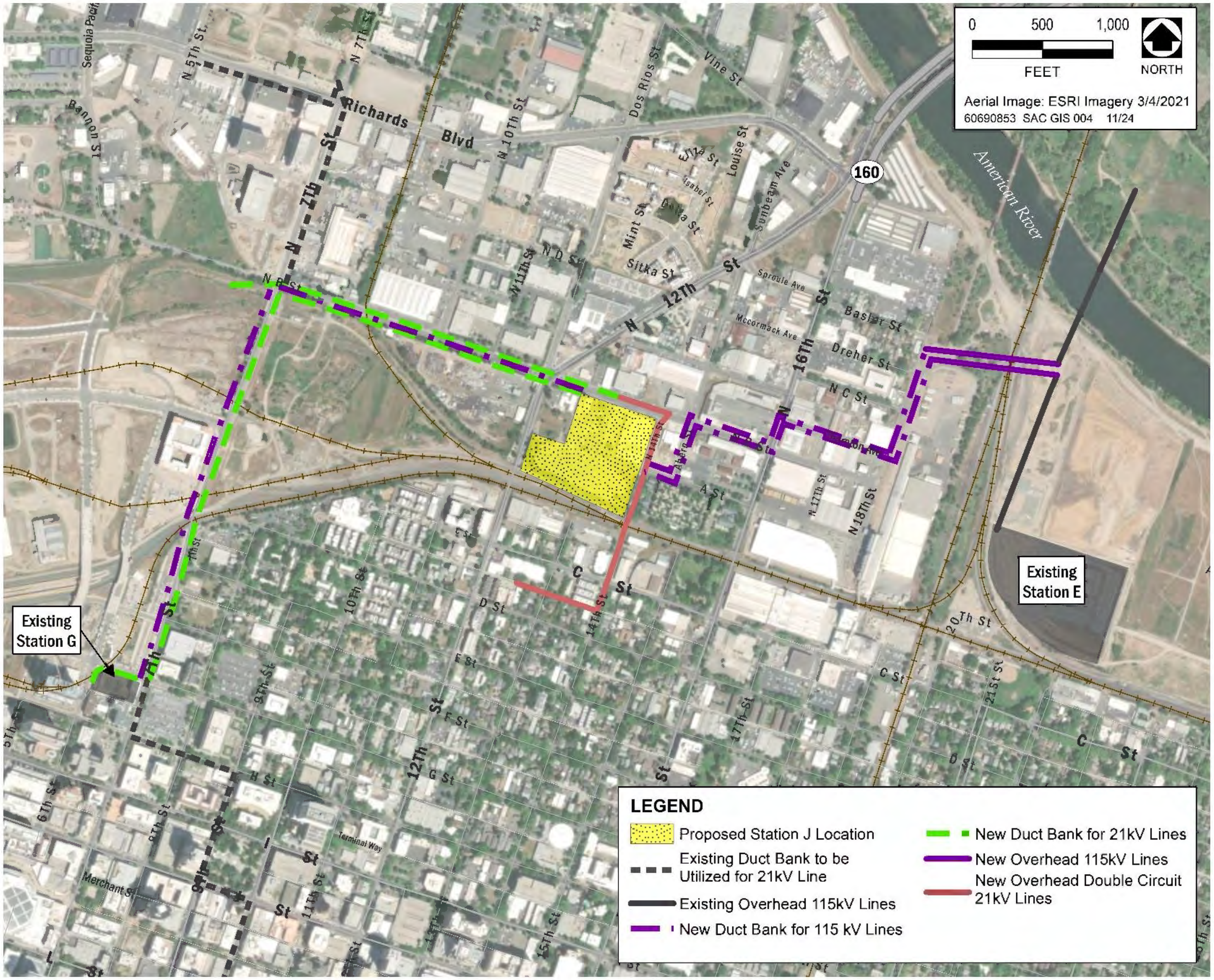


Figure 2-2: Station J Project Site and Vicinity

2.3 Project Objectives

SMUD's objectives for the project include the following:

- provide safe and reliable electrical service to existing and proposed development in the downtown Sacramento area;
- meet SMUD's goals of ensuring electrical service reliability in the downtown Sacramento area by 2030 and beyond;
- provide greater operational flexibility between circuits and substations in the area;
- maximize the use of available SMUD property and resources;
- minimize impacts to nearby sensitive receptors; and,
- minimize potential conflicts with existing planning efforts within the City of Sacramento.

2.4 Project Background

The ~~project~~ proposed substation site has historically been used for a variety of commercial and industrial uses. In the early 1960s, the northwestern portion of the ~~project~~ proposed substation site transitioned from residential to commercial (tire storage and repair facility) and the northeastern portion of the site was developed with a commercial produce cold storage and distribution warehouse and office building. The southern portion of the ~~project~~ site was historically owned by UPRR. UPRR used a portion of the~~ir~~ property for bunk houses (presumably for UPRR workers) and leased a portion to an oil reprocessing and distribution company (Purity Oil). In the 1990s, the Sacramento Housing and Redevelopment Agency (SHRA) used the former UPRR property for temporary housing and recreation. SHRA structures were demolished in 2001. The Purity Oil portion of the ~~project~~ site was subject to remedial activities under the oversight of the Department of Toxic Substances Control (DTSC) and received a no further action determination by the DTSC in 2008.

Most recently, the proposed substation ~~project~~ site was owned by C&J Warehouse LLC and operated by General Produce for commercial produce cold storage and distribution. Portions of the existing buildings at the site were constructed between 1957 and 1964. The ~~project~~ site is within the City of Sacramento's River District Specific Plan area. The zoning designation of the property is C-4 – SPD, Heavy Commercial – Special Planning District. There is also currently an easement for North A Street that partially bisects the property.

A Phase I Environmental Site Assessment and subsequent Phase II Site Investigation were completed in 2021 and 2023, respectively in preparation for property redevelopment to evaluate areas where past and/or current activities may have chemically impacted soil, soil gas, or groundwater that could be encountered during future construction activities. Based on the age of the buildings at the ~~project~~ proposed substation site, the potential exists for asbestos containing materials (ACM) and or lead-based paint (LBP) to be present in the structures. The Phase II Site Investigation identified residual levels of lead and petroleum hydrocarbons in soil at the ~~project~~ site. The project would require demolition of all existing on-site structures and excavation of soil may be required prior to construction (see Section 3.8, Hazards and Hazardous Materials).

2.5 Required Public Approvals

Elements of the project could be subject to permitting and/or approval authority of other agencies. As the lead agency pursuant to the CEQA, SMUD is responsible for considering the adequacy of the environmental impact report (EIR) and determining if the project should be approved. Other potential permits required from other agencies could include:

2.5.1 State

- **California Department of Transportation:** Permits and/or transportation management plan for any oversized equipment or excessive loads on State Highways.

2.5.2 Local

- **Sacramento Metropolitan Air Quality Management District:** Authority to Construct/Permit to Operate pursuant to Sacramento Metropolitan Air Quality Management District Regulation 2 (Rule 201 et seq.).
- **City of Sacramento:**
    - Improvement plans.
    - Design review.
    - Transmission Facilities Permit – to comply with Sacramento City Code requirements.
    - Encroachment permit.
    - National Pollution Discharge Elimination System (NPDES) permit
    - Demolition permit.
    - Tree removal permit—to comply with the City of Sacramento Tree Ordinance.

2.6 Project Description

The proposed substation would include demolition of all existing on-site structures and construction of new infrastructure to include sizing for ~~five~~ six 40 MVA 115/21kV transformers (~~200~~ 240 MVA). The proposed substation would house electrical equipment, including power transformers, gas insulated equipment, switchgear, capacitors, instrument transformers, control and relay equipment, remote monitoring equipment, telecommunications equipment, batteries, steel structures, switches, underground conductor and cable, an electrical bus, and a control building. Station J would include up to ~~five~~ six 40 MVA 115/21kV transformers to serve the SMUD network. Each power transformer would contain up 10,000 gallons of insulating oil. Typically, mineral oil is used in the transformers. Each transformer would have a secondary containment system to collect and hold any oil leaks from the transformer. The maximum average sound level for each transformer would not exceed 80 decibel A-weighting (dBA) measured at a distance of 6 feet around the periphery of the transformer (Note that these measurements are usually made at one-third and at two-thirds height of the transformer tank). The proposed substation would be surrounded by an 8 to ~~10~~12-foot tall concrete masonry unit

(CMU) wall~~s~~ to provide visual and sound screening from nearby uses. The 12-foot tall portion will be installed along the northwest property boundary adjacent to the Salvation Army's Center of Hope homeless shelter.

Initial installation of ~~two~~ up to three 40 MVA transformers is anticipated to occur by ~~2030~~ 2028. The project would also include up to ~~7~~ 9 miles of overhead and underground 115kV and 21kV connections into the substation from nearby existing SMUD facilities and infrastructure. The site also includes space for expansion as future needs are identified.

~~As part of the project, SMUD may use limited amounts of Sulfur Hexafluoride (SF_6), a common insulating gas for high-voltage electrical systems, at the project~~ proposed substation ~~site. Use of the proposed electrical equipment would comply with recordkeeping, reporting, and leakage emission limit requirements in accordance with California Air Resources Board regulations for reduction of SF_6 emissions. As part of substation operations and maintenance activities, SMUD would monitor existing substation equipment to accurately and immediately identify any SF_6 leaks and immediately repair leaks that are discovered. SMUD is also an active member of the SF_6 Emission Reduction Partnership, which focuses on reducing emissions of SF_6 from transmission and distribution sources.~~

The new substation would be connected to SMUD's bulk electric system via three new 115kV transmission lines and nine new 21kV distribution lines, described below:

- One of the 115 kV transmission lines would connect to SMUD's Station G downtown substation. This would be an underground transmission line. This line would start at the corner of 7th Street and G Street and route north along 7th Street. The line would then head east along North B Street and enter the Station J from the north side. This line would be encased in a concrete duct bank.

- An underground 21 kV transmission line would parallel the proposed 115 kV line from Station G to Station J. Beginning at the corner of North B Street and 7th Street, a second underground 21 kV transmission line would be installed parallel to the 115 kV line and the other 21 kV line. The second 21 kV line would be installed on the opposite side of North B Street and would also enter Station J at the north side. These lines would be encased in concrete duct banks.

- The other two 115 kV transmission lines would loop in an existing overhead transmission line that currently connects SMUD's Elverta and Station E bulk substations. By looping in the line two new lines would be created. Both lines would be located in a combination of overhead and underground alignments. The lines would begin at Station E where SMUD would install up to three new steel pole structures to intercept the existing line. From these structure(s) the lines would head west overhead approximately 900 feet to a set of steel riser poles. Pole structures would be approximately 100 feet tall. Concrete foundations for poles are typically nine feet in diameter to a depth of 25 to 30 feet below ground surface (bgs). These poles would be used to transition the line from overhead to underground. The riser poles would be installed just north of Basler Street and North 18th Street. From here the lines would transition to underground duct bank and head south along North 18th Street to Thornton Avenue. On Thornton Avenue the lines would continue underground heading west until reaching North 16th Street. At North 16th Street the lines would head south until reaching North B Street. At North B Street the lines would head west to Ahern Street. At Ahern Street the lines would head south to North A

Street and enter the Station J to the west from North A Street. The lines would be encased in a concrete duct bank.

- For the initial installation of three 40 MVA transformers, nine 21 kV distribution lines will be constructed.
    - This includes seven underground lines along North B Street from Station J west to North 7th Street in new underground duct banks. Four underground distribution lines will continue south along North 7th Street to G Street. Three of these lines will then continue west along G Street tying into existing SMUD 21 kV infrastructure located at 7th and G Streets; the fourth line will continue to L Street and Kayak Alley in existing underground infrastructure (no new duct bank excavation). Two of the seven underground distribution lines along North B Street will continue west, stopping at the west side of North 7th Street for future construction. The final or seventh underground distribution line will continue north along North B Street in existing underground infrastructure (no new duct bank excavation) to Richards and North 5th Streets.
    - The eighth 21 kV distribution line will intercept existing overhead distribution via a new riser pole located at the north side of North B Street across from the Station J substation site.
    - The 9th and final 21 kV distribution line will be overhead, rebuilding an existing overhead circuit from a single to double overhead circuit with approximately 20 new replacement poles, running east along North B Street from Station J to North 14th Street, then south to C and D Alley.

2.6.1 Project Operation

The substation would be operated remotely and continuously. The new control building and substation site would remain unoccupied except for periodic weekly visits by SMUD personnel and maintenance employees to conduct routine checks and perform maintenance activities. Maintenance workers and other SMUD employees would access the site through North B Street or North 14th Street. Maintenance activities would also include annual inspections of duct bank and vault structures.

2.6.2 Project Construction

Project construction would include excavations for new connections and installation of new equipment to a depth of 15 to 30 feet bgs; however, piles needed for seismic stability/support could reach a depth of approximately 55 feet bgs or more, pending geotechnical study results. Duct bank trenching would total approximately 13,820 ~~5,500~~ linear feet, including parallel trenches in 7th Street and North B Street, to a depth of up to 6 feet and width of 4 feet.

Construction equipment and materials staging would generally occur within the project site. While offsite staging areas have not yet been identified and would be identified by the contractor based on availability at the time, it is assumed that any offsite staging areas would be within one mile of the project site. During construction, access to the project site would be maintained, with the primary access point for construction equipment, deliveries, and workers located from North B Street or North 14th Street. Temporary roadway lane closures could occur during construction of the underground duct bank and would vary in location and duration based on construction requirements. Additionally, the majority of construction activities would occur during daylight hours; however, there may be a need for evening or nighttime work for specific tasks (such as concrete pours and/or material deliveries) that cannot be performed during the day. Nighttime work would be limited to two consecutive days or less at a time. Project staff will communicate with neighboring facilities when nighttime work would need to occur.

Construction would require an average daily worker population of approximately ~~10~~ 20 workers, with approximately ~~30~~ 40 workers during peak construction activities associated with on-site demolition, excavation, and heavy equipment deliveries and installations.

2.6.3 Project Schedule and Phasing

The construction of Station J would occur in seven phases. The phases of the project and required equipment and durations are described below. Construction would require approximately ~~95~~ 101 weeks. The phases may be intermittent and not all pieces of construction equipment would be used for the entire duration of a construction phase. A summary table of the project, including estimated duration of each phase, is provided in Table 2-1 below.

Table 2-1. Phases and Duration for the Station J Bulk Transmission Substation Project

Project Phase	Duration
1. Demolition	16 weeks
2. Grading, Drainage, and Access	15 weeks
3. Perimeter Wall and Retaining Wall	12 weeks
4. Civil Construction	12 weeks
5. Grounding, Conduit, Encasement	12 weeks
6. Steel Erection	8 weeks
7. Electrical Equipment Assembly (new substation, new transmission lines, and cutover)	26 weeks
Total	**101 weeks**

Source: Adapted by AECOM in 2022

Construction is anticipated to begin in ~~2027~~ 2026 and would be completed in ~~2030~~ 2028. Project implementation timing is based on load growth and the 2030 City of Sacramento Water Treatment Plant expansion which is projected to include an approximate 17 MW increase in demand based upon current load factors. Construction intensity and hours would be in accordance with the City's Noise Ordinance, contained in Title 8, Chapter 8.68 of the Sacramento City Code. Construction would be limited to the hours between 7 a.m. and 6 p.m. Monday through Saturday, and between the hours of 9 a.m. and 6 p.m. on Sunday. As noted above, discrete nighttime construction activities may also occur when necessary (such as concrete pours) which would occur for two consecutive days or less. Typically, construction activities would occur Monday through Friday, with work occurring on the weekend only when necessary.

Phase 1: Demolition

Demolition and removal of existing structures at the project site would include removal of existing structures, vegetation clearing and grubbing, and any environmental clean-up activities required for soil remediation. Demolition of existing structures would require upwards of 16 weeks and would include use of the following vehicles and equipment: excavators with breakers; semi-end dumps; front loaders; 1-ton service trucks; a pavement grinder; 30-ton crane; 49-horsepower (hp) air compressors (250 cubic feet per minute [cfm]); water truck; 20-hp generator; street sweeper, and construction staff vehicles.

Phase 2: Grading, Drainage, and Access Road

The project's site would be graded for substation equipment, drainage, and access improvements. Approximately 47,000 cubic yards of material for engineered fill would be imported to the project's site. Grading, drainage facilities, and access road creation would require approximately 15 weeks, and include use of the following equipment: grader; scraper; sheepsfoot compactor; 1-ton service trucks; 20-ton tandem haul trucks; rubber tire drill rig; 5-ton 20-foot semi flatbed truck to deliver casings; front loader; semi-end dump truck; 30-ton crane; water truck; 20-hp generator; street sweeper; and construction staff vehicles.

Phase 3: Perimeter Wall and Retaining Wall

A perimeter wall and retaining wall would be constructed. Construction of the perimeter wall, perimeter grounding, and the retaining wall would require approximately 12 weeks, and include use of the following equipment: 2-ton trucks; skid steers with drills; semi-flatbed truck for material delivery; backhoe; concrete trucks; 3- to 5-ton roller; street sweeper; and construction staff vehicles.

Phase 4: Civil Construction

Water lines, drainage pipes, and foundations would be installed. Construction of water lines, drainpipe, foundations, and the cable trough would require approximately 12 weeks and use the following equipment: truck-mounted drill rig; track-mounted drill rig; 1-ton service truck; front loader; semi-end dump trucks; 5-ton 20-foot semi flatbed truck for materials delivery; 16-hp welder; water truck; concrete delivery trucks; 20-hp generator; street sweeper; and construction staff vehicles.

Phase 5: Grounding, Conduit, Encasement

Electrical grounding, below-ground conduits, and encasements would be constructed and installed. Installation of the grounding, conduit and encasement would require approximately 12 weeks and use the following equipment: backhoes; 5-ton 20-foot semi flatbed truck; concrete truck; 3- to 5-ton roller/compactors; front loader; semi end dump trucks; 1-ton service trucks; construction employee vehicles; and a street sweeper.

Phase 6: Steel Erection

Erection of structural steel components and steel poles at the new substation would occur. Erection of the steel would require 8 weeks and the following vehicles and equipment: semi flatbed trucks for steel delivery; 60-ton crane; 60-foot manlifts; 10,000- pound reach forklift;

construction employee vehicles; 1-ton service trucks; 20-hp generator; 16-hp welder; and a street sweeper.

Phase 7: Electrical Equipment Assembly (New Substation, New Transmission & Distribution Lines, and Cutover)

New substation equipment, new poles and overhead electrical conductors and cables, and new underground duct bank would be installed to provide connectivity to existing incoming electrical transmission service and outgoing distribution service. Substation battery backup systems would be installed inside the control building or in an enclosure in the substation. Assembly and installation of the substation equipment and transmission and distribution lines and the cutover would require approximately 26 weeks and include use of the following SMUD and contractor equipment: crew vehicles; crew trucks; SMUD foreman trucks; 5-ton 20-foot semi flatbed truck for deliveries; 290-ton crane; 9-axle semi flatbed trucks; 20-hp generators; SMUD network crew vehicles; a backhoe, cement truck, asphalt paver, vibrator/compactor, water truck, and a street sweeper.

3.0 ENVIRONMENTAL SETTING, IMPACTS, AND MITIGATION MEASURES

This chapter is organized by environmental resource category; each resource category is organized to provide an integrated discussion of the existing environmental conditions (including regulatory setting and environmental setting), potential environmental effects (including direct and indirect impacts), and measures to reduce significant effects, where feasible, of construction and operation of the Station J Bulk Transmission Substation Project.

Cumulative and growth-inducing impacts are discussed in Chapters 4, “Cumulative Impacts,” and 5, “Other CEQA Sections,” respectively.

Approach to the Environmental Analysis

In accordance with Section 15126.2 of the State CEQA Guidelines, this <u>Recirculated</u> Draft EIR identifies and focuses on the significant direct and indirect environmental effects of the project, giving due consideration to both its short-term and its long-term effects. Short-term effects are generally those associated with construction, and long-term effects are generally those associated with solar facility operations.

As part of the IS Checklist prepared for the project and provided in Appendix A, the project was determined to have either less-than-significant impacts or no impact for several environmental resource categories. The following discussion summarizes the analysis conducted for these resource categories, and presents any mitigation determined to be necessary to reduce impacts to less than significant.

Environmental Resource Categories Not Evaluated Further

Agriculture and Forestry Resources

The project site is located in an urbanized area and 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 (California Department of Conservation 2018a). There are no active agricultural operations within or near the project site, and there are no Williamson Act contracts associated with the project site (Sacramento Area Council of Governments 2021). No existing agricultural or timber-harvest uses are located on or near the project site.

For the reasons above, the project would not result in significant impacts related to agriculture and forest resources and this issue is not discussed further.

Land Use and Planning

The proposed project would result in the redevelopment of an existing site with Substation J and construction of approximately ~~8~~ <u>9</u> miles of <u>below- or above-grade transmission lines which would connect with nearby substations and infrastructure</u> ~~high-voltage transmission lines in the surrounding area~~. The project would result in a substantial land use change on the Substation J site, as it currently consists of distribution, warehouse, and office uses and would be redeveloped with the proposed substation. The project would not divide an established community as it would redevelop an existing commercial site without introducing new physical barriers.

Several discretionary approvals would be required for the proposed project, including a Sacramento Metropolitan Air Quality District (SMAQMD) permit; City of Sacramento tree removal, grading, and building permits; NPDES Construction General Permit; and Caltrans permits. Additionally, the City of Sacramento 2035 General Plan contains policies which pertain to the environmental effects of projects within the City.

An inconsistency with regional plans and local general plan policies is not necessarily considered a significant impact under CEQA, unless it is related to a physical impact on the environment that is significant in its own right. Specific impacts and project consistency issues are addressed in each technical resource section of this EIR, as appropriate. These technical sections provide a detailed analysis of other relevant physical environmental effects that could result from implementation of the proposed project and identify mitigation measures, as necessary, to reduce impacts. Implementation of the proposed project would not conflict with adopted City General Plan policies or other land use plans, policies, or regulations that would generate any adverse physical impacts beyond those addressed in detail in the environmental sections of this Draft EIR (aesthetics, air quality, biological resources, cultural resources, etc.).

For the reasons above, the project would not result in significant impacts related to land use and planning, and this issue is not discussed further.

Mineral Resources

The majority of the project area is classified as mineral resource zone (MRZ)-1, which represents an area where available geologic information indicates that little likelihood exists for the presence of significant mineral resources. A small portion of the eastern project area is classified as MRZ-3, generally where the proposed transmission lines will loop into the existing overhead line connecting SMUD's Elverta and Station E Substations (California Department of Conservation 2018b). This classification represents an area where adequate information indicates significant mineral deposits are present, or where it is judged that a high likelihood exists for their presence (concrete aggregate in this particular area). Although this small portion of the project area may contain mineral resources, the surrounding area is developed with recreational, commercial, and utility uses and there is little potential for mineral resource recovery at this site. Further, the project site and surrounding area are not designated as a locally important mineral resource recovery site in the Sacramento 2035 General Plan Update (City of Sacramento 2014: Figure 6-11).

For the reasons above, the project would not result in significant impacts related to mineral resources, and this issue is not discussed further.

Population and Housing

The project does not include new homes or businesses and no persons or homes would be displaced as a result of project construction or operation. Further, new electrical equipment and distribution lines would serve existing and planned future uses in the downtown area and would not induce or generate population growth.

For the reasons above, the project would not result in significant impacts related to population and housing, and this issue is not discussed further.

Public Services

Implementation of the project would not increase demand for fire or police protection services such that the construction of new or expansion of existing fire or police service facilities would be required. The project does not include residential or other commercial uses that would increase demand for services nor would it increase the service boundary of any existing public service providers. As noted above, the project would not provide any new housing that would generate new students in the community or a need for new or expanded park facilities.

For the reasons above, the project would not result in significant impacts related to public services, and this issue is not discussed further.

Recreation

The project would not involve any changes to permitted uses of existing recreational facilities, nor would it require the construction of new recreational facilities or the expansion of existing ones that might have an adverse physical effect on the environment.

For the reasons above, the project would not result in potentially significant impacts related to recreation, and this issue is not discussed further.

Wildfire

The project site is in an area of predominantly flat terrain. It is not located in or near a state responsibility area or on lands classified as very high fire hazard severity zones and it is more than 5 miles away from the nearest such area or zone (CAL FIRE 2022). As required by the City, SMUD and its construction contractor would develop and implement a traffic control plan that would maintain access and connectivity during project construction activities. Because access and connectivity would be maintained during construction, the project would not substantially impair an emergency response plan or evacuation plan. Once construction is complete, the project would operate similar to its pre-construction condition, and would not impair emergency response or evacuation. Further, the project would not exacerbate wildfire risks as the project would adhere to all safety requirements for the equipment to be replaced and would not involve modifications to slopes that could expose people to risks of flooding from post-fire slope instability.

For the reasons above, the project would not result in significant impacts related to wildfire, and this issue is not discussed further.

Environmental Resource Categories Evaluated Further

The remainder of this chapter addresses the following resource topics:

- Section 3.1, Aesthetics
- Section 3.2, Air Quality
- Section 3.3, Biological Resources

- Section 3.4, Cultural Resources
- Section 3.5, Energy
- Section 3.6, Geology and Soils
- Section 3.7, Greenhouse Gas Emissions
- Section 3.8, Hazards and Hazardous Materials
- Section 3.9, Hydrology and Water Quality
- Section 3.10, Noise
- Section 3.11, Transportation
- Section 3.12, Tribal Cultural Resources
- Section 3.13, Utilities and Service Systems

Sections 3.1 through 3.13 follow the same general format:

Regulatory Setting presents the laws, regulations, plans, and policies that are relevant to each issue area. Regulations originating from the federal, state, and local levels are each discussed as appropriate.

Environmental Setting presents the existing environmental conditions on the project site and surrounding area as appropriate, in accordance with the State CEQA Guidelines (California Code of Regulations [CCR] Section 15125). This setting generally serves as the baseline against which environmental impacts are evaluated. The extent of the environmental setting area evaluated (the project study area) differs among resources, depending on the locations where impacts would be expected. For example, air quality impacts are assessed for the air basin (macroscale) as well as the site vicinity (microscale), whereas noise impacts are assessed for the project site and immediate vicinity only.

Environmental Impacts and Mitigation Measures identifies the thresholds of significance used to determine the level of significance of the environmental impacts for each resource topic, in accordance with the State CEQA Guidelines (CCR Sections 15126, 15126.2, and 15143). The thresholds of significance used in this Recirculated Draft EIR are based on the checklist presented in Appendix G of the State CEQA Guidelines; best available data; and regulatory standards of federal, state, and local agencies. The level of each impact is determined by comparing the effects of the project to the environmental setting. Key methods and assumptions used to frame and conduct the impact analysis as well as issues or potential impacts not discussed further (such issues for which the project would have no impact) are also described.

Project impacts are organized numerically in each subsection (e.g., Impact 3.1-1, Impact 3.1-2, Impact 3.1-3). A bold-font impact statement, a summary of each impact, and its level of significance precedes the discussion of each impact. The discussion that follows the impact summary includes the substantial evidence supporting the impact significance conclusion.

The Recirculated Draft EIR must describe any feasible measures that could avoid, minimize, rectify, reduce, or compensate for significant adverse impacts, and the measures are to be fully enforceable through incorporation into the project and adoption of a Mitigation Monitoring and Reporting Plan (Public Resources Code Section 21081.6[b]). Mitigation measures are not required for effects that are found to be less than significant. Where feasible mitigation for a significant impact is available, it is described following the impact along with its effectiveness at addressing the impact. Each identified mitigation measure is labeled numerically to correspond with the number of the impact that would be mitigated by the measure. Where sufficient feasible mitigation is not available to reduce impacts to a less-than-significant level, or where SMUD lacks the authority to ensure that the mitigation is implemented when needed, the impacts are identified as remaining “significant and unavoidable.”

Terminology Used in the <u>Recirculated</u> EIR

This <u>Recirculated</u> Draft EIR uses the following terms to describe the level of significance of impacts identified during the environmental analysis:

Significant and Unavoidable Impact: An impact that exceeds the defined threshold of significance and cannot be eliminated or reduced to a less than significant level through the implementation of feasible mitigation measures.

Potentially Significant Impact: An impact that exceeds the defined thresholds of significance, and can be reduced to a less than significant level through implementation of feasible mitigation measures. If feasible mitigation measures are not available or would not reduce the magnitude of the impact below the threshold of significance, the impact would be determined significant and unavoidable.

Less-than-Significant Impact: An impact that does not exceed the defined thresholds of significance or that is potentially significant and can be eliminated or reduced to aless than significant through implementation of feasible mitigation measures.

No Impact: Where an environmental issue is evaluated and it is determined that the project would have no effect on the issue, the conclusion is drawn that the proposed project would have “no impact” and no further analysis is presented.

Cumulative Impacts: Under CEQA, “cumulative impacts refer to two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts” (CEQA Guidelines, Section 15355). CEQA requires that cumulative impacts be discussed when the “project’s incremental effect is cumulatively considerable… [or] … provide a basis for concluding that the incremental effect is not cumulatively considerable (CEQA Guidelines, CCR Section 15130 (a)).”

Mitigation Measures: The CEQA Guidelines (Title 14, CCR Section 15370) define mitigation as:

a) avoiding the impact altogether by not taking a certain action or parts of an action;

b) minimizing impacts by limiting the degree of magnitude of the action and its implementation;

c) rectifying the impact by repairing, rehabilitating, or restoring the affected environment;

d) reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action; and

e) compensating for the impact by replacing or providing substitute resources or environments.

3.1 Aesthetics

Aesthetic (i.e., visual) resources are defined as the visible natural and human-built features of the landscape that contribute to an attractive landscape appearance and the public's enjoyment of the environment.

This section summarizes regulations applicable to aesthetic resources, describes the existing aesthetic resources within the project area, and provides an assessment of potential changes to those conditions that would result from implementation of the proposed project. Effects of the proposed project on the visual environment are generally defined in terms of the proposed project's physical characteristics and the potential visibility of those changes (including changes in lighting and glare), the extent to which the proposed project would change the perceived visual character and quality of the visual environment where it is located, and the expected level of sensitivity of the viewing public in the area.

3.1.1 Regulatory Setting

Federal

There are no applicable federal laws, policies, and standards regarding aesthetics that apply to the proposed project.

State

California Scenic Highway Program

The intent of the California Scenic Highway Program (Streets and Highway Code Sections 260 et seq.) is to provide and enhance California's natural beauty and protect the social and economic values provided by the State's scenic resources. The California Department of Transportation (Caltrans) defines a scenic highway as any freeway, highway, road, or other public right-of-way that traverses an area of exceptional scenic quality. Suitability for designation as a State Scenic Highway is based on vividness, intactness, and unity.

The nearest designated state scenic highway is Route 160, approximately 9 miles south of the project site (Caltrans 2022).

Local

City of Sacramento 2035 General Plan

The following goals and policies are contained in the City of Sacramento 2035 General Plan Update and relevant to aesthetics.

- **Goal LU 8.1.7 Compatibility of Non-City Public Uses.** The City shall encourage school and utility districts and other government agencies that may be exempt from City land use control and approval to plan their properties and design buildings at a high level of visual and architectural quality that maintains the character of the district or neighborhood in which they are located. (RDR/IGC/JP)

- **Goal ER 7.1 Visual Resource Preservation.** Maintain and protect significant visual resources and aesthetics that define Sacramento.
  - **Policy ER 7.1.1 Protect Scenic Views.** The City shall avoid or reduce substantial adverse effects of new development on views from public places to the Sacramento and American Rivers and adjacent greenways, landmarks, and the State Capitol along Capitol Mall. (RDR)
  - **Policy ER 7.1.2 Visually Complimentary Development.** The City shall require new development be located and designed to visually complement the natural environment/setting when near the Sacramento and American Rivers, and along streams. (RDR)
  - **Policy ER 7.1.3 Lighting.** The City shall minimize obtrusive light by limiting outdoor lighting that is misdirected, excessive, or unnecessary, and requiring light for development to be directed downward to minimize spill-over onto adjacent properties and reduce vertical glare. (RDR)
  - **Policy ER 7.1.4 Reflective Glass.** The City shall prohibit new development from (1) using reflective glass that exceeds 50 percent of any building surface and on the bottom three floors, (2) using mirrored glass, (3) using black glass that exceeds 25 percent of any surface of a building, (4) using metal building materials that exceed 50 percent of any street-facing surface of a primarily residential building, and (5) using exposed concrete that exceeds 50 percent of any building. (RDR)
  - Policy U 1.1.9 Utilities Location. The City shall limit, to the extent financially and technically feasible, the construction of major infrastructure facilities in areas better suited for infill and urban development. (RDR/MPSP)
  - Policy U 1.1.10 Safe, Attractive, and Compatible Utility Design. The City shall ensure that public utility facilities are designed to be safe, aesthetically pleasing, and compatible with adjacent uses. (RDR/MPSP)

City of Sacramento Design Review

The City of Sacramento has developed urban design and architectural guidelines for both public and private development in specific areas of the city. The proposed project is located within the River District, which is subject to the River District Design Guidelines (City of Sacramento 2011). These guidelines were developed in conjunction with the River District Specific Plan, and set forth a framework of design intentions, recommendations, and design standards for various areas within the River District. Site Plan and Design Review is a planning entitlement required by the city for new construction, which relies on the standards and guidance set forth by area-specific design guidelines.

The City prescribes additional standards for projects that are located within designated historic districts or that involve a historic landmark. Portions of the proposed project would be located within the North 16th Street Historic District (City of Sacramento 2019). The North 16th Street Historic District preserves a concentration of buildings that were once part of a busy automobile and industrial corridor (City of Sacramento 2018).

3.1.2 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. Therefore, the environmental setting consists of the quality and character of the site and its surroundings as well as sensitivity of viewers.

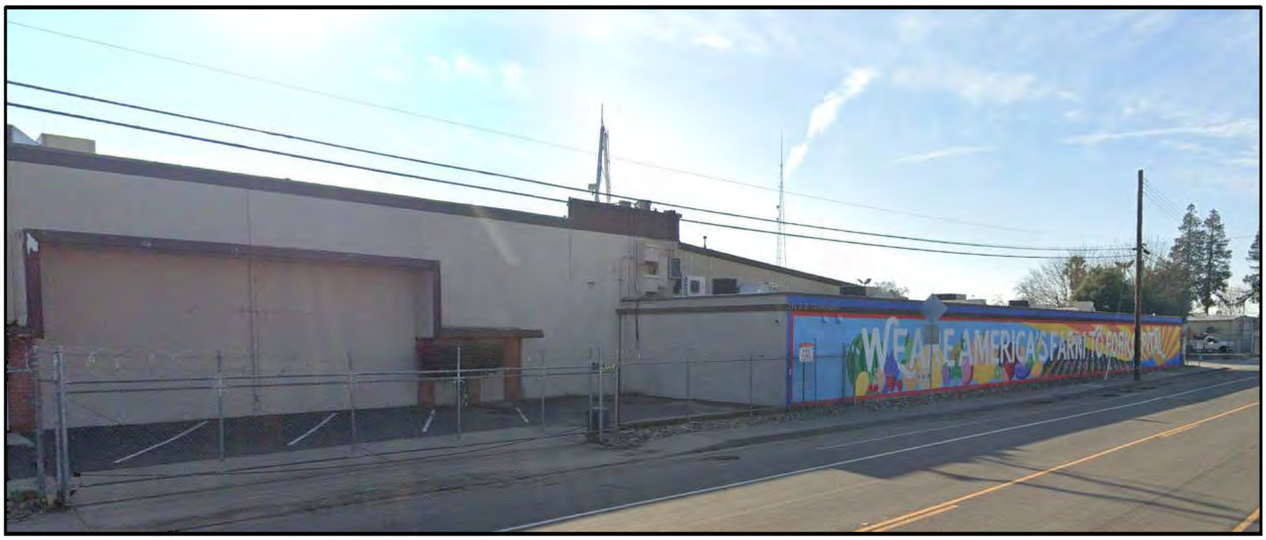
Project Site and Surroundings

The proposed project site consists of a 10.3-acre site at 1220 North B Street and surrounding streets in a developed area of downtown Sacramento. The project site is composed of the proposed Substation J site and approximately 7 miles of linear connections to existing or under construction substations in the area. The proposed substation site is bordered by North B Street to the north, North 14th Street to the east, Union Pacific Railroad (UPRR) tracks to the south, and North 12th Street to the west. The substation site is relatively flat and sparsely vegetated with a limited number of trees along the southern project perimeter. Given the flat topography, views to and from the substation site are limited to the immediately surrounding development. The substation site contains two buildings including a single-story maintenance shop building and a single-story distribution warehouse with loading docks, and office space. Both buildings are situated towards the front of the property along North B Street and surrounded by barbed wire fencing. The existing buildings on the substation site exhibit typical industrial building design, with an emphasis on functionality over appearance. There are minimal windows or other articulation of the exteriors. The building materials have brown and white coloration, punctuated by small elements of brick at the entryways facing North B Street. The only distinguishing aesthetic feature of the buildings is a colorful mural facing North B Street. The rear of the property consists of yard storage containing freight trucks, stacked pallets, and other miscellaneous materials, and is adjacent to UPRR to the south.

The substation site is located in a predominantly industrial area of Sacramento. Adjacent land uses include Salvation Army to the northwest, Fire Station No. 14 and General Produce offices to the east, First Step Communities homeless shelter and Quinn Cottages transitional housing to the southeast, and Sims Metal recycling center across North 12th Street to the west. Surrounding land uses are visually similar to those on the site, exhibiting corrugated metal, stucco, or brick single-story buildings bordered by large, paved parking lots and storage areas with security fencing. There are several SMUD facilities nearby the site including the Station E electrical substation located approximately 0.5 miles to the east, Station G electrical substation and Station H (future substation) located approximately 0.7-mile to the southwest.

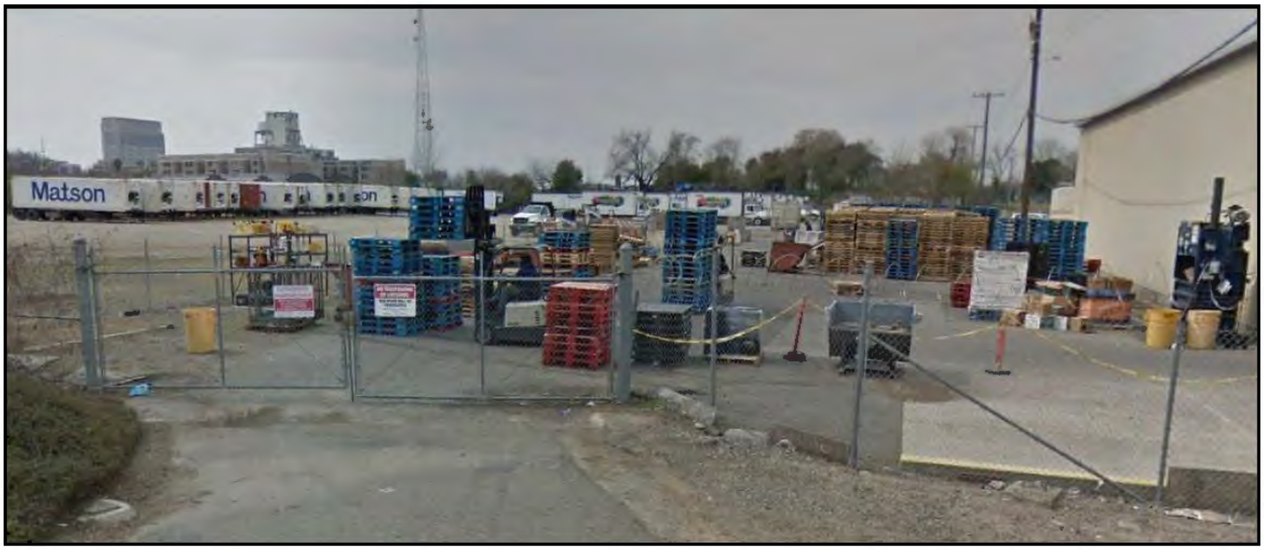
The proposed project also includes up to ~~7~~ 9 miles of overhead and underground transmission lines which would extend from the proposed substation to interconnect with nearby substations. The majority of the transmission lines would be located in or above surface streets surrounding the substation site, including North B Street to the east and west, 7th Street to the south, North A Street, Ahem Street, Thornton Avenue, and North 18th Street. The visual character of these surrounding areas is similarly defined by one- and two-story industrial and commercial uses with brick and stucco exteriors, along with taller and more modern buildings further south on 7th Street. A final approximately 0.2-mile section of the transmission lines would extend from North 18th Street to interconnect with the Station E substation. This portion of the project site contains undeveloped plots of land and open spaces including the Sacramento Northern Bikeway, which crosses over the American River just north of the alignment. This area is more densely vegetated with oaks and riparian vegetation and punctuated by utility infrastructure including the railway and overhead transmission lines.

The substation site and its immediate surroundings do not contain any notable scenic resources. The nearest designated state scenic highway is Route 160, approximately 9 miles south of the project area (Caltrans 2022). Scenic views, however, are present at the eastern end of the alignment near the interconnection with Station E, consisting of views of the American River and adjacent open spaces from the Sacramento Northern Bikeway. Scenic views in this area are generally of moderate quality, given the scale of surrounding urban development and the presence of utility lines and infrastructure in the immediate vicinity. Primary viewers including recreationists using the bikeway; the project site is not visible from the American River itself given the slope of its banks and intervening vegetation. Additionally, historic buildings located within the North 16th Street Historic District in the eastern portion of the project site may be considered scenic resources which contribute to the visually cohesive industrial character of the area. The buildings on the substation site are not located within the historic district. Views of the project site and adjacent land uses are shown in Figure 3.1-1 through Figure 3.1-12 below.



Source: adapted by AECOM from Google Earth imagery in 2023

Figure 3.1-1: View of substation site (front) from North B Street, looking south



Source: adapted by AECOM from Google Earth imagery in 2023

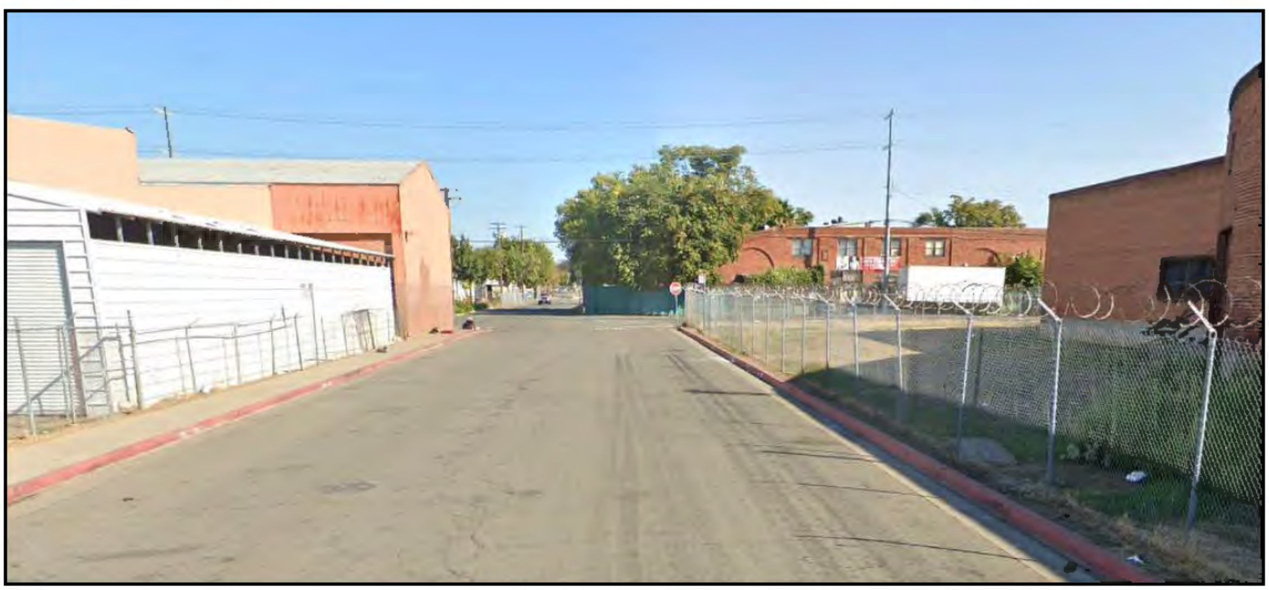
Figure 3.1-2: View of substation site (rear) from North 14th Street, looking west

Source: adapted by AECOM from Google Earth imagery in 2023

Figure 3.1-3: View of surrounding industrial development and Fire Station No. 14 adjacent to substation site on North B Street, looking east

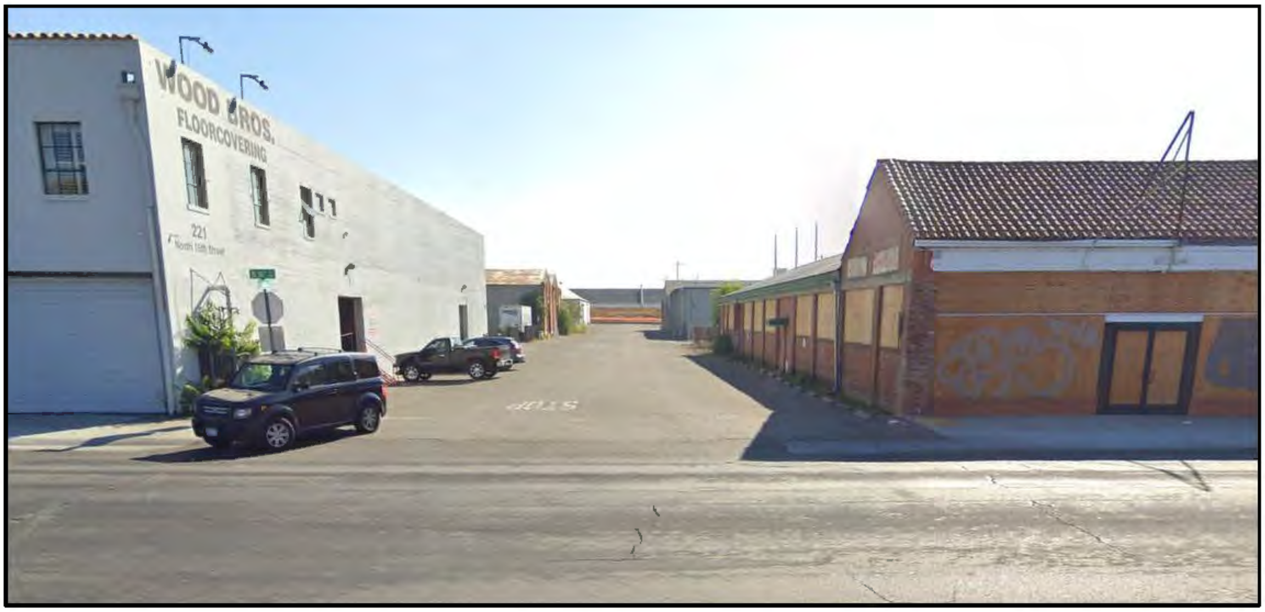
Source: adapted by AECOM from Google Earth imagery in 2023

Figure 3.1-4: View of surrounding industrial development adjacent to substation site on North B Street, looking west



Source: adapted by AECOM from Google Earth imagery in 2023

Figure 3.1-5: View of surrounding industrial development adjacent to substation site on Ahem Street, looking north



Source: adapted by AECOM from Google Earth imagery in 2023

Figure 3.1-6: View of surrounding development on Thornton Avenue, looking east from North 16th Street

Source: adapted by AECOM from Google Earth imagery in 2023

Figure 3.1-7: View of surrounding land uses on North 18th Street, looking north

Source: adapted by AECOM from Google Earth imagery in 2023

Figure 3.1-8: View of the Sacramento Northern Bikeway near Dreher Street, looking north

Source: adapted by AECOM from Google Earth imagery in 2023

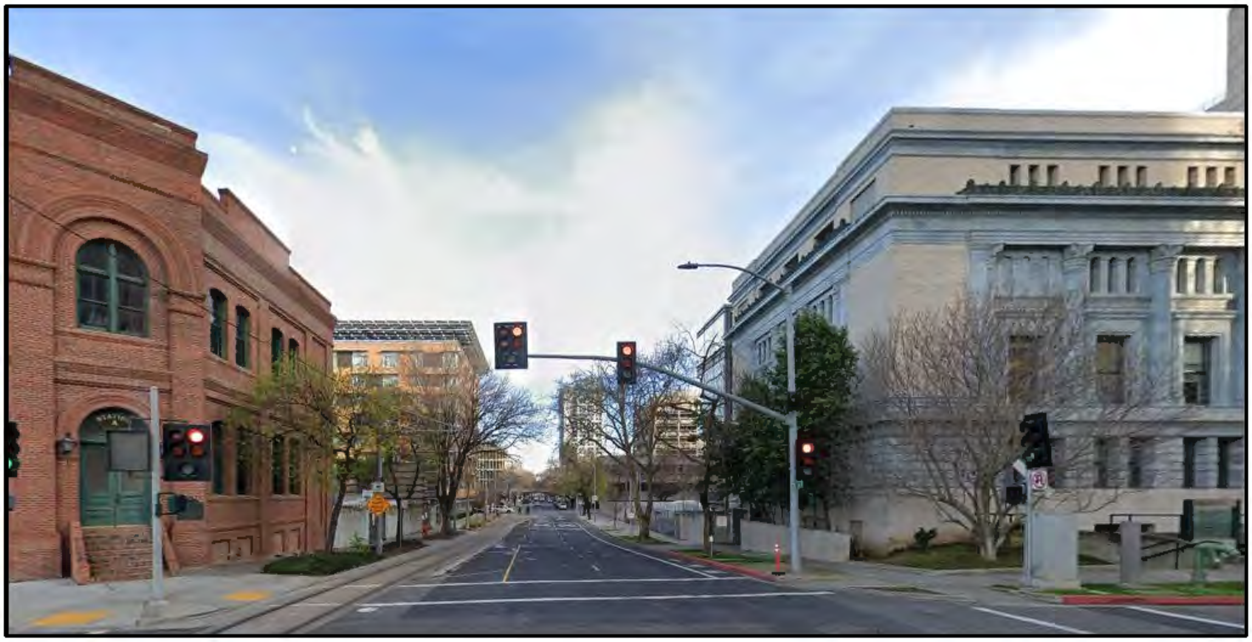
Figure 3.1-9: View of Sacramento Northern Bikeway near Dreher Street, looking east

Source: adapted by AECOM from Google Earth imagery in 2023

Figure 3.1-10: View of SMUD Substation E from terminus of 20th Street, looking northeast

Source: adapted by AECOM from Google Earth imagery in 2024

Figure 3.1-11: View of surrounding land uses on North 7th Street at Railyards Boulevard, looking south



Source: adapted by AECOM from Google Earth imagery in 2024

Figure 3.1-12: View of surrounding land uses, including Station A, at the intersection of 6th Street and H Street, looking east.

3.1.3 Environmental Impacts and Mitigation Measures

Methods and Assumptions

The evaluation of potential impacts of the proposed project on aesthetics was based on consideration of both the visual character and quality of the resource affected, and the value given the resource by viewers. Viewer valuation or response is a combination of viewer exposure and viewer sensitivity. Viewer exposure is a function of the visibility of the affected area, number of viewers, and viewing duration.

Changes in foreground views from a position where large numbers of viewers are relatively stationary for extended periods would generate greater viewer exposure than changes in a background view seen by a limited number of viewers driving rapidly past the viewing site. Viewer sensitivity relates to viewer expectations and the extent of the public's concern for a particular viewshed. Viewers undertaking recreational activities in a location known for high-quality aesthetic resources are expected to have higher expectations and express greater concern relative to preservation of scenic conditions than workers in an industrial setting in an urban area. The significance of the change on scenic qualities of the landscape and publicly available viewpoints is evaluated using the thresholds below.

Thresholds of Significance

Based on Appendix G of the State CEQA Guidelines, implementation of the proposed project would result in a potentially significant impact on aesthetics if it would do the following:

- have a substantial adverse effect on a scenic vista;
- substantially damage scenic resources, including but not limited to trees, rock outcroppings, and historic buildings along a scenic highway;
- in nonurbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings. In urbanized areas, conflict with applicable zoning or other regulations governing scenic quality; or
- create a new source of substantial light or glare that would adversely affect daytime or nighttime views in the area.

Issues or Potential Impacts Not Discussed Further

As mentioned above and in the Initial Study Checklist included as Appendix A, the project site is not visible from, nor are views provided to, a designated state scenic highway. Thus, the proposed project would have **no impact** to scenic resources within a state scenic highway and this issue is not discussed further.

Impact Analysis

Impact 3.1-1. Have a substantial adverse effect on a scenic vista?

Less-than-Significant Impact. The proposed project is located primarily within an industrial area of Sacramento where minimal scenic views are provided. The proposed substation site is developed with industrial warehouse and commercial buildings with little scenic value. The proposed demolition of the buildings on-site and construction of the proposed substation would not adversely affect any scenic vistas. However, the easternmost portion of the proposed alignment, near the interconnection with Station E, provides access to scenic views of the American River along the Sacramento Northern Bikeway. The proposed transmission lines would intersect the bikeway and adjacent open spaces to connect to Station E. Construction in this area could temporarily inhibit access from the bikeway to areas which provide scenic views of the American River. However, temporary access routes would be identified prior to construction and signage would be provided to notify recreationalists of alternate routes, as set forth in Mitigation Measure 3.11-2 in Chapter 3.11, “Transportation”. There are several adjacent routes in surrounding surface streets which can be used to provide access to scenic viewpoints along the bikeway during construction. Any access limitations or closures of the bikeway would be temporary and would be restored following construction. Further, the construction work areas provide views of low to moderate scenic quality, consisting of vegetated areas, nearby industrial/residential development, and other utility infrastructure. Nearby areas with the highest scenic quality (e.g., direct views to and from the river) would be unaffected. Therefore, the construction impact of the proposed project on scenic vistas would be ***less than significant*****.**

Once operational, the proposed project would not result in the removal or obstruction of any scenic vistas. Scenic vistas from the Sacramento Northern Bikeway would not be substantially altered. The overhead utility lines connecting to Station E and new riser poles near Basler Street and North 18th Street would be visually similar to the existing scale of development in surrounding areas and would not block views of recreationalists. The remainder of the proposed transmission alignments would be placed in underground duct banks in surface streets and would have no visual effect. Operations and maintenance activities would be limited to intermittent inspections at duct bank vault structures or minor repairs of existing transmission lines, which would similarly not impact scenic vistas. Therefore, the operational impact of the proposed project on scenic vistas would be ***less than significant***.

Impact 3.1-2. In nonurbanized areas, substantially degrade the existing visual character or quality of the site and its surroundings? If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?

Less-than-Significant Impact. The proposed project is in an urbanized area in downtown Sacramento within the River District. The preservation of scenic quality in the City is guided by General Plan goals and policies, zoning requirements, and area-specific design guidelines. The City has General Plan goals and policies which focus on preservation of areas of high scenic quality, ensuring visual compatibility with surrounding land uses, minimizing visual effects of utility projects, and reducing light and glare effects (see Section 3.1.2 "Environmental Setting"). Visual appearance and compatibility of new development in the area is also subject to the River District Design Guidelines.

As noted above, the proposed project would not adversely affect scenic views in the area. The proposed Station J would replace existing industrial warehouse buildings with a substation in a predominantly industrial area of the City. The proposed substation would be surrounded by 8 to ~~10~~ 12-foot tall concrete masonry unit (CMU) walls to provide visual screening from nearby uses. The proposed substation would not be constructed in an area that is recognized for its scenic qualities. Other elements of the proposed project (transmission lines and riser poles) would also be compatible with the industrial character of the area. Transmission lines extending from the proposed substation through urban areas to the east (including the North 16th Street Historic District) and west would be placed underground and would have no visual effect. The overhead utility lines connecting to Station E ~~and~~ new riser poles near Basler Street and North 18th Street would result in minimal visual change in the area and would not detract from scenic qualities of the Sacramento Northern Bikeway or the American River. Similarly, new 21kV overhead lines and poles extending east on North B Street and south on North 14th Street to C and D Alley would be visually similar to other existing utility infrastructure in the area. Thus, the proposed project would not conflict with any regulations governing scenic quality. The City's design review process would provide opportunities to refine the proposed project's final design to further minimize visual impacts and ensure compatibility with adjacent land uses. Therefore, this impact would be ***less than significant*.**

Impact 3.1-3. Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

Less-than-Significant Impact. The proposed project would include low-level lighting for safety and security. Because the adjacent downtown area is primarily built out, substantial amounts of lighting and glare already exist, and the lighting from the proposed project would add only a minor increment of light above existing ambient light sources. According to the 2035 General Plan Master EIR (City of Sacramento 2014), development of infill parcels would be located in areas that commonly experience impacts from existing light sources. In the case of the new substation site, existing receptors that currently experience existing ambient light sources include the Salvation Army Center of Hope homeless shelter, First Step Communities homeless shelter and Quinn Cottages transitional housing to the southeast, along with motorists, pedestrians, and cyclists along North B Street. The proposed project would not result in a substantial departure from the existing levels of light and glare generated at the existing industrial warehouse buildings at the proposed substation site. Further, the proposed project would not include any of the land uses that the 2035 General Plan Master EIR highlights as projects that could result in light and glare (e.g., solar farms, sports facilities) but would include buildings typical of an urban setting that would not require substantial lighting or result in glare impacts. Therefore, this impact would be ***less than significant.***

3.2 Air Quality

This section describes the project area's existing air quality conditions and applicable air quality regulations and analyzes potential short- and long-term air quality impacts that could result from implementation of the project. Mitigation measures are recommended, as necessary, to reduce potentially significant air quality impacts.

3.2.1 Regulatory Setting

Federal

The primary legislation that governs federal air quality regulations is the Clean Air Act (CAA), enacted in 1970 and amended by Congress most recently in 1990. The CAA delegates primary responsibility for clean air to United States Environmental Protection Agency (EPA). EPA develops rules and regulations to preserve and improve air quality and delegates specific responsibilities to state and local agencies.

Criteria Air Pollutants

Under the CAA, EPA has established the national ambient air quality standards (NAAQS) for seven criteria air pollutants: ozone, carbon monoxide (CO), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), respirable and fine particulate matter (PM_{10} and $PM_{2.5}$, respectively), and lead. The purpose of the NAAQS is two-tiered: primarily to protect public health, and secondarily to prevent degradation to the environment (i.e., impairment of visibility, damage to vegetation and property). The current primary and secondary NAAQS are shown in Table 3.2-1[1]. These health-based pollutant standards are reviewed with a legally prescribed frequency and are revised as warranted by new data on health and welfare effects. Each standard is based on a specific averaging time over which the concentration is measured. Different averaging times are based on protection from short-term, high-dosage effects or longer term, low-dosage effects.

The CAA requires EPA to determine if areas of the country meet the NAAQS for each criteria air pollutant. Areas are designated according to the following basic designation categories:

- **Attainment:** This designation signifies that pollutant concentrations in the area do not exceed the established standard. In most cases, a maintenance plan is required for a region after it has attained an air quality standard and is designated as an attainment or maintenance area after previously being designated as nonattainment. Maintenance plans are designed to ensure continued compliance with the standard.

- **Nonattainment:** This designation indicates that a pollutant concentration has exceeded the established standard. Nonattainment may differ in severity. To identify the severity of the problem and the extent of planning and actions required to meet the standard, nonattainment areas are assigned a classification that is commensurate with the severity of their air quality problem (e.g., moderate, serious, severe, extreme).

[1] Table 3.2-1 also includes the California Ambient Air Quality Standards, described further below.

Table 3.2-1. Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards [a]	National Standards [b]	
		Concentration [c]	Primary [c,d]	Secondary [c,e]
Ozone [f]	1 hour	0.09 ppm (180 µg/m^3)	–	Same as primary standard
	8 hours	0.070 ppm (137 µg/m^3)	0.070 ppm (147 µg/m^3)	
Respirable particulate matter—10 micrometers or less [g]	24 hours	50 µg/m^3	150 µg/m^3	Same as primary standard
	Annual arithmetic mean	20 µg/m^3	–	
Fine particulate matter—2.5 micrometers or less [g]	24 hours	–	35 µg/m^3	Same as primary standard
	Annual arithmetic mean	12 µg/m^3	12 µg/m^3	15 µg/m
Carbon monoxide	8 hours	9.0 ppm (10 mg/m^3)	9 ppm (10 mg/m^3)	None
	1 hour	20 ppm (23 mg/m^3)	35 ppm (40 mg/m^3)	
	8 hours (Lake Tahoe)	6 ppm (7 mg/m^3)	–	–
Nitrogen dioxide [h]	Annual arithmetic mean	0.030 ppm (57 µg/m^3)	0.053 ppm (100 µg/m^3)	Same as primary standard
	1 hour	0.18 ppm (339 µg/m^3)	100 ppb (188 µg/m^3)	None
Sulfur dioxide [i]	Annual arithmetic Mean	–	0.030 ppm (for certain areas) [i]	–
	24 hours	0.04 ppm (105 µg/m^3)	0.14 ppm (for certain areas) [i]	–
	3 hours	–	–	0.5 ppm (1,300 µg/m^3)
	1 hour	0.25 ppm (655 µg/m^3)	75 ppb (196 µg/m^3)	–
Lead [j]	30-day average	1.5 µg/m^3	–	–
	Calendar quarter	–	1.5 µg/m^3 (for certain areas) [j]	Same as primary standard
	Rolling 3-month average	–	0.15 µg/m^3	
Visibility-reducing particles [k]	8 hours	See footnote k	No national standards	
Sulfates	24 hours	25 µg/m^3		
Hydrogen sulfide	1 hour	0.03 ppm (42 µg/m^3)		
Vinyl chloride [j]	24 hours	0.01 ppm (26 µg/m^3)		

Notes: µg/m^3 = micrograms per cubic meter; CARB = California Air Resources Board; EPA = U.S. Environmental Protection Agency; mg/m^3 = milligrams per cubic meter; ppb = parts per billion; ppm = parts per million

a. California standards for ozone, carbon monoxide (except 8-hour Lake Tahoe), sulfur dioxide (1- and 24-hour), nitrogen dioxide, and particulate matter (PM_{10}, $PM_{2.5}$, 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. National standards (other than ozone, particulate matter, and those based on annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over 3 years, is equal to or less than the standard. For PM_{10}, the 24-hour 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 1. For $PM_{2.5}$, the 24-hour standard is attained when 98% of the daily concentrations, averaged over 3 years, are equal to or less than the standards.

c. Concentration expressed first in the units in which it was promulgated. Equivalent units given in parentheses are based upon 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 reference pressure of 760 torr; "ppm" in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.

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:* Levels of air quality necessary to protect public welfare from any known or anticipated adverse effects of a pollutant.

f. On October 1, 2015, the national 8-hour ozone primary and secondary standards were lowered from 0.075 to 0.070 ppm.

g. On December 14, 2012, the national annual $PM_{2.5}$ primary standard was lowered from 15 µg/m^3 to 12.0 µg/m^3. The existing national 24-hour $PM_{2.5}$ standards (primary and secondary) were retained at 35 µg/m^3, as was the annual secondary standard of 15 µg/m^3. The existing 24-hour PM_{10} standards (primary and secondary) of 150 µg/m^3 also were retained. The form of the annual primary and secondary standards is the annual mean, averaged over 3 years.

h. To attain the 1-hour national standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 ppb. California standards are in units of ppm. To directly compare the national 1-hour standard to the California standards, the units can be converted from 100 ppb to 0.100 ppm.

i. On June 2, 2010, a new 1-hour SO_2 standard was established and the existing 24-hour and annual primary standards were revoked. To attain the 1-hour national standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO_2 national standards (24-hour and annual) remain in effect until 1 year after an area is designated for the 2010 standard, except that in areas designated nonattainment for the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved. To directly compare the 1-hour national standard to the California standard, the units can be converted to ppm. In this case, the national standard of 75 ppb is identical of 0.075 ppm.

j. CARB has identified lead and vinyl chloride as toxic air contaminants with no threshold level 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.

k. In 1989, CARB converted both the general statewide 10-mile visibility standard and the Lake Tahoe 30-mile visibility standard to instrumental equivalents, which are "extinction of 0.23 per kilometer" and the "extinction of 0.07 per kilometer" for the statewide and Lake Tahoe Air Basin standards, respectively.

- **Unclassified:** This designation indicates that insufficient data exist to determine attainment or nonattainment. For regulatory purposes, an unclassified area is generally treated the same as an attainment area.

As detailed below, the project is located in the Sacramento Valley Air Basin (SVAB), under the jurisdiction of the Sacramento Metropolitan Air Quality Management District (SMAQMD). As shown in Table 3.2-2 below the SMAQMD meets the NAAQS for all criteria air pollutants except ozone and $PM_{2.5}$. The CAA requires each state to prepare an air quality control plan, referred to as a state implementation plan (SIP) to demonstrate how attainment standards will be achieved.

Hazardous Air Pollutants / Toxic Air Contaminants

Air quality regulations also focus on hazardous air pollutants (HAPs), referred to at the state regulation level as Toxic Air Contaminants (TACs). These are a set of airborne pollutants that may cause or contribute to an increase in mortality or in serious illness, or that may pose a hazard to human health. HAPs are usually present in minute quantities in the ambient air; however, their high toxicity or health risk may pose a threat to public health even at low concentrations. The health effects associated with TACs are quite diverse and generally are assessed locally, rather than regionally. TACs can cause long-term health effects such as cancer, birth defects, neurological damage, asthma, bronchitis, or genetic damage; or short-term acute affects such as eye watering, respiratory irritation (a cough), running nose, throat pain, and headaches.

Stationary sources of HAPs include gasoline stations, dry cleaners, and diesel backup generators, among which are subject to permit requirements. On-road motor vehicles and off-road sources, such as construction equipment and vehicles, are also common sources of HAPs. On-road and off-road exhaust emissions contain diesel particulate matter (DPM), benzene, formaldehyde, 1,3-butadiene and acetaldehyde. Gasoline vapors contain several HAPs, including benzene, toluene, and xylenes. Public exposure to HAPs can result from emissions from normal operations, as well as accidental releases.

HAPs can be separated into carcinogens (cancer-causing) and non-carcinogens, based on the nature of the effects associated with exposure to the pollutant. For regulatory purposes, carcinogens are assumed to have no safe threshold below which health impacts would not occur. Non-carcinogens differ in that there is generally assumed to be a safe level of exposure below which no negative health impact is believed to occur. EPA regulates HAPs through statutes and regulations that generally require the use of the maximum or best available control technology for toxics (MACT and BACT) to limit emissions.

The CAA requires EPA to identify and set national emissions standards for HAPs to protect public health and welfare. Emissions standards are set for what are called “major sources” and “area sources.” Major sources are defined as stationary sources with potential to emit more than 10 tons per year of any HAP or more than 25 tons per year of any combination of HAPs; all other sources are considered area sources. There are two types of emissions standards: those that require application of MACT and BACT, and those that are health-risk based and deemed necessary to address the risks that remain after implementation of MACT or BACT. For area sources, the MACT or BACT standards may be different because of differences in generally available control technology. The CAA also requires EPA to issue vehicle or fuel standards containing reasonable requirements that control toxic emissions of, at a minimum, benzene and formaldehyde. Performance criteria were established to limit mobile-source emissions of toxics.

State

The California Air Resources Board (CARB) is responsible for coordination and oversight of state and local air pollution control programs in California and for implementing the California Clean Air Act (CCAA).

Criteria Air Pollutants

The CCAA, adopted in 1988, required CARB to establish California Ambient Air Quality Standard (CAAQS) (as shown above in Table 3.2-1). CARB has also established CAAQS for sulfates, hydrogen sulfide, vinyl chloride, and visibility-reducing particulate matter, in addition to the above-mentioned criteria air pollutants regulated by EPA. The CCAA requires that all air districts in the state endeavor to achieve and maintain the CAAQS by the earliest practicable date. The CCAA specifies that local air districts should focus particular attention on reducing the emissions from transportation and areawide emission sources and provides districts with the authority to regulate indirect sources. CARB also maintains air quality monitoring stations throughout the state in conjunction with air districts. CARB uses the data collected at these stations to classify air basins as being in attainment or nonattainment with respect to each pollutant and to monitor progress in attaining the CAAQS and NAAQS. As shown in Table 3.2-2 below the SMAQMD meets the CAAQS for all criteria air pollutants except ozone and PM_{10}.

Table 3.2-2. Attainment Status for Federal and State Ambient Air Quality Standards

Pollutant	Federal Standard	State Standard
Ozone[a]	Nonattainment[a]	Nonattainment
Particulate Matter—10 Micrometers or Less	Attainment	Nonattainment
Particulate Matter—2.5 Micrometers or Less	Nonattainment	Attainment
Carbon Monoxide	Attainment	Unclassified/Attainment
Nitrogen Dioxide	Unclassified/Attainment	Attainment
Sulfur Dioxide	Unclassified/Attainment	Attainment
Lead	Unclassified/Attainment	Attainment
Hydrogen Sulfide	No Federal Standard	Unclassified
Sulfates		Attainment
Visibility-Reducing Particles		Unclassified

Source: SMAQMD 2022.
[a] This designation indicates that a pollutant concentration has exceeded the established standard.

CARB is the lead agency for developing the SIPs in California. SIPs are not single documents. They are a compilation of new and previously submitted plans, programs (such as monitoring, modeling, permitting, etc.), district rules, state regulations, and federal controls. Many of California's SIPs rely on the same core set of control strategies, including emission standards for cars and heavy trucks, fuel regulations, and limits on emissions from consumer products. Local air districts and other agencies prepare SIP elements and submit them to CARB for review and approval. CARB forwards SIP revisions to the EPA for approval and publication in the Federal Register.

CARB has established emission standards for vehicles sold in California and for various types of equipment. California gasoline specifications are governed by both state and federal agencies, which have imposed numerous requirements on the production and sale of gasoline in California during the past 30 years. In December 2004, CARB adopted a fourth phase of emission standards (Tier 4) in its off-road compression-ignition regulations that are nearly identical to those finalized by EPA earlier that year. The standards required engine manufacturers to meet after-treatment–based exhaust standards for nitrogen oxides (NO_X) and PM, starting in 2011, that were more than 90 percent lower than then-current levels, putting emissions from off-road engines virtually on par with those from on-road, heavy-duty diesel engines. CARB has also adopted control measures for DPM and more stringent emissions standards for various on-road mobile sources of emissions, including transit buses and off-road diesel equipment (e.g., tractors, generators). In November 2022, CARB approved amendments to its In-Use Off-Road Diesel-Fueled Fleets Regulation, which requires fleets to phase-out use of the oldest and highest polluting off-road diesel vehicles in California; prohibit the addition of high-emitting vehicles to a fleet; and require the use of R99 or R100 renewable diesel in off-road diesel vehicles.

In 2017, Senate Bill (SB) 1 (the Road Repair and Accountability Act of 2017) was passed, which, in addition to funding transportation-related projects, requires the Department of Motor Vehicles to refuse registration or renewal or transfer of registration for certain diesel-fueled vehicles, based on weight and model year, that are subject to specified provisions relating to the reduction of emissions of diesel particulate matter, oxides of nitrogen, and other criteria pollutants from in-use diesel-fueled vehicles. As of January 1, 2020, compliance with the CARB Truck and Bus regulation is now automatically verified by the California DMV as part of the vehicle registration process.

In June 2020, CARB approved the Advanced Clean Trucks regulation, requiring truck manufacturers to transition from diesel-powered trucks and vans to electric zero-emission trucks beginning in 2024 with phasing in of increasingly stringent requirements through 2045. By 2045, under the Advanced Clean Trucks regulation, every new truck sold in California will be zero-emission. Promoting the development and use of advanced clean trucks will help CARB achieve its emission reduction strategies as outlined in the SIP, Sustainable Freight Action Plan, SB 350, and Assembly Bill (AB) 32.

Toxic Air Contaminants

As described under the federal regulations above, CARB regulates TACs, of which a subset of the identified substances are the federally identified and regulated HAPs, through statutes and regulations that generally require the use of MACT and BACT.

TACs in California are regulated primarily through the Tanner Air Toxics Act (Chapter 1047, Statutes of 1983) and the Air Toxics Hot Spots Information and Assessment Act (Assembly Bill 2588; Chapter 1252, Statutes of 1987). The Air Toxics Hot Spots Information and Assessment Act seeks to identify and evaluate risks from air toxics sources, but does not regulate air toxics emissions. TAC emissions from individual facilities are quantified and prioritized. "High-priority" facilities must perform a health risk assessment and, if specific thresholds are violated, must communicate the results to the public in the form of notices and public meetings. TACs are generally regulated through statutes and rules that require the use of MACT or BACT to limit TAC emissions.

According to the *California Almanac of Emissions and Air Quality* (CARB 2013), most of the estimated health risk from TACs is attributed to relatively few compounds, the most dominant being DPM. In 2000, CARB approved a comprehensive diesel risk reduction plan to reduce emissions from both new and existing diesel-fueled vehicles and engines. Additional regulations apply to new trucks and diesel fuel. Subsequent CARB regulations on diesel emissions include the On-Road Heavy Duty Diesel Vehicle (In-Use) Regulation, the On-Road Heavy Duty Certification Program, the In-Use Off-Road Diesel Vehicle Regulation, and the Off-Road Compression Ignition Certification Program. All of these regulations and programs have timetables by which manufacturers must comply and existing operators must upgrade their diesel-powered equipment.

The State of California has also implemented regulations to reduce DPM emissions. Two such regulations applicable to the proposed project include Title 13, Sections 2485 and 2449 of the California Code of Regulations, which limit idling time to a maximum of 5 minutes for heavy-duty commercial diesel vehicles (defined as diesel vehicles heavier than 10,000 pounds gross vehicle rated weight) and off-road diesel-fueled construction vehicles, respectively. These regulatory measures are driven by the CARB Airborne Toxic Control Measure and subsequent amendments.

Local

Criteria Air Pollutants

SMAQMD is responsible for monitoring air pollution within the SVAB and for developing and administering programs to reduce air pollution levels below the health-based standards established by the state and federal governments. All projects within SMAQMD's jurisdictional area are subject to SMAQMD rules and regulations in effect at the time of construction. Specific SMAQMD rules that could be applicable include but are not limited to the following:

- **Rule 401:** Ringlemann Chart. A person shall not discharge into the atmosphere from any single source of emission whatsoever any air contaminant, other than uncombined water vapor, for a period or periods aggregating more than three minutes in any one hour which is: as dark or darker in shade as that designated No. 1 on the Ringelmann Chart, as published by the United States Bureau of Mines, or of such opacity as to obscure a human observer's view, or a certified calibrated in-stack opacity monitoring system to a degree equal to or greater than does smoke described in Subsection 301.1 of this rule.

- **Rule 402:** Nuisance. A person shall not discharge from any source whatsoever such quantities of air contaminants or other materials which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or the public, or which endanger the comfort, repose, health or safety of any such persons or the public, or which cause or have natural tendency to cause injury or damage to business or property.

- **Rule 403:** Fugitive Dust. A person shall take every reasonable precaution not to cause or allow the emissions of fugitive dust from being airborne beyond the property line from which the emission originates, from any construction, handling or storage activity, or any wrecking, excavation, grading, clearing of land or solid waste disposal operation. Reasonable precautions shall include, but are not limited to:
    - Use, where possible, of water or chemicals for control of dust in the demolition of existing buildings or structures, construction operations, the construction of roadways or the clearing of land.

   - Application of asphalt, oil, water, or suitable chemicals on dirt roads, materials stockpiles, and other surfaces which can give rise to airborne dusts; and

   - Other means approved by the Air Pollution Control Officer.

- **Rule 404:** Particulate Matter. Except as otherwise provided in Rule 406 of this regulation, a person shall not discharge into the atmosphere from any source particulate matter in excess of 0.23 grams per dry standard cubic meter (0.1 grains per dry standard cubic foot).

- **Rule 405:** Dust and Condensed Fumes. A person shall not discharge into the atmosphere in any one hour from any source whatsoever dust or condensed fumes in total quantities in excess of the amount shown in the Rule's Table for Process Weight and Allowable Discharge.

- **Rule 442:** Architectural Coatings. Limit the emissions of VOCs from the use of architectural coatings supplied, sold, offered for sale, applied, solicited for application, or manufactured for use within the SMAQMD.

- **Rule 201:** General Permit Requirements. To provide an orderly procedure for the review of new sources of air pollution and of the modification and operation of existing sources through the issuance of permits.

- **Rule 902:** To implement U.S. EPA's National Emissions Standard for Hazardous Air Pollutants for Asbestos (40 C.F.R. Section 61.140 et. seq.).

SMAQMD has also produced a guidebook called the *CEQA Guide to Air Quality Assessment in Sacramento County* (CEQA Guide), which contains guidance for analyzing construction and operational emissions (SMAQMD 2021a). The CEQA Guide provides methods to analyze air quality impacts from plans and projects, including screening criteria, thresholds of significance, calculation methods, and mitigation measures to assist lead agencies in complying with CEQA. In developing the thresholds, SMAQMD took into account health-based air quality standards and the strategies to attain air quality standards, emissions projections and regional growth and land use trends.

As part of the Sacramento Federal Nonattainment Area (SFNA) for ozone, and in accordance with requirements under the CAA, SMAQMD worked with the other local air districts within the Sacramento region (El Dorado County Air Quality Management District, Feather River Air Quality Management District, Placer County Air Pollution Control District, and Yolo-Solano Air Quality Management District) to develop the a regional air quality management plan. The most currently approved plan, the Sacramento Regional 2008 NAAQS 8-Hour Ozone Attainment and Reasonable Further Progress Plan (referred to as the Ozone Attainment and Progress Plan) describes and demonstrate how the Sacramento Federal Nonattainment Area, is meeting requirements under the federal CAA in demonstrating reasonable further progress and attainment of the NAAQS for ozone (SMAQMD 2017). Some elements of the Ozone Attainment and Progress Plan were updated in 2018 and included in the 2018 Updates to the California SIP, which updated SIP elements for nonattainment areas throughout the state, as needed. These updates were adopted by CARB in October 2018. The Ozone Attainment and Progress Plan is the currently adopted and applicable air quality plan for the region. The SFNA air districts are also in progress on the updated SIP work with ARB, including drafting of the

Sacramento Regional 2015 National Ambient Air Quality Standards 8-Hour Ozone Attainment and Reasonable Further Progress Plan (2023) to address the 2015 ozone NAAQS, for which the SFNA is designated severe nonattainment, and demonstrate how the SFNA will attain the 2015 ozone NAAQS by 2033. As detailed in the draft 2023 plan, the SFNA will rely on existing federal, state, and local control programs along with the committed state control measures to reduce ozone precursor emissions. California Air Resources Board (CARB) will continue to implement existing control strategies and the commitments outlined in its 2022 State Implementation Plan (SIP) Strategy (CARB, 2022). The SFNA air districts and SACOG will continue to implement existing local and regional strategies and transportation control measures.

Similarly, the region prepared the $PM_{2.5}$ Maintenance Plan and Redesignation Request (SMAQMD 2013) to address how the region attained and would continue to attain the 24-hour $PM_{2.5}$ standard. In 2017, EPA found that the area attained the 2006 24-hour $PM_{2.5}$ NAAQS by the attainment date of December 31, 2015. The $PM_{2.5}$ Maintenance Plan and Redesignation Request will be updated and submitted in the future based on the clean data finding made by the EPA.

The SMAQMD also prepared the PM_{10} Implementation/Maintenance Plan and Redesignation Request for Sacramento County (SMAQMD 2010). EPA approved the PM_{10} Plan, which allowed EPA to proceed with the redesignation of Sacramento County as attainment for the PM_{10} NAAQS. The approval of the first Maintenance Plan showed maintenance from 2013 through 2023. A second plan must provide for maintenance of the NAAQS for 10 more years after expiration of the first 10-year maintenance period. The SMAQMD adopted and submitted the Second 10-Year PM_{10} Maintenance Plan for Sacramento County in August of 2021 to demonstrate maintenance of the PM_{10} standard through 2033 (SMAQMD 2021b).

City of Sacramento General Plan

The following policies from the “Environmental Resources” Element of the Sacramento 2035 General Plan (City of Sacramento 2015) are related to air quality.

Goal: Improve the health and sustainability of the community through improved regional air quality and reduced greenhouse gas emissions that contribute to climate change.

ER 6.1.1. Maintain Ambient Air Quality Standards. The City shall work with the California Air Resources Board and the Sacramento Metropolitan Air Quality Management District (SMAQMD) to meet State and Federal ambient air quality standards in order to protect residents, regardless of age, culture, ethnicity, gender, race, socioeconomic status, or geographic location, from the health effects of air pollution. (RDR/IGC)

ER 6.1.2. New Development. The City shall review proposed development projects to ensure projects incorporate feasible measures that reduce construction and operational emissions for reactive organic gases, nitrogen oxides, and particulate matter (PM_{10} and $PM_{2.5}$) through project design. (RDR)

ER 6.1.3. Emissions Reduction. The City shall require development projects that exceed SMAQMD ROG and NO_X operational thresholds to incorporate design or operational features that reduce emissions equal to 15 percent from the level that would be produced by an unmitigated project. (RDR)

ER 6.1.4. Sensitive Uses. The City shall coordinate with SMAQMD in evaluating exposure of sensitive receptors to toxic air contaminants, and will impose appropriate conditions on projects to protect public health and safety. (RDR)

ER 6.1.14. Preference for Reduced-Emission Equipment. The City shall give preference to contractors using reduced emission equipment for City construction projects and contracts for services (e.g., garbage collection), as well as businesses that practice sustainable operations. (SO/JP)

Toxic Air Contaminants

At the local level, air pollution control or management districts may adopt and enforce CARB control measures. Under SMAQMD Rule 201 (General Permit Requirements), Rule 202 (New Source Review), and Rule 207 (Federal Operating Permit Program), all sources that could emit TACs must obtain permits from SMAQMD.

Odors

Although offensive odors rarely cause any physical harm, they can be very unpleasant, leading to considerable stress among the public and often generating citizen complaints to local governments and SMAQMD. SMAQMD Rule 402 (Nuisance) regulates odorous emissions.

3.2.2 Environmental Setting

Ambient concentrations of air pollutants are determined by the amount of emissions released by the air pollutants sources and the atmosphere's ability to transport and dilute such emissions. Natural factors that affect transport and dilution include terrain, wind, atmospheric stability, and sunlight. Therefore, existing air quality conditions in the area are determined by such natural factors as topography, meteorology, and climate, in addition to the amount of emissions released by existing air pollutant sources, as discussed separately below.

The project site is in Sacramento County, in the SVAB, which is characterized by cool winters and hot, dry summers tempered by occasional westerly breezes from the Sacramento–San Joaquin River Delta. The region has a Mediterranean climate, characterized by hot, dry summers and cool, rainy winters. During the year the temperature may range from 20 to 115 degrees Fahrenheit with summer highs usually in the 90s and winter lows occasionally below freezing. Average annual rainfall is about 20 inches with snowfall being very rare.

In general, the SVAB is relatively flat and bounded by the north Coast Ranges to the west and the northern Sierra Nevada to the east. Air flows into the SVAB through the Carquinez Strait, the only breach in the western mountain barrier, and moves across the Sacramento–San Joaquin River Delta from the San Francisco Bay Area. The inland location and surrounding mountains typically prevent the area from experiencing much of the ocean breeze that moderates the temperatures in coastal regions. The mountains surrounding the Sacramento Valley create a barrier to air flow, which can trap in air pollutants, particularly in the autumn and early winter when large pressure cells lie over the Sacramento Valley and temperatures are low. The lack of surface wind during these periods and reduced vertical flow caused by less surface heating, reduces the influx of outside air and allows air pollutants generated within the SVAB to become concentrated in a stable volume of air. Ground concentrations are the highest when these conditions are combined with smoke from agricultural burning or forest fires or when temperature inversions the trap cool air, fog, and pollutants near the ground. Alternatively, winds and unstable atmospheric conditions associated with the passage of winter storms result in periods of low air pollution and excellent visibility.

Characteristic of the winter months in the SVAB are periods of dense and persistent low-level fog, which are most prevalent between storms. This precipitation and fog also tend to reduce or limit some pollutant concentrations; however, between winter storms, high pressure and light winds contribute to low-level temperature inversions and stable atmospheric conditions, resulting in the concentration of air pollutants.

May through October is ozone season in the SVAB and is characterized by poor air movement in the mornings and the arrival of the Delta sea breeze from the southwest in the afternoons. In addition, with the longer daylight hours, a larger amount of sunlight is available to fuel photochemical reactions between volatile organic compounds (VOC) and NO_X, which in turn result in ozone formation. Typically, the Delta breeze transports air pollutants northward out of the SVAB; however, during approximately half of the time from July to September, a phenomenon known as the Schultz Eddy prevents this from occurring. The Schultz Eddy phenomenon causes winds on the west side of the SVAB to shift to a northerly wind, blowing air pollutants southward back into the SVAB. This phenomenon exacerbates the concentration of air pollutant emissions in the air basin and can contribute to violations of ambient air quality standards.

Criteria Air Pollutants

There are many pollutants present in the atmosphere, although most are not a significant public health concern in the project region. A brief description of key criteria air pollutants in the SVAB and their health effects is provided below. Criteria air pollutants include ozone, CO, NO_2, SO_2, PM_{10}, $PM_{2.5}$, and lead. However, for the purposes of this analysis, criteria air pollutants of primary concern due to the regional nonattainment status (refer to Table 3.2-3 further below) include ozone (and ozone precursors) and PM. Criteria air pollutants, their sources, and potential health effects from exposure are summarized below.

Ozone. Ozone is the most common component of smog and is the principal pollutant that causes adverse health effects. Ozone is toxic and colorless and has a pungent odor. In high concentrations, ozone and other photochemical oxidants are directly detrimental to humans by causing respiratory irritation and possible alterations in the functioning of the lungs. Ozone and other oxidants can also enter the leaves of plants and reduce photosynthesis, which is the process that plants use to convert sunlight to energy to live and grow.

Ozone is not emitted directly into the air but is formed through a series of reactions involving reactive organic gases (ROG) and NO_X in the presence of sunlight. These chemicals are considered to be precursors of ozone, as their reaction leads to its formation. ROG emissions result primarily from incomplete combustion and the evaporation of chemical solvents and fuels. NO_X includes various combinations of nitrogen and oxygen, including nitric oxide, NO_2, and others, typically resulting from the combustion of fuels.

Emissions of both ROG and NO_X are considered critical to ozone formation; therefore, either ROG or NO_X can limit the rate of ozone production. When the production rate of NO_X is lower, indicating that NO_X is scarce, the rate of ozone production is NO_X-limited. Under these circumstances, ozone levels could be most effectively reduced by lowering current and future NO_X emissions (from fuel combustion), rather than by lowering ROG emissions. Rural areas tend to be NO_X-limited, while areas with dense urban populations tend to be ROG-limited.

Ozone concentrations reflect an interplay of emissions of ozone precursors, transport, meteorology, and atmospheric chemistry. Meteorology and terrain play a major role in ozone formation. Generally, low wind speeds or stagnant air, coupled with warm temperatures and clear skies provide the optimum conditions for formation. As a result, summer is generally the peak ozone season. Because of the reaction time involved, peak ozone concentrations often occur far downwind of the precursor emissions. Therefore, ozone is a regional pollutant that often affects large areas.

Individuals exercising outdoors, children, and people with lung disease, such as asthma and chronic pulmonary lung disease, are the most susceptible subgroups for ozone effects. Short-term ozone exposure (lasting for a few hours) can result in changes in breathing patterns, reductions in breathing capacity, increased susceptibility to infections, inflammation of lung tissue, and some immunological changes. A correlation has also been reported between elevated ambient ozone levels and increases in daily hospital admission rates and mortality (EPA 2022). An increased risk of asthma has been found in children who participate in multiple sports and live within communities with high ozone levels.

Emissions of the ozone precursors ROG and NO_X have decreased in the past several years. According to the most recently published edition of CARB California Almanac of Emissions and Air Quality, NO_X, and ROG emissions levels in the Sacramento metropolitan area are projected to continue to decrease through 2035, largely because of more stringent motor vehicle standards and cleaner burning fuels, as well as rules for controlling ROG emissions from industrial coating and solvent operations (CARB 2013).

Carbon Monoxide. CO is a colorless and odorless gas that is primarily produced by the incomplete burning of carbon in fuels such as natural gas, gasoline, and wood, and is emitted by a wide variety of combustion sources, including on-road and non-road mobile sources, wood-burning stoves, incinerators, industrial sources, and wildfires. Relatively high concentrations are typically found near crowded intersections and along heavily used roadways carrying slow-moving traffic. Even under the most severe meteorological and traffic conditions, high concentrations of CO are limited to locations within a relatively short distance (300 to 600 feet) of heavily traveled roadways. Vehicle traffic emissions can cause localized CO impacts, and severe vehicle congestion at major signalized intersections can generate elevated CO levels, called “hot spots,” which can be hazardous to human receptors adjacent to the intersections.

Adverse health effects associated with exposure to high CO concentrations, typically only attainable indoors or within similarly enclosed spaces, include dizziness, headaches, and fatigue. CO exposure is especially harmful to unborn babies, infants, elderly people, and people with anemia or with a history of heart or respiratory disease (CARB 2023a).

Nitrogen Dioxide. NO_2 is one of a group of highly reactive gases known as oxides of nitrogen, or NO_X. NO_2 is formed when ozone reacts with nitric oxide (i.e., NO) in the atmosphere and is listed as a criteria pollutant because NO_2 is more toxic than nitric oxide. The major human-made sources of NO_2 are combustion devices, such as boilers, gas turbines, and mobile and stationary reciprocating internal combustion engines. The combined emissions of nitric oxide and NO_2 are referred to as NO_X and reported as equivalent NO_2. Because NO_2 is formed and depleted by reactions associated with ozone, the NO_2 concentration in a geographical area may not be representative of local NO_X emission sources. NO_X also reacts with water, oxygen, and other chemicals to form nitric acids, contributing to the formation of acid rain.

Inhalation is the most common route of exposure to NO_2. Breathing air with a high concentration of NO_2 can lead to respiratory illness. Short-term exposure can aggravate respiratory diseases, particularly asthma, resulting in respiratory symptoms (such as coughing, wheezing, or difficulty breathing), hospital admissions, and visits to emergency rooms. Longer exposures to elevated concentrations of NO_2 may contribute to the development of asthma and potentially increase susceptibility to respiratory infections. People with asthma, as well as children and the elderly are generally at greater risk for the health effects of NO_2 (EPA 2023a).

Sulfur Dioxide. SO_2 is one component of the larger group of gaseous oxides of sulfur (SO_X). SO_2 is used as the indicator for the larger group of SO_X, as it is the component of greatest concern and found in the atmosphere at much higher concentrations than other gaseous SO_X. SO_2 is typically produced by such stationary sources as coal and oil combustion facilities, steel mills, refineries, and pulp and paper mills. The major adverse health effects associated with SO_2 exposure pertain to the upper respiratory tract. On contact with the moist mucous membranes, SO_2 produces sulfurous acid, a direct irritant. Concentration rather than duration of exposure is an important determinant of respiratory effects. Children, the elderly, and those who suffer from asthma are particularly sensitive to effects of SO_2 (EPA 2023b).

SO_2 also reacts with water, oxygen, and other chemicals to form sulfuric acids, contributing to the formation of acid rain. SO_2 emissions that lead to high concentrations of SO_2 in the air generally also lead to the formation of other SO_X, which can react with other compounds in the atmosphere to form small particles, contributing to particulate matter pollution, which can have health effects of its own.

Particulate Matter. PM refers to a complex mixture of small solid matter and fine droplets (aerosols) made up of several components, including acids (such as nitrates and sulfates), organic chemicals, metals, and soil or dust particles. The major area-wide sources of $PM_{2.5}$ and PM_{10} are fugitive dust, especially from roadways, agricultural operations, and construction and demolition. Other sources of PM_{10} include crushing or grinding operations. $PM_{2.5}$ sources also include all types of combustion, including motor vehicles, power plants, residential wood burning, forest fires, agricultural burning, and some industrial processes. Exhaust emissions from mobile sources contribute only a very small portion of directly emitted $PM_{2.5}$ and PM_{10} emissions. However, they are a major source of ROG and NO_X, which undergo reactions in the atmosphere to form PM, known as secondary particles. These secondary particles make up the majority of PM pollution.

The size of PM is directly linked to its potential for causing health problems. EPA is concerned about particles that are 10 micrometers in diameter or smaller, because these particles generally pass through the throat and nose and enter the lungs. Once inhaled, these particles can affect the heart and lungs and cause serious health effects, even death. The adverse health effects of PM_{10} depend on the specific composition of the particulate matter. For example, health effects may be associated with metals, polycyclic aromatic hydrocarbons, and other toxic substances adsorbed onto fine PM (referred to as the "piggybacking effect"), or with fine dust particles of silica or asbestos. Short-term exposures to PM_{10} have been associated primarily with worsening of respiratory diseases, including asthma and chronic obstructive pulmonary disease, 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. The International Agency for Research on Cancer published a review in 2015 that concluded that particulate matter in outdoor air pollution causes lung cancer (CARB 2023b). $PM_{2.5}$ poses an increased health risk because these very small particles can be inhaled deep in the lungs and may contain substances that are particularly harmful to human health. 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 (CARB 2023b).

Lead. Lead is a highly toxic metal that may cause a range of human health effects. Lead is found naturally in the environment and is used in manufactured products. Previously, the lead used in gasoline anti-knock additives represented a major source of lead emissions to the atmosphere. Soon after its inception, EPA began working to reduce lead emissions, issuing the first reduction standards in 1973. Lead emissions decreased substantially after the near elimination of leaded gasoline use. Metal processing is currently the primary source of lead emissions. The highest levels of lead in air are generally found near lead smelters. Other stationary sources are waste incinerators, utilities, and lead-acid battery manufacturers. Although the ambient lead standards are no longer violated, lead emissions from stationary sources still pose “hot spot” problems in some areas. As a result, CARB has identified lead as a TAC.

Fetuses, infants, and children are more sensitive than others to the adverse effects of lead exposure. Exposure to low levels of lead can adversely affect the development and function of the central nervous system, leading to learning disorders, distractibility, inability to follow simple commands, and lower intelligence quotients. In adults, increased lead levels are associated with increased blood pressure. Lead poisoning can cause anemia, lethargy, seizures, and death, although it appears that lead does not directly affect the respiratory system.

Toxic Air Contaminants

As described previously, concentrations of TACs are also used as indicators of air quality conditions that can harm human health. TACs for which data are available that pose the greatest existing ambient risk in California are DPM, benzene, 1,3-butadiene, acetaldehyde, carbon tetrachloride, hexavalent chromium, para-dichlorobenzene, formaldehyde, methylene chloride, and perchloroethylene.

DPM differs from other TACs because it is not a single substance, but a complex mixture of hundreds of substances. Although DPM is emitted by diesel-fueled internal combustion engines, the composition of the emissions varies depending on engine type, operating conditions, fuel composition, type of lubricating oil, and presence or absence of an emission control system. Unlike the other TACs, no ambient monitoring data are available for DPM because no routine measurement method currently exists. However, emissions of DPM are forecasted to decline; it is estimated that emissions of DPM in 2035 will be less than half those in 2010, further reducing statewide cancer risk and non-cancer health effects (CARB 2023c).

Another concern related to air quality is naturally occurring asbestos (NOA). Asbestos is a term used for several types of naturally occurring fibrous minerals found in many parts of California.

When rock containing asbestos is broken or crushed, such as through construction-related ground disturbance or rock quarrying activities where NOA is present, asbestos fibers may be released and become airborne. Exposure to asbestos fibers may result in health issues such as lung cancer, mesothelioma (a rare cancer of the thin membranes lining the lungs, chest, and abdominal cavity), and asbestosis (a non-cancerous lung disease which causes scarring of the lungs). Because asbestos is a known carcinogen, NOA is considered a TAC. NOA is typically associated with fault zones, and areas containing serpentinite or contacts between serpentinite and other types of rocks. According to the California Department of Conservation *Special Report 192: Relative Likelihood for the Presence of Naturally Occurring Asbestos in Eastern Sacramento County, California*, the project site is located within an area categorized as least likely to contain NOA (California Department of Conservation 2006).

Existing Air Quality Conditions

Concentrations of emissions from criteria air pollutants are used to indicate the quality of the ambient air. Ambient air pollutant concentration monitoring data for the latest three years for which data is available (2019 through 2021) are provided in Table 3.2-3. The data presented for ozone, NO_2, PM_{10} and $PM_{2.5}$ are based on monitoring results from the CARB monitoring site nearest to the project site at Sacramento-T Street, approximately 1.5 miles southwest from the project site (1220 North B Street, Sacramento, California).

Table 3.2-3. Local Air Quality Monitoring Summary

Pollutant and Averaging Period	Item	2019	2020	2021
Ozone 1 Hour	Max 1 Hour (ppm)	0.100	0.112	0.091
Ozone 1 Hour	Days > State Standard (0.09 ppm)	1	1	0
Ozone 8 Hour	Max 8 Hour (ppm)	0.075	0.076	0.081
Ozone 8 Hour	Days > State Standard (0.070 ppm)	1	3	1
Ozone 8 Hour	Days > National Standard (0.070 ppm)	1	3	1
NO_2 Annual	Annual Average (ppm)	.009	.008	.007
NO_2 1 Hour	Max 1 Hour (ppm)	0.062	0.054	0.056
NO_2 1 Hour	Days > State Standard (0.18 ppm)	0	0	0
PM_{10} Annual	Annual Average (μg/m^3)	20.7	31.2	31.0
PM_{10} 24 hour	Max 24 Hour (μg/m^3)	179.1	298.7	142.6
PM_{10} 24 hour	Days > State Standard (50 μg/m^3)	24	59	12
PM_{10} 24 hour	Days > National Standard (150 μg/m^3)	1	4	0
$PM_{2.5}$ Annual	Annual Average (μg/m^3)	7.6	13.1	9.3
$PM_{2.5}$ 24 hour	Max 24 Hour (μg/m^3)	37.1	150.4	89.1
$PM_{2.5}$ 24 hour	Days > National Standard (35 μg/m^3)	0	6	4

Source: CARB 2023d
Notes: μg/m^3 = micrograms per cubic meter; - = insufficient data; ppm = parts per million.

Sensitive Receptors

Some land uses are considered more sensitive to air pollution than others, because of the types of population groups or activities involved. Children, pregnant women, the elderly, those with existing health conditions, and athletes or others who engage in frequent exercise are especially vulnerable to the effects of air pollution. Accordingly, land uses typically considered sensitive receptors include schools, daycare centers, parks and playgrounds, and medical facilities.

Residential areas are considered sensitive to air pollution because residents (including children and the elderly) tend to be at home for extended periods of time, resulting in sustained exposure to the pollutants present. Recreational land uses are considered moderately sensitive to air pollution. Exercise places a high demand on respiratory functions, which can be impaired by air pollution, even though exposure periods during exercise are generally short. In addition, noticeable air pollution can detract from the enjoyment of recreation. Industrial and commercial areas are considered the least sensitive to air pollution. Exposure periods are relatively short and intermittent as most workers tend to stay indoors most of the time.

The project site is generally surrounded by industrial land uses. Sensitive land uses in the project area include single- and multi-family residences southwest of the project site and single-family residences to the southeast of the project site along North A Street. The nearest sensitive receptors to the proposed project are the Salvation Army Center of Hope homeless shelter to the west of the project site, and the First Step Communities homeless shelter and Quinn Cottages transitional housing directly adjacent to the southeastern side of the project site. There is also an apartment complex on the west side of 7th street adjacent to proposed duct bank for distribution lines, and several residences adjacent to the overhead alignment down 14th Street.

3.2.3 Environmental Impacts and Mitigation Measures

Methodology and Assumptions

Regional and local criteria air pollutant emissions and associated impacts, as well as impacts from TACs, and odors were assessed in accordance with Sacramento County and SMAQMD-recommended methodologies. The project's construction and operational emissions were compared to SMAQMD's construction and operational thresholds. The California Emissions Estimator Model (CalEEMod) Version 2022.1.1.28[2] was used to estimate emissions from construction and operation of the project. CalEEMod inputs were refined from defaults, as appropriate, using the following project-specific details regarding construction schedule, equipment, and import/export quantities, and operational vehicle trips.

Substation construction activities are anticipated to begin in 2026 ~~2027~~ and to be completed in approximately 24 months (~~95~~101 weeks), as detailed in Table 2-1 of Chapter 2, "Project Description," of this EIR. This duration is inclusive of demolition and removal of existing structures and some asphalt at the project site, on-site project construction activities, and off-site overhead and or underground connections into the proposed substation from nearby existing facilities and infrastructure. To evaluate the potential maximum daily emissions in the case of linear subgrade occurring simultaneously with linear paving, the linear phases were modeled with some overlap.

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2 CalEEMod is a statewide computer model developed in cooperation with air districts throughout the state to quantify criteria air pollutant and GHG emissions associated with construction activities and operation of a variety of land use projects, such as residential, commercial, and industrial facilities. CalEEMod input parameters, including the land use type used to represent the project and its size, construction schedule, and anticipated use of construction equipment, were based on information provided by the applicant or default model assumptions if project specifics were unavailable.

Construction activities would require the use of off-road equipment, as detailed in Appendix B to this Recirculated EIR ~~including skid steers, forklifts, graders, scrapers, paving equipment, rollers, tractors/loaders/backhoes, excavators, rollers, plate compactors, bore/drill rigs, cranes, sweepers/scrubbers, generator sets, welders, and air compressors~~. Construction of the proposed project would also require the import and export of material during demolition, grading, and trenching activities. Approximately 47,000 cubic yards of material for engineered fill would be imported to the project site during construction. It was also ~~assumed~~ estimated that the underground trenching activities ~~along North 18th Street and North B Street~~ would require approximately ~~3,259~~ 7,200 cubic yards of material export. Demolition would also require the export of construction and demolition material from the approximately 5,580 and 66,000 square-foot onsite structures.

Operational activities would be operated remotely and continuously. The new control building and substation site would remain unoccupied except for periodic weekly visits by SMUD personnel and maintenance employees to conduct routine checks and maintenance. It is anticipated that inspection and maintenance activities would require up to 2 roundtrips per day.

For additional details regarding the air quality methodology and assumptions, please refer to Appendix B, *Air Quality and Greenhouse Gas Emission Calculations*.

TAC emissions associated with project construction and operation that could affect surrounding areas are evaluated qualitatively. The potential for the project to result in other emissions, such as those leading to odors, is also evaluated qualitatively.

Thresholds of Significance

An air quality impact would be considered significant if it would exceed any of the thresholds of significance listed below, which are based on Appendix G of the CEQA Guidelines and on SMAQMD's CEQA Guide (SMAQMD 2021a). Based on Appendix G of the CEQA Guidelines, the proposed project would result in a significant impact on air quality if it would:

- conflict with or obstruct implementation of the applicable air quality plan;
- result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in nonattainment under an applicable federal or state ambient air quality standard;
- expose sensitive receptors to substantial pollutant concentrations; or
- result in other emissions (such as those leading to odors) adversely affecting a substantial number or people.

As stated in Appendix G of the CEQA Guidelines, the significance criteria established by the applicable air quality management district may be relied on to make the above determinations. Thus, pursuant to the SMAQMD-recommended thresholds for evaluating project-related air quality impacts, the proposed project would result in a significant impact on air quality if it would:

- generate construction-related criteria air pollutant or ozone precursor emissions that exceed 85 pounds per day for NO_X, or, after implementation of best management practices (BMPs), 80 pounds per day or 14.6 tons per year of PM_{10} and 82 pounds per day or 15 tons per year of $PM_{2.5}$;

- generate long-term regional criteria air pollutant or ozone precursor emissions that exceed 65 pounds per day of ROG or NO_X, or, after implementation of BMPs, 80 pounds per day or 14.6 tons per year of PM_{10} and 82 pounds per day or 15 tons per year of $PM_{2.5}$;

- generate emissions of toxic air contaminants that would cause an excess cancer risk level of more than 10 in in one million or exceed a noncarcinogenic[3] Hazard Index of 1; or

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

For cumulative impacts, SMAQMD states that, as a result of the SMAQMD approach to thresholds of significance, if a project's emissions are not anticipated to exceed the SMAQMD-recommended thresholds, as listed above, the project would not be expected to result in a cumulatively considerable contribution to a significant impact at a cumulative level (SMAQMD 2020a).

Impact Analysis

Impact 3.2-1. Conflict with or obstruct implementation of the applicable air quality plan?

Less-than-Significant Impact with Mitigation. SMAQMD has adopted air quality plans pursuant to regulatory requirements under EPA and CARB for the attainment and maintenance of federal and state ambient air quality standards, as detailed above in "Regulatory Setting." The goal of air quality plans is to reduce criteria air pollutant emissions for which the SVAB is designated as nonattainment in order to achieve NAAQS and CAAQS by the earliest practicable date. As documented in the SMAQMD CEQA Guide (SMAQMD 2020a), the SMAQMD construction and operational mass emissions thresholds for ozone precursors were developed with consideration of air quality planning efforts for the SFNA to attain the ozone ambient air quality standards. Furthermore, as the SFNA Ozone Attainment and Progress plans are reviewed and updated to meet SIP requirements and demonstrate progress toward attaining current standards, these plans take into consideration anticipated construction and operational growth in the region and the contribution of such toward existing and future emissions rates. Therefore, projects whose emissions would be less than the recommended thresholds of significance for criteria air pollutants would not conflict with or obstruct implementation of applicable air quality plans related to the attainment of ozone. Similarly, the construction and operational mass emissions thresholds for PM correlate to the SMAQMD's permitting offset trigger levels[4] and represent the emission levels above which a project's individual emissions would result in an individually or cumulatively considerable contribution to the County's existing

[3] Noncarcinogenic or noncancer effects are those effects other than cancer, such as emphysema or reproductive disorders that can be associated with substantial pollutant concentrations.

[4] SMAQMD rules require stationary sources that emit pollutants in excess of certain levels to implement best available control technology (BACT) and provide offsets. The PM BACT threshold is zero, and the offset threshold is 14.6 tons per year for PM_{10} and 15 tons/year for $PM_{2.5}$. Requiring projects to implement BACT and best management practices is reasonable because it mirrors the CAA approach to reducing emissions and attaining the federal CAA standards.

air quality conditions. These emission levels prevent deterioration of ambient air quality and a regionally cumulative significant impact by ensuring projects do not worsen the region's attainment status (SMAQMD 2015). Therefore, projects whose emissions do not exceed the recommended PM thresholds of significance would also not conflict with or obstruct implementation of the applicable air quality plans related to PM.

Construction

Construction would result in temporary emissions of criteria air pollutants and ozone precursors in the form of fugitive dust from ground disturbing activities and vehicle travel on paved roadways, and exhaust emissions from off-road equipment and on-road motor vehicle usage. Fugitive dust emissions are primarily associated with site preparation, grading, and demolition and vary as a function of parameters such as soil silt content, soil moisture, wind speed, acreage of disturbed area, amount of demolition, and miles traveled by construction vehicles on- and off-site. Exhaust emissions are generated during off-road and on-road construction equipment operation and vary based on operational usage, such as vehicle miles traveled by construction vehicles and the horsepower and usage hours per day per equipment.

Proposed project construction activities would be required to comply with SMAQMD rules and regulations established, in part, to ensure implementation of and consistency with strategies and actions of the applicable air quality plans, including but not limited to Rule 401, Rule 402, Rule 403, Rule 404, and Rule 405.

As shown in Table 3.2-4 below, project construction emissions would not exceed SMAQMD's ROG, NO_X, PM_{10}, and $PM_{2.5}$ thresholds. However, because the project would generate PM emissions during construction activities, implementation of best management practices would be required in order to use the SMAQMD non-zero thresholds of significance for PM. Therefore, without implementation of SMAQMD best management practices, project construction emissions have the potential to conflict with or obstruct implementation of the applicable air quality plans related to PM. This impact would be **potentially significant**.

Operation

Operational activities associated with the project would include regular inspection and maintenance activities and would result in the generation of criteria air pollutant emissions, including ROG, NO_X, PM_{10}, and $PM_{2.5}$. Since the project would generate PM emissions during operation, implementation of best management practices would be required in order to use the SMAQMD non-zero thresholds of significance for PM. As shown in Table 3.2-5 below and discussed in more detail under Impact 3.2-2, project operational emissions would not exceed the SMAQMD thresholds of significance.

However, since the project's operational activities would generate PM emissions during routine maintenance activities, the proposed project may conflict with or obstruct implementation of applicable air quality plans if the applicable best management practices were not implemented. This impact would be **potentially significant**.

Mitigation Measures

Mitigation Measure 3.2-1a: SMAQMD Basic Construction Emission Control Practices

The construction contractor shall include as a condition in the grading, improvement, and demolition plans, the following basic construction emissions control practices (best management practices) to be initiated at the start and maintained throughout the duration of construction.

- Control of fugitive dust as required by SMAQMD Rule 403.
- 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 of 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 powered sweeping is prohibited.
- Limit vehicle speeds on unpaved roads to 15 miles per hour (mph).
- All roadways, driveways, sidewalks, parking lots to be paved should be completed 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) and 2485]. Provide clear signage that posts this requirement for workers at the entrances to the site.
- Provide current certificate(s) of compliance for CARB's In-Use Off-Road Diesel-Fueled Fleets Regulation [California Code of Regulations, Title 13, sections 2449 and 2449.1]. For more information contact ARB at 877-593-6677, doors@arb.ca.gov, or www.arb.ca.gov/doors/compliance_cert1.html
- Maintain all construction equipment 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 3.2-1b: SMAQMD PM Operational Best Management Practices

The applicant shall include as a condition of the Transmission Facilities Permit, the following best management practices for fugitive dust control during operational and maintenance activities associated with the project:

- Limit vehicle speeds on unpaved roads to 15 mph.

- Minimize idling time either by shutting equipment off when not in use or reducing the time of idling to 5 minutes [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.

- Compliance with anti-idling regulations for diesel powered commercial motor vehicles (greater than 10,000 gross vehicular weight rating). The current requirements include limiting idling time to 5 minutes and installing technologies on the vehicles that support anti-idling. Information can be found on the California Air Resources Board's website: https://ww2.arb.ca.gov/ourwork/programs/idle-reduction-technologies/idle-reduction-technologies.

Significance after Mitigation

Construction

Mitigation Measure 3.2-1a includes the SMAQMD Basic Construction Measures/best management practices for fugitive dust control to reduce the generation of on-site fugitive dust during earthwork and travel on unpaved roadways, maintain equipment in good operating condition, and minimize equipment idling times as required by California Code of Regulations. With implementation of Mitigation Measure 3.2-1a, the project's construction activities would not exceed SMAQMD's thresholds of significance and would not conflict with applicable air quality plans. This impact would be **less than significant with mitigation**.

Operation

Project operational activities would result in emissions of PM associated with routine maintenance activities. Therefore, implementation of best management practices during operational activities is required in order to support the use of the SMAQMD's non-zero thresholds of significance for operational PM emissions. Mitigation Measure 3.2-1b would ensure compliance with the applicable operational best management practices to reduce PM emissions and ensure that the project's operational activities would not conflict with applicable air quality plans. With implementation of Mitigation Measure 3.2-1b, this impact would be **less than significant with mitigation**.

Impact 3.2-2. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard?

Less-than-Significant Impact with Mitigation. By its very nature, air pollution is largely a cumulative impact. The nonattainment status of regional pollutants results from past and present development within the SVAB, and this regional impact is cumulative rather than attributable to any one source. A project's emissions may be individually limited, but cumulatively considerable when taken in combination with past, present, and future development projects.

SMAQMD is currently designated as a federal nonattainment area for ozone and $PM_{2.5}$ and as a state nonattainment area for ozone and PM_{10}. As discussed above in response to Impact 3.3-1, construction-related activities would result in temporary increases in ROG, NO_X, PM_{10}, and $PM_{2.5}$ emissions.

Construction

Construction would result in temporary emissions of criteria air pollutants and ozone precursors in the form of fugitive dust from ground disturbing activities and vehicle travel on paved roadways, and exhaust emissions from the use of off-road equipment and on-road motor vehicles. Table 3.2-4 presents the project's daily and maximum annual construction-related emissions.

As shown in Table 3.2-4, estimated emissions associated with construction of the project would not exceed the SMAQMD recommended thresholds of significance. Although construction-related emissions would not exceed SMAQMD thresholds, due to the nonattainment status of the SVAB with respect to ozone, PM_{10}, and $PM_{2.5}$, SMAQMD recommends that all construction projects implement the SMAQMD Basic Construction Emission Control Practices (SMAQMD 2020a). Without implementation of the SMAQMD Basic Construction Emission Control Practices, as described in Mitigation Measure 3.2-1a, the contribution of construction-related emissions from the project would have the potential to be cumulatively considerable, resulting in a **potentially significant impact**.

Table 3.2-4. Summary of Construction-Related Emissions of Criteria Air Pollutants and Precursors

	Maximum Daily Emissions ROG (pounds per day)	Maximum Daily Emissions NO_X (pounds per day)	Maximum Daily Emissions PM_{10} (pounds per day)	Maximum Daily Emissions $PM_{2.5}$ (pounds per day)	Maximum Annual Emissions PM_{10} (tons per year)	Maximum Annual Emissions $PM_{2.5}$ (tons per year)
Project Construction Emissions	~~4.73~~ 36.6	~~39.40~~ 41.4	~~4.66~~ 4.94	~~1.90~~ 2.01	~~0.34~~ 0.35	~~0.14~~ 0.16
SMAQMD Significance Threshold[2]	N/A	85	80	82	14.6	15
Do Project Emissions Exceed SMAQMD Threshold?	N/A	No	No	No	No	No

Notes:
NO_X = oxides of nitrogen; PM_{10} = respirable particulate matter with an aerodynamic diameter of 10 micrometers or less; $PM_{2.5}$ = respirable particulate matter with an aerodynamic diameter of 2.5 micrometers or less; ROG = reactive organic gases; SMAQMD = Sacramento Metropolitan Air Quality Management District

~~1 Detailed modeling in Appendix B presents emissions for a 6-week duration for the Perimeter Wall and Retaining Wall work (listed as "Fencing and Retaining Wall" in the CalEEMod output file due to a prior naming convention for this phase). However, due to a potential 12-week duration, the total emissions for this phase were doubled for the purposes of construction Maximum Annual Emissions of PM10 and PM2.5 shown in this table; Maximum Daily Emissions would not change because this extended schedule would not intensify maximum daily equipment or worker demand in any way.~~

1 Represents SMAQMD Threshold of Significance with the application of Best Management Practices (BMPs) and Best Available Control Technology (BACT).

Source: Modeled by AECOM in 2024. See Appendix B for detailed construction inputs and model output files.

Operation

Project operational sources of emissions would be limited to routine maintenance and inspections. The resultant maximum daily and maximum annual operational emissions estimates are shown in Table 3.2-5.

Table 3.2-5. Summary of Operational Emissions of Criteria Air Pollutants and Precursors

	Maximum Daily Emissions ROG (pounds per day)	Maximum Daily Emissions NO_X (pounds per day)	Maximum Daily Emissions PM_{10} (pounds per day)	Maximum Daily Emissions $PM_{2.5}$ (pounds per day)	Maximum Annual Emissions PM_{10} (tons per year)	Maximum Annual Emissions $PM_{2.5}$ (tons per year)
Operational Emissions	0.39	0.02	0.03	0.01	<0.01	<0.01
SMAQMD Significance Threshold[1]	65	65	80	82	14.6	15
Do Project Emissions Exceed SMAQMD Threshold?	No	No	No	No	No	No

Notes:
NO_X = oxides of nitrogen; PM_{10} = respirable particulate matter with an aerodynamic diameter of 10 micrometers or less; $PM_{2.5}$ = respirable particulate matter with an aerodynamic diameter of 2.5 micrometers or less; ROG = reactive organic gases; SMAQMD = Sacramento Metropolitan Air Quality Management District
[1] Represents SMAQMD Threshold of Significance with the application of Best Management Practices (BMPs) and Best Available Control Technology (BACT).
Data compiled by AECOM in 2023. See Appendix B for detailed operational inputs and model output files.

As shown in Table 3.2-5, the intermittent increase in emissions related to project operations would not approach or exceed any SMAQMD threshold. According to the SMAQMD, if a project's emissions are not anticipated to exceed the SMAQMD-recommended thresholds, as listed above, the project would not be expected to result in a cumulatively considerable contribution to a significant impact at a cumulative level (SMAQMD 2020a). However, since the project would generate PM emissions during operation, implementation of best management practices would be required in order to use the SMAQMD non-zero thresholds of significance for PM. Therefore, without implementation of best management practices, project operations could result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard, and this operational-related impact would be **potentially significant.**

Mitigation Measures

Construction

Implement Mitigation Measure 3.2-1a. *SMAQMD Basic Construction Emission Control Practices*

Operation

Implement Mitigation Measure 3.2-1b. *SMAQMD PM Best Management Practices*

Significance after Mitigation

Construction

Implementation of Mitigation Measure 3.2-1a would ensure that the project implements the SMAQMD-required Basic Construction Emission Control Practices, allowing the use of the non-zero particulate matter significance thresholds. Therefore, project construction would not result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment and this impact would be **less than significant with mitigation**.

Operation

Implementation of Mitigation Measure 3.2-1b would ensure that the project implements best management practices during operational activities, allowing the use of the SMAQMD's non-zero thresholds of significance for operational PM emissions. With implementation of Mitigation Measure 3.2-1b, project operation would not result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment and this impact would be **less than significant with mitigation**.

Impact 3.3-3. Expose sensitive receptors to substantial pollutant concentrations?

As discussed previously, the closest sensitive receptors to the proposed project site ~~is~~ are the homeless facilities and transitional housing on North B Street, adjacent to the northwest side of the project site, and on North A Street, adjacent to the southeastern end of the project site. While there are also some residences along the distribution line alignments, emissions sources along the alignments would be limited to the period of construction and, because linear construction would not occur for extended periods at any one location, activities would result in less intensive emissions than the localized construction that would occur at the Station J project site.

Criteria Air Pollutants

Less-than-Significant Impact. Criteria pollutants can be classified as either regional or localized pollutants. Regional pollutants can be transported over long distances and affect ambient air quality far from the emissions source. Localized pollutants affect ambient air quality near the emissions source. Ozone is considered a regional criteria pollutant, whereas CO, NO_2, SO_2, and lead are localized pollutants. PM can be both a local and a regional pollutant, depending on its composition.

As detailed in "Environmental Setting," exposure to criteria air pollutants can result in adverse health effects. The proposed project would primarily generate criteria air pollutant emissions during the construction phase, and the primary pollutants of concern would be ozone precursors (ROG and NO_X) and PM. Adverse health effects induced by regional criteria pollutant emissions generated by the proposed project (ozone precursors and PM) are highly dependent on a multitude of interconnected variables (e.g., cumulative concentrations, local meteorology and atmospheric conditions, the number and character of exposed individuals [e.g., age, gender]). For these reasons, ozone precursors (ROG and NO_X) contribute to the formation of ground-borne ozone on a regional scale, where emissions of ROG and NO_X generated in one area may not equate to a specific ozone concentration in that same area. Similarly, some types of particulate pollutant may be transported over long distances or formed through atmospheric reactions. As such, the magnitude and locations of specific health effects from exposure to increased ozone or regional PM concentrations are the product of emissions generated by numerous sources throughout a region, as opposed to a single individual project.

Existing models have limited sensitivity to small changes in regional criteria pollutant concentrations, and as such, translating project-generated regional criteria pollutants to specific health effects would not produce meaningful results. In other words, minor increases in regional air pollution from project-generated ROG and NO_X would have nominal or negligible impacts on human health. Currently, CARB and EPA have not approved a quantitative method to meaningfully and consistently translate the mass emissions of criteria air pollutants from a project to quantified health effects. As explained in the amicus brief filed by the South Coast Air Quality Management District (SCAQMD) in the *Sierra Club v. County of Fresno* (2014) 26 Cal.App.4th 704, it "takes a large amount of additional precursor emissions to cause a modeled increase in ambient ozone levels" (SCAQMD 2015).

In 2020, SMAQMD published Guidance to Address the Friant Ranch Ruling for CEQA Projects in the Sac Metro Air District (SMAQMD 2020b), which provides a screening level analysis estimating the health effects of criteria air pollutants and their precursors, as well as provides guidance for conducting a health effects analysis of a project that satisfies the requirements of the *Sierra Club v. County of Fresno*, 2018, 6 Cal. 5th 502 case ruling regarding the proposed Friant Ranch Project. The Guidance was prepared by conducting regional photochemical modeling and relies on the EPA's Benefits Mapping and Analysis Program to assess health impacts from ozone and $PM_{2.5}$. Analysis was conducted to estimate the level of health effects for a proposed project that has emissions at the maximum SMAQMD-recommended thresholds of significance using 41 hypothetical project locations, as well as a screening model conducted to estimate potential health effects for strategic areas where development is anticipated to cause exceedance of thresholds of significance. The results were used to develop two screening tools intended to support individual projects in analyzing health risks from criteria pollutants: the Minor Project Health screening Tool for projects with criteria pollutant emissions below SMAQMD's adopted thresholds of significance, and the Strategic Area Project Health Screening Tool for projects with emissions between two and six times the SMAQMD threshold levels.

The modeling results support a conclusion that any one proposed project in the SFNA, which is inclusive of the project site, with emissions at or below the maximum SMAQMD thresholds of significance levels for criteria air pollutants does not on its own lead to sizeable health effects. The findings of the SMAQMD screening modeling indicate that the mean health incidence for a project emitting at the threshold of significance levels at all 41 representative locations was less than 3 per year for mortality and less than 1.5 per year for other health outcomes evaluated.

In addition, as shown in Table 3.2-4, construction-related activities would result in minimal emissions of criteria air pollutants, at levels that would be substantially below the SMAQMD regional thresholds of significance. The regional thresholds of significance were designed to identify those projects that would result in significant levels of air pollution and to assist the region in attaining the applicable state and federal ambient air quality standards, which were established using health-based criteria to protect the public with margin of safety from adverse health impacts due to exposure to air pollution.

Similarly, and as detailed in Table 3.2-5, operational emissions associated with the project represent a small fraction of the SMAQMD regional thresholds of significance. Therefore, construction and operation of the project would not expose sensitive receptors to substantial criteria pollutant concentrations and this impact would be **less than significant**.

Toxic Air Contaminants

Less-than-Significant Impact. In addition to criteria air pollutants, construction of the project would also generate TAC emissions. The greatest potential TAC emissions would be related to DPM emissions associated with heavy-duty construction equipment operations and diesel-fueled haul trucks. These activities may expose nearby receptors to TACs, including surrounding residents. For this analysis, DPM is assumed to be equivalent to exhaust-generated $PM_{2.5}$, a subset of the total PM, because more than 90 percent of DPM is less than 1 micrometer (μm) in diameter.

Health effects from TACs are often described in terms of individual cancer risk, which is based on a 30-year lifetime exposure to TACs (OEHHA 2015). Based on the 95-week duration of construction of the project, the potential exposure of a nearby sensitive receptor to construction emissions would be seven percent of the total exposure period used for typical health risk calculations (i.e., 30 years). Additionally, health risk is a function of the concentration of contaminants in the environment and the duration of exposure to those contaminants. For example, the risks estimated for an exposed individual are higher if a fixed exposure occurs over a longer period of time. Project construction activities would occur intermittently throughout the day and would not serve as a constant source of emissions from the project site. Emissions associated with construction activities would vary day to day and would also occur at varying distances from the nearest sensitive receptors, depending on the location of machinery and equipment within the project site. For example, although the nearest sensitive receptors are located adjacent to the ~~southeastern~~ northwestern end of the project site, as construction activity occurs across the 10.3 acres, construction-related emissions would occur at varying distances as far as ~~880~~ 500 feet from receptors (when construction activities are occurring at the southwestern end of the Project site). Concentrations of mobile-source DPM emissions are typically reduced by approximately 60 percent at a distance of 300 feet (90 meters) (Zhu et al. 2002). Therefore, trucks and off-road equipment would not operate in the immediate vicinity of any sensitive receptor for an extended period of time and the potential exposure to TAC emission concentrations would be limited. In addition, as described above, $PM_{2.5}$ emissions during construction would not exceed the SMAQMD's threshold of significance of 82 pounds per day (Table 3.2-4); the maximum daily on-site exhaust $PM_{2.5}$ emissions are estimated to be than ~~1.02~~ 1.29 pounds per day, and typically less than 1 pound per day (Appendix B). It is also important to note that the maximum daily emissions would only occur if all anticipated equipment were operated all day simultaneously for a given day, which is unlikely. Average daily emissions would be about half this rate, and even less in later phases of construction when less diesel-powered equipment would be required.

Furthermore, the project would implement Mitigation Measure 3.2-1a to comply with the SMAQMD-required emission reduction measures, including minimizing equipment and truck idling time and maintaining construction equipment in proper working condition, which would also reduce construction-related TAC emissions. Due to the intermittent and temporary nature of construction activities, and the dispersive properties of TACs, as well as the fact that PM emissions would be far less than the SMAQMD emission thresholds, short-term construction would not expose sensitive receptors to DPM emission levels that would result in a health hazard.

As described previously, operation of the project would be limited to routine maintenance and inspection activities by staff. Staff vehicles trips to the project site would primarily be gasoline-powered light-duty vehicles, which are not substantial sources of TAC emissions (e.g., DPM) that are primarily associated with diesel-fueled vehicles. As a result, this impact would be **less than significant.**

Impact 3.3-4. Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

Less-than-Significant Impact. The occurrence and severity of odor impacts depend on numerous factors, including the source's nature, frequency, and intensity; wind speed and direction; and the presence of sensitive receptors. Typically, odors are generally regarded as an annoyance rather than a health hazard. However, manifestations of a person's reaction to foul odors can range from psychological (i.e., irritation, anger, or anxiety) to physiological, including circulatory and respiratory effects, nausea, vomiting, and headache. The ability to detect odors varies considerably among the population and, overall, is quite subjective.

Construction

Sources that may emit odors during construction activities include exhaust from construction equipment and heavy-duty trucks and off-gassing from paving activities, which could be considered offensive to some individuals. Odors from these sources would be localized and generally confined to the immediate area surrounding the project site; however, this effect would be minor and of short duration. Furthermore, although the nearest sensitive receptors are located adjacent to the northwestern and southeastern ends of the project site, as construction activity occurs across the 10.3 acres, construction-related emissions, such as those leading to odors, would not occur in the immediate vicinity of any sensitive receptor for an extended period of time and would dissipate with distance. In addition, the project would use typical construction techniques, and the odors would be typical of most construction sites and temporary in nature. As a result, the project would not result in other emissions, such as those leading to odors, affecting a substantial number of people. Therefore, this impact would be **less than significant**.

Operation

The project would not generate long-term objectionable odors during operations. The land uses associated with the project are utility-related and would not include typical odor-generating land uses, such as composting facilities, wastewater treatment plants, or rendering plants (SMAQMD 2016). As a result, the project would not result in other emissions, such as those leading to odors, affecting a substantial number of people. This impact would be **less than significant**.

3.3 Biological Resources

This section addresses impacts on biological resources known from or with potential to occur in the project area. The analysis includes a description of the existing environmental conditions at the time of the NOP, the methods used for site and impact assessment, the impacts associated with implementing the proposed project, and mitigation measures proposed to reduce potentially significant impacts, where necessary. This section also includes a brief overview of the federal, State, and local laws and regulations pertaining to the protection of biological resources in Sacramento County.

The biological resources information presented in this section is based on information gathered from biological resources databases, including the California Department of Fish and Wildlife (CDFW) California Natural Diversity Database (CNDDB), Biogeographic Information and Observation System (BIOS), and the California Native Plant Society (CNPS) Online Inventory of Rare and Endangered Plants, an official species list obtained from the U.S. Fish and Wildlife Service Information, Planning, and Conservation System (IPaC); and the results of a biological resources assessment conducted for the project by Bargas, Inc. dated August 2023 (Appendix C).

Note that this section remains the same as that originally provided in the Draft EIR. No additional environmental analysis was required to address project description revisions.

3.3.1 Regulatory Setting

Federal

Endangered Species Act

USFWS and the National Marine Fisheries Service (NMFS) implement the Federal Endangered Species Act (FESA) of 1973 (16 U.S. Code Section [USC] 1531 et seq.). Under the FESA, threatened and endangered species on the federal list and their habitats (50 Code of Federal Regulations [CFR] Subsections 17.11, 17.12) are protected from “take” (i.e., activities that harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect) as well as any attempt to engage in any such conduct, unless a Section 10 Permit is granted to an individual or a Section 7 consultation and a Biological Opinion with incidental take provisions is issued by the lead federal agency.

Pursuant to the requirements of FESA, the USFWS and/or NMFS determines whether any federally listed species or their designated critical habitat may be present and if the proposed project would have the potential to affect those species, including through habitat loss. These agencies determines whether the project is likely to jeopardize the continued existence of any species proposed to be listed under FESA or result in the destruction or adverse modification of critical habitat proposed to be designated for such species (16 USC Section 1536[3], [4]). (Under CEQA, such effects on federally-listed species or their habitat would be considered significant and would require mitigation).

Clean Water Act

Section 404 of the Clean Water Act (CWA) (33 USC 1251 et seq.) requires project proponents to obtain a permit from the U.S. Army Corps of Engineers (USACE) before performing any activity that involves any discharge of dredged or fill material into waters of the United States, including wetlands. Fill material is material placed in waters of the United States where the material has the effect of replacing any portion of a water of the United States with dry land or changing the bottom elevation of any portion of a water of the United States. Waters of the United States include navigable waters of the United States, interstate waters, tidally influenced waters, and all other waters where the use, degradation, or destruction of the waters could affect interstate or foreign commerce, tributaries to any of these waters, and wetlands that meet any of these criteria or that are adjacent to any of these waters or their tributaries. Many surface waters and wetlands in California meet the criteria for waters of the United States.

In accordance with Section 401 of the CWA, projects that apply for a USACE permit for discharge of dredged or fill material must obtain water quality certification from the appropriate regional water quality control board (RWQCB) indicating that the action would uphold State water quality standards.

Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) (16 USC Section 703, et seq.), first enacted in 1918, provides for protection of international migratory birds and authorizes the Secretary of the Interior to regulate the taking of migratory birds. The MBTA provides that it shall be unlawful, except as permitted by regulations, to pursue, take, or kill any migratory bird, or any part, nest, or egg of any such bird. This prohibition includes both direct and indirect acts, although harassment and habitat modification are not included unless they result in direct loss of birds, nests, or eggs. The current list of species protected by the MBTA can be found in Title 50 of the CFR, Section 10.13 (50 CFR 10.13). The list includes nearly all birds native to the United States.

State

California Endangered Species Act

The California Endangered Species Act (CESA) prohibits the take of State-listed threatened and endangered species. Under CESA, CDFW is responsible for maintaining a list of rare, threatened, and endangered species designated under State law (California Fish and Game Code 2070–2079). The CDFW also maintains lists of candidate species, species of special concern, and fully protected species. Candidate species are those taxa that have been formally recognized by the CDFW and are under review for addition to the State threatened and endangered list. Species of special concern are those taxa that are considered sensitive and this list serves as a "watch list." Fully protected species are those designated as such under Sections 3511, 4700, or 5050 of the California Fish and Game Code.

Pursuant to the requirements of CESA, agencies reviewing proposed projects within their jurisdictions need to determine whether any State-listed species has the potential to occur in a proposed project site and if the proposed project would have any potentially significant impacts on such species. Project-related impacts on those species would be potentially significant and would require mitigation, and impacts on species of concern could be potentially significant under certain circumstances. The CDFW can concurrently authorize take if an incidental take permit is issued by the Secretary of the Interior or Commerce in compliance with FESA or if the director of the CDFW issues a separate CESA permit under Section 2080 in those cases where it is demonstrated that the potentially significant impacts would be minimized and mitigated.

CEQA Guidelines Section 15380

Several federal and State statutes protect rare, threatened, and endangered species. Under the State CEQA Guidelines, Section 15380 provides that a species not listed in the federal or State list of protected species may be considered rare, threatened, or endangered if the species can be shown to meet certain specified criteria. These criteria have been modeled after the definitions of endangered, rare, or threatened that are provided in the FESA and the CESA. This section of the State CEQA Guidelines provides public agencies with the ability to protect a species from any potential impacts of proposed projects until the respective government agency has the opportunity to designate (list) that species as protected, if warranted.

CNPS maintains an extensive list of plant species that it considers to be rare, threatened, or endangered, but these lists have no designated status or protection under federal or state endangered species legislation. Impacts on CNPS-listed species (e.g., CNPS list 1B and 2) are to be considered during CEQA environmental review.

California Fish and Game Code—Protection of Bird Nests and Raptors

Section 3503 of the California Fish and Game Code states that it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird. Section 3503.5 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 and failure of nesting attempts, resulting in loss of eggs and/or young. These violations can be caused by human activity and disturbance of nesting pairs. Projects that could result in potential impacts on bird nests and raptors would be subject to the California Fish and Game Code.

California Fish and Game Code–Section 1602 Lake and Streambed Alteration

All diversions, obstructions, or changes to the natural flow or bed, channel, or bank of any river, stream, or lake in California that supports wildlife resources are subject to regulation by CDFW under Section 1602 of the California Fish and Game Code. Under Section 1602, it is unlawful for any person, governmental agency, or public utility to do the following without first notifying CDFW:

- substantially divert or obstruct the natural flow of, or substantially change or use any material from, the bed, channel, or bank of any river, stream, or lake; or
- deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it may pass into any river, stream, or lake.

The regulatory definition of a stream is a body of water that flows at least periodically or intermittently through a bed or channel that has banks and supports fish or other aquatic life. This definition includes watercourses with a surface or subsurface flow that supports or has supported riparian vegetation (California Code of Regulations [CCR] Title 14, Section 1.72). CDFW regulatory authority within altered or artificial waterways is based on the value of those waterways to fish and wildlife. A lake and streambed alteration agreement must be obtained for any diversion or alteration that would substantially adversely affect a fish or wildlife resource in a river, stream, or lake.

Porter-Cologne Water Quality Control Act

Under the Porter-Cologne Water Quality Control Act (Porter-Cologne Act), waters of the State fall under the jurisdiction of the appropriate RWQCB. The study area is within the Central Valley RWQCB. Each of the nine RWQCBs in California must prepare and periodically update water quality control plans (basin plans) pursuant to the Porter-Cologne Act. Each basin plan sets forth water quality standards for surface water and groundwater, as well as actions to control nonpoint and point sources of pollution to achieve and maintain these standards. The RWQCB's jurisdiction includes federally protected waters as well as areas that meet the definition of "waters of the State." Waters of the State are defined as any surface water or groundwater, including saline waters, within the boundaries of the State. Projects that affect waters of the State must meet waste discharge requirements of the RWQCB, which may be issued in addition to a water quality certification under Section 401 of the CWA.

Local

City of Sacramento 2035 General Plan Update

The following goals and policies from the City of Sacramento 2035 General Plan Update (City of Sacramento 2015) are related to biological resources:

- **Goal ER 2.1 Natural and Open Space Protection**. Protect and enhance open space, natural areas, and significant wildlife and vegetation in the city as integral parts of a sustainable environment within a larger regional ecosystem.
    - **Policy ER 2.1.1 Resource Preservation.** The City shall encourage new development to preserve onsite natural elements that contribute to the community's native plant and wildlife species value and to its aesthetic character.
    - **Policy ER 2.1.4 Retain Habitat Areas.** The City shall retain plant and wildlife habitat areas where there are known sensitive resources (e.g., sensitive habitats, special-status, threatened, endangered, candidate species, and species of concern). Particular attention shall be focused on retaining habitat areas that are contiguous with other existing natural areas and/or wildlife movement corridors.
    - **Policy ER 2.1.10 Habitat Assessments.** The City shall consider the potential impact on sensitive plants and wildlife for each project requiring discretionary approval. If site conditions are such that potential habitat for sensitive plant and/or wildlife species may be present, the City shall require habitat assessments, prepared by a qualified biologist, for sensitive plant and wildlife species. If the habitat assessment determines that suitable habitat for sensitive plant and/or wildlife species is present, then either (1) protocol-level surveys shall be conducted (where survey protocol has been established by a resource agency), or, in the absence of established survey protocol, a focused survey shall be conducted consistent with industry-recognized best practices; or (2) suitable habitat and presence of the species shall be assumed to occur within all potential habitat locations identified on the project site. Survey Reports shall be prepared and submitted to the City and the CDFW or the USFWS (depending on the species) for further consultation and development of avoidance and/or mitigation measures consistent with state and federal law.

- Policy ER 2.1.11 Agency Coordination. The City shall coordinate with State and Federal resource agencies (e.g., CDFW, U.S. Army Corps of Engineers, and USFWS to protect areas containing rare or endangered species of plants and animals.

- **Goal ER 3.1 Urban Forest.** Manage the city's urban forest as an environmental, economic, and aesthetic resource to improve Sacramento resident's quality of life.

  - **Policy ER 3.1.2 Manage and Enhance.** The City shall continue to plant new trees, ensure new developments have sufficient right-of-way width for tree plantings, manage and care for all publicly owned trees, and work to retain healthy trees.

  - **Policy ER 3.1.3 Trees of Significance.** The City shall require the retention of City trees and heritage trees by promoting stewardship of such trees and ensuring that the design of development projects provides for the retention of these trees wherever possible. Where tree removal cannot be avoided, the City shall require tree replacement or appropriate remediation.

- **Goal U.1.1 High-Quality Infrastructure and Services.** Provide and maintain efficient, high-quality public infrastructure facilities and services throughout the city.

  - **Policy U 1.1.12 Impacts to Environmentally Sensitive Lands.** The City shall locate and design utilities to avoid or minimize impacts to environmentally sensitive areas and habitats.

Sacramento City Code Chapter 12.56 – Tree Ordinance

The City recognizes that the planting and preserving trees enhances natural scenic beauty; increases life-giving oxygen; promotes ecological balance; provides natural ventilation, air filtration, and temperature, erosion, and acoustical controls; increases property values; improves the lifestyle of residents; and enhances the identity of the City. Title 12, Chapter 12.56 of the Sacramento City Code includes provisions to protect trees within the City. Wherever feasible, the City is required to modify the design of public projects to avoid the removal or damage to city trees, pursuant to Section 12.56.040. Tree removal permits are required for any work on, or removal of, City trees. A City tree is defined as any tree the trunk of which, when measures 4.5 feet above ground, is 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. Where appropriate, the director may require the replacement of City trees that are proposed for removal.

3.3.2 Environmental Setting

The information in this section is based on a Biological Resources Assessment prepared for the proposed project (Bargas 2023) (Appendix C). To describe the environmental setting with respect to biological resources, a desktop analysis of available literature and resource databases was first completed. The desktop analysis was supplemented with field surveys aligned with the seasonality of species with potential to occur in the project area (i.e., during the blooming season for special-status plant species identified in the literature and database review, and the typical nesting bird season of February 15 – August 31). Following site surveys, this information was compiled to assess habitat types in the area and the potential for special-status species to be present.

The Biological Resources Assessment found that urban land comprises the majority of the project site and surrounding area. Natural habitats are present along the eastern edge of the proposed Station J site, limited to non-native grassland areas and a mix of non-native trees in small numbers. There are no sensitive vegetation communities, as identified by CDFW and CNPS, within the project area. The nearest sensitive vegetation community is Great Valley Cottonwood Riparian Forest, mapped approximately 1 mile to the south along the Sacramento River. Additionally, per the City's River District Specific Plan EIR, there is a small, mapped area of Elderberry Savanna habitat potentially containing elderberry shrubs (*Sambucus nigra*) in the area where the proposed transmission line would cross from North 18th Street to interconnect with Station E (City of Sacramento 2010). There are no existing riparian corridors immediately adjacent to the project site, nor are there any wetlands on or adjacent to the site. The nearest riparian corridor is the American River, located approximately 800 feet north of the proposed transmission line connection to Station E. Given the extent of urban development on the project site and in the surrounding areas, there are no migratory corridors for wildlife present.

The desktop review determined that 13 special-status wildlife species had been documented as occurring within a 1.5-mile buffer of the project area. The majority of these species have no potential to occur within the proposed Station J site due to a lack of suitable habitat and/or nesting sites, and the presence of surrounding urban development. One special-status species, the Valley Elderberry Longhorn Beetle (VELB) (*Desmocerus californicus dimporphus*), was found to have low potential to occur in the project area given the presence of low-quality habitat containing elderberry shrubs. Three special-status plant species were documented as occurring within a 1.5-mile buffer of the project area; these plant species were determined to have no potential for occurrence within the proposed Station J site due to a lack of suitable habitat.

Birds, including native species protected by the MBTA and the California Fish and Game Code, have the potential to nest in nearly any environment, including those heavily altered by human activity. There is limited tree and shrub canopy along the edges of the proposed Station J site that may support nesting birds, although none were observed during site surveys. Additionally, mature trees are present at the northern end of the alignment along the Sacramento Northern Bikeway, in the vicinity of the proposed transmission lines connecting to Station E, which may support nesting birds.

3.3.3 Environmental Impacts and Mitigation Measures

Methods and Assumptions

The evaluation of potential impacts of the proposed project on biological resources was based on review of the presence or potential presence of special-status species and their habitats within the Biological Study Area (BSA). The BSA is defined as the Project site plus a 250-foot buffer. This is the area within which biological resources were fully analyzed.

Special-Status Species Occurrence Potential

Following the desktop review, field surveys, and habitat analyses, Bargas assessed the potential for the occurrence of special status species in the BSA. Biological conditions (vegetation communities, wildlife habitats, disturbances, etc.) and the habitat and life cycle requirements of special status species identified for analysis in the desktop review were considered. "Recent" occurrences are defined as observed within the past 30 years. Based on these considerations, species were assigned to the following categories:

- Present: Species is known to occur in BSA based on recent surveys, CNDDB (within 30 years), or other records.
- High: Species with known recent recorded occurrences/populations near the BSA and highly suitable habitat occurs within the BSA. Highly suitable habitat includes all necessary elements to support the species (e.g., elevation, hydrology, soils, cover, habitat type, food resources).
- Moderate. Species with known recent recorded occurrences/populations near the BSA; however, habitat within the BSA has been moderately disturbed, fragmented, or is small in extent. Moderately suitable habitat includes several elements to support the species (e.g., elevation, hydrology, soils, cover, habitat type, food resources). Furthermore, moderately suitable habitat may also be located at the edge of the species' range, or there are no reported occurrences nearby.
- Low. Species with few known recent recorded occurrences/populations near the BSA and habitat within the BSA is highly disturbed or extremely limited. A low potential is assigned to annual or perennial plant species that may have been detectable during a focused survey in the appropriate blooming period but was not found; however, small populations or scattered individuals are still considered to have a low potential to occur. Additionally, species for which poor-quality habitat may support the species within the BSA, but the reported extant range is far outside the BSA and/or any species observations would anticipate being migratory (i.e., not likely to reproduce within the BSA).
- Presumed Absent/No Potential. Focused surveys were conducted and the species was not detected, or the species was found in the desktop review but suitable habitat (soil, vegetation, elevational range) was not found in the BSA, or the BSA is not within the known geographic range of the species.

The potential for bird species were further distinguished into those that may: 1) nest within or near the BSA; 2) forage within or near the BSA; and/or 3) occur on or near the BSA only as transients during migratory flights or other dispersal events.

The impact analysis considers direct and indirect effects to biological resources. Direct effects include adverse effects that would occur to plants, wildlife, and vegetation communities within or immediately adjacent to the proposed Project footprint and other work areas. Indirect effects, also known as secondary effects, are reasonably foreseeable and caused by a project but occur at a different time or place. Examples of indirect effects pertinent to many development projects could include a change in drainage patterns that ultimately affect vegetation communities not otherwise affected by the project or a reduction in native wildlife species resulting from a decrease in habitat.

Thresholds of Significance

The thresholds for determining the significance of impacts for this analysis are based on the environmental checklist in Appendix G of the CEQA Guidelines, as amended. The proposed project area would result in a significant impact related to biological resources if they would do any of the following:

- 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 CDFW or USFWS;
- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by CDFW or USFWS;
- 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;
- 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;
- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance; or
- Conflict with the provisions of an adopted HCP, natural community conservation plan, or other approved local, regional, or state HCP.

Impact Analysis

Impact 3.3-1. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or the U.S. Fish and Wildlife Service?

Less than Significant Impact with Mitigation. No threatened or endangered species were found to be present or have high potential to occur within the project site. There is low potential for VELB to occur in the project area, given the prior mapping of the transmission line portion of the proposed project as Elderberry Savanna and the presence of low-quality potential habitat for this species. The potential habitat is surrounded by disturbance on three sides. While the potential VELB habitat in the form of elderberry shrubs is adjacent to the river, it is in an urban setting and isolated from other elderberry shrub habitats, making it unlikely that VELB is present in the project site. Nonetheless, the proposed project could impact this special-status species if present, either directly through construction activities or indirectly through habitat modifications or disturbance adjacent to suitable habitat, if appropriate avoidance and minimization measures are not implemented. Therefore, this impact would be ***potentially significant*****.**

Additionally, nesting birds may be found on or adjacent to the project site due to the presence of limited vegetation, including mature trees and shrubs. The proposed project has the potential to affect nesting birds through vegetation removal and ground disturbance adjacent to potential nesting sites. If any active nests are present adjacent to construction activities, this could result in nest abandonment by adult birds and mortality of chicks and eggs. As noted above, nesting birds are protected by the MBTA and California Fish and Game Code. Any loss of fertile eggs, nesting birds, or any activities resulting in nest abandonment would be a violation of these regulations. Therefore, the impact would be ***potentially significant***.

Mitigation Measures

To minimize potential impacts on Valley Elderberry Longhorn Beetle, SMUD would implement the following mitigation measure:

Mitigation Measure 3.3-1a: Valley Elderberry Longhorn Beetle

- Elderberry shrubs within 150 feet of the project disturbance area shall be mapped and avoided to the extent possible. Shrubs to be avoided shall be identified and flagged by a qualified biologist.

- A 20-foot minimum avoidance buffer shall be established from the dripline of each avoided shrub. No work shall occur within the buffer area.

- High-visible construction fencing shall be installed along the 20-foot avoidance buffer.

- If feasible, construction activities within 150 feet of an elderberry shrub shall not occur during the VELB flight season (March through July).

To minimize potential impacts on nesting birds, SMUD would implement the following mitigation measure:

Mitigation Measure 3.3-1b: Nesting Birds

- A nesting bird survey shall be conducted within the project site (for raptors and non-raptors) and a 500-foot buffer (for raptors only) prior to commencing with earth-moving or construction work if this work would occur during the typical nesting season (between February 1 and August 31).

- If nesting birds are identified during the surveys, a qualified biologist will determine an appropriate disturbance-free buffer zone and clearly demarcate the buffer zone in the field for avoidance by construction activities.

- The size of an established buffer may be altered if a qualified biologist conducts behavioral observations and determines the nesting birds are well acclimated to disturbance. If this occurs, the biologist shall prescribe a modified buffer that allows sufficient room to prevent undue disturbance/harassment to the nesting birds. If the buffer is reduced, the qualified biologist shall remain on site to monitor the behavior of the nesting birds during construction in order to ensure that the reduced buffer does not result in take of eggs or nestlings.

- No construction or earth-moving activity shall occur within the established buffer until it is determined by a qualified biologist that the young have fledged (are no longer dependent on the nest or the adults for feeding) and have attained sufficient flight skills to avoid project construction zones. This typically occurs by August 31. This date may be earlier or later and shall be determined by a qualified biologist. If a qualified biologist is not hired to monitor the nesting raptors, then the full buffer(s) shall be maintained in place from February 1 through the month of August. The buffer may be removed, and work may proceed as otherwise planned within the buffer on September 1.

Significance after Mitigation

With implementation of mitigation measures 3.3-1a and 3.3-1b, the proposed project would avoid or minimize potential impacts on VELB and nesting birds. Therefore, impacts would be ***less than significant with mitigation*****.**

Impact 3.3-2. 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. The project site does not contain riparian habitat or any other sensitive natural communities that are identified in local or regional plans, policies, and regulations or by CDFW or USFWS. Furthermore, the project site is located in a developed urban environment and no riparian habitat or any other sensitive natural communities adjacent to the project site would be affected by project construction or operation. Therefore, there would be ***no impact***.

Impact 3.3-3. Have a substantial adverse effect on federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

No Impact. The project site does not include federally or State-protected wetlands or other features, regulated under Sections 404 or 401 of the Clean Water Act. Therefore, the proposed project would not result in the direct removal, filling, or hydrological interruption of wetland resources, and there would be ***no impact.***

Impact 3.3-4. Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

No Impact. The project site is located within a developed urban area and does not include any native resident or migratory corridors. Therefore, the proposed project would not interfere with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory corridors. The proposed project would not impede the use of native wildlife nursery sites. Therefore, ***no impact*** would occur.

Impact 3.3-5. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

Less than Significant Impact with Mitigation. The proposed Station J site contains limited intact vegetation, including mature trees along the site periphery, which would be removed to accommodate the proposed project. Additionally, limited areas of tree trimming and/or removal may be required to facilitate the overhead transmission line interconnection with Station E. Some of the trees planned for removal may meet the definitions of City Trees or private protected trees, as specified in Chapter 12.56 of the Sacramento City Code. The potential loss of these trees due to construction activities would be a ***potentially significant impact***.

Mitigation Measure

To ensure compliance with the City's Tree Ordinance (Chapter 12.56 of the Sacramento City Code) and minimize impacts due to loss of trees, the following mitigation measures shall be implemented:

Mitigation Measure 3.3-5: Tree Removal

- To the maximum extent feasible, the project design shall avoid the loss of any protected tree (City or private). SMUD shall retain a certified arborist to survey trees in the project area including potential laydown areas and identify and evaluate trees that will be removed. If the arborist's survey does not identify any protected trees that would be removed or damaged as a result of the proposed project, no further mitigation is necessary.
- If protected trees or their canopy are identified within the affected area, measures shall be taken to avoid impacts on protected trees as detailed in the City's tree ordinance. Protected trees that are lost as a result of the project shall be replaced according to the provisions of the ordinance and in alignment with an approved tree replacement plan (Section 12.56.060). Removed trees will generally require replacement at a 1:1 ratio. Tree replacement shall occur after project construction and will be monitored by a qualified arborist.

Significance after Mitigation

Implementation of mitigation measure 3.3-5 would ensure the proposed project does not conflict with the City of Sacramento Tree Ordinance. Therefore, this impact would be ***less than significant with mitigation***.

Impact 3.3-6. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

No Impact. The project site is located in a primarily urbanized environment and is not located within an adopted Habitat Conservation Plan area, Natural Community Conservation Plan area, or other approved local, regional, or state habitat conservation plan area, and would not conflict with the provisions of any such plans. Therefore, ***no impact*** would occur.

3.4 Cultural Resources

This section analyzes and evaluates the potential impacts of the project on known and unknown cultural resources. Although impacts related to human remains are typically analyzed in a cultural resources section, unanticipated discovery of human remains in the project area may potentially be Native American and would be considered a Tribal cultural resource, impacts associated with Tribal cultural resources are discussed in Section 3.12, “Tribal Cultural Resources.”

Cultural resources include districts, sites, buildings, structures, or objects generally older than 50 years and considered to be important to a culture, subculture, or community for scientific, traditional, religious, or other reasons. They include pre-contact resources and historic-period resources. Archaeological resources are locations where human activity has measurably altered the earth or left deposits of pre-contact or historic-period physical remains (e.g., stone tools, bottles, former roads, house foundations). Historical (or built environment) resources include standing buildings (e.g., houses, barns, outbuildings, cabins) and intact structures (e.g., dams, bridges, roads, districts), or landscapes. A cultural landscape is defined as a geographic area (including both cultural and natural resources and the wildlife therein), associated with a historic event, activity, or person or exhibiting other cultural or aesthetic values.

3.4.1 Regulatory Setting

Federal

National Register of Historic Places

The National Register of Historic Places (NRHP) is the nation’s primary inventory of known historic properties. It is administered by the National Park Service and includes listings of buildings, structures, sites, objects, and districts that possess historic, architectural, engineering, archaeological, or cultural significance at the national, state, or local level.

The formal criteria (36 CFR 60.4) for determining NRHP eligibility are as follows:

1. The property is at least 50 years old (however, properties under 50 years of age that are of exceptional importance or are contributors to a district can also be included in the NRHP);

2. It retains integrity of location, design, setting, materials, workmanship, feeling, and associations; and

3. It possesses at least one of the following characteristics:

   Criterion A — Is associated with events that have made a significant contribution to the broad patterns of history (events).

   Criterion B — Is associated with the lives of persons significant in the past (persons).

   Criterion C — Embodies the distinctive characteristics of a type, period, or method of construction, or represents the work of a master, or possesses high artistic values, or represents a significant, distinguishable entity whose components may lack individual distinction (architecture).

Criterion D Has yielded, or may be likely to yield, information important in prehistory or history (information potential).

A project is considered to have a significant impact when the effect on a historic property may diminish the integrity of the property's location, design, setting, materials, workmanship, feeling, or association. These seven aspects of integrity are described as:

- **Location.** Integrity of location refers to whether a property remains where it was originally constructed or was relocated.
- **Design.** Integrity of design refers to whether a property has maintained its original configuration of elements and style that characterize its plan, massing, and structure. Changes made after original construction can acquire significance in their own right.
- **Setting.** Integrity of setting refers to the physical environment surrounding a property that informs the characterization of the place.
- **Materials.** Integrity of materials refers to the physical components of a property, their arrangement or pattern, and their authentic expression of a particular time period.
- **Workmanship.** Integrity of workmanship refers to whether the physical elements of a structure express the original craftsmanship, technology and aesthetic principles of a particular people, place, or culture at a particular time period.
- **Feeling.** Integrity of feeling refers to the property's ability to convey the historical sense of a particular time period.
- **Association.** Integrity of association refers to the property's significance defined by a connection to a particular important event, person, or design.

Listing in the NRHP does not entail specific protection or assistance for a property but it does guarantee consideration in planning for federal or federally-assisted projects, eligibility for federal tax benefits, and qualification for federal historic preservation assistance. Additionally, project effects on properties listed in the NRHP must be evaluated under CEQA.

The National Register Bulletin series was developed to assist evaluators in the application of NRHP criteria. For example, National Register Bulletin #36 provides guidance in the evaluation of archaeological site significance. If a property cannot be placed within a particular theme or time period, and thereby lacks "focus," it will be unlikely to possess characteristics which would make it eligible for listing in the NRHP. Evaluation standards for linear features (such as roads, trails, fence lines, railroads, ditches, and flumes) are considered in terms of four related criteria that account for specific elements that define engineering and construction methods of linear features: (1) size and length, (2) presence of distinctive engineering features and associated properties, (3) structural integrity, and (4) setting. The highest probability for NRHP eligibility exists in the intact, longer segments, where multiple criteria coincide.

State

California Register of Historical Resources

All properties in California that are listed in or formally determined eligible for listing in the NRHP are also listed in the California Register of Historical Resources (CRHR). The CRHR is a listing of State of California resources that are significant in the context of California's history. It is a Statewide program with a scope and with criteria for inclusion similar to those used for the NRHP. In addition, properties designated under municipal or county ordinances are also eligible for listing in the CRHR.

A historical resource must be significant at the local, state, or national level under one or more of the criteria defined in the California Code of Regulations Title 15, Chapter 11.5, Section 4850 to be included in the CRHR. The CRHR criteria are tied to CEQA because any resource that meets the criteria below is considered a significant historical resource under CEQA. As noted above, all resources listed in or formally determined eligible for listing in the NRHP are automatically listed in the CRHR.

The CRHR uses four evaluation criteria:

Criterion 1 Is associated with events that have made a significant contribution to the broad patterns of local or regional history, or the cultural heritage of California or the United States.

Criterion 2 Is associated with the lives of persons important to local, California, or national history.

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

Criterion 4 Has yielded, or has the potential to yield, information important to the prehistory or history of the local area, California or the nation.

Similar to the NRHP, a historical resource must meet one of the above criteria and retain integrity to be listed in the CRHR. The CRHR uses the same seven aspects of integrity used by the NRHP.

California Environmental Quality Act

CEQA requires public agencies to consider the effects of their actions on "historical resources," and "unique archaeological resources." Pursuant to PRC Section 21084.1, a "project that may cause a substantial adverse change in the significance of an historical resource is a project that may have a significant effect on the environment." Section 21083.2 requires agencies to determine whether projects would have effects on unique archaeological resources.

Historical Resources

"Historical resource" is a term with a defined statutory meaning (PRC Section 21084.1; State CEQA Guidelines Sections 15064.5[a] and [b]). Under State CEQA Guidelines Section 15064.5(a), historical resources include the following:

1) A resource listed in, or determined to be eligible by the State Historical Resources Commission for listing in, the CRHR (PRC Section 5024.1).

2) A resource included in a local register of historical resources, as defined in PRC Section 5020.1(k) or identified as significant in a historical resource survey meeting the requirements of PRC Section 5024.1(g), will be presumed to be historically or culturally significant. Public agencies must treat any such resource as significant unless the preponderance of evidence demonstrates that it is not historically or culturally significant.

3) Any object, building, structure, site, area, place, record, or manuscript that a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California may be considered to be a historical resource, provided the lead agency's determination is supported by substantial evidence in light of the whole record. Generally, a resource will be considered by the lead agency to be historically significant if the resource meets the criteria for listing in the CRHR (PRC Section 5024.1).

4) The fact that a resource is not listed in or determined to be eligible for listing in the CRHR, not included in a local register of historical resources (pursuant to PRC Section 5020.1[k]), or identified in a historical resources survey (meeting the criteria in PRC Section 5024.1[g]) does not preclude a lead agency from determining that the resource may be a historical resource as defined in PRC Sections 5020.1(j) or 5024.1.

Unique Archaeological Resources

CEQA also requires lead agencies to consider whether projects will affect unique archaeological resources. PRC Section 21083.2(g) states that "unique archaeological resource" means an archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets one or more of the following criteria:

1) Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information.

2) Has a special and particular quality such as being the oldest of its type or the best available example of its type.

3) Is directly associated with a scientifically recognized important prehistoric (pre-contact) or historic event or person.

Local

City of Sacramento 2035 General Plan

The following policies are considered relevant to the project and cultural resources in the vicinity of the project:

- **Policy HCR 2.1.1:** Identification. The City shall identify historic and cultural resources, including individual properties, districts, and sites (e.g., archaeological sites), to ensure adequate protection of these resources.

- **Policy HCR 2.1.2:** Applicable Laws and Regulations. The City shall ensure compliance with City, State, and Federal historic preservation laws, regulations, and codes to protect and assist in the preservation of historic and archaeological resources, including the use of the California Historical Building Code as applicable. Unless listed in the Sacramento, California, or National registers, the City shall require discretionary projects involving resources 50 years and older to evaluate their eligibility for inclusion on the California or Sacramento registers for compliance with the California Environmental Quality Act.

- **Policy HCR 2.1.5:** National, California, and Sacramento Registers. The City shall support efforts to pursue eligibility and listing for qualified resources including historic districts and individual resources under the appropriate National, California, or Sacramento registers.

- **Policy HCR 2.1.10:** Early Project Consultation. The City shall minimize potential impacts to historic and cultural resources by consulting with property owners, land developers, and the building industry early in the development review process.

- **Policy HCR 2.1.11:** Compatibility with Historic Context. The City shall review proposed new development, alterations, and rehabilitation/remodels for compatibility with the surrounding historic context. The City shall pay special attention to the scale, massing, and relationship of proposed new development to surrounding historic resources.

- **Policy HCR 2.1.15:** Demolition. The City shall consider demolition of historic resources as a last resort, to be permitted only if rehabilitation of the resource is not feasible, demolition is necessary to protect the health, safety, and welfare of its residents, or the public benefits outweigh the loss of the historic resource.

- **Policy HCR 2.1.16:** Archaeological & Cultural Resources. The City shall develop or ensure compliance with protocols that protect or mitigate impacts to archaeological and cultural resources including prehistoric resources.

- **Policy HCR 2.1.14:** Preservation Project Review. The City shall review and evaluate proposed development projects to minimize impacts on identified historic and cultural resources, including projects on Landmark parcels and parcels within Historic Districts, based on applicable adopted criteria and standards.

Sacramento Planning and Development Code Chapter 17.604

Chapter 17.604 (Historic Preservation) of the City's Planning and Development Code includes provisions for the identification of significant historic, prehistoric (pre-contact) and cultural resources, structures, districts, sites, landscapes, and properties within the City. This chapter also includes mechanisms and procedures to protect and encourage the preservation of the city's historic and cultural resources, as well as established the preservation commission and the responsibilities of the City's Preservation Director.

Sacramento Register of Historic and Cultural Resources

City Code section 17.604.210 contains the criteria and requirements for listing on, or deletion from, the Sacramento Register as a landmark, historic district or contributing resource are as follows:

A. Listing on the Sacramento Register—Landmarks. A nominated resource shall be listed on the Sacramento register as a landmark if the city council finds, after holding the hearing required by this chapter, that all of the requirements set forth below are satisfied:

1. Requirements.

a. The nominated resource meets one or more of the following criteria:

i. It is associated with events that have made a significant contribution to the broad patterns of the history of the city, the region, the state or the nation;

ii. It is associated with the lives of persons significant in the city's past;

iii. It embodies the distinctive characteristics of a type, period or method of construction;

iv. It represents the work of an important creative individual or master;

v. It possesses high artistic values; or

vi. It has yielded, or may be likely to yield, information important in the prehistory or history of the city, the region, the state or the nation;

b. The nominated resource has integrity of location, design, setting, materials, workmanship and association. Integrity shall be judged with reference to the particular criterion or criteria specified in subsection A.1.a of this section;

c. The nominated resource has significant historic or architectural worth, and its designation as a landmark is reasonable, appropriate and necessary to promote, protect and further the goals and purposes of this chapter.

2. Factors to be considered. In determining whether to list a nominated resource on the Sacramento Register as a landmark, the factors below shall be considered.

a. A structure removed from its original location is eligible if it is significant primarily for its architectural value or it is the most important surviving structure associated with a historic person or event.

b. A birthplace or grave is eligible if it is that of a historical figure of outstanding importance and there is no other appropriate site or structure directly associated with his or her productive life.

c. A reconstructed building is eligible if the reconstruction is historically accurate, if the structure is presented in a dignified manner as part of a restoration master plan, and if no other original structure survives that has the same association.

d. Properties that are primarily commemorative in intent are eligible if design, age, tradition, or symbolic value invests such properties with their own historical significance.

e. Properties achieving significance within the past 50 years are eligible if such properties are of exceptional importance.

3.4.2 Environmental Setting

This section describes the precontact, ethnohistoric, and historic setting of the project area for the undertaking.

Archaeological Context

In an attempt to unify the various hypothesized cultural periods in California, Fredrickson (1993) proposed an all-encompassing scheme for cultural development, while acknowledging that these general trends may manifest themselves differently and some variation may exist between subregions. These general cultural periods (i.e., Paleo-Indian, Early, Middle and Late Archaic, and Emergent periods) are used in this document in connection with the North-Central Sierra Nevada chronology because of their relevancy to the lower foothill region of the project area, in the vicinity of Folsom.

The Late Pleistocene pattern and period (greater than 10,000 years before present [B.P.]) is practically nonexistent in the foothill and eastern Sacramento Valley. Sites CA-SAC-370 and CA-SAC-379, located near Rancho Murieta, produced numerous bifaces, cores, and raw materials from gravel strata estimated to be between 12,000 and 18,000 years in age. Early Holocene pattern and period (circa [ca.] 10,000–7000 B.P.) was first defined by Bedwell (1970) as a human adaptation to lake, marsh, and grassland environments that were prevalent at this time. Appearing after 11,000 years B.P., the tradition slowly disappeared ca. 8000–7000 B.P.

During the Archaic pattern and period (ca. 7000–3200 B.P.), the climate in the valleys and foothills of Central California became warmer and dryer, and milling stones are found in abundance.

The Early and Middle Sierran pattern (ca. 3200–600 B.P.) evidences an expansion in use of obsidian, which is interpreted with reservation to indicate an increase in regional land use, and the regular use of certain locales. During this time, a much heavier reliance on acorns as a staple food was developed, supporting large, dense populations.

During the Late Sierran period (ca. 600–150 B.P.), archaeological village sites generally correspond to those identified in the ethnographic literature. Diagnostic artifacts include small contracting-stem points, clam shell disk beads, and trade beads that were introduced near the end of the period, marking the arrival of European groups (Beardsley 1954:77–79; Elsasser 1978:44; Fredrickson 1993).

Ethnohistoric Context

The project area is situated within the traditional territory of the Nisenan. The language of the Nisenan, which includes several dialects, is classified within the Maiduan family of the Penutian linguistic stock. Kroeber (1925) recognized three Nisenan dialects: Northern Hill, Southern Hill, and Valley. The Nisenan territory included the drainages of the Yuba, Bear, and American Rivers, and the lower drainages of the Feather River, extending from the crest of the Sierra Nevada to the banks of the Sacramento River. According to Bennyhoff (1961:204–209), the southern boundary with the Miwok was probably a few miles south of the American River, bordering a shared area used by both Miwok and Nisenan groups that extended to the Cosumnes River. It appears that the foothills Nisenan distrusted the valley peoples but had a mostly friendly relationship with the Washoe to the east. Elders recall intergroup marriage and trade, primarily involving the exchange of acorns for fish procured by the Washoe (Wilson 1972:33). The northern boundary has not been clearly established due to similarities in language with neighboring tribes (Wilson and Towne 1978:387–389).

Nisenan settlement locations depended primarily on elevation, exposure, and proximity to water and other resources. Permanent villages were usually located on low rises along major watercourses. Houses were domed structures measuring 10 to 15 feet in diameter and covered with earth and tule reeds or grass. Brush shelters were used in the summer and at temporary camps during food-gathering rounds. Larger villages often had semi-subterranean dance houses that were covered in earth and tule reeds or brush, with a central hole at the top to allow the escape of smoke, and an east-facing entrance. Another common village structure was the granary, which was used for storing acorns.

Several political divisions in the Nisenan territory, constituting tribelets, had headmen in the larger villages. However, the relative levels of influence in these larger population centers are unknown. All of these larger villages were located in the foothills. More substantial and permanent Nisenan villages generally were not established on the valley plain between the Sacramento River and the foothills, although this area was used as a rich hunting and gathering ground. One tribelet consisted of people occupying the territory between the Bear River and the Middle Fork American River (Wilson and Towne 1978). According to Kroeber (1925:831), the larger villages could have had populations exceeding 500 individuals, although small settlements consisting of 15 to 25 people and extended families were common.

The Nisenan occupied permanent settlements from which specific task groups set out to harvest the seasonal bounty of flora and fauna provided by the rich valley environment. The Valley Nisenan economy involved riparian resources, in contrast to the Hill Nisenan, whose resource base consisted primarily of acorn and game procurement. The only domestic plant was native tobacco (*Nicotiana* sp.), but many wild species were closely husbanded. The acorn crops from the blue oak (*Quercus douglasii*) and black oak (*Q. kelloggii*) were carefully managed resources. Acorns were stored in granaries in anticipation of winter. Deer, rabbit, and salmon were the chief sources of animal protein in the aboriginal diet, but many insect and other animal species were taken when available (Wilson and Towne 1978:389).

Traditional Nisenan culture, described above, was greatly reduced in the nineteenth century as a result of European colonization, coupled with a reluctance to discuss Nisenan spiritual beliefs and practices, making it difficult to describe these practices in any detail. However, historic records document a number of observances and dances, some of which are still performed today, that were important ceremonies in early historic times. The Kuksu religion, the basic religious system noted throughout Central California, appeared among the Nisenan. Religious membership was restricted to those initiated in its spirit and deity-impersonating rites. However, the Kuksu religion was only one of several levels of religious practice among the Nisenan. Various dances associated with mourning and the change of seasons were also important. One of the last major additions to Nisenan spiritual life occurred sometime shortly after 1872 with a revival of the Kuksu religion as an adaptation to the Ghost Dance religion (Wilson and Towne 1978). Today, Nisenan descendants are reinvesting in their traditions and represent a growing and thriving community.

Information on the contemporary Tribes of the regions are discussed in the TCR chapter.

Known Ethnographic Villages Near Downtown Sacramento

Villages along the Sacramento and American rivers include *Pujune*, *Momol*, *Sahmah*, *Demba*, *Yamahepu*, and *Sa'cum*. *Pujune* is located on the north side of the American River, about one-quarter mile east of its confluence with the Sacramento River. *Momol* is located on the south side of the American River, opposite the village of *Pujune*. *Sahmah* is located the east side of the Sacramento River, south of its confluence with the American River. *Demba* is located on the south side of the Sacramento River about one-half mile east of the Interstate 80 bridge crossing over the river. *Yamahepu* is located on the north side of the American River near the Highway 160 bridge crossing over the river. *Sa'cum* is located at Cesar Chavez Park in Sacramento.

In addition, Tribes have identified lake *Wanoho Pakan* as culturally important. A lake, originally named *Wanoho Pakan* by Native American Tribes, formerly extended from 3rd Street to 5th Street and north of I Street; the area is now occupied by the Southern Pacific railroad depot. *Wanoho Pakan* was and continues to be a place of cultural significance and value to Tribes. Subsequent to Euroamerican settlement and development of Sacramento, *Wanoho Pakan* became known as Sutter Lake and later as China Slough (JCC 2020:4.4).

The presence and distribution of the six villages and *Wanoho Pakan* indicate that the area encompassed by modern Sacramento was a landscape occupied and successfully used by Native Americans. Indeed, beyond any physical presence (e.g., archaeological sites and artifacts) of Native American occupation, the landscape is part of the history of Native Americans in the Sacramento area. The development and change of the landscape over time tells a story important to and valued by the Native American community and also the history of Sacramento and the Central Valley (JCC 2020:6.5,6.7).

Historical Context

Development of the River District in Sacramento

The following historical context has been extracted and edited from the *River District Specific Plan Draft Environmental Impact Report* (City of Sacramento 2010).

The project area is east of North 12th Street along North B Street, which was historically within the northernmost boundary of the city of Sacramento. Sited at the confluence of the Sacramento and American rivers, this area is a low-lying tract of sedimentary earth where several seasonal lakes once formed. After 1853, the federal government typically declared river land in California "Swamp and Overflow" lands and granted the State permission and additional funding to administer "reclamation" activities as they saw fit. Until the late 19th century, the area was subject to intermittent flooding.

Into the late 19th century, the area was subject to intermittent flooding and by the early 20th century the swampy character of the area had limited its potential growth and consequent economic value. Several factors restricted the development of the River District for commercial and residential development, in addition to the area's geographical location with its potential for flooding and drainage problems. Bisected or bound by major levees and subject to flooding, the area remained physically segregated from the rest of the city to the south. Another historical limitation was the area's proximity to Sacramento's railyards. Since its development in the latter half of the 19th century, the railyards and the related railroad levee have created a physical barrier between the downtown and the River District area.

The lower land values and the area's proximity to transportation made the area attractive to a variety of industrial enterprises. In 1912, The Pacific, Gas & Electric Company (PG&E) commissioned River Station B, an oil-powered steam plant designed by Willis Polk. In the early 1920s, the City constructed a large new water intake and filtration plant near PG&E's River Station B. A major trucking firm located its central operations along North 16th Street. The Bercut-Richards Packing Company began operating a cannery during the 1930s. For many years, the 12th Street Road (part of Old Auburn Road) running diagonally through the eastern portion of the River District provided a primary route to the center of the city. Later, 16th Street joined 12th Street as a one-way corridor to the northeast. Both streets connected to Highway 160. The earlier 12th Street Road and its bridge across the American River accommodated early auto traffic to the northeast. Its presence encouraged the development of several small auto camps and roadside establishments in the River District.

Before long, auto camps sprang up along North 12th and North 16th streets to service travelers coming to and from Sacramento. Light manufacturing establishments, a number of oil, gas and petroleum distribution centers, food production factories, and warehouses were also important long-term tenants of the area. The Bercut-Richards Cannery formerly on Richards Boulevard (no longer extant), in the 1930s as an active and viable enterprise as a major economic force in the Sacramento region for many years, popularizing "Sacramento" brand tomato products. Another major agricultural concern, the California Almond Growers Exchange, continues to use a large area along North A and North B Streets near its' primary facilities to the east and on C Street, for both storage and production activities. Once the principal produce distribution center for the city, a produce distribution center on North 16th Street has diminished in activity due to the establishment of other such facilities elsewhere in the region. General warehousing and product distribution facilities were both common historically within the area.

The industrial character of the area, the rivers, and the area's rail lines and highways through it, attracted the homeless and impoverished, and transient agricultural workers. Transients and seasonal agricultural workers found inexpensive "lodging" sites along the American River—sometimes renting very small plots of land from a common landlord upon which they were left to create whatever dwelling they could manage. During the Great Depression, many such persons came to the area and formed settlements or camps that became known as "Hoovervilles." These settlements were characterized by small, makeshift shelters and substandard dwellings. Although economic stability returned after World War II, the area retained a substantial population of low-income and transient residents. The area's impoverished and destitute residents provided an impetus for organizations like the Salvation Army, Loaves and Fishes, Union Gospel Mission, and other aid groups to establish support facilities in the area, which still exist to the present day. In both healthy economic times and bad, homeless and impoverished persons have been a constant social feature of the area.

3.4.3 Literature Review

A cultural resources records search of the project site and vicinity was conducted by the North Central Information Center (NCIC) of the California Historical Resources Information System (CHRIS) on November 1, 2022 (NCIC File No SAC-22-215), with a supplemental search conducted on October 15, 2024 (NCIC File No 24-158). The records search was conducted to obtain background information regarding previous resources or studies that have been reported within and in the vicinity of the project site, and to obtain existing information that may contribute to the proposed project's cultural sensitivity assessment. Documentation of the cultural resources records search results are provided in a separate Historical Resources Evaluation prepared by AECOM (Appendix D).

The search included the project site and a 0.25-mile radius. The results were used to determine whether known cultural resources have been recorded at or adjacent to the project site, and to assess the cultural sensitivity of the area. The records search included reviews of maps listing previously conducted cultural resource studies in the area, and historic General Land Office (or GLO) maps.

The following references also were reviewed:

- National Register of Historic Places (NRHP)
- California Register of Historical Resources (CRHR)
- Office of Historic Preservation Historic Property Data File (CDPR 1976)
- California State Historical Landmarks (CDPR 1976)
- California Inventory of Historic Resources (CDPR 1976)
- California Points of Historical Interest (CDPR 1976)

3.4.4 Previous Investigations

Three studies (003407, 010553, and 012473) have investigated portions of the proposed ~~Substation~~ Station J footprint ~~and within the route of the proposed transmission lines~~. Of those within the substation, a literature review and windshield tour of the project area was conducted to assess ~~the~~ archaeological sensitivity ~~was conducted~~ for the Richards Boulevard Master Plan EIR (Lindstrom 1991). The Richards Boulevard Area Architectural and Historical Property Survey, which included the project site within the 1,320-acre study area did not identify historic properties (Historic Environment Consultants 2000). The Historic Property Survey Report was conducted for the North 12th Complete Streets Project (Koenig 2017) along the northern project site boundary. None of the previous investigations consisted of an archaeological or built environment assessment within the footprint for the proposed Station J.

An additional 13 studies included the entire rights-of-way for the proposed transmission lines. Another ~~25~~ 36 cultural investigations have been conducted within 0.25 miles of the project site. These studies consisted of those for linear pipelines, fiber optics, road improvements, residential development and documentation and assessment of Central Pacific Transcontinental

Railroad, Sacramento to Nevada State Line - Historic American Engineering Record (HAER) CA-196.

No cultural resources have been previously documented within the Station J Substation project site; however, four have been documented within the proposed transmission line corridors , A total of 87 historic-age properties have been identified within 0.25 mile of the project site. The previously documented resources within the project site including transmission lines are provided in Appendix D.

Of the four resources within the project area, the Western Pacific Railway P-34-000491 (CA-SAC-000464H) bisects the proposed route of the transmission lines at one point. It has been evaluated and recommended as not significant under any criteria (National Register Criterion A (History); National Register Criterion B (People); National Register Criterion C (Design); National Register Criterion D (information potential); National Significance; and Integrity for the National Register of Historic Places.

The Central Pacific Railroad (CPRR) (P-34-000505, CA-SAC-000478H) was incorporated in 1861, and ground was broken on the First Transcontinental Railroad at Front Street and K Street in downtown Sacramento on January 8, 1863. Construction of the line progressed eastward, over the American River, to reach Roseville, California in 1864. The line reached Reno, Nevada in June 19, 1868. The final spike for the First Transcontinental Railroad was driven almost a year later on May 10, 1869, at Promontory Point, At this point the CPRR line connected with the eastern half of the transcontinental railroad built by the Union Pacific Railroad. The line linked the east and west, and encouraged settlement of the western U.S. In 1884, the Southern Pacific Railroad absorbed the CPRR, and operated the line until they merged with UPRR on September 11, 1996

Although the CPRR First Transcontinental Railroad has been extensively upgraded and rerouted since its original construction, it is designated as California Historical Landmark (Number 780) and a Historical Point of Interest, and is listed in the CRHR. It bisects the proposed transmission lines at two locations. Installation of the underground utilities will be located beneath the existing right-of-way and will not impact the route of the Union Pacific Railroad.

The Northern Electric Railroad P-34-000746 (CA-SAC-000571H) bisects the transmission right-of-way south of the American River. Elsewhere the route has been determined not eligible for inclusion the NRHP/CRHR. There is no evidence of this railway within the proposed project.

P-34-5225 is described as a Precontact, Historic Cultural Landscape and identified by the Nisenan as Hoyo Sayo/Tah Sayo (United Auburn Indian Community) and the Plains Miwok as Waka-ce/Waka-Ly (Wilton Rancheria), and roughly encompasses the Lower Sacramento River environs, from the northern end of the Natomas Basin to the southern end of Sherman Island, an area that includes a portion of the project site. The primary character-defining elements of this landscape are its waterways, tule habitat, fisheries, and other wildlife. These natural resources once served as the lifeblood of the local inhabitants. Today, relics of historical habitat still survive, with the river supporting anadromous and resident fish populations, as well as shellfish, and waterfowl. The natural levees lining the riverbanks historically were covered with riparian forests. Behind the levee/forests were flood basins, filled with tidal and non-tidal freshwater emergent wetlands, hosting vast stands of tules and large backwater lakes. The upland margins behind these wetlands/lakes, vegetated with willow thickets, were dissected by distributary networks of creeks that emptied into the flood basin sinks. Although generally defined, no specific locations were identified. There are no remnant natural landscape features, as described above, within the project site, therefore, project implementation would not result in affects to this cultural landscape.

~~No cultural resources have been previously documented within the project site; however, a total of 79 historic-age properties have been identified within 0.25 mile of the project site.~~ Other than ~~an~~ historic-era refuse deposits (P-34-001378 and P-34-002360) all of the 87 sites are built environment resources that consist of the route of the Transcontinental Railroad, the Northern Electric Railroad, the Alkali Flat Historic District, and numerous commercial and residential properties.

3.4.5 Field Inventory and Findings

Archaeology Survey

AECOM Archaeologist Diana Ewing conducted a pedestrian survey of the proposed Station J footprint utilizing approximately 15-meter transects on November 10, 2022. The area consisted of a dirt lot with some grass/weed cover and some thick vine growth near fence lines. Ground visibility was good with approximately eighty percent free of vegetation. No historic or Indigenous cultural material was observed. On December 14, 2022, an additional survey of the transmission rights-of-way ~~Alternate Routes~~ for the Station J project was conducted ~~again~~ by Diana Ewing, AECOM Archaeologist. The paved and developed routes were walked including the dirt path by the Sacramento Northern Bikeway avoiding homeless encampments and private property. No cultural material, either historical or Indigenous, was observed.

Built Environment Survey

AECOM Architectural Historian Chandra Miller, M.A. conducted a survey of the historic-age (45 years and older) built environment within the proposed SMUD Substation J project site on November 10, 2022. Ms. Miller identified two properties that resulted in the preparation of two separate Department of Parks and Recreation (DPR) 523 series forms: a warehouse at 1330 North B Street and a shop located at 1226-1270 North B Street. The two historic-age built environment properties were evaluated and found not eligible for listing in the CRHR or the Sacramento Register, and are therefore not considered historical resources for the purposes of CEQA.

3.4.6 Environmental Impacts and Mitigation Measures

Methods and Assumptions

The impact analysis for archaeological and historical resources is based on the records search results (NCIC File Number SAC-221-215 and NCIC File No 24-158), and the results of the Historical Resources Evaluation (see Appendix D). The analysis is also informed by the provisions and requirements of federal, state, and local laws and regulations that apply to cultural resources.

PRC Section 21083.2(g) defines a “unique archaeological resource” as an archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets one or more of the following CRHR-related criteria: (1) that it contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information; (2) that it has a special and particular quality, such as being the oldest of its type or the best available example of its type; or (3) that it is directly associated with a scientifically recognized important prehistoric or historic event or person. An impact on a resource that is not unique is not a significant environmental impact under CEQA (State CEQA Guidelines Section 15064.5[c][4]). If an archaeological resource qualifies as a resource under CRHR criteria, then the resource is treated as a unique archaeological resource for the purposes of CEQA.

Thresholds of Significance

Based on Appendix G of the State CEQA Guidelines, the project would result in a potentially significant impact on cultural resources if it would:

- cause a substantial adverse change in the significance of an historical resource pursuant to Section 15064.5 of the State CEQA Guidelines;
- cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5 of the State CEQA Guidelines; or
- disturb any human remains, including those interred outside of dedicated cemeteries.

Impact Analysis

Impact 3.4-1. Cause a substantial adverse change in the significance of a historical resource pursuant to § 15064.5?

No Impact. As described above, no historical resources were identified on the project site. The historic-age warehouse at 1330 B Street and shop located at 1226-1270 B Street were evaluated and found not eligible for listing in the CRHR or the Sacramento Register. As a result, they are not considered historical resources for the purposes of CEQA. Therefore, project construction and operation would have **no impact** on historical resources.

Impact 3.4-2. Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?

Less than Significant Impact with Mitigation. The records search revealed two historic-era cultural sites; the pedestrian survey did not identify cultural resources. The previously identified sites have been evaluated for the NRHP/ CRHR and do not appear to be eligible; therefore, they are not considered unique archaeological resources. However, project-related ground-disturbing activities could result in discovery or damage of yet undiscovered archaeological resources as defined in State CEQA Guidelines Section 15064.5. These activities could damage or destroy previously undiscovered archaeological resources. This would be a potentially significant impact.

> **Mitigation Measure 3.4-2: Halt ground-disturbing activity upon discovery of subsurface archaeological features.**
>
> In the event that any pre-contact or historic-era subsurface archaeological features or Tribal Cultural Resources (TCRs) or cultural deposits, including locally darkened soil

(“midden”), that could conceal cultural deposits are discovered during construction, all ground-disturbing activity within 100 feet of the resources shall be halted and a qualified professional archaeologist <u>and a Tribal Representative from the consulting Tribe</u> shall be retained to assess the significance of the find. If the find is determined to be significant by the qualified archaeologist <u>or Tribal Representative</u> (i.e., because it is determined to constitute either an historical resource, a unique archaeological resource, or a Tribal cultural resource), the archaeologist <u>or Tribal Representative</u> shall develop appropriate procedures to protect the integrity of the resource and ensure that no additional resources are affected. Procedures could include, but would not necessarily be limited to, preservation in place (which shall be the preferred manner of mitigating impacts to archaeological sites <u>and TCRs</u>), archival research, subsurface testing, or contiguous block unit excavation and data recovery (when it is the only feasible mitigation, and pursuant to a data recovery plan). If the discovery constitutes a TCR, any data recovery shall be in coordination with Tribes. Curation of resources is not recommended under Tribal protocol and reburying of resources where, or in close proximity to where they were excavated, is preferred.

<u>Note that 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.</u>

Significance after Mitigation

Implementation of Mitigation Measure 3.4-2 would reduce impacts associated with archaeological resources to a less-than-significant level because it would require the performance of professionally accepted and legally compliant procedures for the discovery of previously undocumented significant archaeological resources.

Impact 3.4-2. Disturb any human remains, including those interred outside of dedicated cemeteries?

Because Native American human remains qualify as a Tribal Cultural Resource, this impact is discussed in section 3.12 ‘Tribal Cultural Resources.’

3.5 Energy

This section provides an overview of the primary energy requirements of the project, the benefit of existing regulations that require energy-efficient construction and operation, and the potential for the proposed project to result in wasteful, inefficient, and unnecessary consumption of energy.

3.5.1 Regulatory Setting

Federal and state agencies regulate energy consumption through various policies, standards, and programs. Energy conservation is embodied in many federal, state, and local statutes and policies. At the federal level, energy standards apply to numerous products (EPA EnergyStar™ program) and transportation (e.g., fuel efficiency standards). At the state level, Title 24 of the California Code of Regulations sets forth energy standards for buildings and has enacted legislative actions requiring electricity providers to source electricity supply from renewable energy sources. At the local level, individual cities and counties establish policies in their general plans and climate action plans related to the energy efficiency of new development and the use of renewable energy sources. Some of the most relevant aspects of the regulatory framework are summarized in the material that follows.

Federal

National Energy Act of 1978

The National Energy Act of 1978, including the Public Utility Regulatory Policies Act (Public Law 95-617), Energy Tax Act (Public Law 95-318), National Energy Conservation Policy Act (Public Law 95-619), Power Plant and Industrial Fuel Use Act (Public Law 95-620), and the Natural Gas Policy Act (Public Law 95-621), is a broadscale, national energy conservation and renewable energy initiative.

The intent of the National Energy Act was to promote greater use of renewable energy, provide residential consumers with energy conservation audits to encourage slower growth of electricity demand, and promote fuel efficiency. The Public Utility Regulatory Policies Act created a market for nonutility electric power producers to permit independent power producers to connect to their lines and to pay for the electricity that was delivered.

The Energy Tax Act promoted fuel efficiency and renewable energy through taxes and tax credits. The National Energy Conservation Policy Act required utilities to provide residential consumers with energy conservation audits and other services to encourage slower growth of electricity demand.

Energy Policy Act

The Energy Policy Act of 1992 was developed to reduce dependence on imported petroleum and improve air quality by addressing all aspects of energy supply and demand, including alternative fuels, renewable energy, and energy efficiency. The Energy Policy Act of 1992 requires certain federal, state, and local government and private fleets to purchase alternative fuel vehicles. The act also includes definitions for “alternative fuels,” and includes fuels such as ethanol, natural gas, propane, hydrogen, electricity, and biodiesel.

The Energy Policy Act of 2005 set federal energy management requirements for energy-efficient product procurement, energy savings performance contracts, building performance standards, renewable energy requirements, and alternative fuel use. The Energy Policy Act of 2005 provides renewed and expanded tax credits for electricity generated by qualified energy sources, such as landfill gas; provides bond financing, tax incentives, grants, and loan guarantees for clean renewable energy and rural community electrification; and establishes a federal purchase requirement for renewable energy.

Energy Independence and Security Act of 2007

The Energy Independence and Security Act was passed to increase the production of clean, renewable fuels; increase the efficiency of products, buildings, and vehicles; improve the energy performance of the federal government; and increase U.S. energy security, develop renewable fuel production, and improve vehicle fuel economy. The Energy Independence and Security Act included the first increase in fuel economy standards for passenger cars since 1975. The act also included a new energy grant program for use by local governments in implementing energy-efficiency initiatives, as well as a variety of green building incentives and programs.

Corporate Average Fuel Economy and Greenhouse Gas Emissions Standards

The federal government is responsible for establishing regulations to improve the efficiency of motor vehicles. The National Highway Traffic Safety Administration (NHTSA) Corporate Average Fuel Economy (CAFE) standards regulate how far vehicles must travel on a gallon of fuel. NHTSA sets CAFE standards for passenger cars and light trucks (collectively, light-duty vehicles) and separately sets fuel consumption standards for medium- and heavy-duty trucks and engines (NHTSA 2023). Jointly with CAFE, NHTSA also regulates GHG emissions from vehicles of various weight classes. The CAFE and GHG emissions standards have been rolled out in multiple phases. On March 31, 2022, the NHTSA finalized the CAFE Standards for model years 2024-2026. The final rule establishes standards that would require an industry-wide fleet average of approximately 49 miles per gallon for passenger cars and light trucks in model year 2026, by increasing fuel efficiency by 8 percent annually for model years 2024 and 2025, and 10 percent annually for model year 2026. In July 2023, NHTSA announced new CAFÉ standards for passenger cars and light trucks built in model years 2027-2032, and new fuel efficiency standards for heavy-duty pickup trucks and vans built in model years 2030-2035. If finalized, the proposal would require an industry fleet-wide average of approximately 58 miles per gallon for passenger cars and light trucks in model year 2032, by increasing fuel economy by 2 percent year over year for passenger cars and by 4 percent year over year for light trucks (NHTSA 2023).

On August 9, 2011, U.S. Environmental Protection Agency (EPA) and the NHTSA announced standards to reduce GHG emissions and improve fuel efficiency for heavy-duty trucks and buses. In August 2016, the EPA and the NHTSA jointly finalized Phase 2 Heavy-Duty National Program standards to reduce GHG emissions and improve the fuel efficiency of medium- and heavy-duty vehicles for model year 2018-2027(EPA 2023a, b).The July 2023 proposed fuel efficiency standards also include standards for heavy-duty pickup trucks and vans built in model years 2030-2035. The proposal would increase fuel efficiency by 10 percent year over year.

State

Warren-Alquist Act

The 1975 Warren-Alquist Act established the California Energy Resources Conservation and Development Commission, now known as the California Energy Commission (CEC). The Act established state policy to reduce wasteful, uneconomical, and unnecessary uses of energy by employing a range of measures. The CEC is the state's primary energy policy and planning agency to regulate energy efficiency standards, tasked with reducing energy costs and environmental impacts of energy use, while ensuring a safe, resilient, and reliable supply of energy. The CEC conducts collection and analysis of energy-related data, including production, transportation, delivery, and distribution, in order to provide both historical information and forecast data on energy usage. It also develops energy policy recommendations and plans for the state and is also in charge of energy efficiency programs and the enforcement of appliance and building energy efficiency standards.

Senate Bill 1389 (2002) – Integrated Energy Report

Senate Bill (SB) 1389 (Bowen, Chapter 568, Statutes of 2002) requires the Energy Commission to prepare a biennial integrated energy report. In accordance, the CEC prepares the Integrated Energy Policy Report, which provides a cohesive approach to identifying and addressing the state's energy requirements and challenges. The report develops and implements energy plans and policies. The report contains an integrated assessment of major energy trends and issues facing 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.

Senate Bill 1078 (2002), Senate Bill 100 (2021) – California Renewables Portfolio Standard

Established in 2002 by SB 1078, California's Renewables Portfolio Standard (RPS) requires electricity providers (i.e., utilities, cooperatives, and community choice aggregators) to provide a specified minimum portion of their electricity supply from eligible renewable resources by milestone target years. Since 2002, state legislative actions have modified and accelerated the RPS several times, resulting in one of the most ambitious renewable energy standards in the country. As of December 2021, per SB 100, the RPS requires retail sellers of electricity to serve 60 percent of their electric load with renewable energy by 2030 with new interim targets of 44 percent by 2024 and 52 percent by 2027, as well as requiring that all of the state's electricity come from carbon-free resources (not only RPS-eligible ones) by 2045.

California Code of Regulations, Title 20 and Title 24

New buildings constructed in California must comply with the standards contained in CCR Title 20, Appliance Efficiency Regulations, and Title 24, California Building Standards Code.

Title 20 standards range from power plant procedures and siting to energy efficiency standards for appliances, ensuring reliable energy sources are provided and diversified through energy efficiency and renewable energy resources. California's 2009 Appliance Efficiency Regulations (20 CCR 1601–1608) were adopted by the CEC on December 3, 2008, and approved by the

California Office of Administrative Law on July 10, 2009. The regulations include standards for both federally regulated appliances and non-federally regulated appliances.

Title 24 of the California Code of Regulations contains regulations governing the design and construction of buildings in California. These standards were established in 1978 in response to a legislative mandate to reduce California's energy consumption and have been updated periodically to include new energy efficiency technologies and methods. The Building Standards were most recently revised in 2022, effective January 1, 2023. Part 6, Title 24, provides energy efficiency standards for both residential and nonresidential buildings. Part 11, Title 24, is the California Green Building Code (also known as CALGreen) was developed to enhance the design and construction of buildings and sustainable construction practices through planning and design, energy efficiency, water efficiency and conservation, material conservation and resource efficiency, and environmental air quality.

In addition, Chapter 5, Section 5.408, of the 2022 CALGreen Code requires all construction contractors to reduce construction waste and demolition debris by 65 percent. Code requirements include preparing a construction waste management plan that identifies the materials to be diverted from disposal by efficient usage, recycling, reuse on the project, or salvage for future use or sale; determining whether materials will be sorted on-site or mixed; and identifying diversion facilities where the materials collected will be taken. The code also specifies that the amount of materials diverted should be calculated by weight or volume, but not by both. In addition, the 2022 CALGreen Code requires that 100 percent of trees, stumps, rocks, and associated vegetation and soils resulting primarily from land clearing be reused or recycled.

Local

City of Sacramento Climate Action & Adaptation Plan

Sacramento's first community Climate Action Plan, adopted in 2012, was a stand-alone document that was intended to guide City efforts to reduce greenhouse gas emissions and adapt to climate change. In 2015, the Climate Action Plan was incorporated into the 2035 General Plan.

The City of Sacramento is currently updating the Sacramento Climate Action Plan and integrating an Adaptation Chapter and a Climate Change Vulnerability Assessment in tandem with the 2040 General Plan Update process (City of Sacramento 2023). The full Draft Climate Action & Adaptation Plan (CAAP) and Draft 2040 General Plan were released on April 28, 2023 for an extended public review period through August 2023. An online workshop was opened with the release of these documents and will remain open through the full public review period. It is important to note that the City's CAAP, originally adopted in 2012, has been integrated into the 2040 General Plan. The CAAP policies outline strategies that can contribute to the reduction of greenhouse gas emissions as a result of cleaner energy generation and lower consumption and adaptive measures addressing future climate impacts.

SMUD 2030 Clean Energy Vision and Zero Carbon Plan

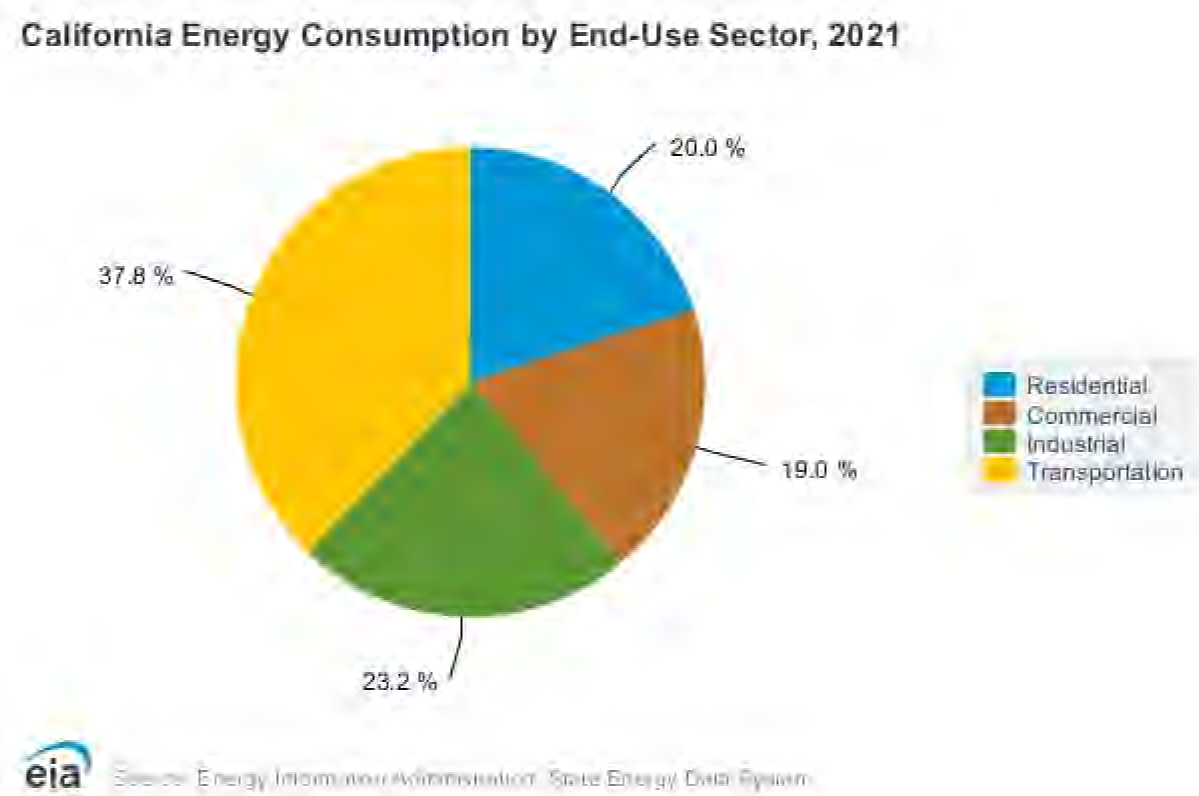
In March 2021, SMUD released its 2030 Zero Carbon Plan, the roadmap for eliminating GHG emissions from their electricity production by 2030. The 2030 Zero Carbon Plan includes four focus areas: repurposing natural gas generation, increasing investments in clean technologies (e.g., solar, wind, and geothermal and battery storage), launching pilot projects and programs for new technologies, and identifying savings and pursuing partnerships and grants that support the zero carbon goal (SMUD 2021). This 2030 Zero Carbon Plan builds on the strategies in SMUD's 2040 Clean Energy Plan, a commitment to community-wide decarbonization and continued investment in electrification, energy efficiency and distributed energy resources.

3.5.2 Environmental Setting

State Energy Resources

In 2021, California's total energy consumption was the second highest in the nation, but energy efficiency efforts have helped make California's per capita energy use less than almost all other states (EIA 2023a).

Figure 3.5-1 shows the relative end-use consumption of energy resources in California by end-use sector in 2021, as reported by U.S. Energy Information Administration (EIA) (2023b). Total consumption was approximately 7,359 trillion British thermal units (Btus), and as shown in Figure 3.5-1, the transportation sector consumes the most energy (38 percent), followed by the industrial sector (23 percent), residential sector (20 percent), and commercial sector (19 percent).



Source: EIA 2023b.

Figure 3.5-1. California Energy Consumption by End-Use Sector (2021)

Electricity

Electricity supply in California involves a complex grid of power plants and transmission lines located in the Western United States, Canada, and Mexico.

In 2023, California ranked first in the nation in producing electricity from solar and geothermal resources and second in the nation in biomass and conventional hydroelectric power generation (EIA 2023a). California is the fourth-largest electricity producer in the nation, with renewable resources, including hydropower and small-scale (less than 1-megawatt), customer-sited solar photovoltaic (P.V.) systems, having supplied more than half of California's in-state electricity generation, natural gas-fired power plants have provided 42 percent, and eight percent coming from nuclear power in 2023; less than one percent of the state's net utility-scale generation was fueled by coal, and it is all from industrial cogeneration units (EIA 2023a).

In 2022, solar energy supplied 19 percent of the state's electricity net generation, and 27 percent when small-scale solar generation is included. wind accounted for 7 percent of California's total in-state electricity generation. In 2022, the state produced 69 percent of the nation's utility-scale geothermal-sourced electricity, and geothermal power accounted for about 6 percent of California's utility-scale generation and 5% of the state's total in-state generation. Biomass fueled 2 percent of the state's total net generation in 2022.

California was also the country's largest importer of electricity, receiving between one-fifth and one-third of its electricity supply from out of state. In 2021, renewable energy generated 31 percent of California's imported electricity and large hydroelectric sources supplied another 16 percent. Nuclear energy accounted for 11 percent of imports and natural gas and coal each supplied almost 10 percent. Another 23 percent of imports came from unspecified sources. The percent of imported electricity supply from coal-fired generation is anticipated to go to zero by the year 2026 due to the California Emissions Performance Standards established in 2006 by SB 268 limiting California utilities' new long-term financial investments in baseload generation with high-carbon dioxide emissions (e.g., coal-fired generation) (EIA 2023a).

Petroleum

California is the second-largest consumer of petroleum products and accounts for eight percent of the nation's total petroleum consumption. Of the petroleum consumed in California, 83 percent is used in the transportation sector. A minimal amount of petroleum is used for electricity generation. California requires that all motorists use, at a minimum, a specific blend of motor gasoline called CaRFG (California Reformulated Gasoline) as part of an overall program to reduce emissions from motor vehicles (CaRFG regulations, California Code of Regulations, Title 23, Sections 2250-2273.5).

Natural Gas

California accounts for less than one percent of total U.S. natural gas reserves and production. The state is second in natural gas end-use consumption in the country; approximately 33 percent of which serves the state's industrial sector and 31 percent of which serves the state's electric power sector (EIA 2023a).

Regional Energy Resources

All electric services in the project area are provided by SMUD. SMUD has served Sacramento County since 1946 and is the nation's sixth-largest community-owned electric utility (SMUD 2021). SMUD delivers electricity to an approximately 900 square mile area within Sacramento County, serving 1.5 million people. SMUD's primary power sources for its general mix include natural gas (51 percent), large hydroelectric (17 percent), and renewables (biomass, geothermal, solar, wind, eligible hydroelectric) (30 percent) (CEC 2022). SMUD also offers clean energy programs to its customers, such as Greenergy which sources energy from renewable sources, including wind and solar.

3.5.3 Environmental Impacts and Mitigation Measures

Methods and Assumptions

Project construction activities would consume energy in the form of diesel and gasoline fuels to power construction-related equipment and on-road vehicles. Project operational energy requirements would be limited to transportation energy for routine operations and maintenance personnel traveling to and from the site.

Construction and operational energy use (i.e., fuel consumption due to equipment and vehicle use) was estimated using the CalEEMod carbon dioxide (CO_2) emissions calculations for the proposed construction activities and application of the U.S. Energy Information Administration's CO_2 emissions coefficients (EIA 2022) to estimate fuel consumption for construction activities. For additional details related to the methodology used to estimate the construction-related CO_2 emissions, refer to Section 3.2, "Air Quality," and Section 3.7, "Greenhouse Gas Emissions." See Appendix B for a detailed summary of energy calculations and assumptions.

Thresholds of Significance

Based on Appendix G of the State CEQA Guidelines, implementation of the proposed project would result in a potentially significant impact on energy if it would result in any of the conditions listed below.

- Wasteful, inefficient, or unnecessary consumption of energy resources during proposed Project construction or operations.

- Conflict with or obstruction of a state or local plan for renewable energy or energy efficiency.

Appendix F of the CEQA Guidelines provides guidance on determining whether a project would result in wasteful, inefficient, or unnecessary consumption of energy resources. As stated in Appendix F, the goal of conserving energy implies the wise and efficient use of energy, and the means of achieving this goal includes the following:

- Decreasing overall per capita energy consumption.
- Decreasing reliance on fossil fuels such as coal, natural gas, and oil.
- Increasing reliance on renewable energy sources.

Impact Analysis

Impact 3.5-1. Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?

Construction

Less-than-Significant Impact. Table 3.5-1 summarizes the total diesel and gasoline fuel consumptions required during the project's construction activities.

Table 3.5-1. Construction-Related Energy Consumption

Fuel Type	Total Energy Requirement (gallons)
Diesel	141,162 ~~132,948~~
Gasoline	24,116 ~~16,160~~

Source: Estimated by AECOM in 2024. See Appendix B for detailed modeling assumptions, outputs, and results.

Based on the anticipated phasing of the project construction activities, the anticipated equipment and construction work staff, the temporary nature of construction, and the project type, the project would not include unusual characteristics that would necessitate the use of construction equipment that is less energy-efficient than the equipment used at comparable construction sites. The energy needs of the project during construction would also not require additional capacity or increase peak or base period demands for electricity or other forms of energy.

In addition, construction contractors are required, in accordance with Mitigation Measure 3.2-1 (see Section 3.2.3) and the CARB Airborne Toxic Control Measure for Diesel-Fueled Commercial Motor Vehicle Idling, to minimize the idling time of construction equipment by shutting equipment off when it is not in use or reducing the idling time to 5 minutes. Per Mitigation Measure 3.2-1, construction contractors would also be required to maintain and properly tune all construction equipment in accordance with the manufacturer's specifications. These required practices would limit wasteful and unnecessary energy consumption.

After construction, operation of the project would not require substantial energy use; energy use would be limited to fuel consumption associated with the occasional maintenance and inspection activities. As detailed in Chapter 2, "Project Description," the substation would be operated remotely and continuously. It is anticipated that routine maintenance and inspections would require up to 2 roundtrips per day. These maintenance trips would be essential to ensuring that Station J is functional to supply energy to customers within the SMUD service area. Furthermore, the objective of the project is to provide safe and reliable electrical service to existing and proposed development in the downtown Sacramento area. Therefore, the project would not result in an inefficient, wasteful, or unnecessary consumption of energy resources. This impact would be **less than significant**.

Impact 3.5-2. Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

No Impact. The project is not using land that was otherwise slated for renewable energy production and does not otherwise conflict with any state or local renewable energy plans. For example, as required and applicable, any construction and demolition waste, including vegetation and soils from land clearing, would be appropriately reused, recycled, or diverted from disposal, as required by the 2022 CALGreen code, or whatever the most current code is at the time of construction. The purpose of the project is to meet SMUD's goals of ensuring electrical service reliability in the downtown 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**.

3.6 Geology, Soils, and Paleontological Resources

This section describes the existing geologic conditions of the project site, including geology, seismicity, and soils, and analyzes the potential hazards and impacts associated with project implementation. This section also provides a brief description of laws, regulations, and ordinances pertinent to the proposed project. The analysis describes seismic hazards, soil conditions, and other geotechnical considerations that could affect people and structures.

This section also provides an analysis of potential impacts on unique paleontological resources (e.g., vertebrate fossils, invertebrate fossils, plant fossils, and trace fossils). A paleontological sensitivity assessment, based on the geologic units at the project site and the results of paleontological literature reviews and online searches of the University of California Museum of Paleontology (UCMP) database and the Paleobiology Database (PBDB), is included in this section. Paleontological sensitivity rankings were assigned to geologic units using Society of Vertebrate Paleontology (SVP) criteria (SVP 2010). The analysis describes potential impacts on unique paleontological resources and recommends mitigation measures.

Note that this section remains the same as that originally provided in the Draft EIR. No additional environmental analysis was required to address project description revisions.

3.6.1 Regulatory Setting

Federal

Earthquake Hazards Reduction Act, Public Law 95–124

In October 1977, the U.S. Congress passed the Earthquake Hazards Reduction Act to reduce the risks to life and property from future earthquakes in the United States through the establishment and maintenance of an effective earthquake hazards reduction program. To accomplish this goal, the act established the National Earthquake Hazards Reduction Program. This program was substantially amended in November 1990 by the National Earthquake Hazards Reduction Program Act, which refined the description of agency responsibilities, program goals, and objectives.

The mission of the National Earthquake Hazards Reduction Program includes improved understanding, characterization, and prediction of hazards and vulnerabilities; improved building codes and land use practices; risk reduction through post-earthquake investigations and education; development and improvement of design and construction techniques; improved mitigation capacity; and accelerated application of research results. The National Earthquake Hazards Reduction Program Act designates the Federal Emergency Management Agency as the lead agency of the program and assigns several planning, coordinating, and reporting responsibilities. Other National Earthquake Hazards Reduction Program Act agencies include the National Institute of Standards and Technology, National Science Foundation, and U.S. Geological Survey (USGS).

State

Alquist-Priolo Earthquake Fault Zoning Act, California Public Resources Code Sections 2621–2630

The Alquist-Priolo Earthquake Fault Zoning Act (Alquist-Priolo Act) (California Public Resources Code Sections 2621–2630) was passed in 1972 to reduce the hazard of surface faulting on structures designed for human occupancy. The main purpose of the law is to prevent the construction of structures used for human occupancy on the surface trace of active faults. The law addresses only the hazard of surface fault rupture and is not directed toward other earthquake hazards. The Alquist-Priolo Act requires the State Geologist to establish regulatory zones known as Earthquake Fault Zones around the surface traces of active faults and to issue appropriate maps. Earthquake Fault Zones are generally one-quarter mile wide or less (i.e., approximately 650 feet on both sides of the actual fault trace). The maps are distributed to all affected cities, counties, and state agencies for their use in planning efforts. Before a project can be permitted in a designated Alquist-Priolo Earthquake Fault Zone, cities and counties must require a geologic investigation to demonstrate that proposed structures would not be constructed across active faults.

Seismic Hazards Mapping Act, California Public Resources Code Sections 2690–2699.6

The Seismic Hazards Mapping Act of 1990 (California Public Resources Code Sections 2690–2699.6) addresses earthquake hazards from non-surface fault rupture, including liquefaction and seismically induced landslides. The act established a mapping program for areas that have the potential for liquefaction, landslide, strong ground shaking, or other earthquake and geologic hazards. The act also specifies that respective cities or counties with jurisdiction over a project may withhold development permits until geologic or soils investigations are conducted for specific sites and mitigation measures are incorporated into plans to reduce hazards associated with seismicity and unstable soils.

National Pollutant Discharge Elimination System

In California, the State Water Resources Control Board (SWRCB) administers regulations promulgated by the U.S. Environmental Protection Agency (55 Code of Federal Regulations 47990) implementing the Clean Water Act (CWA) requiring the permitting of stormwater-generated pollution under the National Pollutant Discharge Elimination System (NPDES). In turn, the SWRCB's jurisdiction is administered through nine regional water quality control boards. Under these federal regulations, an operator must obtain a general permit through the NPDES Stormwater Program for all construction activities with ground disturbance of 1 acre or more. SWRCB's statewide stormwater general permit for construction activity (Order WQ 2022-0057-DWQ) requires the implementation of best management practices (BMPs) to reduce sedimentation into surface waters and to control erosion. One element of compliance with the NPDES permit is preparation of a Storm Water Pollution Prevention Plan (SWPPP), which includes implementation of BMPs to address control of water pollution, including sediment, in runoff during construction. (See Section 3.9 of this Draft EIR, "Hydrology and Water Quality," for more information about the NPDES permit program and SWPPPs.)

California Building Standards Code, California Code of Regulations Title 24

The California Building Standards Commission is responsible for coordinating, managing, adopting, and approving building codes in California. The State of California provides minimum standards for building design through the California Building Standards Code (CBC) (California Code of Regulations [CCR] Title 24). Where no other building codes apply, Chapter 29 of the CBC also regulates excavation, foundations, and retaining walls. The CBC applies to building design and construction in the state and is based on the Federal Uniform Building Code used widely throughout the country (generally adopted on a state-by-state or district-by-district basis). The CBC has been modified for California conditions with numerous more detailed or more stringent regulations.

The state earthquake protection law (California Health and Safety Code Section 19100 et seq.) requires that structures be designed to resist stresses produced by lateral forces caused by wind and earthquakes. The CBC requires an evaluation of seismic design that falls into Categories A–F (where F requires the most earthquake-resistant design) for structures designed for a project site. The CBC philosophy focuses on "collapse prevention," meaning that structures are designed for prevention of collapse for the maximum level of ground shaking that could reasonably be expected to occur at a site. Chapter 16 of the CBC specifies exactly how each seismic design category is to be determined on a site-specific basis through the site-specific soil characteristics and proximity to potential seismic hazards.

Chapter 18 of the CBC regulates the excavation of foundations and retaining walls. This chapter regulates the preparation of a preliminary soil report, engineering geologic report, geotechnical report, and supplemental ground-response report. Chapter 18 also regulates analysis of expansive soils and the determination of the depth to groundwater table. For Seismic Design Category C, Chapter 18 requires analysis of slope instability, liquefaction, and surface rupture attributable to faulting or lateral spreading. For Seismic Design Categories D, E, and F, Chapter 18 requires these same analyses plus an evaluation of lateral pressures on basement and retaining walls, liquefaction and soil strength loss, and lateral movement or reduction in foundation soil-bearing capacity. It also requires mitigation measures to be considered in structural design. Mitigation measures may include ground stabilization, selection of appropriate foundation type and depths, selection of appropriate structural systems to accommodate anticipated displacements, or any combination of these measures. The potential for liquefaction and soil strength loss must be evaluated for site-specific peak ground acceleration magnitudes and source characteristics consistent with the design earthquake ground motions. Peak ground acceleration must be determined from a site-specific study, the contents of which are specified in CBC Chapter 18.

Finally, Appendix Chapter J of the CBC regulates grading activities, including drainage and erosion control and construction on unstable soils, such as expansive soils and areas subject to liquefaction.

Public Resources Code Section 5097.5 – Paleontological Resources

California Public Resources Code (PRC) Section 5097.5 prohibits excavation or removal of any "…vertebrate paleontological site, including fossilized footprints…or any other archaeological, paleontological, or historical feature situated on public lands, except with the express permission of the public agency having jurisdiction over such lands." Section 5097.5 also states that any unauthorized disturbance or removal of archaeological, historical, or paleontological materials or sites located on public lands is a misdemeanor. Public lands are defined to include lands owned by or under the jurisdiction of the state or any city, county, district, authority, or public corporation, or any agency thereof. SMUD is a public corporation.

Local

City of Sacramento General Plan

The *City of Sacramento 2035 General Plan* (2015) includes the following policies that apply to the proposed project.

Environmental Constraints Element

- **Policy EC 1.1.1**: Review Standards. The City shall regularly review and enforce all seismic and geologic safety standards and require the use of best management practices (BMPs) in site design and building construction methods.
- **Policy EC 1.1.2**: Geotechnical Investigations. The City shall require geotechnical investigations to determine the potential for ground rupture, ground-shaking, and liquefaction due to seismic events, as well as expansive soils and subsidence problems on sites where these hazards are potentially present.

Environmental Resources Element

- **Policy ER 1.1.7**: Construction Site Impacts. The City shall minimize disturbances of natural water bodies and natural drainage systems caused by development, implement measures to protect areas from erosion and sediment loss, and continue to require construction contractors to comply with the City's erosion and sediment control ordinance and stormwater management and discharge control ordinance.

City of Sacramento Grading, Erosion, and Sediment Control Ordinance

The City's Grading, Erosion, and Sediment Control Ordinance (Title 15, City of Sacramento Municipal Code, Chapter 15.88) requires a grading permit and includes specific standards for project construction related to erosion control. The Grading Permit application must include grading plans and specifications prepared by a civil engineer demonstrating that the project meets the following City requirements:

1. Mitigation of adverse environmental impacts as disclosed by any environmental document findings.
2. Improvement of any existing grading to comply with the standards of this article.
3. Requirements for fencing or other protection of grading that would otherwise be hazardous.
4. Requirements for dust, erosion, sediment and noise control, and hours of operation and season of work, weather conditions, sequence of work, access roads, and haul routes.

5. Requirements for safeguarding watercourses, whether natural or manmade, from excessive deposition of sediment or debris. In no case shall deposition of sediment or debris cause an exceedance of applicable water quality standards;

6. Assurance that the land area in which grading is proposed and for which habitable structures are proposed is not subject to hazards of land slippage or significant settlement or erosion and that the hazards of flooding can be eliminated or adequately reduced;

7. Requirements for safeguarding existing water wells.

Final grading plans must include the information required in the City's *Manual for Grading and Erosion and Sediment Control*, Chapter 2, Section 2 (City of Sacramento 2013).

An Erosion and Sediment Control (ESC) Plan must be prepared for all projects to demonstrate control of surface runoff and erosion and retention of sediment on a particular site and prevent pollution of site runoff during the period beginning when any preconstruction- or construction-related grading or soil storage first occurs, until all final improvements and permanent structures are complete. The ESC Plan must be prepared and submitted concurrently with the final grading plan. The ESC Plan must contain a statement of the purpose of the proposed Best Management Practices (BMPs) to be used and must include all of the information required and contained in the City's *Manual for Grading and Erosion and Sediment Control*, Chapter 2, Section 3 (City of Sacramento 2013).

A Post-Construction Erosion and Sediment Control (PC) Plan must be prepared for all projects to demonstrate control of surface runoff and erosion and retention of sediment on a particular site after all planned final improvements and/or structures have been installed or erected. The PC Plan must be prepared and submitted concurrently with the final grading plan. The PC Plan must contain a statement of the purpose of the proposed best management practices to be used to secure the project after completion and must include all of the information required and contained in the City's *Manual for Grading and Erosion and Sediment Control*, Chapter 2, Section 4 (City of Sacramento 2013).

A winterization certification must be submitted to the City no later than September 15th for all projects where any construction will occur between October 1st and April 30th. The winterization certification must include a written statement or descriptive plan sheet from the owner certifying that the project under construction is prepared for an event which will stop construction, such as rain or snow, that all ESC plan best management practices are in place and operating correctly, that housekeeping practices are maintained and that the site can be left or abandoned safely for an extended period of time during the rainy season without causing any erosion and sediment control problems.

During construction, all project applicants are also required to comply with the City's Stormwater Management and Discharge Control Ordinance (discussed below).

Although the substation component of this project is exempt from this ordinance pursuant to Government Code § 53091(d), SMUD and its contractors will comply with the substance of these standards both during and following the completion of project construction.

City of Sacramento Stormwater Management and Discharge Control Ordinance

The City's Stormwater Management and Discharge Control Ordinance (Title 13, City of Sacramento Municipal Code, Chapter 13.16) contains regulations to control non-stormwater discharges to the stormwater conveyance system by eliminating discharges to the stormwater conveyance system from spills, dumping, or disposal of materials other than stormwater; and by reducing pollutants in urban stormwater discharges to the maximum extent practicable.

The City and Sacramento County are co-permittees under the operational NPDES Permit No. CA5082597 (see Section 3.9, "Hydrology and Water Quality," of this EIR for additional discussion). The permit requires regular compliance inspections and enforcement at certain commercial and industrial facilities as defined by the permit.

Businesses that include maintenance, storage, manufacturing, assembly, equipment operations, vehicle loading or fueling, and cleanup procedures that are carried out partially or wholly outdoors are required to develop and implement an operational Stormwater Pollution and Prevention Plan, which must include an employee training program.

Business operators must: (1) comply with BMP guidelines or pollution control requirements established or imposed by the City; and (2) properly operate and maintain any treatment control device or other measures utilized on the premises to prevent or reduce, to the maximum extent practicable, stormwater pollution or contamination, and illegal discharges or non-stormwater discharges.

Discharges of pumped groundwater that are not subject to an NPDES permit may be permitted to discharge to the stormwater conveyance system upon written approval from the City and in compliance with conditions of approval set forth by the City.

Although the substation component of this project is exempt from this ordinance pursuant to Government Code § 53091(d), SMUD and its contractors will comply with the substance of these standards both during and following the completion of project construction.

3.6.2 Environmental Setting

Geology

Physiographic Setting

The proposed substation site and the transmission line alignments are situated in the center of the Sacramento Valley within the Great Valley geomorphic province of California. The Sacramento Valley forms the northern third of the Great Valley, which includes approximately 33,000 square miles and fills a northwest-trending structural depression bounded on the west by the Great Valley Fault Zone and the Coast Ranges, and on the east by the Sierra Nevada and the Foothills Fault Zone.

The Great Valley is composed of thousands of feet of sedimentary deposits that have undergone periods of subsidence and uplift over millions of years. During the Jurassic and Cretaceous Periods of the Mesozoic era (206–144 million years Before Present [B.P.]), the Great Valley existed in the form of an ancient ocean. By the end of the Mesozoic era (144 million years B.P.), the northern portion of the Great Valley began to fill with sediment as tectonic forces caused uplift of the basin. By the time of the Miocene epoch, approximately 24 million years B.P., sediments deposited in the Sacramento Valley were mostly of terrestrial origin.

Most of the surface of the Great Valley is covered with Holocene (11,700 years B.P. to present day) and Pleistocene (11,700–2.3 million years B.P.) alluvium. This alluvium is composed of sediments from the Sierra Nevada to the east and the Coast Ranges to the west that were carried by water and deposited on the valley floor. Siltstone, claystone, and sandstone are the primary types of sedimentary deposits. Older Tertiary deposits underlie the Quaternary alluvium.

The depositional history of the Sacramento Valley during the late Quaternary included alternating periods of deposition followed by periods of subsidence and erosion. Thus, during the Pleistocene, the Sacramento Valley experienced stages of wetlands and floodplain creation as tidewaters rose in the valley from the west, areas of erosion when tidewaters receded, and alluvial fan deposition from streams emanating from the adjacent mountain ranges. More recent Holocene-age deposits are derived from modern day erosional forces. Regional geologic mapping prepared by Gutierrez (2011) and Helley and Harwood (1985) indicates that the proposed substation site and transmission line alignments are underlain by Holocene-age alluvium. This alluvium is likely derived from erosion in the Sierra Nevada to the east, which has been transported and deposited by the American River.

The proposed substation site and the transmission line alignments have been graded flat. Elevations at the proposed substation site range from 25 to 27 feet above mean sea level.

Regional Seismicity and Fault Zones

The future probability of both surface fault rupture and strong seismic ground shaking generally depends on the age of a fault's last known movement. Active faults are the most likely to result in surface fault rupture and strong seismic ground shaking. Faults are classified as active if they have exhibited evidence of movement during the Holocene epoch (i.e., 11,700 years B.P. to Present Day). The location of major faults in California has been mapped by the California Geological Survey (CGS) (Jennings and Bryant 2010).

Potential seismic hazards resulting from a nearby moderate to major earthquake generally can be classified as primary and secondary. The primary effect is fault ground rupture, also called surface faulting. Common secondary seismic hazards include ground shaking, liquefaction, and landslides. Each of these potential hazards is discussed below.

Surface Fault Rupture

Surface rupture is an actual cracking or breaking of the ground along a fault during an earthquake. Structures built over an active fault can be torn apart if the ground ruptures. Surface ground rupture along faults is generally limited to a linear zone a few yards wide. The Alquist-Priolo Act (see Section 3.6.1, "Regulatory Setting," above) was created to prohibit the location of structures designed for human occupancy across the traces of active faults, thereby reducing the loss of life and property from an earthquake. Active faults in California that are at high risk for surface fault rupture have been classified by the CGS and mapped under the Alquist-Priolo Earthquake Fault Zoning Act. Before a project that crosses an Alquist-Priolo Fault Zone can be permitted, site-specific studies are required to determine the amount of risk, and to ensure appropriate design that is protective of human life and reduces property loss. No known faults are located within or adjacent to the proposed substation site or the transmission line alignments (Jennings and Bryant 2010), and the sites are not located within or near an Alquist-Priolo Earthquake Fault Zone (CGS 2022).

Ground Shaking

Seismic ground shaking refers to ground motion that results from the release of stored energy during an earthquake. Strong seismic ground shaking can result in damage to or collapse of buildings, bridges, and other structures. The intensity of ground shaking depends on the distance from the earthquake epicenter to the site, the magnitude of the earthquake, and site-specific geologic conditions.

With the exception of the Cleveland Hills fault located near Lake Oroville, the Sacramento Valley has not been seismically active in the last 11,700 years (Holocene time) (Jennings and Bryant 2010). Faults with known or estimated activity during the Holocene are generally located in the San Francisco Bay Area and the Coast Ranges, approximately 42 miles to the southwest.

Calculations of earthquake shaking hazard for California are part of a cooperative project between the USGS and CGS, and are part of the National Seismic Hazard Mapping program. Earthquake shaking hazards are calculated by projecting earthquake rates based on earthquake history and fault slip rates, the same data used for calculating earthquake probabilities. Fault parameters are developed for these calculations by the Working Group on California Earthquake Probabilities. A probabilistic seismic hazard map is a map that shows the hazard from earthquakes that geologists and seismologists agree could occur in California. It is "probabilistic" in the sense that the analysis takes into consideration the uncertainties in the size and location of earthquakes and the resulting ground motions that can affect a particular site. The 2016 map showing the probabilistic *Earthquake Shaking Potential for California* (digitized by the California Department of Conservation [DOC]) indicates that the project site is in an area of very low potential shaking hazard intensity (Branum, et al. 2016). Regions in the low intensity categories are distant from known, active faults and are projected to experience lower levels of shaking less frequently.

Landslides

The proposed substation site and the transmission line alignments are characterized by nearly flat topography, and there are no off-site areas of steep slopes that could affect the proposed project. There are no landslide hazards.

Liquefaction and Lateral Spreading

Liquefaction is a process by which water-saturated materials lose strength and may fail during strong ground shaking, when granular materials are transformed from a solid state into a liquefied state as a result of increased pore-water pressure. Structures on soil that undergoes liquefaction may settle or suffer major structural damage. Liquefaction is most likely to occur in low-lying areas where the substrate consists of poorly consolidated to unconsolidated water-saturated sediments, recent Holocene-age sediments, or deposits of artificial fill. Additional factors that determine the liquefaction potential are the distance to an active seismic source and the depth to groundwater.

Lateral spreading occurs when there is a horizontal displacement of soil that “rides” on top of liquefied soil either down a hill or towards a free face such as a river or creek bank. Lateral spreading generally occurs on mild slopes of 0.3 to 5.0 percent that are underlain by loose soil deposits and a shallow water table.

The native materials at the proposed substation site and the transmission line alignments are mapped as unconsolidated Holocene-age alluvium (Gutierrez 2011), which is less stable as compared to consolidated sediments associated with deposits that are of Pleistocene age or older. As discussed in further detail below, artificial fill is present near the surface in some areas at the proposed substation site. However, active seismic sources are a long distance away, and the depth to groundwater is approximately 17 to 23 feet below the ground surface (bgs) (Brown and Caldwell 2023). A site-specific geotechnical report would be required to determine the liquefaction potential. Because the site is nearly level and there are no creek or stream banks, there would be no potential for lateral spreading.

Soils

A review of U.S. National Resources Conservation Service (NRCS 2022) soil survey data indicates that near-surface soils at the proposed substation site and most of the proposed transmission line alignments consist of the following:

- Orthents-Urban land complex, 0 to 2 percent slopes (approximately 7 acres); and
- Urban land (approximately 3.3 acres).

Soil properties influence the development of building sites, including the engineering design, construction techniques, and site maintenance. Orthents are soils derived from mine spoils or earthen fill. Urban land soils have been altered or obscured by urban works and structures; buildings and pavement cover more than 85 percent of the surface of this soil type. Orthents and Urban Land are not rated by the NRCS in terms of soil characteristics.

Approximately 1 mile of the transmission line alignment from SMUD’s North City site to North 18th Street consists of Columbia sandy loam soil, drained, 0 to 2 percent slopes. This portion of the transmission line would be installed overhead; however, new steel pole structures with concrete foundations would be required. This soil type is rated by the NRCS with a low expansion potential, a low water erosion hazard, and a low stormwater runoff potential (NRCS 2022).

As part of a Phase II Environmental Site Assessment performed at the proposed substation site in 2023, nine soil borings to a maximum depth of 10 feet bgs, three groundwater borings to a maximum depth of 30 feet bgs, and two soil vapor borings to a maximum depth of 15 feet bgs were obtained. Based on the results of these borings, the subsurface lithology at the proposed substation site generally consists of light to dark brown silty sand with intermittent silt and clay (Brown and Caldwell 2023). A thin (approximately 1-foot layer) of black, organic fine-grained material was encountered between 4 and 6 feet bgs in three borings. Minor amounts of foreign fill material that included bricks, cement, and plastic was discovered in four of the borings in near-surface soils. Palm tree roots, bark, and silt saturated with a black sticky substance appearing to be motor oil was discovered in one boring from 3 to 6 feet bgs (Brown and Caldwell 2023).

Paleontological Resources

A review of available geologic mapping indicates that the surficial deposits within the project site consist of Holocene-age alluvium composed of poorly to moderately sorted sand, gravel, and silt (Gutierrez 2011). While not mapped at the surface of the project area, Holocene-age alluvium in the region is often underlain at depth by Pleistocene-age sedimentary deposits, such as the Riverbank Formation, which is mapped to the east of the project site (Gutierrez 2011).

Holocene-age deposits, such as the Holocene-age alluvium mapped within the project site, typically do not contain fossils at or near the surface due to their relatively young age. Holocene-age remains may occasionally be of scientific interest; however, such discoveries are relatively rare and are addressed on a case-by-case basis. Reworked or transported fossils may also be present; however, these types of fossils are out of context and are generally not considered to be significant (i.e., unique). Therefore, the Holocene-age alluvium at the surface of the project site is assigned a low sensitivity for paleontological resources.

Scientifically significant (i.e., unique) fossils are known from Pleistocene-age sedimentary deposits, similar to those that are likely present in the subsurface of the project site at unknown depth. The literature and online database reviews did not identify any known paleontological resources within the project site; however, fossils were documented from elsewhere in the project vicinity. The types of fossils that have been recovered from Pleistocene-age deposits in Sacramento County include large taxa such as mammoths, camels, ground sloths, horses, bison, deer, dire wolves, and coyotes, as well as small taxa such as rodents, moles, rabbits, snakes, amphibians, birds, fish, and invertebrates (UCMP 2023; PBDB 2023; Jefferson 1991). Pleistocene-age deposits, if encountered in the subsurface of the site, are assigned a high sensitivity for paleontological resources.

3.6.3 Environmental Impacts and Mitigation Measures

Methods and Assumptions

The geology and soils analysis relied on published seismic and geologic data and maps; NRCS soil survey data; and a *Phase II Environmental Site Assessment* (Brown and Caldwell 2023) performed for a portion of the proposed substation site. The evaluation of potential paleontological resource impacts is based on reviews of published geologic maps and paleontological literature, and the results of online searches of the UCMP database and the PBDB.

Thresholds of Significance

Based on Appendix G of the CEQA Guidelines, the proposed project would have a significant impact related to geology, soils, or paleontological resources if it would:

- directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:
    - rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault;

  - strong seismic ground shaking;
  - seismic-related ground failure, including liquefaction; or
  - landslides;
- result in substantial soil erosion or the loss of topsoil;
- 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; or
- be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994, as updated), creating substantial risks to life or property;
- 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; or
- directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.

Issues Not Discussed Further

Expose People or Structures to Hazards from Surface Fault Rupture—The proposed substation site and the transmission line alignments are not located within or near an Alquist-Priolo Earthquake Fault Zone, and the nearest known active faults are approximately 42 miles to the southwest in the Coast Ranges (CGS 2022, Jennings and Bryant 2010). Therefore, no impacts related to loss, injury, or death involving rupture of a known earthquake fault would occur, and this issue is not addressed further in this EIR.

Expose People or Structures to Hazards from Landslides—The proposed substation site and the transmission line alignments are characterized by nearly flat topography, and there are no off-site areas of steep slopes that could affect the project site. Therefore, landslides would not represent a hazard and there would be no impact. This issue is not addressed further in this EIR.

Soil Suitability for Septic Systems— Development of the proposed project does not require or include installation of permanent restroom facilities, since the substation would remain unoccupied except for periodic visits by SMUD personnel and maintenance employees to conduct routine checks and perform maintenance activities. Temporary, portable restrooms would be provided for construction workers during the construction phase. Thus, there would be no impact related to soil suitability for septic tanks or alternative wastewater disposal systems, and this issue is not addressed further in this EIR.

Impact Analysis

Impact 3.6-1. Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:

Strong seismic ground shaking?

Less-Than-Significant Impact. The Sacramento Valley has historically experienced very low levels of seismic activity. Known active faults that pose a hazard for strong seismic ground shaking are located approximately 42 miles southwest within the Coast Ranges. As discussed above in the Environmental Setting, the project site is located in an area where the potential for strong seismic ground shaking is very low, although it may still occur during the lifespan of the proposed project (Branum, et al. 2016).

Development of the proposed project is required by law to comply with seismic safety standards of the CBC (CCR Title 24). The CBC philosophy focuses on "collapse prevention," meaning that structures are designed for prevention of collapse for the maximum level of ground shaking that could reasonably be expected to occur at a site. Based on the seismic design category, the CBC requires an analysis of slope instability, liquefaction, and surface rupture attributable to faulting or lateral spreading, plus an evaluation of lateral pressures on basement and retaining walls, liquefaction and soil strength loss, and lateral movement or reduction in foundation soil-bearing capacity. It also requires that measures to reduce damage from seismic effects be incorporated in structural design. Measures may include ground stabilization, selection of appropriate foundation type and depths, selection of appropriate structural systems to accommodate anticipated displacements, or any combination of these measures.

SMUD is required by law to design and construct all buildings in compliance with the CBC (CCR Title 24). A site-specific geotechnical report would be prepared, which would include soil borings, as required by the CBC. The results of the geotechnical report would be used to inform the project design and engineering to comply with CBC provisions that are specifically designed to prevent the collapse of structures during seismic ground shaking. Therefore, impacts from strong seismic ground shaking would be **less than significant**.

Seismic-related ground failure, including liquefaction?

Less-Than-Significant Impact. As described above in Section 3.6.1, "Environmental Setting," the native materials at the proposed substation site and the transmission line alignments are mapped as unconsolidated Holocene-age alluvium (Gutierrez 2011), which is less stable as compared to consolidated sediments associated with deposits that are of Pleistocene age or older. The results of soil borings at the proposed substation site found that artificial fill is present near the surface in some areas at the proposed substation site. However, active seismic sources are a long distance away, and the depth to groundwater is approximately 17 to 23 feet bgs (Brown and Caldwell 2023). A site-specific geotechnical investigation is necessary in order to determine the liquefaction potential.

SMUD is required by law to design and construct all buildings in compliance with the CBC (CCR Title 24). A site-specific geotechnical report would be prepared, which would include a liquefaction analysis as required by the CBC. The results of the geotechnical report would be used to inform the project design and engineering to comply with CBC provisions that are specifically designed to prevent the collapse of structures from liquefaction. Therefore, impacts from liquefaction would be **less than significant**.

Impact 3.6-2. Result in substantial soil erosion or the loss of topsoil?

Less-Than-Significant Impact. The soil characteristics of the Orthents-Urban land complex and Urban land soils at the proposed substation site and the transmission line alignments are not rated by the NRCS and are therefore unknown, including the erosion potential. The approximately 1-mile-long portion of the transmission line alignment from SMUD's North City site to North 18th Street is composed of Columbia sandy loam soil, which the NRCS has rated with a low water erosion potential and a low stormwater runoff potential (NRCS 2022).

The construction process associated with development of the proposed project would require a variety of earthmoving activities, including drilling, excavating, trenching, grading, and compacting. For purposes of this analysis, grading activities are assumed to occur over the entire substantial site and throughout the transmission line alignments. Construction-related earthmoving activities would expose soils to potential erosion from wind and water. Earthmoving activities during the winter months would expose soils to rain events, which could mobilize loose soil and result in soil erosion. Subsequent soil transport during storm events could result in sedimentation within and downstream of the project site. Furthermore, earthmoving activities during the summer months could result in wind erosion.

Project applicants are required by law to comply with the provisions of the SWRCB's *National Pollutant Discharge Elimination System (NPDES) General Permit for Stormwater Discharges Associated With Construction and Land Disturbance Activities* (Order WQ 2022-0057-DWQ) (Construction General Permit) (SWRCB 2022). The Construction General Permit regulates stormwater discharges for construction activities under the CWA and applies to all land-disturbing construction activities that would disturb 1 acre or more. Project applicants must submit a notice of intent to discharge to the Central Valley RWQCB and must prepare and implement a SWPPP that includes site-specific BMPs to minimize construction-related soil erosion. Construction techniques that could be implemented to reduce the potential for stormwater runoff and sediment transport may include minimizing site disturbance, controlling water flow over the construction site, stabilizing bare soil, and ensuring proper site cleanup. BMPs that could be implemented to reduce erosion may include silt fences, staked straw bales/wattles, silt/sediment basins and traps, geofabric, trench plugs, terraces, water bars, soil stabilizers and re-seeding and mulching to revegetate disturbed areas. All NPDES permits also have inspection, monitoring, and reporting requirements.

Although the substation component of this project is exempt from local building ordinances pursuant to Government Code § 53091(d), SMUD would comply with the substance of the City's Grading, Erosion, and Sediment Control Ordinance, and would outline proposed erosion and sediment control measures. Typical BMPs may include stormwater detention basins, wattles, silt fencing, and covering or watering of stockpiled soils to reduce wind erosion.

Compliance with existing laws, regulations, and ordinances ensures that project-related short-term, temporary construction impacts from soil erosion would be **less than significant**. (Operational impacts related to sedimentation and water quality are evaluated in Section 3.9, "Hydrology and Water Quality.")

Impact 3.6-3. Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?

Less-Than-Significant Impact. Soil borings at the proposed substation site indicated the presence of materials such as bricks, plastic, and organics in the near-surface layers. Deeper soils are composed of native sand, silt, and clay derived from Holocene-age alluvium. Because the project site soils are not rated by the NRCS and a geotechnical report has not yet been prepared, the potential for unstable conditions at the proposed substation site and the transmission line alignments is presently unknown.

However, SMUD is required by law to design and construct all buildings in compliance with the CBC (CCR Title 24). A site-specific geotechnical report would be prepared, which would include an analysis of soil conditions related to stability as required by the CBC. The results of the geotechnical report would be used to inform the project design and engineering to comply with CBC provisions that are specifically designed to prevent the collapse of structures from geologic conditions such as unstable soils. Therefore, impacts from unstable soils would be **less than significant**.

Impact 3.6-4. Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?

Less-Than-Significant Impact. Expansive soils are composed largely of clays, which greatly increase in volume when saturated with water and shrink when dried (referred to as “shrink-swell” potential). Soils with a moderate to high expansion potential can result in cracked foundations, structural distortions, and warping of doors and windows. Underground pipelines can also be damaged.

The approximately 1-mile-long portion of the proposed transmission line alignment from SMUD’s North City site to North 18th Street would be installed in Columbia sandy loam soil, which the NRCS has rated with a low expansion potential (NRCS 2022). Because the soils at the proposed substation site and the remaining transmission line alignments are not rated by the NRCS (2022) and a geotechnical report has not yet been prepared, the potential for expansive soils at the proposed substation site and most of the transmission line alignments is presently unknown.

However, SMUD is required by law to design and construct all buildings in compliance with the CBC (CCR Title 24). A site-specific geotechnical report would be prepared, which would include an analysis of soil conditions related to stability as required by the CBC. The results of the geotechnical report would be used to inform the project design and engineering to comply with CBC provisions that are specifically designed to prevent damage from geologic conditions such as expansive soils. Therefore, impacts from expansive soils would be **less than significant**.

Impact 3.6-5. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Less-Than-Significant Impact With Mitigation. Based on the results of the literature and online database reviews, there are no known paleontological resources within the project site boundaries, and the Holocene-age alluvium at the surface of the site has a low sensitivity for paleontological resources due to its relatively young age. However, the Holocene-age deposits are underlain by high sensitivity Pleistocene-age sedimentary deposits, which have produced significant (i.e., unique) paleontological resources in Sacramento County.

Excavation associated with project construction would reach a depth of 15 to 30 feet bgs, and the piles needed for seismic stability/support could reach a depth of approximately 55 feet bgs or more, pending geotechnical study results. Therefore, excavation for the proposed project has the potential to result in a potentially significant impact on paleontological resources if Pleistocene-age sedimentary deposits are encountered in the subsurface during construction. Implementation of Mitigation Measure 3.6-5 would reduce potential impacts to a unique paleontological resource or site or unique geologic feature to **less than significant with mitigation**.

Mitigation Measures

Mitigation Measure 3.6-5

If construction or other project personnel discover any potential fossils during construction, regardless of the depth of work or location, work at the discovery location shall cease in a 50-foot radius of the discovery and SMUD shall be notified. SMUD shall retain a qualified paleontologist to evaluate the resource. If the discovery is identified as potentially significant, additional work, such as recovery, laboratory preparation, fossil identification, curation, and reporting, may be necessary. Recovered paleontological resources should be deposited in an appropriate fossil repository to be determined by SMUD in consultation with the qualified paleontologist.

Significance after Mitigation

Mitigation Measures 3.6-5 would reduce potential impacts related to paleontological resources to a less-than-significant level by implementing measures to train project personnel regarding the potential for discoveries; treat unanticipated paleontological resource discoveries; and identify, treat, and avoid adverse impacts on such resources during construction activities within Pleistocene-age deposits through construction monitoring, fossil recovery, laboratory procedures, and curation.

3.7 Greenhouse Gas Emissions

This section provides background information about greenhouse gas (GHG) emissions and climate change and evaluates the project's GHG emissions impacts during construction and operational activities. Emissions of GHGs have the potential to adversely affect the environment because such emissions contribute cumulatively to global climate change. Cumulative emissions from many projects and activities affect global GHG concentrations and the climate system. Unlike criteria air pollutants and toxic air contaminants that tend to have more localized or regional impacts, GHG emissions tend to disperse more broadly and are more of a global concern because of their relatively longer atmospheric lifetimes compared to air pollutant emissions. Therefore, the total amount and types of GHG emissions, regardless of their location, have the most significant effect on climate change globally.

3.7.1 Regulatory Setting

While most do not directly inform project implementation or impact determination, federal, state, regional, and local GHG-related plans, policies, and regulations are helpful for understanding the overall context for GHG emissions impacts and strategies to reduce GHG emissions.

Federal

The U.S. Environmental Protection Agency (EPA) is the federal agency responsible for implementing the federal Clean Air Act (CAA). On April 2, 2007, the U.S. Supreme Court held that the EPA must consider regulation of motor vehicle GHG emissions. In *Massachusetts v. Environmental Protection Agency et al.,* 12 states and cities (including California) along with several environmental organizations sued to require EPA to regulate GHGs as pollutants under the CAA (127 S. Ct. 1438 [2007]). The Supreme Court ruled that GHGs fit within the CAA's definition of a pollutant and that EPA had the authority to regulate GHGs.

U.S. Environmental Protection Agency "Endangerment" and "Cause or Contribute" Findings

On December 7, 2009, the EPA Administrator signed two distinct findings regarding GHGs under Section 202(a) of the CAA:

- *Endangerment Finding:* The current and projected concentrations of the six key GHGs—carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6)—in the atmosphere threaten the public health and welfare of current and future generations.

- *Cause or Contribute Finding:* The combined emissions of these GHGs from new motor vehicles and new motor vehicle engines contribute to the GHG pollution that threatens public health and welfare.

Mandatory Greenhouse Gas Reporting Rule

On September 22, 2009, EPA released its final Greenhouse Gas Reporting Rule (Reporting Rule). The Reporting Rule is a response to the fiscal year 2008 Consolidated Appropriations Act (House of Representatives Bill 2764; Public Law 110-161), which required EPA to develop

"…mandatory reporting of GHGs above appropriate thresholds in all sectors of the economy…." The Reporting Rule applies to most entities that emit 25,000 metric tons of carbon dioxide equivalents (MT CO_2e) or more per year. Since 2010, facility owners have been required to submit an annual GHG emissions report with detailed calculations of the facility's GHG emissions. The Reporting Rule also mandates compliance with recordkeeping and administrative requirements to enable EPA to verify annual GHG emissions reports.

Council on Environmental Quality Guidance

The Council on Environmental Quality (CEQ) is a division of the Executive Office of the President that coordinates federal environmental efforts, policies, and initiatives to protect public health and the environment. CEQ released its initial draft National Environmental Policy Act (NEPA) guidance in 2010 for Federal agencies' consideration of the effects of GHG emissions and climate in their evaluation of proposals for Federal actions under NEPA. Several iterative reviews and revisions to this guidance have taken place since the release of this initial guidance. Pursuant to President Biden's Executive Order 13990 *"Protecting Public Health and the Environment and Restoring Science to Tackle the Climate Crisis,"* CEQ was tasked with reviewing, for revision and update, the 2016 *Final Guidance for Federal Departments and Agencies on Consideration of Greenhouse Gas Emissions and the Effects of Climate Change in National Environmental Policy Act Reviews*. On January 9, 2023, CEQ issued an interim NEPA Guidance on Consideration of GHG Emissions and Climate Change to assist agencies in analyzing GHG and climate change effects.

State

The legal framework for GHG emission reductions has come about through Executive Orders, legislation, and regulations. The major components of California's climate change initiatives are outlined below.

Executive Order S-3-05

Executive Order S-3-05, issued in recognition of California's vulnerability to the effects of climate change, set forth the following target dates by which statewide GHG emissions would be progressively reduced: by 2010, reduce GHG emissions to 2000 levels; by 2020, reduce GHG emissions to 1990 levels; and by 2050, reduce GHG emissions to 80 percent below 1990 levels.

Assembly Bill 1279

For the post-2030 period, EO-B-55-18 established a statewide goal of achieving carbon neutrality as soon as possible, but no later than 2045, and achieving and maintaining net negative emissions thereafter. Signed September 16, 2022, AB 1279, the California Climate Crisis Act, codified EO B-55-18. This bill declares the policy of the state both to achieve net zero GHG emissions as soon as possible, but no later than 2045, and achieve and maintain net negative GHG emissions thereafter. It as requires that by 2045 statewide anthropogenic GHG emissions are reduced to at least 85 percent below the 1990 levels.

Assembly Bill 32 and the State Climate Change Scoping Plan

In 2006, California passed the California Global Warming Solutions Act of 2006 (AB 32; California Health and Safety Code Division 25.5, Sections 38500, et seq.). AB 32 further details and puts into law the mid-term GHG reduction target established in Executive Order S-3-05: reduce GHG emissions below 1990 levels by 2020. AB 32 also identifies CARB as the State agency responsible for the design and implementation of emissions limits, regulations, and other measures to meet the target.

In December 2008, CARB adopted the Climate Change Scoping Plan (Scoping Plan), which contains the main strategies California will implement to achieve the required GHG reductions required by AB 32 (CARB 2008). The Scoping Plan also includes CARB-recommended GHG reductions for each emissions sector of California's GHG inventory. CARB acknowledges that land use planning decisions will have large impacts on the GHG emissions that will result from the transportation, housing, industry, forestry, water, agriculture, electricity, and natural gas emissions sectors. The Scoping Plan details the regulations, alternative compliance mechanisms, voluntary actions and incentives, etc. proposed to meet the target emission reduction levels.

The Scoping Plan differentiates between "capped" and "uncapped" strategies. Capped strategies are subject to the proposed Cap-and-Trade Program, discussed further below. The Scoping Plan states that the inclusion of these emissions within the Cap-and-Trade Program will help ensure that the emission targets in AB 32 are met despite some degree of uncertainty in the emission reduction estimates for any individual measure. Uncapped strategies that will not be subject to the Cap-and-Trade Program are provided as a margin of safety by accounting for additional GHG emission reductions (CARB 2008).

CARB is required to update the Scoping Plan at least once every five years to evaluate progress and develop future inventories that may guide this process. CARB approved the first update to the Climate Change Scoping Plan: Building on the Framework in June 2014 (CARB 2014). The Scoping Plan Update includes a status of the 2008 Scoping Plan measures and other federal, State, and local efforts to reduce GHG emissions in California, and potential actions to further reduce GHG emissions by 2020. The Scoping Plan Update determined that the State was on schedule to achieve the 2020 target (i.e., 1990 levels by 2020). However, an accelerated reduction in GHG emissions is required to achieve the S-3-05 2050 reduction target of 80 percent below 1990 levels by 2050.

The statewide measures adopted under the direction of AB 32, and as outlined in the Scoping Plan, would reduce GHG emissions associated with existing development, as well as new development. CARB has now adopted the 2022 Scoping Plan Update, which evaluates progress toward the 2030 target, as well as examining scenarios that could achieve carbon neutrality by 2045 or sooner (CARB 2022a). The 2022 Scoping Plan Update focuses on actions needed to achieve carbon neutrality by assessing paths for clean technology, energy deployment, natural and working lands, and others, and is designed to meet the State's long-term climate objectives.

Executive Order B-30-15

In April 2015, Governor Edmund Brown issued an executive order establishing a statewide GHG reduction goal of 40 percent below 1990 levels by 2030. The emission reduction target acts as an interim goal between the AB 32 goal (i.e., achieve 1990 emission levels by 2020) and Governor Brown's Executive Order S-3-05 goal of reducing statewide emissions 80 percent below 1990 levels by 2050. In addition, the executive order aligns California's 2030 GHG reduction goal with the European Union's reduction target (i.e., 40 percent below 1990 levels by 2030) that was adopted in October 2014.

Senate Bill 32

Approval of SB 32 in September 2016 extended the provisions of AB 32 from 2020 to 2030 with a new target of 40 percent below 1990 levels by 2030. The companion bill, AB 197, adds two non-voting members to the CARB, creates the Joint Legislative Committee on Climate Change Policies consisting of at least three Senators and three Assembly members, requires additional annual reporting of emissions, and requires Scoping Plan updates to include alternative compliance mechanisms for each statewide reduction measure, along with market-based compliance mechanisms and potential incentives.

Assembly Bill 1279

In September 2022, Governor Gavin Newsom signed AB 1279, the California Climate Crisis Act, which requires the state to achieve net zero GHG emissions as soon as possible, but no later than 2045, and achieve and maintain net negative GHG emissions thereafter. AB 1279 also requires California to reduce statewide GHG emissions by 85 percent compared to 1990 levels and directs CARB to work with relevant state agencies to achieve these goals.

Senate Bill 1078 (2002), Senate Bill 100 (2021) – California Renewables Portfolio Standard

Established in 2002 by SB 1078, California's Renewables Portfolio Standard (RPS) requires electricity providers (i.e., utilities, cooperatives, and community choice aggregators) to provide a specified minimum portion of their electricity supply from eligible renewable resources by milestone target years. Since 2002, state legislative actions have modified and accelerated the RPS several times, resulting in one of the most ambitious renewable energy standards in the country. As of December 2021, per SB 100, the RPS requires retail sellers of electricity to serve 60 percent of their electric load with renewable energy by 2030 with new interim targets of 44 percent by 2024 and 52 percent by 2027, as well as requiring that all of the state's electricity come from carbon-free resources (not only RPS-eligible ones) by 2045.

Mandatory Reporting of Greenhouse Gas Emissions (17 CCR §95100 to 95158)

This rule applies to entities of certain sources categories, including suppliers of transportation fuels and generators of electricity; however, no specific reporting requirements apply to electric power generation from solar resources.

California Code of Regulations Title 17 CCR §95350 et seq.

Adopted in 2010, the purpose of this regulation is to achieve GHG emissions reductions by reducing SF_6 emissions from electric power system gas-insulated equipment. Owners of such equipment must not exceed maximum allowable annual emissions rates, which as of 2020 and each year thereafter is 1.0 percent. Owners of such equipment must annually report SF_6 emissions, determine the emission rate relative to the SF_6 capacity of the equipment, provide a complete inventory of all gas-insulated equipment and their SF_6 capacities, provide a SF_6 gas container inventory, and keep all information current for CARB enforcement staff inspection and verification. Existing and new electric transmission facilities would be subject to this regulation.

In September 2020, CARB adopted Resolution 20-28, to amend the current regulation. Under this resolution, CARB developed a timeline for phasing out SF_6 equipment in California in stages between 2025 and 2033, and will be creating incentives to encourage owners to replace SF_6 equipment. The Resolution was approved by the California Office of Administrative Law and filed with the Secretary of State on December 30, 2021, and the amendments became effective January 1, 2022.

Local

City of Sacramento Climate Action & Adaptation Plan

Sacramento's first community Climate Action Plan, adopted in 2012, was a stand-alone document that was intended to guide City efforts to reduce GHG emissions and adapt to climate change. In 2015, the CAP was incorporated into the 2035 General Plan.

The City of Sacramento is currently updating the Sacramento Climate Action Plan and integrating an Adaptation Chapter and a Climate Change Vulnerability Assessment in tandem with the 2040 General Plan Update process. The full Draft Climate Action & Adaptation Plan (CAAP) and Draft 2040 General Plan were released on April 28, 2023 for an extended public review period through August 2023. An online workshop was opened with the release of these documents and will remain open through the full public review period.

The Draft CAAP details specific measures to be implemented in the City by 2030 to reduce GHG emissions from communitywide activities and government operations (City of Sacramento 2023). It also includes an adaptation plan that recommends actions to reduce the community's vulnerability to the anticipated impacts of climate change. The Draft CAAP has been developed in response to mitigation measures contained in the City's General Plan and State legislation, including AB 32, AB 1279, SB 32, and SB 743, as well as Executive Orders S-3-05 and B-55-18. The strategies and measures in the Draft CAAP complement a wide range of policies, plans, and programs adopted by the City, State, and regional agencies to protect communities from hazards and activities contributing to GHG emissions.

City of Sacramento General Plan

The following select policies from the "Environmental Resources" Element of the Sacramento 2035 General Plan (City of Sacramento 2015) are related to GHG emissions.

Goal: Improve the health and sustainability of the community through improved regional air quality and reduced greenhouse gas emissions that contribute to climate change.

ER 6.1.5. Community Greenhouse Gas Reductions. The City shall reduce community GHG emissions by 15 percent below 2005 baseline levels by 2020, and strive to reduce community emissions by 49 percent and 83 percent by 2035 and 2050, respectively. (RDR)

ER 6.1.7. Greenhouse Gas Reduction in New Development. The City shall reduce greenhouse gas emissions from new development by discouraging auto-dependent sprawl and dependence on the private automobile; promoting water conservation and recycling; promoting development that is compact, mixed use, pedestrian friendly, and transit oriented; promoting energy-efficient building design and site planning; improving the jobs/housing ratio in each community; and other methods of reducing emissions. (RDR)

ER 6.1.10. Coordination with SMAQMD. The City shall coordinate with SMAQMD to ensure projects incorporate feasible mitigation measures to reduce GHG emissions and air pollution if not already provided for through project design. (RDR/IGC)

ER 6.1.13 Zero-Emission and Low-Emission Vehicle Use. The City shall encourage the use of zero-emission vehicles, low-emission vehicles, bicycles and other non-motorized vehicles, and car-sharing programs by requiring sufficient and convenient infrastructure and parking facilities in residential developments and employment centers to accommodate these vehicles. (RDR/PI)

SMUD 2030 Zero Carbon Plan

In March 2021, SMUD released its 2030 Zero Carbon Plan, the roadmap for eliminating GHG emissions from their electricity production by 2030. The 2030 Zero Carbon Plan includes four focus areas: repurposing natural gas generation, increasing investments in clean technologies (e.g., solar, wind, and geothermal and battery storage), launching pilot projects and programs for new technologies, and identifying savings and pursuing partnerships and grants that support the zero carbon goal (SMUD 2021).

3.7.2 Environmental Setting

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 earth's atmosphere from space. The earth's surface absorbs a portion of the radiation, and a smaller portion of this radiation is reflected back toward space through the atmosphere; however, infrared radiation is selectively absorbed by GHGs in the atmosphere. As a result, infrared radiation released from the earth 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. Anthropogenic (e.g., human caused) emissions of GHGs lead to atmospheric levels in excess of natural ambient concentrations and have the potential to adversely affect the environment because such emissions contribute, on a cumulative basis, to global climate change.

The Intergovernmental Panel on Climate Change (IPCC) concluded that variations in natural phenomena, such as solar radiation and volcanoes, produced most of the warming of the earth from pre-industrial times to 1950. Some variations in natural phenomena also had a small cooling effect. From 1950 to the present, increasing GHG concentrations resulting from human activity, such as fossil fuel burning and deforestation, have been responsible for most of the observed temperature increase (IPCC 2023).

Global surface temperature was 1.09 degrees Celsius higher in 2011 through 2020 than 1850 through 1900. Global surface temperature has increased faster since 1970 than in any other 50-year period over at least the last 2,000 years (IPCC 2023). During the same period when increased global warming has occurred, many other changes have occurred in other natural systems. Sea levels have risen; precipitation patterns throughout the world have shifted, with some areas becoming wetter and others drier; snowlines have increased elevation, resulting in changes to the snowpack, runoff, and water storage; and numerous other conditions have been observed. Although it is difficult to prove a definitive cause-and-effect relationship between global warming and other observed changes to natural systems, there is a high level of confidence in the scientific community that these changes are a direct result of increased global temperatures caused by the increased presence of GHGs in the atmosphere.

Principal Greenhouse Gases and Sources

GHGs are present in the atmosphere naturally, are released by natural and anthropogenic (human-caused) sources, and are formed from secondary reactions taking place in the atmosphere. Natural sources of GHGs include the respiration of humans, animals, and plants; decomposition of organic matter; volcanic activity; and evaporation from the oceans. Anthropogenic sources include the combustion of fossil fuels by stationary and mobile sources, waste treatment, and agricultural processes. The following are the principal GHG pollutants that contribute to climate change and their primary emission sources:

- Carbon Dioxide (CO_2): Natural sources of CO_2 include decomposition of dead organic matter; respiration of bacteria, plants, animals, and fungus; and evaporation from oceans. Anthropogenic (human) sources include burning of coal, oil, natural gas, and wood.
- Methane (CH_4): CH_4 is emitted during the production and transport of coal, natural gas, and oil. CH_4 emissions also result from livestock and other agricultural practices and by the decay of organic waste in municipal solid waste landfills.
- Nitrous Oxide (N_2O): N_2O is produced by both natural and human-related sources. Primary human-related sources of N_2O are agricultural soil management, sewage treatment, mobile and stationary combustion of fossil fuel, adipic acid production, and nitric acid production. N_2O is also produced naturally from a wide variety of biological sources in soil and water, particularly microbial action in wet tropical forests.
- Fluorinated gases: These gases are typically emitted in smaller quantities, but because they are potent GHGs, they are sometimes called High Global Warming Potential (High GWP) gases. GHGs are not monitored at local air pollution monitoring stations and do not represent a direct impact to human health. Rather, GHGs generated locally contribute to global concentrations of GHGs, which result in changes to the climate and environment.

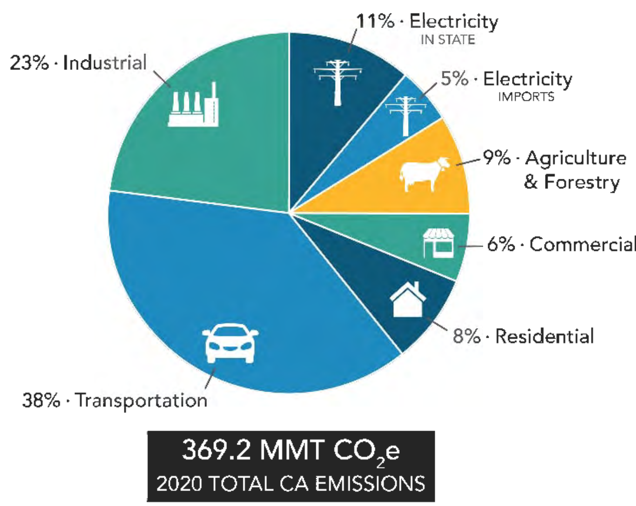
Global Warming Potential

Global Warming Potential (GWP) is a concept developed to compare the ability of each GHG to trap heat in the atmosphere relative to another gas. The GWP of a GHG is based on several factors, including the relative effectiveness of a gas to absorb infrared radiation and the length of time the gas remains in the atmosphere ("atmospheric lifetime"). The GWP of each gas is measured relative to CO_2. Therefore, CO_2 has a GWP of 1. GHGs with lower emissions rates than CO_2 may still contribute to climate change because they are more effective at absorbing outgoing infrared radiation than CO_2 (i.e., high GWP). GHG emissions are typically measured in terms of metric tons of carbon dioxide equivalent (CO_2e) and are often expressed in MT CO_2e.

Greenhouse Gas Emissions Inventories

California Greenhouse Gas Emissions Inventory and Trends

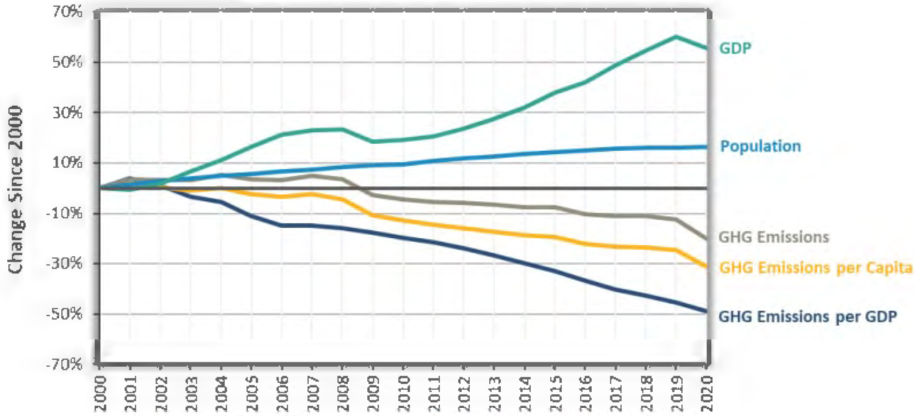
The CARB prepares an annual inventory of statewide GHG emissions. GHGs are typically analyzed by sector, a term that refers to the type of activity. As shown in Figure 3.7-1, 369.2 million MT CO_2e were generated in 2020. Combustion of fossil fuel in the transportation sector was the single largest source of California's GHG emissions in 2020, accounting for 38 percent of total GHG emissions. Transportation was followed by industry, which accounted for 23 percent, and then the electric power sector (including in-state and out-of-state sources), which accounted for 11 percent of total GHG emissions (CARB 2022b).



Source: CARB 2022a

Figure 3.7-1: 2020 California Greenhouse Gas Emissions Inventory by Sector

California has implemented several programs and regulatory measures to reduce GHG emissions. Figure 3.7-2 demonstrates California's progress in reducing statewide GHG emissions. Since 2007, California's GHG emissions have been declining, even as population and gross domestic product have increased. Per-capita GHG emissions in 2020 were 33 percent lower than the peak per-capita GHG emissions recorded in 2001. Similarly, GHG emissions per million dollars of gross domestic product have decreased by 49 percent since the peak in 2001.



Metric	Associated 2020 Value
GDP	2.7 trillion (2012 $)
Population	39.5 million
GHG Emissions	369.2 $MMTCO_2e$
GHG Emissions per Capita	9.3 metric tons CO_2e per person
GHG Emissions per GDP	139 metric tons CO_2e per million $

Source: CARB 2022b

Figure 3.7-2: Trends in California Greenhouse Gas Emissions (Years 2000 to 2020)

Local Greenhouse Gas Emissions Inventory

As described above, under "City of Sacramento Climate Action Plan," the City of Sacramento is currently updating the Sacramento Climate Action Plan and integrating an Adaptation Chapter and a Climate Change Vulnerability Assessment. The Draft CAAP includes a baseline and forecasted GHG emissions inventory for the community and government operations. The total community GHG emissions in the 2016 baseline year were 3,424,729 MT CO_2e; while the forecasted GHG emissions for 2030 are 2,703,565 MT CO_2e (City of Sacramento 2023).

3.7.3 Environmental Impacts and Mitigation Measures

Methods and Assumptions

The project's short-term construction activities and long-term operations would generate GHG emissions associated with off-road and on-road exhaust. Construction-related and operational mobile sources (both off-road and on-road) of GHG emissions were modeled using the same methods and assumptions described in Chapter 3.2 "Air Quality," of this Recirculated EIR. ~~In addition to those sources identified in the air quality analysis that would contribute to regional criteria air pollutant emissions, operations would include the use of sulfure hexafluoride (SF_6), which is a high-GWP GHG. Potential MT CO_2e of SF_6 that could result from annual project operations were estimated based on the estimated SF_6 requirement, a maximum fugitive emissions rate of one percent based on current California Code of Regulations Title 17 CCR §95350 et seq., and a GWP of 23,900 for SF_6 compared to CO_2.~~ Due to regulatory requirements (California Code of Regulations Title 17, Section 95350) to phase out the use of sulfur hexafluoride (SF_6), which is a high-GWP GHG, SF_6 is not proposed to be used as an insulating gas for operations. Appendix B provides detailed calculation inputs, assumptions, and outputs related to construction and operation emissions estimates.

Thresholds of Significance

GHG emissions have the potential to adversely affect the environment because such emissions contribute cumulatively to global climate change. It is unlikely that a single project will contribute significantly to climate change, but cumulative emissions from many projects could affect global GHG concentrations and the global climate system. Therefore, impacts are analyzed within the cumulative context of the project's potential contribution to the significant impact of global climate change.

Based on Appendix G of the CEQA Guidelines, implementation of the proposed project would result in a cumulatively considerable contribution to the significant impact of climate change if it would:

- generate GHG 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 GHGs.

Section 15064.4(b) of the CEQA Statute and Guidelines, concerning determining the significance of impacts from GHG emissions, states that a lead agency may consider the following three factors in assessing the significance of impacts from GHG emissions.

- The extent to which the project may increase or reduce GHG emissions as compared to the existing environmental setting.
- Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project.
- The extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions. Such regulations or requirements must be adopted by the relevant public agency through a public review process and must include specific requirements that reduce or mitigate the project's incremental contribution of GHG emissions. If there is substantial evidence that the possible effects of a particular project are still cumulatively considerable notwithstanding compliance with the adopted regulations or requirements, an EIR must be prepared for the project.

As stated in Appendix G of the CEQA Guidelines, the significance criteria established by the applicable air quality management district may be relied on to make the above determinations.

On April 23, 2020, the SMAQMD Board of Directors adopted the Greenhouse Gas Thresholds for Sacramento County, which established thresholds of significance for GHG emissions designed to analyze a project's compliance with applicable State laws, including AB 32 and SB 32 (SMAQMD 2020). In developing the thresholds, the SMAQMD developed the thresholds for Sacramento County based on determining Sacramento County's share of statewide 2030 GHG emissions by sector, determining the share of Sacramento County 2030 emissions from existing development versus new development, allocating 2030 GHG emissions from new development among land uses and place types to set numeric thresholds, and setting best management practices by land use and place types that achieve those numeric thresholds. Specifically, the

SMAQMD adopted a mass emissions based threshold for the construction phase of all project types of 1,100 MT CO_2e per year (SMAQMD 2021).

For operational emissions, the SMAQMD has developed an operational screening table, which shows sizes of development projects at which 1,100 MT CO_2e would not be exceeded, including implementation of Tier 1 Best Management Practices[1]. Tier 1 Best Management Practices requires that projects be designed and constructed without natural gas infrastructure (BMP 1), and that projects meet the current CALGreen Tier 2 standards and that all electric vehicle (EV) capable spaces shall instead be EV ready. Since the proposed project's land use development type is not included in the SMAQMD operational screening level table, this analysis estimated the project's annual GHG emissions in the first year of operation.

Impact Analysis

Impact 3.7-1. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

Less-than-Significant Impact. GHG emissions would be generated as a result of short-term project construction and long-term operational activities.

Construction

During construction of the project, the use of off-road equipment and on-site vehicles, as well as vehicle trips (e.g., construction worker commutes and haul truck trips) to and from the site, would generate GHG emissions. As shown in Table 3.7-1, the maximum annual GHG emissions would be 1,091 ~~1,079~~ MT CO_2e, which would not exceed the SMAQMD construction-related threshold of 1,100 MT CO_2e per year. This impact with respect to construction emissions would be less than cumulatively considerable; therefore, construction-related GHG impacts would be **less than significant**.

Table 3.7-1. Construction-Related GHG Emissions

Year/Description	MT CO_2e
2027	1,091 ~~1079~~
2028	537 ~~399~~
Maximum Annual GHG Emissions	1,091 ~~1079~~
SMAQMD Threshold	1,100
Exceeds Thresholds?	No

Notes: CO_2e = carbon dioxide equivalents; MT = metric tons; SMAQMD = Sacramento Metropolitan Air Quality Management District.

Operation

Operational GHG emissions would result from periodic inspection and maintenance activities, which would generate ~~GHG~~ emissions associated with staff vehicle trips and area source

[1] 1,100 MT CO_2e/year is the current SMAQMD de minimis threshold. By complying with Best Management Practices 1 and 2 (removing natural gas, EV-ready), small projects would reduce emissions to be consistent with State goals (SMAQMD 2020).

emissions from landscape equipment.~~ and potential leakage of SF_6 from substation equipment, such as circuit breakers. The equipment at the proposed substation would be subject to the SF_6 regulation for reduction of SF_6 emissions from electricity transmission and distribution equipment (California Code of Regulations Title 17, Section 95350). The regulation requires reductions in SF_6 loss rates, and was approved by CARB in 2007 as part of AB 32.~~

Table 3.7-2 shows that emissions from operational activities associated with the project would generate up to ~~3,110~~ 4.11 metric tons of CO_2e per year.

Table 3.7-2. Proposed Project's Greenhouse Gas Emissions Summary

Description	MT CO_2e
Mobile	~~35.5~~ 3.91
Area ~~(includes SF6 leakage)~~	~~11.3~~ 0.2
Total Annual Operational GHG Emissions	**~~46.8~~ 4.11**
SMAQMD Threshold	1,100
Exceeds Thresholds?	No

Notes: CO_2e = carbon dioxide equivalents; MT = metric tons; SMAQMD = Sacramento Metropolitan Air Quality Management District.
~~The SF_6 emissions reduction regulation sets a maximum leakage rate for each year, with stricter requirements for future years. The GHG emissions presented for the proposed substation represent compliance with the year 2023 gas loss rate of 1 percent.~~

These operational GHG emissions would be less than the SMAQMD de minimis screening level and the project's operational emissions would not be considered to have a cumulatively considerable contribution to the significant impact of global climate change. In addition, the project would not include any natural gas infrastructure and would, therefore, be consistent with SMAQMD Best Management Practice 1. Furthermore, the project is not a typical land use development that would be required to comply with CALGreen requirements, such as commercial and residential land use developments, and SMAQMD Best Management Practice 2 would not be applicable. This impact for operations would be less than cumulatively considerable; therefore, operational GHG impacts would be **less than significant**.

Impact 3.7-2. Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

Less-than-Significant Impact. As described in Section 3.7.1, Regulatory Setting, in response to AB 32 and SB 32, CARB has approved a series of Climate Change Scoping Plans and Scoping Plan updates. While the Scoping Plan updates do include measures that would indirectly address GHG emissions associated with construction and operational activities, including the phasing in of cleaner technology for diesel engine fleets (including construction equipment) and a Low Carbon Fuel Standard, successful implementation of these measures primarily depends on the development of laws and policies at the state level. Thus, none of these statewide plans or policies constitutes a regulation to adopt or implement a regional or local plan for reduction or mitigation of GHG emissions. It is therefore assumed that any requirements or policies formulated under the mandates of AB 32, SB 32, or AB 1279 that would be applicable to the project, either directly or indirectly, would be implemented consistent with statewide policies and laws.

In addition, as shown in Table 3.7-1 and Table 3.7-2, the project would not generate construction-related or operational GHG emissions that would have a cumulatively significant impact on the environment. <u>Consistent with state programs and policies to reduce high GWP emissions sources, the project would not include SF_6 as an insulating gas.</u> ~~The SF_6 emissions associated with the substation are covered under the SF_6 regulation for reduction of emissions from electricity transmission and distribution equipment (California Code of Regulations Title 17, Section 95350), and would be required to be monitored and reported.~~ The SF_6 regulation (<u>California Code of Regulations Title 17, Section 95350</u>) was originally enacted as an early action measure pursuant to AB 32 to reduce SF_6 emissions from the electricity sector's transmission and distribution system. ~~Therefore, the SF_6-containing equipment at the substation would be subject to the Regulation for Reducing Sulfur Hexafluoride Emissions from Gas Insulated Switchgear, which would minimize potential leakage of SF_6, as well as the subsequent amendments in Resolution 20-28 to phase-out SF_6-containing equipment.~~

Furthermore, the objectives of the project are to provide safe and reliable electrical service to existing and proposed development in the downtown Sacramento area and meet SMUD's goals of ensuring electrical service reliability in the downtown Sacramento area by 2030. These objectives are consistent with the goals and commitments in SMUD's ~~20230~~ <u>2030</u> Zero Carbon Plan, which states that service reliability is one of the fundamental elements in their vision to deliver clean energy.

Therefore, the project would be consistent with applicable plans, policies, and regulations adopted for the purpose of reducing GHG emissions. This impact would be **less than significant**.

3.8 Hazards and Hazardous Materials

This section summarizes the regulatory setting and describes the environmental setting and impacts related to hazards and hazardous materials. For the purposes of this analysis, the term "hazards" refers to risk associated with such issues as fires, explosions, and exposure to hazardous materials. Impacts related to hazardous emissions (i.e., toxic air contaminants) are evaluated in Section 3.2, "Air Quality," and potential effects of hazardous materials on water quality are evaluated in Section 3.9, "Hydrology and Water Quality."

3.8.1 Regulatory Setting

Federal

Management of Hazardous Materials

Various federal laws address the proper handling, use, storage, and disposal of hazardous materials, and require implementation of cleanup measures if such materials are accidentally released. The U.S. Environmental Protection Agency (EPA) is the agency primarily responsible for enforcing and implementing federal laws and regulations regarding hazardous materials. Applicable federal regulations pertaining to hazardous materials are contained mainly in Code of Federal Regulations (CFR) Titles 29, 40, and 49. Hazardous materials, as defined in the code, are listed in 49 CFR 172.101. Management of hazardous materials is governed by the following laws, among others:

- The Toxic Substances Control Act of 1976 (TSCA) (Title 15, Section 2601 and following sections of the U.S. Code [15 USC 2601 et seq.]) gave the EPA the ability to track thousands of industrial chemicals being produced in or imported into the United States. The TSCA regulates the manufacturing, inventory, and disposition of industrial chemicals, including hazardous materials, to protect the environment and human health from potential risks.

- The Resource Conservation and Recovery Act of 1976 (RCRA) (42 USC 6901 et seq.), together with the TSCA, established an all-encompassing federal regulatory program for hazardous substances that is administered by EPA. Under RCRA, EPA regulates the generation, transportation, treatment, storage, and disposal of hazardous substances. RCRA focuses on active and future facilities; it does not address abandoned or historical sites, which are managed under the Comprehensive Environmental Response, Compensation, and Liability Act.

- The Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (also called the Superfund Act or CERCLA) (42 USC 9601 et seq.) provided broad federal authority to respond directly to releases or threatened release of hazardous substances that could endanger public health or the environment. CERCLA established requirements concerning closed and abandoned hazardous waste sites, provided for liability of persons responsible for the release of hazardous waste at these sites, and established a trust fund to provide for cleanup when no responsible party could be identified.

- The Superfund Amendments and Reauthorization Act (SARA) of 1986 (Public Law 99-499; 42 USC 116), also known as SARA Title III or the Emergency Planning and Community Right-to-Know Act of 1986 (EPCRA), established requirements for federal, state, and local governments, Indian Tribes, and industry regarding emergency planning and Community Right-to-Know reporting on hazardous and toxic chemicals. SARA Title III requires states and local emergency planning groups to develop community emergency response plans for protection from a list of Extremely Hazardous Substances (40 CFR Appendix B). The Community Right-to-Know provisions help increase the public's knowledge of and access to information on chemicals at individual facilities, their uses, and their release into the environment. In addition, SARA provided new enforcement and settlement tools, increased the focus on human health problems posed by hazardous waste sites, and stressed the importance of permanent remedies and innovative treatment technologies in cleaning up hazardous waste sites.

Uniform Building Code and Uniform Fire Code

The Uniform Building Code and Uniform Fire Code contain building standards and federal fire protection codes. The Uniform Building Code addresses proper building materials, spacing, and siting to minimize the potential for damage from fires. The Uniform Fire Code addresses applicable water pressure, fire hydrants, automatic fire sprinkler systems, fire alarm systems, explosion hazards, safety measures, and additional building-specific information.

Transport of Hazardous Materials

The U.S. Department of Transportation regulates transport of hazardous materials in commerce between states. The federal Hazardous Materials Transportation Law, 49 USC 5101 et seq. (formerly the Hazardous Materials Transportation Act, 49 USC 1801 et seq.) is the basic statute regulating transport of hazardous materials in the United States. These regulations cover hazardous materials definitions and classifications, hazard communications, shipper and carrier operations, training and security requirements, and packaging and container specifications. The Federal Highway Administration, U.S. Coast Guard, Federal Railroad Administration, and Federal Aviation Administration (FAA) enforce hazardous materials transport regulations.

Worker Safety

The federal Occupational Safety and Health Administration (OSHA) is responsible for assuring worker safety in the handling and use of chemicals identified in the Occupational Safety and Health Act of 1970 (Public Law 91-596, 29 USC 651 et seq.). OSHA has adopted numerous regulations pertaining to worker safety, contained in CFR Title 29. These regulations set standards for safe workplaces and work practices, including standards for handling hazardous materials and for excavation and trenching.

State

California Hazardous Waste Control Law

The California Hazardous Waste Control Law (California Code of Regulations [CCR] Title 22) is administered by the California Environmental Protection Agency (CalEPA) to regulate hazardous wastes and is generally more stringent than the RCRA. It establishes criteria for identifying, packaging, and labeling hazardous wastes, prescribes management controls, establishes permit requirements for treatment, storage, disposal, and transportation, and identifies some wastes that cannot be disposed of in landfills.

Hazardous Materials Business Plan

The California Health and Safety Code Chapter 6.95 (Hazardous Materials Release Response Plans and Inventory) requires qualifying businesses to prepare a Hazardous Materials Business Plan (HMBP). The plan must include procedures for managing hazardous materials and hazardous waste. In addition, the plan must describe emergency response procedures and include a list of emergency spill cleanup supplies and equipment. Before an applicant may use hazardous materials at certain defined federal and/or state thresholds, the applicant must submit a HMBP to the administering agency. The HMBP provides Unified Program Agencies, local fire agencies, and the public with information on hazardous materials handled at businesses in order to prevent or mitigate the damage to the health and safety of persons and the environment from release or threatened release of hazardous materials into the workplace and environment.

California Department of Toxic Substances Control

The California Department of Toxic Substances Control (DTSC) has primary regulatory responsibility, with delegation of enforcement to local jurisdictions that enter into agreements with the State agency, for the management of hazardous materials and the generation, transport and disposal of hazardous waste under the authority of the Hazardous Waste Control Law. Since August 1, 1992, DTSC has been authorized to implement the state's hazardous waste management program for CalEPA.

State Water Resources Control Board

The State Water Resources Control Board (SWRCB), established in 1967, has authorized the Central Valley Regional Water Quality Control Board (RWQCB) to enforce provisions of the Porter-Cologne Water Quality Control Act of 1969 in the Sacramento and San Joaquin River Basin. This act gives the Central Valley RWQCB authority to require groundwater investigations when the quality of groundwater or surface waters of the state is threatened and to require remediation of the site, if necessary.

Cortese List, California Government Code Section 65962.5

The provisions of Section 65962.5 of the California Government Code are commonly referred to as the "Cortese List" (after the legislator who authored the legislation that enacted it). The Cortese List is a planning document used by state and local agencies to comply with CEQA's requirement to provide information about the location of hazardous-materials release sites. Government Code Section 65962.5 requires CalEPA to develop an updated Cortese List at least annually. DTSC is responsible for a portion of the information contained on the Cortese List. Other state and local government agencies, including the SWRCB and RWQCBs, are required to provide additional information for the Cortese List about releases of hazardous materials.

In addition, Section 65962.5 requires all project applicants to consult the Cortese List and determine whether any site-specific project is within a hazardous materials site on the list. If so, the project applicant is required to notify the lead agency in writing prior to the issuance of a building permit, so the lead agency can determine the appropriate course of action, which generally would include preparation of Phase I and (if necessary) Phase II environmental site assessment, along with site-specific remediation.

Wildland Fire Hazard Mapping

The California Department of Forestry and Fire Protection (CAL FIRE) maintains maps of fire hazard severity zones for local and state responsibility areas. These areas are mapped based on fuels, terrain, weather, and other relevant factors. These hazard zones are rated based on their potential to expose structures to wildfire.

Transport of Hazardous Materials

The State of California has adopted U.S. Department of Transportation regulations for the movement of hazardous materials originating within and passing through the state. State regulations are contained in Division 26, Title 13 of the California Code of Regulations. The California Highway Patrol and the California Department of Transportation (Caltrans) have primary responsibility for enforcing state regulations and responding to hazardous materials transportation emergencies. Together, these agencies determine the container types used and issue licenses to hazardous waste haulers to transport hazardous waste on public roads.

Hazardous Materials Emergency Response Plan

California has developed an emergency response plan to coordinate emergency services provided by the federal, state, and local governments and private agencies. Response to hazardous materials incidents is one part of the plan. The plan is managed by the California Governor's Office of Emergency Services, which coordinates the responses of other agencies in the project area.

Worker Safety

The California Division of Occupational Safety and Health (Cal/OSHA) is the primary agency responsible for worker safety in the handling and use of chemicals in the workplace in California. Cal/OSHA standards are typically more stringent than federal OSHA regulations. Under Cal/OSHA rules, an employer is required to monitor worker exposure to listed hazardous substances and notify workers of exposure (CCR Title 8, Sections 337–340). The regulations specify requirements for employee training, availability of safety equipment, accident-prevention programs, and warnings regarding exposure to hazardous substances.

Local

In 1983, Sacramento County established the Disclosure Program, which requires that hazardous material in commercial or industrial settings be reported to the Environmental Management Department and local fire districts. The Sacramento County Environmental Management Department (SCEMD), Hazardous Materials Division formed in 1987. The Sacramento County Hazardous Waste Management Plan was prepared to fulfill the requirements of Assembly Bill 2948. It was adopted January 24, 1989, and incorporated into the Sacramento County General Plan by resolution number 92-0708 on May 13, 1992. The goals and policies within the County of Sacramento General Plan Hazardous Materials Element were amended September 26, 2017.

In 1993, Senate Bill 1082 established the Unified Hazardous Waste and Hazardous Materials Management Regulatory Program (Unified Program). The Unified Program consolidates, coordinates, and makes consistent the following hazardous materials and hazardous waste program elements:

- Aboveground Petroleum Storage Act
- California Accidental Release Prevention Program
- Hazardous Material Release Response Plans and Inventories
- Hazardous Waste Generation, including onsite treatment under Tiered Permitting
- Spill Prevention Control and Countermeasure Plan
- Underground Storage Tanks
- Uniform Fire Code Hazardous Materials Management Plans and Inventories

The Environmental Compliance Division of the SCEMD is the local Certified Unified Program Agency (CUPA), approved and designated by CalEPA, to implement the Unified Program in Sacramento County. Additionally, the City Department of Utilities monitors all groundwater discharges to ensure they are free of contamination through enforcement of the Department of Utilities Engineering Services Policy No. 0001 (adopted as Resolution No. 92-439 by the Sacramento City Council); and the Sacramento Metropolitan Air Quality Management District Rule 902 protects the public from exposure to asbestos in the event of a release. The SCEMD, local fire departments, Sacramento County Sheriff's Department, and the Department of General Services Emergency Operations Division are responsible for implementing various aspects of Sacramento County's emergency plan. The plan includes a "Hazardous Materials Incident Response Plan."

3.8.2 Environmental Setting

Definition of Terms

For purposes of this section, the term "hazardous materials" refers to both hazardous substances and hazardous wastes. The Code of Federal Regulations defines a "hazardous material" as "a substance or material that … is capable of posing an unreasonable risk to health, safety, and property when transported in commerce" (49 CFR 171.8). Section 25501 of the California Health and Safety Code defines a hazardous material as follows:

> "'Hazardous material' means any material that, because of its quantity, concentration, or physical, or chemical characteristics, poses a significant present or potential hazard to human health and safety or to the environment if released into the workplace or the environment. "Hazardous materials" include, but are not limited to, hazardous substances, hazardous waste, and any material which a handler or the administering agency has a reasonable basis for believing that it would be injurious to the health and safety of persons or harmful to the environment if released into the workplace or the environment."

Section 25141(b) of the California Health and Safety Code defines "hazardous wastes" as wastes that:

> " … because of their quantity, concentration, or physical, chemical, or infectious characteristics, [may either] cause, or significantly contribute to an increase in mortality or an increase in serious illness [or] pose a substantial present or potential

hazard to human health or the environment when improperly treated, stored, transported, disposed of, or otherwise managed."

Site Background

The ~~project~~ proposed substation site has historically been used for a variety of commercial and industrial uses. In the early 1960s, the northwestern portion of the ~~project~~ site transitioned from residential to commercial (tire storage and repair facility) and the northeastern portion of the ~~project~~ site was developed with a commercial produce storage and distribution warehouse and office building (used by General Produce). In 1986, a 10,000-gallon gasoline underground storage tank (UST) and associated product piping were removed from the General Produce property, south of the existing warehouse building.

The southern portion of the proposed substation site was owned by Union Pacific Railroad (UPRR) until 1995, at which time UPRR sold the property to the Sacramento Housing and Redevelopment Agency (SHRA). Bunk houses were located on the southwestern corner of the site in the 1950s (presumably for UPRR workers) prior to demolition and use of the area as a parking lot in the 1960s. By the early 1990s, this portion of the site was being used by the SHRA for temporary housing and recreation; SHRA structures were demolished in 2001.

UPRR leased the south central/southeastern portion of the proposed substation site to an oil reprocessing and distribution company (Purity Oil Company) that operated from prior to 1960 until 1978. In 1990, a former leaking underground tank (LUST) was identified on the Purity Oil Company property. Initial remediation activities were completed under the oversight of the SCEMD, then oversight was transferred to the DTSC in 1994. All USTs associated with the Purity Oil operations were removed in 1985 and the clarifier tanks and associated piping were removed by 1995. Approximately 33,000 tons of soil were removed from the site between 1992 and 1995, and additional soil remedial activities were completed in 2003. The confirmation sampling completed during the soil remedial actions showed cleanup goals were achieved, and residual hydrocarbons, lead, and arsenic concentrations remaining in the soil do not pose an unacceptable human or environmental risk. On November 19, 2008, DTSC issued a no further action letter required for soil for the former UPRR property.

The closure strategy for the Purity Oil site included groundwater monitoring for residual contaminants from as early as 1989 to 2011. Volatile organic compounds (VOCs) and total petroleum hydrocarbons (TPH) were detected in groundwater. Remedial goals for VOCs in groundwater were met by the third quarter of 2011 except for vinyl chloride. Residual concentrations of vinyl chloride were low and expected to naturally attenuate. Residual TPH concentrations did not pose a significant risk to the environment and were expected to decrease over time and naturally attenuate. In 2009, DTSC concurred that an off-site contaminant source had likely impacted groundwater beneath the site. In 2013, the DTSC issued a certification of remedial action for the Purity Oil site and concluded that removal actions had been completed to levels that permitted unrestricted land use and no longer posed a threat to human health or the environment. The 2013 certification letter stated that 1,2-dichlorethane (1,2-DCA) levels fluctuating around the cleanup goal (maximum contaminant level [MCL]) were detected in the general area and may be associated with an upgradient offsite source. Although very low levels of 1,2-DCA are still present in groundwater, the level is statistically within range of the MCL of 0.5 parts per billion allowed in drinking water.

Underground duct bank would be installed beneath surface streets to connect the proposed substation to existing SMUD facilities. A portion of the proposed duct bank site would occur along the 7th Street and North B Street corridor, which includes an area known as the Sacramento Railyards. The UPRR Sacramento Railyard Facility, formerly Southern Pacific Transportation Company, has been in operation since 1865. Inorganic and organic contamination are distributed across a majority of the 240-acre site, including heavy metals, VOCs, semi-volatile organic compounds, TPH, and both friable and non-friable asbestos-containing material. DTSC and UPRR entered into an Enforceable Agreement in 1988. The 7th Street corridor bisects three study areas of the greater Railyards; Lagoon Study Area, Car Shop Nine Study Area, and Central Corridor Study Area.

Although groundwater remediation is ongoing at the Sacramento Railyard, DTSC has previously certified the soil in the 7th Street corridor to have met the relevant remedial goals. In 2004, 7th Street was extended through the Railyards to connect downtown with the Richards area. The street was developed as public right-of-way with utility corridors, pedestrian and bike paths, storm water control, and light rail. Environmental restrictions are in place for the 7th Street corridor, known as land use covenants (LUCs). The LUCs require a compliant soil layer over remediated soil, vapor intrusion mitigation measures, and DTSC notice and approval of a soil and groundwater management plan prior to disturbance of either media. The LUCs also indicate that any enclosed structure (including tunnels), or utility corridors to be constructed within the vapor mitigation area will be required to be designed and constructed to include vapor mitigation, unless the area is exempted from such requirements in writing by DTSC.

North B Street west of 7th Street has a non-native surface cap from the surface to a maximum of 6 feet below the surface, and fill material below the cap to a maximum of 30 feet contains elevated concentrations of contaminants (DTSC 2023). Therefore, duct work in North B Street west of 7th Street would require additional investigation and potentially design parameters if soil is disturbed at a depth greater than 6 feet below ground surface.

Due to ongoing groundwater remediation associated with the Railyards, the Project may need to work around groundwater monitoring wells, groundwater and soil vapor extraction wells, and related groundwater and soil vapor extraction remediation systems. Figure 3.8-1 is the 2023 location map of all monitoring and extraction wells (DTSC 2023).

In December 2015, DTSC approved the Railyards Projects - Soil & Groundwater Management Plan (Stantec 2015) for use with each development project constructed within the Railyards that involved the handling of soil or groundwater. The plan describes required management, handling, and procedures associated with encountered soil, groundwater, and general waste streams with the potential to require special handling. On May 17, 2018, DTSC approved an addendum to the Railyards Soil and Groundwater Management Plan for SMUD's installation of an electrical line across 7th Street and use of a staging area northwest of 7th Street and Railyards Boulevard. A similar addendum identifying coordination between the project proponent and stakeholders, planned field activities, permitting, health and safety, and management of project-derived waste will be required for the proposed installation of duct bank along 7th Street and North B Street.

Figure 3.8-1: Sacramento Railyard Monitoring and Extraction Well Location Map

Database Results

The following site addresses and facilities were identified on databases searched by Environmental Data Resources, Inc. as part of the Phase I Environmental Site Assessment (Phase I ESA) completed for the proposed substation site ~~project~~ in 2021 (Brown and Caldwell 2021) and confirmed with verification on the SWRCB GeoTracker (SWRCB ~~2023~~ 2024) and DTSC EnviroStor (DTSC ~~2023~~ 2024) databases:

- Purity Oil - 1324 North A Street. This site was used as a waste oil reprocessing facility from 1966 to 1978 and was impacted by various contaminants of concern including chlorinated hydrocarbons, lead, diesel, and water oil. Several soil removal actions were performed in the mid-1990s and the DTSC issued a No Further Action letter for soil on November 19, 2008. The facility is listed on State Water Resources Control Board's

- GeoTracker database as Completed - Case closed as of 7/7/1995 and is listed on EnviroStor with a Cleanup Status - Certified as of 6/28/2013.

- Union Pacific Railroad - 1324 North A Street. Several soil removal actions have been completed starting in 1985. The facility is listed on GeoTracker as Completed - Case closed as of 6/28/2013.

- General Produce - 1330 North B Street. This facility is listed on the HAZNET[1] database in years 1998, 1999, 2000, and 2003 for multiple waste codes including oil/water separation sludge. The facility is listed on the California Hazardous Material Incident Reporting System database for a 40-gallon hydraulic oil release from an equipment failure. The facility is listed on the California Environmental Reporting System database with violations including storing unlabeled 55-gallon drums of sump sludge in 2014.

- Sacramento Produce Terminal Company - 1330 North B Street. This facility was listed in 2018 for asbestos containing waste.

- SHRA Property - 1200 North A Street. The soil at this site was impacted by lead and petroleum hydrocarbons, which may have been the result of imported fill containing asphalt and elevated lead, and a release from waste oil aboveground storage tanks and drums stored on-site. Impacted soil was removed from the Site in 1996 and SCEMD closed the case on January 16, 2003. The facility is listed on GeoTracker as Completed - Case closed as of 1/16/2003.

- Contaminated Property 1200 North A Street. This facility is listed on GeoTracker as Completed - Case closed as of 1/16/2003.

- Wayne's Body Shop - 1300 North B Street. This facility is listed on the Historic Auto shop database in 1970.

[1] A California Department of Toxic Substances Control database that records annual hazardous waste shipments.

- The Fleet Doctor - 1226 North B Street. This facility is listed on the Sacramento County Master List of Facilities with Potentially Hazardous Materials database with an Inactive facility status.

- North 12th Street Social Services Site - 1221 North A Street, 1223 North A Street, 111 North 12th Street and A Street. Past uses of this site have ranged from a plant nursery to a produce site and illegal dumping activities may have occurred. ASTs and drums were located on the site in the past. The content of the ASTs is not clear, but was reportedly waste oil. Investigations indicated that site soils have been impacted with lead (source unknown) and TPH quantified as motor oil (TPHmo). Previous soil sample analytical results collected at the site have detected lead up to 31,000 milligrams per kilogram (mg/kg). The facility is listed on EnviroStor with a Cleanup Status - Inactive - action required as of 10/4/2010.

- Additional LUST facilities identified with a status of case closed are located along the proposed duct bank site near the intersection of 7th Street and G Street, on North B Street between 10th and 12th streets, and near the intersection of 16th Street and Thornton Avenue. In addition, a former SMUD electrical substation is located at 1610 Thornton Avenue, along the proposed duct bank site. Shallow soils at this location contain elevated levels of lead and arsenic. Remedial alternatives are under development as of December 2023.

Brown and Caldwell performed a Tier 1 Vapor Encroachment Screening (VES) for the ~~project~~ proposed substation site (Brown and Caldwell 2021). According to the EDR VES report, 101 listings were identified within the area of concern, with 15 listings identified for the ~~project~~ site. All the identified facilities were eliminated as presenting a potential vapor encroachment condition due to their location either down gradient of the ~~project~~ site, because of incident closures, or there had been no documented soil or groundwater contamination, with the exception of the following facility:

- Sims Metal, LMC Metals, Levin Metals Corp, 130 North 12th Street. Identified on multiple regulatory databases and located 237 feet west of, across North 12th Street from, and directly upgradient of, the ~~project~~ proposed substation site. The Covenant to Restrict Use of Property, Environmental Restriction, dated September 2, 2020, for the facility indicates lead, polychlorinated biphenyls (PCBs), benzo(a) pyrene, and TPH detections in soil, and benzene, naphthalene, and TPH detections in groundwater above applicable screening levels as reported in a Remedial Investigation Report received by the DTSC in 2012. The facility is listed on GeoTracker as Open - site assessment as of 3/4/2009. The facility is listed on EnviroStor with a Cleanup Status - active as of 10/30/2004.

Phase I Environmental Site Assessment

Brown and Caldwell, Inc. performed a Phase I ESA of the proposed substation site in 2021. The Phase I ESA report identified the following evidence of Recognized Environmental Conditions (RECs):

- The storm drain and the oil/water interceptor system, associated with the wash area located at the southeastern corner of the maintenance building on the northwestern corner of the ~~project~~ proposed substation site, has the potential for a petroleum release to the soil and groundwater.

- The drywell/sump, located along the western side of the maintenance building on the northwestern corner of the ~~project~~ site, has the potential for a petroleum release to the soil and groundwater.

- The former UST removed from an area south of the commercial warehouse in the eastern portion of the site has no evidence of confirmation soil samples having been collected at the time of the UST removal.

- The previous environmental impacts at the site, even though listed with a closed status, have the potential to exceed new or revised regulatory limits that may have changed.

- Sims Metal (also known as LMC Metals, Levin Metals Corp) is located directly upgradient of the site and listed with an open status on multiple regulatory databases.

- Several 55-gallon drums and 5-gallon buckets, with unknown contents, were observed on the western adjacent property, which has historically reported high levels of lead in the soil near the site's western boundary.

- A soil stockpile and burned material within an open excavation, both of unknown origin, were reported in an earlier investigation of the site. Burned material is known to produce dioxin and heavy metals which can potentially settle on the soil surface and infiltrate the groundwater.

In addition to the evidence of RECs, the following environmental concerns were also identified:

- Asbestos containing materials (ACM) and/or lead-based paint (LBP) may have been deposited onto the surficial soil during historical building demolition activities, if ACM and LBP were not mitigated prior to demolition. There is also potential that ACM and/or LBP exist in the current buildings based on their age.

- Railroad ties associated with the railroad tracks located along the southern site property boundary and the rail spur located across the site may have been treated with creosote, coal ash containing metals, and cinder containing lead and arsenic, and there may be residual herbicides from historical weed control efforts.

- Homeless encampments are located on the northern and eastern site boundaries, with debris associated with these encampments directly adjacent to the site.

- The known long-term industrial nature of the site and adjacent properties' activities represent an environmental concern.

- The unknown source of the fill material, historically and currently used on the southern portion of the site, is an environmental concern.

The proposed project would include soil disturbance, trenching, and general construction activities that may involve workers coming into contact with contaminants in soil and/or soil vapor that may be present at the site. Additionally, potential risks to any future indoor workers exist based on the historical volatile compounds (petroleum and chlorinated hydrocarbons) detected in the subsurface at the proposed substation site. Prior to performing construction activities as part of the proposed project, SMUD decided to assess existing proposed substation site conditions and collect samples to ensure future construction and site worker protection.

Phase II Site Investigation

Based on the previous site investigations, remedial actions, and the findings of the 2021 Phase I ESA report, a Phase II Site Investigation was subsequently conducted by Brown and Caldwell, Inc. in 2023 for the proposed substation site. The sampling locations in this investigation were chosen based on the findings of the Phase I ESA and known contaminants found in soil and groundwater related to the former Purity Oil site.

A total of 14 soil borings were drilled at the ~~project~~ proposed substation site, three of which were advanced to also collect groundwater samples, and two of which were advanced to also collect soil vapor samples, to assess residual contaminants in soil, groundwater and soil vapor, both from potential on- and off-site locations (see **Error! Reference source not found.**2).

Subsurface observations from boring logs noted debris and other non-native materials in several locations. In general, these observations were consistent with construction materials attributable to the site's historical use and do not indicate significant filling activity or other environmental concerns. A sample collected from B-1, on the northwestern portion of the site, at 4 feet below ground surface (bgs) had a thin dark layer that was identified as naturally occurring and is not a concern for construction activities. The one exception includes the vicinity of B-4, located centrally on the site near the southwestern corner of the existing warehouse, from approximately 3 to 6 feet bgs where evidence of a heavy end hydrocarbon/motor oil release was noted. None of the compounds detected in this boring have elevated risks at the concentrations detected, but some do exceed applicable screening levels. Soil samples collected at other locations generally do not exceed applicable screening levels. While some surface and/or minor occurrences of elevated concentrations are possible, no evidence of significant concerns or potential risks are apparent based on these data. Soluble threshold limit concentration (STLC) and toxicity characteristic leaching procedure (TCLP) analyses measure the amount of hazardous chemicals that may leach out into the environment in landfill conditions. It is possible that some soil removed during construction activities will require transportation to a California hazardous waste landfill, due to the STLC exceedances and near exceedances for lead.

The analytical results for the groundwater samples did not identify any analyte exceeding its respective maximum contaminant level (MCL), which is the highest level of a contaminant that is allowed in drinking water. Constituents detected (petroleum hydrocarbons and chlorinated VOCs) are generally consistent with constituents detected at the former Purity Oil site. Constituents detected in groundwater are well below MCLs and do not pose a significant risk to human health or the environment. They are not a concern for future site activities, and it is unlikely that any regulatory concerns will arise in the future. Additionally, contaminants reported in the soil and soil vapor do not appear to be migrating into the groundwater beneath the site.

Figure 3.8-2: Boring Log Location Map

Results from soil vapor sampling at locations SVP-1 and SVP-2 show that there is no vapor intrusion risk with the exception of tetrachloroethylene (PCE). At SVP-1, the concentration of PCE modestly exceeds the DTSC soil screening level at 5 feet bgs, but this result may be biased high based on laboratory notes. At SVP-2, the low concentration of PCE at 5 feet bgs relative to the 15 feet bgs sample indicates that the PCE attenuates significantly between these two zones, resulting in a low risk for vapor intrusion near this location. Site-specific human health risks associated with PCE detected in soil vapor samples were evaluated by a Brown and Caldwell toxicologist and documented in a Risk Assessment Technical Memorandum (RA Tech Memo). The results of the additional RA performed for the vapor intrusion to indoor air pathway indicated that no significant human health risks are present at the site for future workers that may occupy and work inside the planned control building.

3.8.3 Environmental Impacts and Mitigation Measures

Methods and Assumptions

The evaluation of potential impacts of the proposed project regarding hazards and hazardous materials was based on a desktop survey of the project area land uses, a Phase I ESA prepared by Brown and Caldwell, Inc. (Brown and Caldwell 2021), and a subsequent Phase II Site Investigation Report prepared by Brown and Caldwell, Inc. (Brown and Caldwell 2023). The analysis also considered known hazardous materials sites listed in DTSC's EnviroStor and SWRCB's GeoTracker databases. The impact analysis considers the potential for changes in the nature or extent of hazardous conditions as a result of project construction and operation, including potential for exposure to hazardous materials and hazardous conditions. Potential for hazards and hazardous conditions were reviewed in light of existing hazardous materials management plans and policies, emergency response plans, and applicable regulatory requirements.

Thresholds of Significance

Based on Appendix G of the State CEQA Guidelines, the proposed project would result in a potentially significant impact related to hazards and hazardous materials if it would do the following.

- Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.
- Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.
- Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school.
- Be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, create a significant hazard to the public or the environment.

- For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, result in a safety hazard or excessive noise for people residing or working in the project area.

- Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.

- Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires.

Impact Analysis

Impact 3.8-1. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

<u>Project Construction</u>

Less-than-Significant Impact with Mitigation. Project construction would involve the transport and disposal of hazardous materials. A Phase II Site Investigation (Brown and Caldwell 2023) indicated that excess soil generated at the site as part of construction activities must be properly characterized prior to off-site disposal and disposed of at a waste facility permitted to accept the waste. Due to the STLC exceedances and near exceedances for lead, it is possible that some soil removed during construction activities will require transportation to a California hazardous waste landfill.

The Phase II ESA results identified organochlorine pesticides, polychlorinated biphenyls, chlorinated herbicides, VOCs, title 22 metals, and TPH generally below the DTSC screening levels in soil samples and below MCLs in water samples. The only exceptions were:

- soil samples collected from B-4 at 3 feet and 6 feet bgs had elevated TPH and VOC levels indicating a petroleum impact, and

- 2 out of 54 soil samples contained lead above the DTSC screening level.

Based on the low occurrence of lead exceedances, it is unlikely that a significant risk to construction workers is present due to exposure to lead in soil (Brown and Caldwell 2023).

The source of TPH, VOCs, and metal-impacted soil at the ~~project~~ <u>proposed substation</u> site is likely related to historical aboveground and underground storage tank operations. Although impacted soil had been adequately remediated by soil excavation from 1992 to 1995, the Phase II report recommended additional testing and proper disposal in the vicinity of B-4. See Mitigation Measure 3.8-1a below.

During <u>demolition of the existing structures and</u> construction <u>of the proposed substation and duct banks</u>, construction materials, debris spoils and waste, and equipment <u>potentially containing asbestos, lead-based paint and/or other hazardous materials</u> would be transported to and from the site. The California Highway Patrol and Caltrans are responsible for enforcing regulations related to the transportation of hazardous materials on local roadways. SMUD and its construction contractors would be required to comply with the CUPA, 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. 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 the removal and transportation of hazardous materials for disposal.

Since ground-disturbing activity for the installation of new equipment at the proposed substation site would reach a depth of 15 to 30 feet bgs and piles needed for seismic stability/support could reach a depth of 55 feet bgs or more, there would be potential to encounter groundwater during construction. In addition, ground-disturbing activity for the installation of new riser poles north of the intersection of Basler Street and North 18th Street and on the north side of North B Street across from the proposed substation site would reach depths of 25 to 30 feet bgs, thus there would be potential to encounter groundwater during construction. Ground-disturbing activity for the installation of approximately 20 new replacement poles from the proposed substation site east on North B Street to North 14th Street and south on North 14th Street to Chinatown Alley would reach depths of 5 to 14 feet bgs and would be unlikely to require dewatering. Should dewatering be required during project construction, the project is likely to qualify for coverage as a Low Threat Discharge under SWRCB's Water Quality Order 2003-0003-DWQ, which permits small and/or temporary dewatering projects (i.e., excavations during construction). Water would be collected, tested, and treated prior to discharge, in accordance with regulatory requirements.

Groundwater is not expected to be encountered for the installation of proposed duct bank; therefore, dewatering is not anticipated to be required within the Railyards. All workers will be notified that groundwater that may be encountered may contain various Railyards contaminants at concentrations that may be of concern. If dewatering is required, dewatering activities would be designed and implemented to not adversely affect remediation or exacerbate it such that contamination expands. If required, a written dewatering management plan would be submitted for approval to DTSC prior to groundwater extraction, treatment, and discharge.

During construction activities, the use and maintenance of construction equipment for the project would require the on-site use and storage of hazardous materials (fuels, lubricating oil, grease, and/or hydraulic fluid). The use and storage of these materials could potentially expose and adversely affect workers, the public, or the environment through improper handling or use, accident, environmentally unsound disposal methods, fire, explosion, or other emergencies. Exposure to hazardous materials may result in adverse health or environmental effects. The project would be required to comply with extensive federal, state, and local hazardous materials-related regulations that would ensure implementation of plans and measures to prevent, control, and clean-up any accidental hazardous materials releases. Compliance with these measures during construction would minimize the potential for leaks from construction equipment or accidental spills that could affect the environment, onsite workers, or the public.

The project would be designed to minimize the potential for hazardous materials release. Because the project would disturb greater than 1.0 acre of land, it would be subject to the requirements of the National Pollutant Discharge Elimination System (NPDES) Construction General Permit. As described in Section 3.9 "Hydrology and Water Quality," this permit requires preparation and implementation of a Stormwater Pollution Prevention Plan (SWPPP), which includes a Spill Prevention and Response Plan (SPRP) to minimize the potential for accidental releases of hazardous materials into the environment and a site-specific Hazardous Substance Control and Emergency Response (HSCER) to minimize the potential for accidental releases of hazardous materials during construction. These plans include best management practices (BMPs) and good site housekeeping measures, including protocols for proper storage, capture, and disposal of hazardous materials. During construction, the proposed project would be required to comply with federal and state hazardous waste handling and disposal requirements. Compliance with these requirements would reduce the potential for accidental release of hazardous materials during project construction.

Compliance with these regulations would reduce the potential for accidental release of hazardous waste during construction, excavation and transport; however, there is still potential to encounter hazardous materials during construction. This impact would be ***potentially significant***.

Mitigation Measures

Mitigation Measure 3.8-1a

Implement a Soil and Groundwater Management Plan. SMUD and its Contractor shall prepare and implement a Soil and Groundwater Management Plan to address contaminant-impacted soil and groundwater. The Plan shall address the apparent petroleum-impacted soil in the vicinity of boring B-4 by further delineating the petroleum-impacts and then excavating and disposing of this soil prior to commencing construction. This activity could be carried out as pre-construction activities or as part of the first construction phase. Excess soil generated at the site shall be properly characterized prior to off-site disposal ~~and disposed of~~ at a waste facility permitted to accept the waste. Based on the STLC/TCLP results, it is possible that some soil removed during construction activities will require transportation to a California hazardous waste landfill, due to the STLC exceedances and near exceedances. Soils from the Railyards should not be exported to any other sites outside the Railyards for any purpose other than disposal at a regulated facility without prior approval from DTSC. In the unlikely event that groundwater is encountered and dewatering required during project construction, SMUD will adhere to requirements in SWRCB's Water Quality Order 2003-0003-DWQ and, within the Railyards, request approval from DTSC prior to implementation of the groundwater management plan. Water would be collected, tested, and treated prior to discharge, in accordance with all regulatory requirements.

Mitigation Measure 3.8-1b

Manage Accidental Discovery of Hazardous Materials. If contaminated soils or potentially hazardous items are discovered during earth moving activities, all ground-disturbing activities within 25 ~~50~~ feet shall be halted until a qualified SMUD employee or SMUD representative can assess the conditions on the site. SMUD will notify the appropriate agency (e.g., SCEMD) to determine next steps for managing ~~if it is appropriate to rebury~~ the potentially hazardous materials. If it is determined that the hazardous material cannot be re-incorporated into the project site, it shall be hauled by a qualified hauler to an appropriate waste disposal facility.

Significance after Mitigation

With implementation of Mitigation Measures 3.8-1a and 3.8-1b, requiring implementation of a Soil Management Plan and that construction employees stop work in the event that suspicious soils or items are uncovered, the potential exposure risks would be reduced to a less than significant level.

Project Operation

Less-than-Significant Impact. During substation operation, transformers and switchgear equipment containing hazardous substances would be in use, however, the substances would be enclosed within the equipment. In the event of equipment structure or system malfunction, the transformer and switchgear dielectric fluids would be kept from leaving the site by a spill containment system consisting of a berm, curb or sump. The substation would have a Supervisory Control and Data Acquisition (SCADA) system (supervisory control and data acquisition system) that would send alarms to SMUD's dispatch center if malfunctions occur.

The substation would include up to ~~five~~ six 40 MVA 115/21 kV transformers, each containing up to 10,000 gallons of highly refined mineral oil. Mineral oil used to cool transformers would be transported to the site in sealed equipment or containers. While the oil is not especially toxic, highly refined mineral oil will degrade over time and secondary containment practices are required. Each transformer would have a secondary containment system to collect and hold any oil leaks from the transformer. Due to the amount of mineral oil that would be on-site, a 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 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 2023). The project also may be subject to the 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 structures designed to contain the oil volume of the transformers. The SPCC is required for facilities that store greater than 1,320 gallons of oil and have a reasonable expectation of a discharge to water (EPA 2022).

Substation battery backup systems containing battery acid would be transported to the site in sealed cases. These would be required to be located inside the control building or in an enclosure in the substation.

As part of the proposed project, limited amounts of Sulfur Hexafluoride (SF_6), a common insulating gas for high-voltage electrical systems, would be used. Use of the proposed electrical equipment would comply with recordkeeping, reporting, and leakage emission limit requirements in accordance with California Air Resources Board regulations for reduction of SF_6 emissions. As part of substation operations and maintenance activities, SMUD would monitor existing substation equipment to accurately and immediately identify any SF_6 leaks and immediately repair leaks that are discovered. SMUD is also an active member of the SF_6 Emission Reduction Partnership, which focuses on reducing emissions of SF_6 from transmission and distribution sources. This gas is nontoxic; therefore, it would not represent a hazard to the public or the environment.

The substation would be operated remotely and continuously. The new control building and substation site would remain unoccupied except for periodic visits by SMUD personnel and maintenance employees to conduct routine checks and perform maintenance activities. The transformer oil would require filtering after extended use. During this process, impurities in the filtrate would either be removed and recycled or disposed of in accordance with federal, state, and local hazardous waste disposal requirements.

Project operation would comply with EPA's SPCC and CalEPA's CUPA programs and are subject to Cal/OSHA regulations, which include requirements for the protection of worker health and safety. Compliance with these programs would include procedures that identify methods and techniques to minimize the exposure of the public and workers to potential hazardous materials during all phases of project construction and operation.

Project operations would be required to comply with existing laws and regulations regarding the transportation, use, and disposal of hazardous materials; therefore, potential operational impacts would be ***less than significant***.

Impact 3.8-2. 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 Impact with Mitigation. As discussed in Impact 3.8-1, project construction has the potential to disturb contaminated soils, requiring proper characterization and disposal. Ground-disturbing activity for the installation of new equipment <u>at the proposed substation site</u> would reach a depth of 15 to 30 feet bgs and piles needed for seismic stability/support could reach a depth of 55 feet bgs or more. Buried construction debris is known to be located between 1 and 10 feet bgs based on the most recent investigation at the site. Construction workers may come into contact with contaminated soils and buried fill material, such as debris from former and current site buildings, during demolition and grading activities. This may expose workers to contaminated dust emissions or wastes that contain hazardous constituents, including ACM and LBP. <u>Ground-disturbing activity for the installation of new duct bank, riser poles, and new replacement poles may encounter contaminants associated with the Railyards, including heavy metals, VOCs, TPH, and ACM.</u>

During earth moving activities, water would be applied uniformly and lightly throughout the site to provide adequate control of nuisance dust. As discussed in Section 3.2 "Air Quality" and 3.9 "Hydrology and Water Quality," the SWPPP would satisfy the requirements of the Fugitive Dust Rule 403 to reduce particulate matter emissions. This rule would also limit the amount of contaminated dust emitted by the project to the extent feasible, thus reducing the potential for inhalation of contaminated soils associated with the site.

In addition, a site-specific health and safety plan (SSHSP) would be prepared before the start of construction-related activities. The SSHSP would be subject to approval by a Certified Industrial Hygienist. The contents of the SSHSP would include:

- requirements related to worker use of personal protective equipment,
- general field safety procedures,
- standard operating procedures for the handling of potentially hazardous materials, and
- worker safety training requirements.

The SSHSP also requires that all activities associated with the project would be overseen by a health and safety monitor (H&S monitor). The H&S monitor would provide safety briefings to construction workers that would address site conditions, possible hazards, and safety measures provided in the SSHSP. Thus, because an SSHSP would be implemented during construction activities, the potential for construction worker exposure to hazards and hazardous materials related to site conditions would be minimal.

As described in Section 3.9 "Hydrology and Water Quality," the project would be required to prepare and implement a SWPPP. The SWPPP would include BMPs and good site housekeeping measures for proper storage and management of hazardous materials, as well as spill prevention, control, and counter-measures. Implementation of the SWPPP would greatly reduce the potential for construction activities to result in accidental releases of hazardous materials. In compliance with state and federal regulations (SWPPP, Cal/OSHA, OSHA, HMBP, and SPCC), accidental releases of hazardous materials during construction and operation of the project would be unlikely to occur. Should a release occur, potential impacts on the public and the environment would be minimized.

The potential to encounter contaminated soil or groundwater exists, which could potentially expose construction workers, the public, or the environment to hazards. The impact would be ***potentially significant***.

Mitigation Measures

Mitigation Measure 3.8-1a: Implement a Soil and Groundwater Management Plan. (Described above)

Mitigation Measure 3.8-1b: Manage Accidental Discovery of Hazardous Materials (Described above)

Significance after Mitigation

With implementation of Mitigation Measures 3.8-1a and 3.8-1b, requiring implementation of a Soil and Groundwater Management Plan and procedures in the event that suspicious soils or items are uncovered, the potential exposure risks would be reduced to a ***less than significant*** level.

Impact 3.8-3. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

Less-than-Significant Impact. Two schools are located within one-quarter mile of the proposed ~~project~~ substation site and proposed new power lines: the Mustard Seed School is a private school located at 1321 North C Street, approximately 700 feet northeast of the ~~project~~ site, and the Sacramento Montessori School is located at 1123 D Street, approximately 800 feet southwest of the ~~project~~ site. The proposed project would not emit hazardous emissions or include the handling of hazardous or acutely hazardous materials, substances, or wastes that would adversely affect either Mustard Seed School or Sacramento Montessori School. The proposed substation ~~project~~ would include use of mineral oil in transformers and SF_6 gas within high-voltage electrical equipment. Small quantities of hazardous materials such as fuels, oils, and lubricants would be used during project construction. As recommended in the Phase II Site Investigation, SMUD would conduct testing of soils to be removed from the project site.

The City of Sacramento Truck Routes map (City of Sacramento 2019) identifies North B Street as a Surface Transportation Assistance Act (STAA) truck route and North 12th Street as a STAA truck route north of North B Street, and a city truck route south of North B Street. The most direct haul routes to the project site would likely be from Business 80 to west on California 160 to south on North 12th Street; or from Business 80/U.S. Highway 50 (US-50) to north on 16th Street to west on North B Street; or from Interstate (I-)5, east on Richards Boulevard to south on North 7th Street to east of North B Street. Taking Richards Boulevard to North 7th Street, rather than North 16th Street, would avoid passing the Smythe Academy of Arts and Sciences middle school located at 700 Dos Rios Street, on the northeast corner of Richards Boulevard and Dos Rios Street. There are no schools located along the haul routes identified here, however, schools are located within one-quarter mile of these haul routes.

The project would be required to comply with existing laws and regulations regarding the transportation, 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 to *less than significant*.

Impact 3.8-4. 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 Impact with Mitigation. The ~~project~~ proposed substation site is included on multiple lists of hazardous materials sites, as described in the environmental setting. However, all hazardous materials previously identified on the site have been removed in accordance with applicable regulations. The duct bank site along 7th Street and in North B Street west of 7th Street is located within the Railyards, which is included on multiple lists of hazardous materials sites. However, the 7th Street corridor is identified as having met remediation goals for soils, and groundwater is not anticipated to be encountered at this location. If groundwater is encountered and dewatering is required, dewatering activities would be designed and implemented to not adversely affect remediation of the former Railyards site, or exacerbate it such that contamination expands. If required, a written dewatering management plan would be submitted for approval to DTSC prior to groundwater extraction, treatment, and discharge.

Construction of the project would involve soil excavation, and thus could encounter soil contaminants from former activities at the duct bank sites, particularly in the Railyards, or ~~project~~ substation site or that may have migrated from the facility located across North 12th Street from the ~~project~~ substation site. This could potentially expose construction workers, the public, or the environment to hazards. However, measures for detection, testing, and proper handling and disposal of potentially contaminated soils encountered during construction would avoid or substantially minimize any potential impacts from contaminated soils from known or unknown hazardous materials sources. The potential to encounter contaminated soils from the previous substation site activities exists; therefore, this impact is ***potentially significant***.

Mitigation Measures

Mitigation Measure 3.8-1a: Implement a Soil and Groundwater Management Plan.
(Described above)

Mitigation Measure 3.8-1b: Manage Accidental Discovery of Hazardous Materials
(Described above)

Significance after Mitigation

Implementation of Mitigation Measures 3.8-1a and 3.8-1b would minimize potential for accidental release into the environment or a substantial hazard to the public. Thus, this impact would be reduced to a ***less than significant*** level.

Impact 3.8-5. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?

No Impact. The project site is not located within an airport land use plan or within 2 miles of a public airport or public use airport, or within the vicinity of a private airstrip. The closest airport to the project site is the Sacramento Executive Airport located at 6151 Freeport Boulevard, approximately 4.7 miles south of the project site. Implementation of the project would have ***no impact*** on aviation-related safety hazard for people residing or working in the project area

Impact 3.8-6. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

Less-than-Significant Impact. Temporary roadway lane closures could occur during construction of the underground duct bank and would vary in location and duration based on construction requirements. ~~Project~~ Substation construction would occur on a private parcel with staging located away from public roads but may require temporary lane closures of North B Street and North 12th Street that could interfere with or slow down emergency vehicles. Project activities that may involve public right-of-way would be required to obtain an encroachment permit from either Caltrans, Regional Transit, or the City of Sacramento. As part of this encroachment permit application, SMUD would be required to prepare and then 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.

According to the City of Sacramento Evacuation Plan, North 12th Street and North B Street, both located adjacent to the ~~project~~ proposed substation site, are identified as impassable during some flood scenarios. The plan identifies the closest evacuation route to the ~~project~~ proposed substation site as southbound 15th Street (south of the railroad tracks located adjacent to the site) and westbound H Street and I Street (City of Sacramento 2008). The City of Sacramento Flood Depth & Evacuation Map identifies evacuation routes following a levee breach scenario for a 200-year flood event. North B Street is identified as a collector for the highways used for evacuation; however, it would be impassable by 6 hours following a levee breach (City of Sacramento 2015). The proposed ~~project~~ substation site would not be used as an evacuation route in the event of an emergency.

The proposed project construction and operations would have a ***less than significant impact*** on emergency response or emergency evacuation plans.

Impact 3.8-7. Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?

Less-than-Significant. The proposed project site is an urbanized area and is not located within any state or local wildland fire hazard severity zones (CAL FIRE 2007, 2008, 2023). The project would involve the use of combustion-engine construction equipment, as well as storage of potentially flammable materials, such as fuel or lubricating oil. Construction activities could potentially provide a spark or ignition source or introduce materials that could combust or burn at high intensity if exposed to a heat source. Heat or sparks from a vehicle or hot work activities could ignite dry vegetation and cause a fire, however, the majority of site construction activities would occur within paved areas. Although portions of the proposed substation site contain annual grasses which could pose a wildland fire risk, existing natural fire breaks are provided by the UPRR tracks to the south, North 12th Street to the west, North B Street to the north, and North 14th Street to the east. Municipal water service is provided to the ~~project~~ site by the City of Sacramento Department of Utilities, which could be used for fire suppression purposes. In addition, Sacramento Fire Station Number 14 is located across North 14th Street from the ~~project~~ site.

While the use of fuels and construction equipment could pose a risk to fire ignition, the potential to result in a wildland fire is low because of the location and condition of the project site. Therefore, the impact related to the exposure of people or structures to the risk of loss, injury, or death involving wildland fires would be ***less than significant***.

3.9 Hydrology and Water Quality

This section provides a brief description of hydrology and water quality related laws, regulations, and ordinances pertinent to the proposed project. Next, a description is provided of the existing hydrologic and hydraulic conditions of the project site, including watersheds, drainage, water quality and flooding. The analysis describes impacts related to surface water and groundwater quality, groundwater recharge and sustainability, stormwater runoff, and flooding. Feasible mitigation measures are recommended, where necessary.

Impacts related to water supply and water treatment are discussed in Section 3.13, “Utilities and Service Systems,” of this EIR.

3.9.1 Regulatory Setting

Federal

Clean Water Act

The Clean Water Act of 1972 (CWA) (33 U.S.C. Section 1251 et seq.) is the primary federal law that governs and authorizes water quality control activities by the U.S. Environmental Protection Agency (EPA), the lead federal agency responsible for water quality management. By employing a variety of regulatory and non-regulatory tools, including establishing water quality standards, issuing permits, monitoring discharges, and managing polluted runoff, the CWA seeks to restore and maintain the chemical, physical, and biological integrity of surface waters to support the protection and propagation of fish, shellfish, and wildlife, and recreation in and on the water.

Water Quality Criteria and Standards

Section 303 of the CWA requires states to adopt water quality standards for all surface waters of the United States. As defined by the CWA, water quality standards consist of two elements: (1) designated beneficial uses of the water body in question, and (2) criteria that protect the designated uses. Section 304(a) requires EPA to publish advisory water quality criteria that accurately reflect the latest scientific knowledge on the kind and extent of all effects on health and welfare that may be expected from the presence of pollutants in water. Where multiple uses exist, water quality standards must protect the most sensitive use. Section 303(d) requires states to develop lists of the water bodies and associated pollutants that exceed water quality criteria.

National Pollutant Discharge Elimination System Permit Program, Section 402

The National Pollutant Discharge Elimination System (NPDES) permit program was established as part of the CWA to regulate municipal and industrial discharges to surface waters of the U.S. Federal NPDES permit regulations have been established for broad categories of discharges, including point source municipal waste discharges and nonpoint source stormwater runoff. NPDES permits generally identify limits on the concentrations and/or mass emissions of pollutants in effluent discharged into receiving waters; prohibitions on discharges not specifically allowed under the permit; and provisions that describe required actions by the discharger, including industrial pretreatment, pollution prevention, self-monitoring, and other activities.

In November 1990, EPA published regulations establishing NPDES permit requirements for municipal and industrial stormwater discharges. Phase I of the permitting program applied to municipal discharges of stormwater in urban areas where the population exceeded 100,000 persons, various industrial activities, and general construction activity if the project would disturb more than 5 acres. Phase II of the NPDES stormwater permit regulations became effective in March 2003 and requires NPDES permits be issued for construction activity for projects that disturb between one and five acres. Phase II of the municipal permit system (i.e., known as the NPDES General Permit for Small Municipal Separate Storm Sewer Systems [Small MS4s], Order 2013-0001-DWQ NPDES NO. CAS000004 as amended by WQ 2015-0133-EXEC, Order WQ 2016-0069-EXEC, WQ Order 2017-XXXX-DWQ, Order WQ 2018-0001-EXEC, and Order WQ 2018-0007-EXEC requires small municipality areas of less than 100,000 persons to develop stormwater management programs.

California's RWQCBs are responsible for implementing the NPDES permit system (refer to additional details in the subsection "State Regulations," below).

Section 303(d) Impaired Waters List

Under Section 303(d) of the CWA, states are required to develop lists of water bodies that would not attain water quality objectives after implementation of required levels of treatment by point source dischargers (municipalities and industries). Section 303(d) requires that the state develop a total maximum daily loads (TMDL) for each of the listed pollutants. The TMDL is the amount of loading that the water body can receive and still be in compliance with water quality objectives. The TMDL is also a plan to reduce loading of a specific pollutant from various sources to achieve compliance with water quality objectives. The goal of the TMDL program is that, after implementation of a TMDL for a given pollutant on the 303(d) list, the causes that led to the pollutant's placement on the list would be remediated.

Federal Antidegradation Policy

The federal antidegradation policy (40 CFR 131.12) is designed to protect existing water uses, water quality, and national water resources. The federal policy directs states to adopt a statewide policy to protect and maintain water quality for existing in-stream uses and waters of exceptional recreational or ecological significance.

Federal Emergency Management Agency National Flood Insurance Program

The Federal Emergency Management Agency (FEMA) administers the National Flood Insurance Program (NFIP, 42 U.S.C. 4016[a]) to provide flood insurance to individuals within communities that adopt and enforce NFIP regulations that limit development in floodplains. Federally-backed flood insurance is only available within NFIP communities. FEMA also develops and issues Flood Insurance Rate Maps (FIRMs) that identify which land areas are subject to flooding. Flood hazard zones in the community are identified within the FIRMs for the 1-in-100 annual exceedance probability flood event and sometimes other flood events. The design standard for flood protection covered by the FIRMs is established by FEMA with the minimum level of flood protection for new development determined to be the 1-in-100 annual exceedance probability (i.e., the 100-year flood event).

State

The Porter-Cologne Water Quality Control Act (Porter-Cologne Act)

The Porter-Cologne Act is California's statutory authority for the protection of water quality. Under the act, the SWRCB and nine RWQCBs regulate activities in waters of the State. Waters of the State include waters of the U.S. and are defined by the Porter-Cologne Act as "any surface water or groundwater, including saline waters, within the boundaries of the state." Additionally, the RWQCB regulates discharges of fill and dredged material under Section 401 of the CWA and the Porter-Cologne Act through the State Water Quality Certification Program. The State Water Quality Certification Program regulates proposed federally permitted activity which may result in a discharge to water bodies including discharges of dredged or fill material permitted by the U.S. Army Corps of Engineers under Section 404 of the CWA (e.g., navigational dredging; flood control channelization; levee construction; channel clearing; and fill of wetlands or other water bodies for land development). The Central Valley RWQCB has jurisdiction over the project area.

Construction General Permit

The Central Valley RWQCB enforces the Construction General Permit within the City of Sacramento. The current Construction General Permit is the NPDES General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities, Order No. 2022-0057-DWQ, NPDES No. CAS000002, effective September 1, 2023. Coverage under a Construction General Permit requires the preparation and implementation of a stormwater pollution prevention plan (SWPPP) and notice of intent (NOI). The SWPPP includes pollution prevention measures (erosion and sediment control measures and measures to control non-stormwater discharges and hazardous spills), demonstration of compliance with all applicable local and regional erosion and sediment control standards, identification of responsible parties, a detailed construction timeline, and a monitoring and maintenance schedule for best management practices (BMPs). The NOI includes site specific information, preliminary post-construction plans and the certification of compliance with the terms of the Construction General Permit.

Basin Plan

Water quality objectives for the American and Sacramento Rivers are specified in the Water Quality Control Plan for the Sacramento River Basin and San Joaquin River Basin (Basin Plan) prepared by the Central Valley RWQCB in compliance with the federal CWA and the California Water Code (section 13240). The Basin Plan (Central Valley RWQCB 2019) contains water quality numerical and narrative standards and objectives for rivers and their tributaries within its jurisdiction. In cases where the Basin Plan does not contain a standard for a particular pollutant, other criteria, such as EPA water quality criteria developed under Section 304(a) of the CWA, apply.

Construction Dewatering

Where groundwater levels are shallow, dewatering during construction is necessary to keep trenches or excavations free of standing water when improvements or foundations/footings are installed. Clean or relatively pollutant-free water that poses little or no risk to water quality may be discharged directly to surface water under certain conditions. The Central Valley RWQCB has adopted a general NPDES permit for short-term discharges of small volumes of wastewater from certain construction-related activities (General Dewatering Permit). Permit conditions for the discharge of these types of wastewaters to surface waters are specified in “General Order for Dewatering and Other Low-Threat Discharges to Surface Waters” (Order R5-2022-0006-01/NPDES Permit No. CAG995002). Discharges may be covered by the General Dewatering Permit provided they are (1) either four months or less in duration or (2) the average dry weather discharge does not exceed 0.25 million gallons per day. The General Dewatering Permit specifies standards for testing, monitoring, and reporting, receiving water limitations, and discharge prohibitions. When project construction would exceed four months in duration or 0.25 million gallons per day, a project-specific permit from the Central Valley RWQCB is required. Any dewatering plan discharging off the project’s footprint will need to be submitted to the State Waterboard’s database SMARTS (Stormwater Multiple Application & Report Tracking System) by SMUD environmental under the State Construction General Permit before dewatering can commence and follow the State Construction General Permit requirements for dewatering.

Local

City of Sacramento 2035 General Plan

The City of Sacramento 2035 General Plan adopted the following goals and policy measures that are relevant to hydrology and water quality.

- **Goal ER 1.1 Water Quality Protection.** Protect local watersheds, water bodies and groundwater resources, including creeks, reservoirs, the Sacramento and American Rivers, and their shorelines.
  - **Policy ER 1.1.2 Regional Planning.** The City shall continue to work with local, State, and Federal agencies and private watershed organizations to improve water quality.
  - **Policy ER 1.1.3 Stormwater Quality.** The City shall control sources of pollutants and improve and maintain urban runoff water quality through storm water protection measures consistent with the City’s National Pollution Discharge Elimination System (NPDES) Permit.
  - **Policy ER 1.1.4 New Development.** The City shall require new development to protect the quality of water bodies and natural drainage systems through site design (e.g., cluster development), source controls, storm water treatment, runoff reduction measures, best management practices (BMPs) and Low Impact Development (LID), and hydromodification strategies consistent with the city’s NPDES Permit.
  - **Policy ER 1.1.5 Limit Stormwater Peak Flows.** The City shall require all new development to contribute no net increase in stormwater runoff peak flows over existing conditions associated with a 100-year storm event.
  - **Policy ER 1.1.6 Post-Development Runoff.** The City shall impose requirements to control the volume, frequency, duration, and peak flow rates and velocities of runoff from development projects to prevent or reduce downstream erosion and protect stream habitat.

- **Policy ER 1.1.7 Construction Site Impacts.** The City shall minimize disturbances of natural water bodies and natural drainage systems caused by development, implement measures to protect areas from erosion and sediment loss, and continue to require construction contractors to comply with the City's erosion and sediment control ordinance and stormwater management and discharge control ordinance.

City of Sacramento Stormwater Quality Improvement Plan

The City of Sacramento Stormwater Quality Improvement Program (SQIP) was first established in 1990 and is implemented to reduce stormwater pollution to the maximum extent practicable and eliminate prohibited non-stormwater discharges through the NPDES municipal stormwater discharge permit. The SQIP includes pollution reduction activities for construction sites, industrial sites, illegal discharges and illicit connections, new development, and municipal operations (County of Sacramento 2009).

3.9.2 Environmental Setting

Climate and Precipitation

The project area is characterized by a Mediterranean climate with cool, wet winters and hot, dry summers. The hottest month of the year is August, with average temperatures ranging from 61.6 degrees Fahrenheit (ºF) to 94.8ºF, and the coldest month of the year is January, with average temperatures ranging from 36.6ºF to 59.1ºF. Average annual precipitation is 11.19 inches (NOAA 2022).

Surface Water

The project site is located along the Lower American River and within the American River watershed, which encompasses approximately 1,900 square miles from the western slope of the Sierra Nevada to the City of Sacramento. The river is regulated by dams, canals, and pipelines for power generation, flood control, water supply, recreation, fisheries, and wildlife management. The ~~project~~ proposed substation site is located approximately 0.6 mile south of the American River.

The project site is developed and mostly paved; ~~there are no~~ the only surface waters within 500 feet of the project site include the American River to the north of the proposed overhead transmission line to Station E. Drainage from the ~~project~~ proposed substation site flows into the existing storm drain system along North B Street, which is part of the City of Sacramento's combined sewer system (CSS). Stormwater is conveyed to one of two facilities for primary treatment before discharge to the Sacramento River. The project site would be recontoured as needed so that all drainage enters City drainage facilities in local streets.

Groundwater

The project overlays the Sacramento Valley-South American River Subbasin, which is part of the larger Sacramento Valley Groundwater Basin (DWR 2004). Groundwater in the project vicinity has been recorded at fairly shallow depths. During testing for hazardous materials at the site, groundwater was found at between 17 and 23 feet below ground surface, which is consistent with historical depth reported in nearby wells (Brown and Caldwell 2023). Groundwater contamination recorded in the project vicinity has been associated with past uses in the area. Constituents detected in groundwater included minor petroleum and chlorinated volatile organic compounds, which are well below maximum contaminant levels (MCLs) and do not pose a significant risk to human health or the environment (Brown and Caldwell 2023). See also discussion in Section 3.8, "Hazards and Hazardous Materials."

Water Quality

The Basin Plan (Central Valley RWQCB 2019) identifies water quality standards for the American and Sacramento Rivers. The existing beneficial uses of the Sacramento and American Rivers include supplying water for municipal supply, domestic supply, agricultural irrigation, stock watering, generating hydropower, recreational activities (i.e., canoeing, rafting, fishing),replenishing freshwater, providing cold freshwater and estuarine habitat, preserving habitats of special significance, supporting rare and listed species, and supporting reproduction of aquatic organisms. There are also the potential beneficial uses of providing warm freshwater habitat and supporting the migration of freshwater species. The Basin Plan outlines objectives to better regulate the presence of pollutants, including bacteria, biostimulatory substances, chemical constituents, parasites (*Cryptosporidium* and *Giardia*), floating material, mercury, methylmercury, oil and grease, pesticides, and high concentrations of settleable or suspended materials. Furthermore, the beneficial uses of water shall not be altered by discoloration, reduced dissolved oxygen, abnormal pH levels, increased radioactivity, salinity, and altered sediment levels, temperatures, toxicity, turbidity, taste and odors.

The Lower American River, from the Nimbus Dam in Folsom to the confluence with the Sacramento River, and the Lower Sacramento River are listed as impaired waterways under CWA Section 303(d) (SWRCB 2022). The Lower American River is listed as impaired for: insecticides (pyrethroids, bifenthrin), polychlorinated biphenyls (PCBs), indicator bacteria (*E. coli*), mercury, temperature, and unknown toxicity. The Lower Sacramento River is listed as impaired for: insecticides and pesticides (chlordane, dichlorodiphenyltrichloroethane [DDT], and dieldrin), mercury, PCBs, temperature, and unknown toxicity (SWRCB 2022). There are adopted TMDL quantities for pyrethroids and mercury and/or methylmercury for the Lower American and Lower Sacramento Rivers (SWRCB 2022). These TMDLs and other regional prohibitions for pollutants are identified in the Basin Plan (Central Valley RWQCB 2019).

The City of Sacramento operates under a Phase I NPDES permit for stormwater municipal discharges to surface waters (NPDES No. CAS082597). The permit requires that the City impose water quality and watershed protection measures for all development projects. The intent of the waste discharge requirements in the permit is to attain water quality standards and protection of beneficial uses consistent with the Basin 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 FEMA flood hazard maps (FEMA 2015; Figure 3.9-1).

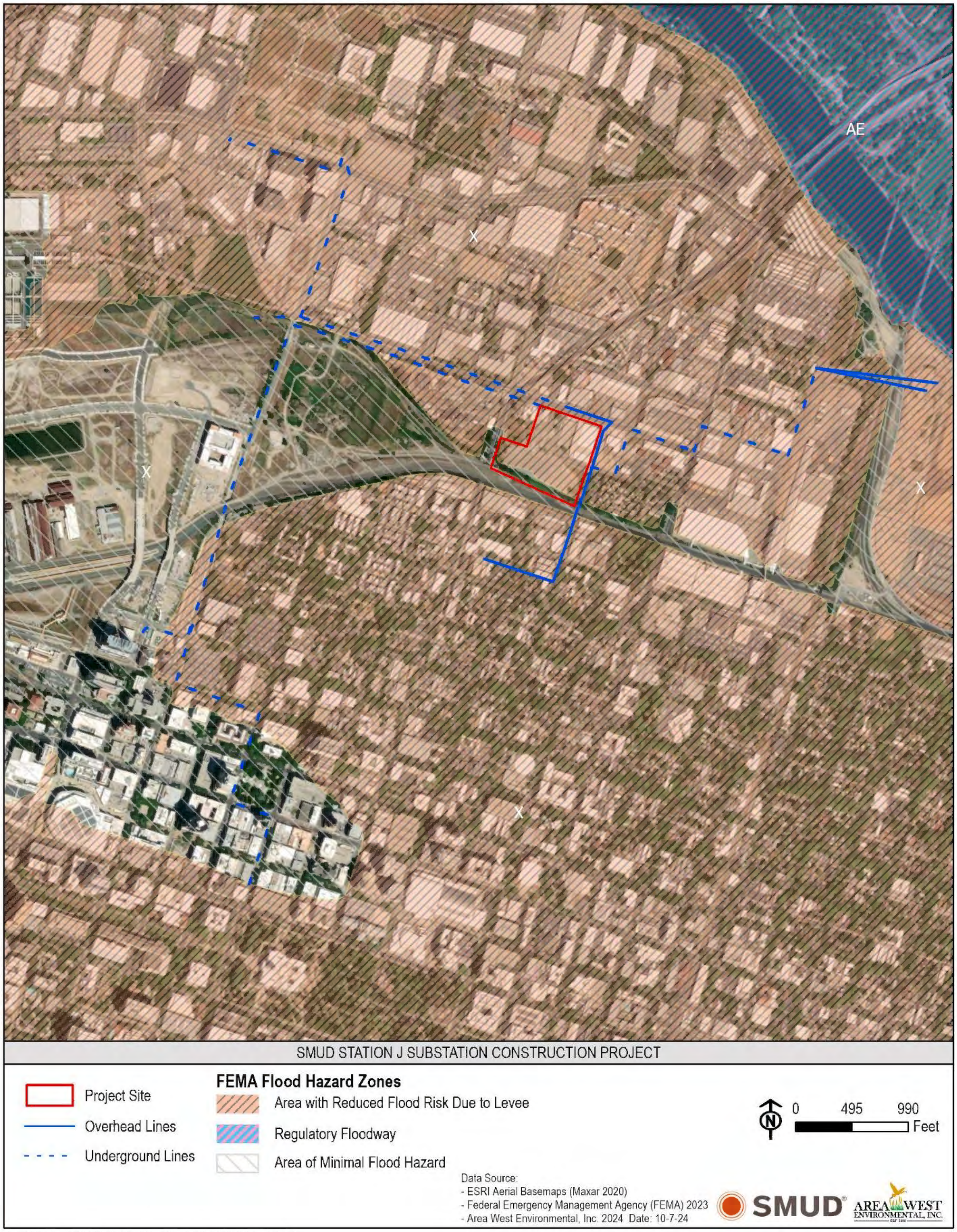


Figure 3.9-1: FEMA Flood Hazard Map

3.9.3 Environmental Impacts and Mitigation Measures

Methods and Assumptions

Potential impacts related to hydrology and water quality were evaluated based on a review of available information regarding watersheds, surface waters, groundwater, flooding hazards, stormwater control and treatment requirements in the project area, and project design and construction methods.

Thresholds of Significance

Based on Appendix G of the State CEQA Guidelines, the proposed project would have a significant impact related to hydrology and water quality if it would:

- violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality;
- substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin;
- substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:

i) result in substantial erosion or siltation on or off site;

ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on or off site;

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;

- in flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation; or
- conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.

Impact Analysis

Impact 3.9-1. Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?

Less-than-Significant Impact. Drainage from the project site flows into the City's CSS and is discharged to the Sacramento River after treatment. The applicable water quality standards are listed in the Water Quality Control Plan (Basin Plan) for the Sacramento River and San Joaquin

River Basins (Central Valley RWQCB 2019). The project includes ground disturbance associated with activities such as grading, trenching, foundation installation, fence construction, and road improvements that would temporarily expose soil and could result in accelerated erosion. Erosion within the construction area could affect water quality of offsite water bodies by increasing sedimentation through accidental discharges into waterways through runoff. The project could also result in the degradation of water quality from runoff of petroleum-based products associated with equipment and vehicles used during construction and operation.

To reduce or eliminate construction-related water quality effects, the City of Sacramento's Grading Ordinance requires compliance with the requirements of the City's SQIP. The City's SQIP and the Stormwater Quality Design Manual for the Sacramento Region include BMPs to be implemented to mitigate impacts from new development and redevelopment projects. Additionally, in compliance with the NPDES Construction General Permit, SMUD must prepare and implement a SWPPP. The SWPPP would identify BMPs, consistent with the SQIP, to prevent sediment from leaving the site and would include a Spill Prevention and Response Plan (SPRP) and a construction-specific Hazardous Substance Control and Emergency Response Plan (HSCERP) to minimize the potential for accidental releases of hazardous materials into the environment. The SWPPP would include BMPs that address excavation areas, stockpile areas, street entrances and exits, construction vehicle maintenance areas, dust suppression activities, and post-construction site stabilization.

As excavation during project construction could reach a depth of 30 – 55 feet below ground surface, there would be potential to encounter groundwater during construction. Should dewatering be required during project construction, the project is likely to qualify for coverage as a Low Threat Discharge under SWRCB's Water Quality Order 2003-0003-DWQ, which permits small and/or temporary dewatering projects (i.e., excavations during construction). Water would be collected and treated prior to discharge, in accordance with regulatory requirements. Dewatering activities would be temporary, and the volume of groundwater withdrawn would be small relative to the subbasin's capacity. As discussed in Section 3.8 "Hazards and Hazardous Materials", groundwater testing at the site detected constituents (minor petroleum and chlorinated volatile organic compounds) well below California MCLs; therefore, the groundwater does not pose a significant risk to human health or the environment (Brown and Caldwell 2023). In accordance with City requirements, SMUD and its construction contractor would coordinate with the City to determine the maximum volume that could be discharged to the CSS so that the project, in conjunction with other sources of stormwater, would not exceed the capacity of the existing system. No groundwater would be withdrawn during project operation.

Consequently, the project would not violate water quality standards or adversely affect surface water or groundwater quality; this impact would be ***less than significant***.

Impact 3.9-2. Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?

Less-Than-Significant Impact. Because the project would involve construction activities within previously developed areas, which are primarily paved areas, 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 not result in an increase in impervious surfaces. Based on initial estimates, the project would remove approximately 135,000 square feet (3.10 acre) of existing asphalt pavement, construct approximately 62,000 square feet (1.43 acre) of impervious asphalt surfaces, and construct approximately 364,000 square feet (8.35 acres) of non-asphalt, pervious gravel or other surfaces. Therefore, the project would have a net decrease in impervious surfaces. Therefore, there would be no adverse change in surface infiltration characteristics affecting groundwater recharge, and the project would not be expected to substantially increase the rate or amount of surface runoff in or near the project site. The project impact on groundwater supplies and recharge would be ***less than significant***.

Impact 3.9-3. substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:

Result in a substantial erosion or siltation on- or off-site;

Less-Than-Significant Impact. The project would not substantially alter the existing drainage pattern of the site. Similar to existing conditions, the site would be graded to direct runoff into the City's CSS system via North B Street and North 14th Street. As discussed for Impact 3.9-2 above, the project would result in a net decrease of impervious surfaces. Additionally, as discussed for Impact 3.9-1, the project would implement construction BMPs to minimize erosion and prevent sediment from leaving the site during and after construction. Therefore, the project would not result in substantial erosion or siltation; this impact would be ***less than significant***.

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

Less-Than-Significant Impact. The project would not substantially increase the rate or amount of surface runoff from the site. The project would have a net decrease in impervious surfaces and would not alter existing drainage patterns. Therefore, this impact would be ***less than significant***.

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

Less-Than-Significant Impact. As discussed in Impact 3.9-1, excavation during project construction may require dewatering; water would be collected and treated prior to discharge, in accordance with regulatory requirements. SMUD and its construction contractor would coordinate with the City to determine the maximum volume that could be discharged to the CSS so that the project, in conjunction with other sources of stormwater, would not exceed the capacity of the existing system. Therefore, the project would not contribute runoff water that would exceed the capacity of the City stormwater collection system. To minimize potential release of pollutants into stormwater, SMUD would implement a SWPPP, including a SPRP and a construction-specific HSCERP to minimize the potential for accidental releases of hazardous materials during construction.

During project operation, the site would not substantially increase the rate or amount of surface runoff compared to existing conditions. This impact would be ***less than significant***.

Impede or redirect flood flows?

Less-Than-Significant Impact. The project is in an area with minimal flood risk. The project would not affect existing hydrology or increase runoff to a degree that would result in flooding off-site or impede or redirect flood flows. Project construction activities would occur within the developed project site and would result in a net decrease in impervious surfaces. Therefore, this impact would be ***less than significant***.

Impact 3.9-4. In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?

No Impact. The proposed substation and electrical infrastructure is located within an area with minimal flood risk (Figure 3.9-1). The substation would not be subject to significant flood hazards. The project site is at an inland location that is outside of any ocean-related tsunami zones. The project is in an area of mostly flat terrain with no large open bodies of water. Thus, the project would not be at risk of flood, seiche, tsunamis, or the release of pollutants from inundation. There would be ***no impact***.

Impact 3.9-5. Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

Less-Than-Significant Impact. As discussed under Impact 3.9-1, above, the project includes implementation of a SWPPP, which would prevent sedimentation and other potential surface water pollution that may occur during project construction. During operation, the project would not generate wastewater or change stormwater runoff conditions, so there would be no conflict with or obstruction of a water quality control plan during project operation. The project would not result in a potentially significant impact on groundwater and would not obstruct a sustainable groundwater management plan. This impact would be ***less than significant***.

3.10 Noise

This section includes a description of ambient noise conditions, a summary of applicable regulations related to noise and vibration, and an analysis of the potential impacts resulting from the implementation of the proposed project. Mitigation measures are recommended, as necessary, to reduce potentially significant noise and vibration impacts.

3.10.1 Regulatory Setting

Various agencies have established noise guidelines and standards to protect citizens from potential hearing damage and other adverse physiological and social effects associated with noise and vibration.

Federal

Although not directly applicable to the proposed project, the research that supported the development of federal community noise standards provides a context for understanding human response to different noise levels and is summarized below for the reader's edification.

Federal Plans, Policies, Regulations, and Laws and National Organizations

The U.S. Environmental Protection Agency (EPA), Office of Noise Abatement and Control, was originally established to coordinate federal noise control activities. After inception, EPA's Office of Noise Abatement and Control issued the federal Noise Control Act of 1972, establishing programs and guidelines to identify and address the effects of noise on public health and welfare and the environment. Administrators of EPA determined in 1981 that subjective issues such as noise would be better addressed at lower levels of government. Consequently, in 1982 responsibilities for regulating noise control policies were transferred to state and local governments. However, noise control guidelines and regulations contained in the rulings by EPA in prior years remain upheld by designated federal agencies, while allowing more individualized control for specific issues by designated federal, state, and local government agencies.

U.S. Environmental Protection Agency Noise Control Act

The Federal Noise Control Act of 1972 (Public Law 92-574) established a requirement that all federal agencies administer their programs to promote an environment free of noise that would jeopardize public health or welfare.[1] Although the EPA was given a major role in disseminating information to the public and coordinating federal agencies, each federal agency retains authority to adopt noise regulations pertaining to agency programs.[2]

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[1] The U.S. Environmental Protection Agency (EPA) was given the responsibility for providing information to the public regarding identifiable effects of noise on public health and welfare, publishing information on the levels of environmental noise that will protect the public health and welfare with an adequate margin of safety, coordinating federal research and activities related to noise control, and establishing federal noise emission standards for selected products distributed in interstate commerce. The Noise Control Act also directed that all federal agencies comply with applicable federal, State, interstate, and local noise control regulations.

[2] The EPA can, however, require other federal agencies to justify their noise regulations in terms of the Noise Control Act policy requirements.

In 1974, in response to the requirements of the federal Noise Control Act, the EPA identified indoor and outdoor noise level limits to protect public health and welfare (communication disruption, sleep disturbance, and hearing damage). Outdoor and indoor noise exposure limits of 55 decibels (dB) Day-Night Average Sound Level (L_{dn}) and 45 dB L_{dn}, respectively, are identified as desirable to protect against speech interference and sleep disturbance for residential, educational, and healthcare settings. The sound-level criterion identified to protect against hearing damage in commercial and industrial areas is 70 dB 24-hour Equivalent Sound Level (L_{eq}) (both outdoors and indoors).

The EPA's Office of Noise Abatement and Control was established to coordinate federal noise control activities. In 1981, EPA determined that subjective issues such as noise would be better addressed at lower levels of government. Consequently, in 1982 responsibilities for regulating noise control policies were transferred to state and local governments.

U.S. Department of Transportation, Federal Transit Administration and U.S. EPA Vibration Guidelines

To address the human response to groundborne vibration, the Federal Transit Administration (FTA) of the U.S. Department of Transportation has set forth guidelines for maximum-acceptable-vibration criteria for different types of land uses. These include 65 vibration decibels (VdB) referenced to 1 microinch per second (μin/sec) and based on root mean square (RMS) velocity amplitude for land uses where low ambient vibration is essential for interior operations (e.g., hospitals, high-tech manufacturing, laboratory facilities); 80 VdB for residential uses and buildings where people normally sleep; and 83 VdB for institutional land uses with primarily daytime operations (e.g., schools, churches, clinics, offices) (FTA 2018).

Standards have also been established to address the potential for groundborne vibration to cause structural damage to buildings. These standards were developed by the Committee of Hearing, Bio Acoustics, and Bio Mechanics (CHABA) at the request of the U.S. Environmental Protection Agency (FTA 2018). For fragile structures, CHABA recommends a maximum limit of 0.25 inches per second (in/sec) peak particle velocity (PPV) (FTA 2018).

State

The State of California has adopted noise standards in areas of regulation not preempted by the federal government. State standards regulate noise levels of motor vehicles, sound transmission through buildings, occupational noise control, and noise insulation.

The state's environmental noise regulations are incorporated into the City of Sacramento's 2035 General Plan, as described below.

Local

City of Sacramento 2035 General Plan Update

The City of Sacramento 2035 General Plan Update contains the follow goal and policies regarding noise and vibration:

- **Goal EC 3.1** Noise Reduction. Minimize noise impacts on human activity to ensure the health and safety of the community.

- **Policy EC 3.1.1** Exterior Noise Standards. The City shall require noise mitigation for all development where the projected exterior noise levels exceed those shown in Table EC 1, to the extent feasible.
- **Policy EC 3.1.2** Exterior Incremental Noise Standards. The City shall require noise mitigation for all development that increases existing noise levels by more than the allowable increment shown in Table EC 2, to the extent feasible.
- **Policy EC 3.1.3** Interior Noise Standards. The City shall require new development to include noise mitigation to assure acceptable interior noise levels appropriate to the land use type: 45 dBA L_{dn} (with windows closed) for residential, transient lodgings, hospitals, nursing homes and other uses where people normally sleep; and 45 dBA L_{eq} (peak hour with windows closed) for office buildings and similar uses.
- **Policy EC 3.1.5** Interior Vibration Standards. The City shall require construction projects anticipated to generate a significant amount of vibration to ensure acceptable interior vibration levels at nearby residential and commercial uses based on the current City or Federal Transit Administration (FTA) criteria.
- **Policy EC 3.1.6** Effects of Vibration. The City shall consider potential effects of vibration when reviewing new residential and commercial projects that are proposed in the vicinity of rail lines or light rail lines.
- **Policy EC 3.1.7** Vibration. The City shall require an assessment of the damage potential of vibration-induced construction activities, highways, and rail lines in close proximity to historic buildings and archaeological sites and require all feasible measures be implemented to ensure no damage would occur.
- **Policy EC 3.1.8** Operational Noise. The City shall require mixed-use, commercial, and industrial projects to mitigate operational noise impacts to adjoining sensitive uses when operational noise thresholds are exceeded.
- **Policy EC 3.1.9** Compatibility with Park and Recreation Uses. The City shall limit the hours of operation of parks and active recreation areas in residential areas to minimize disturbance to residences.
- **Policy EC 3.1.10** Construction Noise. The City shall require development projects subject to discretionary approval to assess potential construction noise impacts on nearby sensitive uses and to minimize impacts on these uses, to the extent feasible.
- **Policy EC 3.1.11** Alternatives to Sound Walls. The City shall encourage the use of design strategies and other noise reduction methods along transportation corridors in lieu of sound walls to mitigate noise impacts and enhance aesthetics.

For community planning purposes, the Noise Element of the City of Sacramento 2035 General Plan Update (City of Sacramento 2015b) establishes exterior noise compatibility standards for various land uses, and these noise levels are expressed in the L_{dn} and CNEL metrics. Table EC 1 of the Noise Element shows the exterior noise standards. Policy EC 3.1.1 (Exterior Noise Standards) states the following in regards to new noise-sensitive areas:

> The City shall require noise mitigation for all development where the projected exterior noise levels exceed those shown in Table EC 1, to the extent feasible.

Table EC 2 of the Noise Element is used as a guideline for determining the allowable incremental noise increases at residences and buildings where people normally sleep in addition to institutional land uses with primarily daytime and evening uses. The L_{dn} noise metric applies to residences and buildings where people normally sleep, and the peak hour L_{eq} noise metric applies to institutional land uses. The allowable increases found in Table EC 2 originate from the Federal Transit Administration and only apply to transportation-related projects. Institutional land uses are land uses with primarily daytime and evening use, and typically include schools, libraries, and churches, where it is important to avoid interference with such activities as speech, meditation, and concentration. Policy EC 3.1.2 (Exterior Incremental Noise Standards) of the Noise Element states the following:

> The City shall require noise mitigation for all development that increases existing noise levels by more than the allowable increment shown in Table EC 2, to the extent feasible.

In terms of interior noise level standards, Policy EC 3.1.3 (Interior Noise Standards) of the Noise Element states the following:

> The City shall require new development to include noise mitigation to assure acceptable interior noise levels appropriate to the land use type: 45 dBA L_{dn} for residential, transient lodgings, hospitals, nursing homes and other uses where people normally sleep; and 45 dBA L_{eq} (peak hour) for office buildings and similar uses.

City of Sacramento Noise Control Ordinance

Section 8.68.060 of the City of Sacramento's Noise Control Ordinance establishes construction noise exempt hours, as follows:

> 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 City's Noise Control Ordinance also establishes exterior noise level standards for noise-sensitive land uses. These are shown in Table 3.10-1. Section 8.68.060 states the following:

> If the ambient noise level exceeds that permitted by any of the first four noise-limit categories listed in [Table 3.12-2], 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 allowable L_{max}, the maximum ambient noise level shall be the noise level limit for that category.

Table 3.10-1. City of Sacramento Exterior Noise Level Standards

Maximum Time of Exposure	Noise Metric	7 a.m. to 10 p.m. (Daytime)	10 p.m. to 7 a.m. (Nighttime)
30 Minutes/Hour	L_{50}	55 dBA	50 dBA
15 Minutes/Hour	L_{25}	60 dBA	55 dBA
5 Minutes/Hour	$L_{8.3}$	65 dBA	60 dBA
1 Minute/Hour	$L_{1.7}$	70 dBA	65 dBA
Any Period of Time	L_{max}	75 dBA	70 dBA

Source: City of Sacramento 2015d

3.10.2 Environmental Setting

Acoustic Fundamentals

Acoustics 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; consequently, the perception of sound is subjective in nature and can vary substantially from person to person. Common environmental noise sources and noise levels are presented in Figure 3.10-1.

Outdoor Noise Source	Noise Level (dBA)	Indoor Noise Source
	— 110 —	Rock band
Jet fly-over at 1000 feet		
	— 100 —	
Gas lawn mower at 3 feet		
	— 90 —	
Diesel truck at 50 feet at 50 mph		Food blender at 3 feet
	— 80 —	Garbage disposal at 3 feet
Noisy urban area, daytime		
Gas lawn mower, 100 feet	— 70 —	Vacuum cleaner at 10 feet
Commercial area		Normal speech at 3 feet
Heavy traffic at 300 feet	— 60 —	
		Large business office
Quiet urban daytime	— 50 —	Dishwasher next room
Quiet urban nighttime	— 40 —	Theater, large conference room (background)
Quiet suburban nighttime		
	— 30 —	Library
Quiet rural nighttime		Bedroom at night, concert hall (background)
	— 20 —	
		Broadcast/recording studio
	— 10 —	
Lowest threshold of human hearing	— 0 —	Lowest threshold of human hearing

Source: Caltrans 2013.

dBA = A-weighted decibel(s)

Figure 3.10-1: Typical Noise Levels

A sound wave is initiated in a medium by a vibrating object (e.g., vocal chords, the string of a guitar, the diaphragm of a radio speaker). The wave is comprised of minute variations in pressure, oscillating above and below the ambient atmospheric pressure. The number of pressure variations occurring per second is referred to as the frequency of the sound wave and is expressed in hertz, which is equivalent to one complete cycle per second.

Directly measuring sound pressure fluctuations at different frequencies would require the use of a very large and cumbersome range of numbers. To avoid this and have a more useable measurement system, the dB scale was introduced. The use of the decibel is a convenient way to handle the millionfold range of sound pressures to which the human ear is sensitive. A decibel is logarithmic.[3] As such, it does not follow normal algebraic methods and cannot be directly added. For example, a 65 dB source of sound, such as a truck, when joined by another 65 dB source results in a sound amplitude of 68 dB, not 130 dB (i.e., doubling the source strength increases the sound pressure by 3 dB). A sound level increase of 10 dB corresponds to 10 times the acoustical energy, and an increase of 20 dB equates to a 100-fold increase in acoustical energy.

The loudness of sound perceived by the human ear depends primarily on the overall sound pressure level and frequency content of the sound source. The human ear is not equally sensitive to loudness at all frequencies in the audible spectrum. To better relate overall sound levels and loudness to human perception, frequency-dependent weighting networks were developed. The standard weighting networks are identified as A through E. A strong correlation exists between the way humans perceive sound and A-weighted sound levels (dBA). For this reason, the dBA can be used to predict community response to noise. Sound levels expressed as dB in this section are A-weighted sound levels, unless noted otherwise.

Noise can be generated by a number of sources, including mobile sources (automobiles, trucks, and airplanes), and stationary sources (construction sites, machinery, commercial and industrial operations). As acoustic energy spreads through the atmosphere from the source to the receptor, noise levels attenuate (reduce) depending on ground absorption characteristics, atmospheric conditions, and the presence of physical barriers (walls, building façades, berms). Noise generated from mobile sources generally attenuates at a rate of 4.5 dB per doubling of distance. Stationary noise sources spread with more spherical dispersion patterns, which attenuate at a rate of 6 dB to 7.5 dB per doubling of distance.

Atmospheric conditions such as wind speed, turbulence, temperature gradients, and humidity may additionally alter the propagation of noise and affect levels at a receptor. Furthermore, the presence of a large object (barrier) between the source and the receptor can provide significant attenuation of noise levels at the receptor. The amount of noise level reduction or “shielding” provided by a barrier primarily depends on the size (height) of the barrier, the location of the barrier in relation to the source and receptors, and the frequency spectra of the noise. Natural barriers such as berms, hills, or dense woods, and human-made features such as buildings and walls may be used as noise barriers.

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[3] A sound level expressed in decibels is the logarithmic ratio of two like pressure quantities, with one pressure quantity being a reference sound pressure. For sound pressure in air, the standard reference quantity is generally considered to be 20 micropascals, which directly corresponds to the threshold of human hearing.

Noise Descriptors

The intensity of environmental noise changes over time. This section uses several different descriptors of time-averaged noise levels. The selection of a proper noise descriptor for a specific source depends on the spatial and temporal distribution, duration, and fluctuation of both the noise source and the environment. The noise descriptors most often used to describe environmental noise are defined below:

- L_{max} (Maximum Noise Level): The highest A/B/C-weighted, integrated noise level occurring during a specific period of time.
- L_{min} (Minimum Noise Level): The lowest A/B/C-weighted, integrated noise level during a specific period of time.
- Peak: The highest weighted or unweighted, instantaneous, peak-to-peak value occurring during a measurement period.
- L_n (Statistical Descriptor): The noise level exceeded n percent of a specific period of time, generally accepted as an hourly statistic. An L_{10} would be the noise level exceeded 10 percent of the measurement period.
- L_{eq} (Equivalent Noise Level): The energy mean (average) noise level, the steady state sound level in a specified period of time that contains the same acoustical energy as a varying sound level over the same time period.
- L_{dn} (Day-Night Noise Level): The 24-hour L_{eq} with a 10 dB “penalty” applied during nighttime noise-sensitive hours between 10:00 p.m. and 7:00 a.m. The L_{dn} attempts to account for the fact that noise during this specific period of time is a potential source of disturbance with respect to normal sleeping hours.
- CNEL (Community Noise Equivalent Level): The CNEL is similar to the L_{dn} described above, but with an additional 5 dB “penalty” for the noise-sensitive hours between 7:00 p.m. and 10:00 p.m., which are typically reserved for relaxation, conversation, reading, and other noise-sensitive activities. If using the same 24-hour noise data, the CNEL is typically 0.5 dB higher than the L_{dn}.
- SEL (Sound Exposure Level): The SEL describes the cumulative exposure to sound energy over a stated period of time.

Noise Effects on Humans

Excessive and chronic exposure to elevated noise levels can result in auditory and nonauditory effects in humans. Auditory effects of noise on people are those relating to temporary or permanent noise-induced hearing loss. Nonauditory effects of exposure to elevated noise levels are those relating to behavioral and physiological effects. The nonauditory behavioral effects of noise on humans are primarily associated with the subjective effects of annoyance, nuisance, and dissatisfaction, which lead to interference with activities such as communications, sleep and learning.[4]

The degree to which noise results in annoyance and interference with activities is highly subjective and may be influenced by a number of nonacoustic factors. The number and effect of these nonacoustic environmental and physical factors vary depending on the individual characteristics of the noise environment, including sensitivity, level of activity, location, time of day, and length of exposure. One key aspect in the prediction of human response to new noise environments is the individual level of adaptation to an existing noise environment. The greater the change in noise levels caused by a new noise source, relative to the environment an individual has become accustomed to, the less tolerant the individual will be to the new noise source.

With regard to the human perception of increases in sound levels expressed in dB, a change of 1 dB is generally not perceivable, excluding controlled conditions and pure tones. Outside of controlled laboratory conditions, the average human ear barely perceives a change of 3 dB. A change of 5 dB generally fosters a noticeable change in human response, and an increase of 10 dB is subjectively heard as a doubling of loudness.

Vibration

The human body responds to the vibration velocity's average amplitude. A vibration decibel notation is commonly used to describe vibration. The vibration velocity level (VdB) is reported in decibels relative to a level of $1x10^{-6}$ inches per second.[5]

In contrast to airborne noise, ground-borne vibration is not a phenomenon that most people experience every day. The background vibration velocity level in residential areas is usually 50 VdB or lower, well below the threshold of human perception (around 65 VdB).

Existing Noise Conditions

Sensitive Land Uses

Noise-sensitive land uses are those uses where quiet is essential to the purpose of the land use. Land uses that are sensitive to noise generally include those uses where exposure to noise would result in adverse effects, and where quiet is an essential element of the intended purpose. Noise-sensitive land uses include residences and buildings where people normally sleep (including hospitals and hotels), as well as uses where it is important to avoid interference with such activities as speech, meditation, and concentration on reading material, such as schools, libraries, theaters, and houses of worship.

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4 The nonauditory physiological health effects of noise on humans have been the subject of considerable research efforts attempting to discover correlations between exposure to elevated noise levels and health problems, such as hypertension and cardiovascular disease. Most research infers that noise-related health issues are predominantly the result of behavioral stressors (physiological) and not a direct noise-induced response.

5 Vibration is an oscillatory motion that can be described in terms of displacement, velocity, or acceleration. Because the motion is oscillatory, no net movement of the vibration element occurs, and the average of any of the motion descriptors is zero. For vibration, velocity represents the instantaneous speed of the motion and acceleration is the speed's rate of change.

The closest noise-sensitive receptors to the project area are residents along A Street to the ~~west~~ southeast of the project site and ~~office uses of~~ the Salvation Army Center of Hope shelter to the northwest of the project site, an office at 721 North B Street, an office at 701 E Street, and apartments along 7th Street. The structures closest to the project area that would be evaluated for structural damage from vibration also would be ~~this apartment complex~~ these receptors, which ~~is~~ are approximately 50 feet from the primary project construction areas~~, to the northeast~~. These residences and offices could experience noise associated with project construction, increased traffic, and stationary sources emanating from the station (e.g., transformers, cooling fans and supporting equipment [e.g., switch gear, circuit breaker, capacitor, and wiring]), and from construction activities along North B Street, and 7th Street. Residences are of primary concern because residents could be exposed to increased and prolonged interior and exterior noise levels.

Existing Noise Sources

The existing noise environment near the project area is influenced ambient noise sources in the vicinity, including vehicles on local roads, train noise from the nearby Union Pacific Railroad, construction from the nearby Railyards development, and mechanical equipment on buildings in the vicinity. The existing noise environment near the project area also is influenced by natural sources (e.g., wind and birds).

Ambient Noise Level Surveys

AECOM measured ambient noise levels near existing noise-sensitive uses at various locations in the project area. Table 3.10-2 summarizes the results of the ambient noise-level measurements. Long-term (LT) and short-term (ST) measurements of ambient noise levels were conducted on July 5th through July 6th, 2023, on May 23rd, 2024, and on October 8th, 2024 in the project area, as shown in Figure 3.10-2. The noise environment in the project vicinity was dominated by local and distant traffic sources, railroad noise, and natural sources (e.g., wind and birds). These data represent existing conditions, which are largely unchanged. As shown in Table 3.10-2, measured ambient noise levels at the noise-sensitive land uses closest to the project area range between ~~55~~ 49 and ~~59~~ 67 dBA L_{eq}.

Table 3.10-2. Ambient Noise Levels in the Project Area

Measurement Site		Date From	Date To	Start Time	Duration	Daytime (7 a.m.–10 p.m.) L_{eq}	Daytime (7 a.m.–10 p.m.) L_{max}	Nighttime (10 p.m.–7 a.m.) L_{eq}	Nighttime (10 p.m.–7 a.m.) L_{max}	L_{dn}
LT-01	Eastern Boundary	5-Jul	6-Jul	15:00	24 Hour	54.9	72.2	54.6	74.2	61.0
LT-02	Northwest Boundary	5-Jul	6-Jul	15:15	24 Hour	57.7	76.8	55.9	74.4	62.6
ST-01	Residential Area Northwest Corner of 20th Street and C Street	6-Jul-23		15:30	15 Minutes	55.3	76.5	--	--	--
ST-02	Residential Area Northeast Corner of Dreher Street and North 18th Street	6-Jul-23		16:00	15 Minutes	59.1	73.4	--	--	--
ST-03	By 525 7th Street	23-May-24		9:51	20 Minutes	63.9	82.6	--	--	67.6
ST-07	By 525 7th Street	23-May-24		14:30	20 Minutes	61.7	79.9	--	--	--
ST-09	By 525 7th Street	23-May-24		20:23	20 Minutes	--	--	63.5	87.5	--
ST-11	By 525 7th Street	23-May-24		23:04	20 Minutes	--	--	60.2	87.1	--
ST-05	By Apartments at 251 6th Street	23-May-24		10:43	20 Minutes	59.7	78.0	--	--	63.6
ST-08	By Apartments at 251 6th Street	23-May-24		15:03	20 Minutes	60.2	80.1	--	--	--
ST-10	By Apartments at 251 6th Street	23-May-24		21:07	20 Minutes	--	--	56.7	69.0	--
ST-12	By Apartments at 251 6th Street	23-May-24		23:30	20 Minutes	--	--	56.4	69.5	--
ST-04	By 701 E Street	23-May-24		10:13	20 Minutes	59.4	74.4	--	--	--
ST-06	By 721 N B Street	23-May-24		11:15	20 Minutes	66.7	83.5	--	--	--
ST-13	By 309 14th Street	8-Oct-24		14:15	30 Minutes	55.1	77.0	NA	NA	NA
ST-14	By 30 Icon Walk	8-Oct-24		14:46	30 Minutes	51.2	67.8	NA	NA	NA
ST-15	316 13th Street	8-Oct-24		15:18	30 Minutes	49.4	67.4	NA	NA	NA
ST-16	Outside Seating, La Cosecha by Mayahuel	8-Oct-24		16:04	15 Minutes	58.4	73.6	NA	NA	NA
ST-17	Northwest J Street & 10th Street	8-Oct-24		16:21	15 Minutes	61.5	76.7	NA	NA	NA

Notes: dB = decibels; L_{eq} = equivalent sound level (the sound energy averaged over a continuous 15-minute to 1-hour period); L_{max} = maximum noise level.

Noise-level measurements were conducted using a Larson Davis Laboratories Model 820 sound-level meter calibrated using an LDL Model CAL200 acoustical calibrator and programmed to record A-weighted sound levels using a "slow" response.

The equipment complied with all pertinent requirements of the American National Standards Institute for Class 1 sound-level meters.

Source: Data compiled by AECOM in 2023 and in 2024.

Figure 3.10-2: Ambient Noise Survey Measurements and Locations

Traffic Noise

Traffic noise is the dominant noise source on the project site. North 12th Street and 16th Street are the major roadways near the project site. Existing vehicle traffic noise levels near the project site were modeled using the Federal Highway Administration (FHWA) Highway Traffic Noise Prediction Model (FHWA-RD-77-108) and traffic data obtained from Caltrans and City traffic counts, to define existing traffic levels.[6]

Table 3.10-3 summarizes the modeled traffic noise levels, provides noise levels at 100 feet from the centerline of each major roadway in the immediate vicinity of the project site, and lists distances from the roadway centerlines to the 60 dB, 65 dB, and 70 dB L_{eq} traffic noise contours. These traffic noise modeling results are based on existing peak hour traffic volumes obtained from Caltrans and City traffic counts. As shown in Table 3.10-3, the location of the 60 dB L_{eq} contour ranges from 10 to 23,000 feet from the centerline of the modeled roadways. The extent to which receptors in the vicinity of the project site are affected by existing traffic noise depends on their respective proximity to the roadways and their individual sensitivity to noise.

Table 3.10-3. Summary of Modeled Levels of Existing Traffic Noise

Roadway	Segment		L_{eq} (dB) 50 Feet	Distance (feet) from Roadway Centerline to L_{eq} Contour		
	From	To		70 dB	65 dB	60 dB
Interstate 5	North of Richards Boulevard		84	2,313	7,315	23,133
Interstate 5	South of Richards Boulevard		83	2,181	6,896	21,807
Richards Boulevard	I-5	North 12th Street	64	28	87	277
North 12th Street	Richards Boulevard	Project Site	64	28	87	277
North A Street	Project Site	16th Street	50	1	3	10

Notes: dB = A-weighted decibels; L_{eq} = equivalent sound level.
Source: Data modeled by AECOM in 2023

3.10.3 Environmental Impacts and Mitigation Measures

Methods and Assumptions

For the proposed project, the environmental evaluation of potential noise impacts is based on a comparison between predicted noise levels and noise criteria defined by Sacramento City. For this project, noise impacts are considered significant if existing or proposed noise-sensitive land uses would be exposed to noise levels in excess of the City General Plan, and Sacramento City Code, as described above.

[6] The FHWA model is based on California Vehicle Noise (CALVENO) reference noise factors for automobiles, medium trucks, and heavy trucks, with consideration given to vehicle volume, speed, roadway configuration, distance to the receptor, and ground attenuation factors.

Information included in Chapter 2, “Project Description,” and data obtained during on-site noise monitoring were used to determine potential locations of noise-sensitive receptors and potential noise-generating activities and land uses in the vicinity of the project site, and within the project site. Noise-sensitive land uses and noise sources near the project site were identified based on existing documentation (e.g., aerial images) and site reconnaissance.

To assess the potential short-term noise impacts from demolition and construction, sensitive receptors and their relative exposure were identified. Construction noise was predicted using the Federal Transit Noise and Vibration Impact Assessment methodology for construction noise prediction (FTA 2018). Reference equipment noise levels and use factors are based on the Federal Highway Administration Roadway Construction Noise Model (FHWA 2006). Noise levels of specific construction equipment that would be operated and the resultant noise levels at sensitive receptor locations were calculated.

Regarding traffic noise, modeling was conducted based on traffic volumes obtained from the Caltrans and City traffic counts. The FHWA Highway Traffic Noise Prediction Model (FHWA RD 77–108) (FHWA 1978) was used to calculate the change in traffic noise levels along affected roadway segments in the project vicinity. The project’s contribution to the existing traffic noise levels along area roadways was determined by comparing the predicted noise levels at a reference distance of 100 feet from the roadway centerline, with and without project-generated traffic.

Potential long-term (operation-related) noise impacts from stationary sources were assessed based on existing documentation and site reconnaissance data (e.g., distances to receptors). This analysis also evaluates the proposed on-site noise-generating uses (i.e., operation noise generating equipment at the proposed station) that could affect off-site noise-sensitive receptors near the proposed project.

Thresholds of Significance

According to Appendix G of the CEQA Guidelines, the proposed project would have a significant impact related to noise if the proposed project would:

- Generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies. (*e.g., exterior and interior noise levels detailed in the County General Plan and Sacramento County Code);*
- Generate excessive groundborne vibration or groundborne noise levels;
- 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, expose people residing or working in the project area to excessive noise levels.

For the proposed project, the environmental evaluation of potential noise impacts is based on a comparison between predicted noise levels and noise criteria defined by the City of Sacramento. For this project, noise impacts are considered significant if existing or proposed noise-sensitive land uses would be exposed to noise levels in excess of the City’s General Plan, and Sacramento City Code, as described above.

Issues Not Discussed Further

Generation of excessive groundborne vibration or groundborne noise levels. Project operation (daily use of the Station) would not result in excessive groundborne vibration or groundborne noise levels; therefore, this issue is not discussed further in this EIR.

For a project within the vicinity of an airport or a private airstrip, expose people residing or working in the project area to excessive noise levels—The proposed project would not expose people to excessive noise levels from an airport or private airstrip because the project site is not located within two miles of any airports or airstrips; therefore, this issue is not discussed further in this EIR.

Impact Analysis

Impact 3.10-1. Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Less-than-Significant with Mitigation. The proposed project would generate temporary and short-term construction noise from equipment operating on the project site, from offsite construction of new underground duct bank, and from the transport of construction equipment, materials, and workers to and from the site. Chapter 2, "Project Description," describes the sequencing of project construction activities.

Project construction noise was estimated using the Federal Highway Administration Roadway Construction Noise Model (Appendix E) and a list of anticipated construction equipment (Table 3.10-4). As shown in Table 3.10-4, the unmitigated noise level produced by the combinations of equipment during project construction would be approximately 78 to 86 dBA at a distance of 50 feet. Assuming standard spherical spreading loss (-6 dB per doubling of distance), the project construction noise levels were estimated to be 80 to 92 dBA L_{eq}, at the nearest noise-sensitive uses to the substation, and 72 to 86 dB at the nearest noise-sensitive uses to the underground duct bank construction activities, as shown in Table 3.10-6.

Table 3.10-4. Construction Activities, Equipment, and Calculated Noise Levels

Construction Activity	Noise Level at 50 feet, dB (L_{eq})
Phase 1— Demolition	86
Phase 2— Grading, Drainage and Access Road	86
Phase 3— Fencing and Retaining Wall	82
Phase 4— Civil Construction	82
Phase 5— Grounding, Conduit, Encasement	78
Phase 6— Steel Erection	81
Phase 7— Electrical Equipment Assembly	80

Notes: dB = decibels
Source: Data compiled by AECOM in 2023

Table 3.10-5. Construction Equipment Noise Levels at the Nearest Noise-Sensitive Uses in the Project Area

Receiver	Location	Shortest Distance (feet) Between Noise-Sensitive Uses and Proposed Construction Areas	Noise Level, dB L_{eq}			
			Exterior		Interior	
			Ambient Noise	Maximum Project Construction Noise	Project Noise, Doors/ Windows Open[1]	Project Noise, Doors/ Windows Closed[2]
LT-01	Eastern Boundary	100	55	80	65	55
LT-02	Northwest Boundary	~~100~~ 25	58	~~80~~ 92	~~65~~ 77	~~55~~ 67
ST-01	Residential Area Northwest Corner of 20th Street and C Street	50	55	86	71	61
ST-02	Residential Area Northeast Corner of Dreher Street and North 18th Street	50	59	86	71	61
ST-03	By 525 7th Street	100	64	72	57	47
ST-07			62	72	57	47
ST-09			64	72	57	47
ST-11			60	72	57	47
ST-05	By Apartments at 251 6th Street	50	60	86	71	61
ST-08			60	86	71	61
ST-10			57	86	71	61
ST-12			56	86	71	61
ST-04	By 701 E Street	100	59	80	65	55
ST-06	By 721 N B Street	50	67	86	71	61
ST-13	By 309 14th Street	50	55	86	71	61
ST-14	By 30 Icon Walk	50	51	86	71	61
ST-15	316 13th Street	50	49	86	71	61
ST-16	Outside Seating, La Cosecha by Mayahuel	100	58	72	NA[3]	NA
ST-17	Northwest J Street & 10th Street	50	62	86	NA	NA

Notes: dB = decibels; L_{eq} = equivalent sound level (the sound energy averaged over a continuous 15-minute to 1-hour period); NA = not applicable; LT = Long-term

1 15 dB reduction for doors/windows open (EPA 1974).

2 25 dB reduction for doors/windows closed (EPA 1974).

3 Restaurant Outside Seating Area and Park.

Source: Data compiled by AECOM in ~~2023~~ 2024

Construction noise levels would exceed the threshold of 55 dBA L_{eq}. However, Section 8.68.080 of the City's Noise Ordinance exempts certain activities, including "noise sources due to the erection (including excavation), demolition, alteration or repair of any building or structure," as long as these activities are limited to between 7 a.m. and 6 p.m., Monday through Saturday, and between 9 a.m. and 6 p.m. on Sunday. These exemptions are typical of municipal noise ordinances and reflect a recognition that construction noise is temporary, generally is acceptable when limited to daylight hours, and is expected as part of a typical urban noise environment (along with sirens). Project construction would extend into nighttime hours (10 p.m. to 7 a.m.), with work at the substation site for potential concrete pours that may require after-hours operations. This activity would take place at the substation site during Phase 4, "Civil Construction." The nearest residential property is located 350 feet from the location of nighttime construction work. Construction noise during this phase, estimated at 82 dB at 50 feet, would attenuate to 65 dB at the exterior of the nearest residence. Assuming windows are open, a 15 dB reduction would occur from exterior to interior, resulting in an interior noise level of 50 dB, which would exceed the applicable nighttime threshold of 45 dBA Leq. Therefore, while the noise levels would comply with the City's daytime noise exposure limits and the City's Noise Ordinance, they would exceed the nighttime threshold, which would be ***potentially significant,*** and SMUD would implement Mitigation Measure 3.10-1a. ~~Also, project construction would not extend into the nighttime hours (10 p.m. to 7 a.m.). Thus, it would not exceed the applicable nighttime threshold of 45 dBA L_{eq}. Therefore, noise levels from project construction would comply with the applicable daytime and nighttime noise exposure limits established by the City and would comply with the City's Noise Ordinance. The impact would be **_less than significant_**.~~

Ambient noise levels at the project vicinity ranged between 49 dBA L_{eq} to 67 dBA L_{eq}, during the daytime (7 a.m. to 10 p.m.) hours (as shown in Table 3.10-6). The estimated project-related construction noise levels of ~~80 to 86~~ 72 to 92 dBA L_{eq} at noise-sensitive uses closest to the project site, would increase the exterior ambient noise level of 49 to 67 dBA L_{eq} by ~~22 to 25~~ 11 to 41 dB, respectively. This level of increase would exceed the established threshold of 5 dB above ambient noise levels. Therefore, this impact would be ***potentially significant***, and SMUD would implement Mitigation Measure 3.10-1a.

Furthermore, with respect to the interior noise levels, the existing interior noise level of 45 dBA was assumed for residential uses (General Plan Policy EC 3.1.3 Interior Noise Standards). As discussed under in response to question a) above, project-related construction noise levels with doors and windows closed would be ~~55~~ 61 dBA L_{eq} at residences closest to the project area (as shown in Table 3.10-6). This level of interior noise would exceed the applicable threshold of 45 dBA for interior uses. Thus, project-related construction noise would cause an increase of +5 dB or more above the ambient interior level at noise-sensitive receivers in the project vicinity. Therefore, the impact would be ***potentially significant***, and SMUD would implement Mitigation Measure 3.10-1a.

With respect to construction traffic, project construction would result in approximately ~~30~~ 40 worker trips per peak hour, and ~~240~~ 40 haul and vendor truck trips (round trips) per day (~~30~~ 5 truck trips per hour) to transport the excess soil material from and to the project site. The unmitigated noise level produced by project-related construction trips would increase existing traffic noise in the project area roadways from 0 to ~~12~~ 8 dB (Table 3.10-6) at 100 feet from the roadway centerline. This includes a reasonable worst-case assumption that some haul trucks would pass by the nearest residential uses to the project site for hauling soils and project materials. The ambient noise level at this location is 55 dB, as shown in Table 3.10-2. Because the increase in traffic noise would be above ~~than~~ 5 dB at residential receivers in the project vicinity, the impact would be ***potentially significant***, and SMUD would implement Mitigation Measure 3.10-1b.

Table 3.10-6. Existing plus Construction Traffic Noise, dB

Roadway	Segment	Existing Traffic Noise Level (L_{eq}, dBA) @ 100 Feet	Existing + Construction Traffic	Increase, dB
Interstate 5	From North of Richards Boulevard to	83.6	83.7	0.0
Interstate 5	From South of Richards Boulevard to	83.4	83.4	0.0
Richards Boulevard	From I-5 to North 12th Street	64.4	~~66.1~~ 65.1	~~1.7~~ 0.7
North 12th Street	From Richards Boulevard to Project Site	64.4	~~66.1~~ 65.1	~~1.7~~ 0.7
North A Street	From Project Site to 16th Street	49.8	~~61.5~~ 57.4	~~11.6~~ 7.5
16th Street	From North A Street to Richards Boulevard	67.4	~~68.3~~ 67.8	~~0.9~~ 0.4

Notes: dBA = A-weighted decibels; L_{eq} = equivalent sound level (the sound energy averaged over a continuous 15-minute to 1-hour period)
Source: Data compiled by AECOM in 2023

Mitigation Measure 3.10-1a: Construction Noise Reduction

The contractor shall ensure that the following measures are implemented during all phases of project construction:

- Whenever construction occurs adjacent to occupied residences (on or offsite) temporary barriers shall be constructed around the construction sites to shield the ground floor of the noise sensitive uses. These barriers shall be of ¾-inch Medium Density Overlay (MDO) plywood sheeting, or other material of equivalent utility and appearance, and shall achieve a Sound Transmission Class of STC-30 or greater, based on certified sound transmission loss data taken according to American Society for Testing and Materials International (ASTM) Test Method E90.
- Construction activities shall comply with the City of Sacramento Noise Ordinance, which limits such activity to the hours of 7:00 a.m. to 6:00 p.m. Monday through Saturday, the hours of 9:00 a.m. to 6:00 p.m. on Sunday, prohibits nighttime construction unless authorized by the director of building inspections for a period no greater than three days, and requires the use of exhaust and intake silencers for construction equipment engines.
- Construction equipment staging areas shall be located as far as feasible from residential areas while still serving the needs of construction contractors.
- Activities that generate high noise levels such as pile driving and the use of jackhammers, drills, and impact wrenches, shall be restricted to the hours of 7:00 a.m. to 6:00 p.m. Monday through Friday.

- Small excavators and bulldozers shall be used during the demolition of the existing building within 25 feet of the building on the northwest site boundary, and this activity shall be restricted to the hours of 7:00 a.m. to 6:00 p.m. Monday through Friday only.

~~Additionally, project construction would result in approximately 30 round-trip truck hauls to transport the excess soil material from the project site over an 11-week period. The unmitigated noise level produced by 30 round-trip trucks would be approximately 64 dBA (Table 3.10-6) at 50 feet from the roadway centerline. These noise levels would exceed the threshold of 55 dBA L_{eq}. Therefore, this impact would be ***potentially significant***, and SMUD would implement Mitigation Measure 3.10-1b, as follows.~~

Mitigation Measure 3.10-1b: Employ Noise-Reducing Construction Measures for Project Construction Truck Traffic.

SMUD and its construction contractor(s) will implement the following measures:

- Establish and enforce construction site and haul road speed limits to less than 15 mph.
- Route construction-related truck traffic along roadways that will cause the least disturbance to residents.
- Use high-grade engine exhaust silencers and engine-casing sound insulation.

Implementation of Mitigation Measures 3.10-1a and 3.10-1b would reduce the impact of ~~daytime construction-related traffic noise along the roadway segments~~ construction noise to ***less than significant***.

Operational noise would be generated by transformers, cooling fans, and supporting equipment (e.g., switch gear, circuit breaker, capacitor, and wiring). The loudest operational equipment for the new substation would be the two transformers, which would each generate 80 dB (at 3 feet) per the manufacturer's specifications. The closest exterior sensitive use to the project site would be residential uses along A Street, located 100 feet from the project site. The proposed project's operational noise level at this location would be approximately 53 dB. The ambient noise level at this location would be 55 dB, as shown in Table 3.10-1. Therefore, the proposed project would not increase noise levels at the nearest noise-sensitive receptors. Therefore, the impacts from operation of the new substation would be ***less than significant***.

Regarding interior noise levels, as discussed in the response to question a) above, proposed project-related operational noise levels with doors and windows closed would be reduced further by 25 dB (EPA 1974). As discussed previously, the operational noise level from the new substation would be approximately 53 dB at 100 feet. The closest interior noise-sensitive use to the project site would be located approximately 100 feet from the equipment. Therefore, the resulting operational noise level would be approximately 28 dBA L_{eq} with doors and windows closed, at the closest residences to the new substation. This level of increase would not exceed the established threshold of 5 dB above ambient noise levels. Therefore, the impact of operational noise increases on interior ambient noise levels would be ***less than significant***.

Impact 3.10-2. Generation of excessive groundborne vibration or groundborne noise levels?

Less-than-Significant Impact. The proposed project would generate construction vibration from equipment operating at the project site, and from the transport of construction equipment, materials, and workers to and from the site. Project operation would not result any excessive groundborne vibration or groundborne noise levels.

Construction–related groundborne vibration would occur within the proximate center of the substation site where most of the substation transformer components would be built and would result from the use of heavy earth-moving equipment and vibratory rollers for clearing, excavation, compaction, ~~and~~ grading, and installation of auger-drilled displacement piles where necessary for structural foundations. These activities would produce a vibration level ~~of~~ up to approximately 87 VdB (0.089 in/sec PPV) at a distance of 25 feet (which is the reference vibration level for operation of a large bulldozer (FTA 2018). The minimum distance between these activities and the closest acoustically sensitive uses would be approximately 50 feet, as shown in Table 3.10-7. Assuming a standard reduction of 9 VdB per doubling of distance (FTA 2018), the vibration level at the nearest receivers (50 feet) would be approximately 78 VdB.

There are existing buildings within 25 to 50 feet of the installation of new poles and overhead electrical conductors and cables. However, rubber-tired trucks would be used for these construction activities. Vibration levels from loaded trucks would be approximately 0.076 in/sec PPV (86 VdB) at 25 feet, which would reduce to approximately 0.027 in/sec PPV (77 VdB) at 50 feet. Therefore, there would be no structural damage at the nearest buildings. However, there could be vibration annoyance at nearby occupied buildings if the construction equipment operates less than 50 feet from the occupied buildings because it could exceed the annoyance threshold of 80 VdB (see discussion below).

FTA's Transit Noise and Vibration Impact Assessment technical manual provides criteria for groundborne vibration impacts with respect to building damage during construction activities (FTA 2018). According to FTA guidelines, a vibration-damage criterion of 0.25 in/sec PPV should be considered for non-engineered timber and masonry buildings. Furthermore, structures or buildings constructed of reinforced concrete, steel, or timber have a vibration-damage criterion of 0.50 in/sec PPV, pursuant to the FTA guidelines. As shown in Table 3.10-7, the temporary and short-term project construction vibration level at the nearest receivers would be at or below approximately 0.031 PPV throughout the project construction area, except during the pole lines installation and at the Salvation Army Building northwest of the project site, at which the vibration level would reach 0.076 to 0.352 inch/second and 86 to 99 VdB, respectively. This level of vibration is ~~below~~ above the established threshold of significance of 0.25 and below 0.5in/sec PPV, and above the threshold of annoyance (80 VdB) pursuant to the FTA guidelines, and it would ~~not~~ likely be perceptible. Therefore, this impact would be **potentially significant**, and SMUD would implement Mitigation Measure 3.10-2.

Table 3.10-7. Construction Equipment Vibration Levels at the Nearest Noise-Sensitive Uses in the Project Area

Receiver	Location	Shortest Distance (feet) Between Noise-Sensitive Uses and Proposed Construction Areas	Project, Vibration Levels	
			PPV	VdB
LT-01	Building, Northeast of the project site	50	0.031	78
LT-02	Building, Northwest of the project site	~~100~~ 10	~~0.011~~ 0.352	~~69~~ 99
ST-01	Residential Area Northwest Corner of 20th Street and C Street	50	0.031	78
ST-02	Residential Area Northeast Corner of Dreher Street and North 18th Street	50	0.031	78
ST-03	By 525 7th Street	100	0.011	69
ST-05	By Apartments at 251 6th Street	50	0.031	78
ST-04	By 701 E Street	100	0.011	69
ST-06	By 721 N B Street	50	0.031	78
ST-13*	By 309 14th Street	50	0.027	77
ST-14*	By 30 Icon Walk	25	0.076	86
ST-15*	316 13th Street	25	0.076	86
ST-16*	Outside Seating, La Cosecha by Mayahuel	50	0.027	77
ST-17*	Northwest J Street & 10th Street	50	0.027	77

Notes: PPV = peak particle velocity; LT = long-term; VdB = vibration decibels.
* Pole Lines only.
Source: Data compiled by AECOM in 2023

Project construction would result in additional vehicle trips on the local roadway network, when workers commute and equipment and materials are transported. Heavy truck traffic can generate groundborne vibration, which varies considerably depending on vehicle type, weight, and pavement conditions; however, groundborne vibration levels generated from vehicular traffic typically are not perceptible outside the road right-of-way, for rubber-tired vehicles (FTA 2018). Therefore, the impact would be ***less than significant***.

Mitigation Measure 3.10-2: Employ Vibration-Reducing Construction Measures for Demolition and Construction Adjacent to Impacted Building

- Enhanced Pre-Demolition Survey: Conduct detailed structural assessments using laser scanning or 3D modeling to document potential weaknesses with high precision.

- Advanced Controlled Demolition Techniques: Utilize diamond wire sawing or hydro-demolition to minimize vibrations. Implement a highly controlled, piece-by-piece demolition method.

- Real-Time Vibration Monitoring: Install multiple vibration sensors on the impacted building for real-time monitoring. Set up an alert system for instant notifications if vibrations approach critical levels.

- Enhanced Buffer Zones: Create double-layer buffer zones using heavy-duty materials like thick rubber mats and geofoam barriers. Implement additional protective measures such as temporary walls filled with sound and vibration absorbing materials.

- High Precision Equipment Selection: Use state-of-the-art demolition equipment designed for low vibration output. Ensure machinery operates at optimal performance levels.

- Specialized Operational Modifications: Schedule vibration-intensive activities during periods when the adjacent building is unoccupied, if possible. Employ a staggered approach to demolition activities to distribute the vibration load over time.

- Enhanced Structural Support: Use advanced shoring systems like hydraulic shoring or steel bracing for robust temporary support. Conduct regular inspections of the support systems.

- Advanced Ground Stabilization: Employ deep soil mixing or grouting techniques to stabilize the ground and reduce vibration transmission. Use vibration isolation pads or trenches around the demolition site.

- Comprehensive Communication Plan: Establish a direct line of communication with stakeholders for real-time updates and feedback. Provide detailed schedules and daily reports on demolition activities and monitoring results.

- Thorough Post-Demolition Inspection and Remediation: Conduct a comprehensive post-demolition survey using visual inspections and advanced non-destructive testing methods. Promptly address any issues, including structural repairs or further stabilization measures.

Implementation of Mitigation Measure 3.10-2 would reduce the impact construction-related vibration at the adjusting building to the demolition activities to ***less than significant***.

3.11 Transportation

This chapter describes potential transportation impacts associated with the proposed project. The impact analysis examines the vehicular, transit, bicycle, pedestrian, and goods movement (by truck) components of the transportation system in the project area. To provide context for the impact analysis, this chapter begins with a discussion of the regulatory framework, which provides part of the basis for impact significance thresholds used in the impact analysis. Next, the environmental setting describes the existing and physical operational conditions for the transportation system. The section concludes with significant criteria, impact analysis findings, and recommended mitigation measures.

3.11.1 Regulatory Setting

Federal

There are no federal plans, policies, regulations, or laws related to transportation and circulation which are applicable to the proposed project.

State

The California Department of Transportation (Caltrans) is responsible for planning, designing, constructing, operating, and maintaining the State Highway System (SHS). Federal highway standards are implemented in California by Caltrans. Any improvements or modifications to the SHS would need to be approved by Caltrans.

California Government Code Section 65080

The State requires each transportation planning agency to prepare and adopt a regional transportation plan that is directed at achieving a coordinated and balanced regional transportation system.

California Streets and Highways Code (Section 1 et seq.)

This code sets the standards for administering the statewide streets and highways system. Designated State Routes and Interstate highway facilities are under the jurisdiction of the Caltrans, except where facility management has been delegated to the county transportation authority.

Caltrans' Local Development – Intergovernmental Review Program Interim Guidance (Caltrans, December 2020) provides guidance on the evaluation of traffic impacts to State highway facilities. The document recommends that CEQA reviewers comment on vehicle miles traveled (VMT), "applying local agency thresholds or absent those, thresholds recommended in adopted CEQA Guidelines or Governor's Office of Planning and Research's (OPR's) approved Technical Advisory."

Senate Bill 743

Governor Brown signed SB 743 in September 2013, which created a process to change the way that transportation impacts are analyzed under CEQA. Specifically, SB 743 required the OPR to amend the CEQA Guidelines to provide an alternative to level of service (LOS) for evaluating transportation impacts, as well as recommend methodologies and significance thresholds. SB 743 does not change the discretion that lead agencies have to select methodology or define significance thresholds.

Under SB 743, the focus of transportation analysis essentially shifted from the social inconvenience of traffic congestion to adverse physical effects associated with vehicular travel demand. Measurements of transportation impacts may include total VMT, VMT per capita, automobile trip generation rates, or automobile trips generated. VMT has long been a common metric to use to measure travel demand. A VMT is one vehicle traveling on a roadway for one mile. Many communities have been estimating and developing policy related to VMT for years, including estimates and goals for VMT per person, VMT per employee, or other methods of normalization. SB 743 directs revisions to the CEQA Guidelines that would create criteria for assessing travel demand, such as "vehicle miles traveled, vehicle miles traveled per capita, automobile trip generation rates, or automobile trips generated" (PRC Section 21099[b][1]). Once the CEQA Guidelines went into effect on July 1, 2020, delay related to congestion was no longer considered a significant impact under CEQA (OPR 2016).

California Air Resources Board

The California Air Resources Board (CARB) has guidance for VMT thresholds in the CARB *2017 Scoping Plan-Identified VMT Reductions and Relationship to State Climate Goals* (January 2019). This document provides recommendations for VMT reduction thresholds that would be necessary to achieve the state's GHG reduction goals and acknowledges that the sustainable communities strategies (SCS) targets alone are not sufficient to meet climate goals. CARB concluded that a 14.3-percent reduction in total VMT per capita and a 16.8-percent reduction in light-duty VMT per capita over then-current conditions (2015-2018) was needed to meet these goals.

Regional and Local

City of Sacramento 2035 General Plan Update

The Mobility Element of the City of Sacramento 2035 General Plan Update (City of Sacramento 2015) includes transportation-related goals and policies that establish measures of effectiveness for the performance of the local circulation system. However, most of the thresholds of the Mobility Element are not applicable to the proposed project because it would only generate daily traffic during the construction period, and construction-related trips would be dispersed throughout project area roadways. Only the following policy would apply to the proposed project:

- **Policy M 4.2.1 Accommodate All Users.** The City shall ensure that all new roadway projects and any reconstruction projects designate sufficient travel space for all users including bicyclists, pedestrians, transit riders, and motorists except where pedestrians and bicyclists are prohibited by law from using a given facility.

City of Sacramento Pedestrian Master Plan, 2006

The Pedestrian Master Plan provides a comprehensive vision and framework for improving pedestrian conditions in the City of Sacramento. The Pedestrian Master Plan includes pedestrian safety goals to improve safety at intersections and mid-block locations.

City of Sacramento Railyards Specific Plan

The Railyards area is a combination of districts that will provide a range of urban uses. The project site is located within the Depot District of the Railyards (Railyards Specific Plan 2007a: Figure 31). The Depot District is the connection point of the Railyards to Downtown, and it is home to the SITF and its accompanying transit-supportive uses and adjacent mixed uses.

Sacramento Area Council of Governments 2035 Metropolitan Transportation Plan, 2012

The Metropolitan Transportation Plan/Sustainable Communities Strategy 2035 (SACOG 2012), is a federally mandated, long-range planning document for identifying and programming roadway improvements throughout the region, including Sacramento County.

Sacramento Area Council of Governments Regional Bicycle, Pedestrian and Trails Master Plan, 2013

In 2013, the Sacramento County Department of Public Works and Planning, through coordinated efforts with the Sacramento Area Council of Governments (SACOG) and various government and non-profit agencies, prepared and adopted the SACOG Regional Bicycle, Pedestrian and Trails Master Plan (Regional Bicycle Plan) (SACOG 2013). Planned projects may be eligible to receive funding from the State's Bicycle Transportation Account. The plan promotes the continued development of a regional bikeway system and non-motorized transportation route planning, in conjunction with planning for streets, roads, highways, and public transit. This plan is the basis for the Bicycle Facilities Element of the Mobility Element of the City of Sacramento 2035 General Plan Update (City of Sacramento 2015).

3.11.2 Environmental Setting

Roadways

Surrounding State highways, including Highway 50, Interstate 80, and Interstate 5 would provide access to local roads in the project area for construction. The project site would be accessed from existing local roadways. Main access to the project site would be from 12th Street and A Street during construction, and through gates from the A Street and the existing alley during operations.

Bicycle and Pedestrian Facilities

Bikeways are classified as Class I (bike paths), Class II (bike lanes), and Class III (bike routes), and are defined as follows:

- **Class I (Bike trail or bike path):** A completely separated facility designated for the use of bicycles. The facility is separated from any street or highway by a physical space, berm, fence, or other barrier.

- **Class II (Bike lane):** A lane within a street or roadway designed for the one-way use of bicycles. It is an on-street facility with signs, striped lane markings, and pavement legends.

- **Class III (Bike Route):** Any on-street right-of-way recommended for bicycle travel which provides for shared-use with motor vehicles or pedestrian traffic.

According to the Sacramento City/County Bikeway Master Plan (City of Sacramento 2011b), bikeways are located in the project vicinity along all major arterials and collectors. Those that would be affected by the proposed project include 12th Street west of the project site, North B Street to the north, and 16th Street to the east. Additionally, the Sacramento Northern Bikeway is located at the eastern project limits and would be intersected by the proposed interconnection to Station E.

Airports

The project site is located approximately 4 miles east of the California Highway Patrol (CHP) Academy Airport. However, as noted in Section 3.10, “Noise,” the project site is located outside the area of influence for the CHP Academy Airport.

Transit

Sacramento Regional Transit provides public transportation in the project vicinity, offering a combination of advance reservations and scheduled bus and light rail services from surrounding communities to downtown Sacramento. The closest bus and light rail routes are located along North B Street to the north, and along 16th Street north of the project site. The Union Pacific Railroad operates a rail line located immediately south of the project site

The new Sacramento Intermodal Transportation Facility (SITF) will be southwest of the project site, in the Railyards. The SITF will be within the planned Depot District and will include the existing historic Southern Pacific Railroad Depot building. The historic Depot building will be preserved and designed as a focal point of the SIFT. The newly renovated Depot building and expanded terminal will provide the City with a single transfer point between regional passenger rail, light rail, bus services and future high speed rail. This location will provide an intermodal connection point to the rest of the City and region for Old Sacramento, Chinatown, Downtown, the Alkali Flat neighborhood, and the Railyards area.

3.11.3 Environmental Impacts and Mitigation Measures

Methods and Assumptions

This section briefly describes the approach used to prepare the analysis of the potential effects of the project related to transportation. Operations following project completion would not change significantly compared to existing conditions. Therefore, an analysis of project-related traffic impacts using LOS was not performed because LOS is primarily used for analyzing long-term effects of projects on traffic flow and is no longer an appropriate metric to assess transportation impacts under CEQA. This analysis used the recommended screening criterion from the Institute of Transportation Engineers (ITE) (1988) for assessing the effects of construction projects that create temporary traffic increases. To account for the large percentage of heavy trucks associated with typical construction projects, ITE recommends a threshold level of 50 or more new peak-direction (one-way) trips during the peak hour (or 100 peak-direction automobile trips assuming a passenger car equivalent of 2.0).

~~Because the proposed project would not add 100 or more peak-hour automobile trips to any intersections and roadway segments within the jurisdiction of the City, detailed transportation impact analysis (TIA) would not be required for the proposed project. This analysis used the screening criterion recommended by the ITE 1988 for assessing the effects of construction projects that create temporary traffic increases. To account for the large percentage of heavy trucks associated with typical construction projects, the ITE recommends a threshold level of 50 or more new peak-direction (one-way) trips during the peak hour.~~

With respect to VMT analysis, the project would not generate ~~work vehicle miles traveled per employee exceeding 15 percent below the existing average work vehicle miles traveled per employee in the Area Planning Commission in which the project is~~ located or attract greater than 110 daily vehicle trips and would the meet the City of Sacramento small-project screening criteria. Therefore, a detailed analysis of VMT ~~does not applied to this project and~~ is not required.

Thresholds of Significance

Based on the CEQA Guidelines, the proposed project would result in a potentially significant impact on traffic or circulation if it would:

- conflict with adopted program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities;
- conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b);
- cause a substantial increase in hazards attributable to a geometric design feature or incompatible uses; or
- result in inadequate emergency access.

Issues or Potential Impacts Not Discussed Further

The proposed project would not conflict with any policies supporting alternative transportation. Because the proposed project would have no impact on these resources, they are not discussed further in this Recirculated Draft EIR.

Impact Analysis

Impact 3.11-1. Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?

Less-than-Significant Impact. Project construction would require hauling equipment and materials, and worker commute trips to and from the project area along local surface streets. ~~Project operation would not change from existing conditions. Therefore, an analysis of project-related traffic impacts using Level of Service (LOS) was not performed because LOS primarily is used for analyzing long-term effects of projects on traffic flow.~~ This analysis used the recommended screening criterion from the ITE for assessing the effects of construction projects that create temporary traffic increases (ITE 1988). The ITE is an international educational and scientific association of transportation professionals who are responsible for meeting mobility and safety needs.

Traffic generated by project construction would be added to existing project area roadway traffic volumes. To assess the potential impact of truck trips generated by project construction, a heavy-vehicle factor known as a passenger car equivalent (PCE) value was applied to the estimated project-generated truck traffic. This heavy-vehicle factor is used to account for the additional space occupied, reduced speed, and reduced maneuverability associated with these vehicles versus standard automobiles, on the roadway. A PCE value of 2.0 was applied to the construction equipment truck trip generation estimates, as recommended by the Highway Capacity Manual 2000 (Transportation Research Board 2000).

To account for the large percentage of heavy trucks associated with typical construction projects, ITE recommend a threshold level of 50 (100, assuming a PCE value of 2.0) or more new peak-direction trips during the peak hour. Therefore, a project could cause an increase in traffic that is substantial in relation to the existing traffic load and capacity of the street system if it would result in 50 ~~(100, assuming a PCE value of 2.0)~~ or more new truck trips during the a.m. peak hour or the p.m. peak hour (or 100 passenger vehicle trips, assuming a PCE value of 2.0).

Construction would require ~~30~~ 40 worker trips during peak construction phases. Also, SMUD estimates that project construction will require approximately ~~240~~ 40 round-trip truck trips per day during peak construction phases (~~30~~ 5 truck trips per hour) to haul excavated materials off-site. In addition, construction workers would contribute commute trips to local roadways.

This analysis assumes that construction activities would occur during an 8-hour work day (from 7 a.m. to 3:00 p.m.), and that construction trucks would operate throughout the day. Therefore, hourly numbers of haul trucks were estimated based on an even distribution of truck trips throughout the 8-hour day. Construction worker commute trips were applied only to peak hours in the morning and the afternoon, assuming worker trips would occur once during the morning commute and once during the afternoon commute. Therefore, the proposed project would add approximately ~~90~~ 50 ~~daily~~ peak-hour trips (~~30~~ 5 truck trips per hour both directions [~~60~~ 10 trips per hour, assuming a PCE value of 2.0], and ~~30~~ 40 worker trips per peak hour) to project area roadways over the course of the 8-hour work window.

Because the proposed project would not result in approximately 100 or more new trips (assuming a PCE value of 2.0) during the AM or PM peak commute hours, the proposed project would not result in a substantial traffic increase in relation to the existing traffic load and capacity of the street system. Construction traffic for the duration of the project would be managed in accordance with a Traffic Control Plan, subject to approval by the City of Sacramento, which would identify any road closures, temporary detours, and flagging and/or signage required to minimize conflict with local policies regarding operation of the roadway network. ~~Therefore, the proposed project would not result in substantial trip-generated traffic congestion.~~ Furthermore, the proposed project would not result in long-term degradation in the performance of area roadways because any damage to roadways would be repaired following construction (see Mitigation Measure 3.11-3b below) ~~the haul trucks would travel primarily between the project site and the Railyards using the area's new roadways not yet open to the public. Moreover, construction-generated traffic would be temporary, and worker trips would not increase during project operation~~. Therefore, the proposed project would not conflict with adopted applicable policies or plans related to the performance of the circulation system and this impact would be ***less than significant***.

~~The increased traffic during project construction would be short-term and temporary; and the number of project-related vehicle/truck trips generated would be below thresholds for temporary construction traffic increases. As discussed under the response to question a) above, the project-related increase in traffic volumes would be 90 vehicles per hour. This level of traffic activity would not degrade traffic operations along the roadways used by haul trucks and would be below the applicable threshold. Therefore, the impact would be ***less than significant***.~~

~~Project operation would not change substantially from existing conditions. Project operation would not result in conflicts with policies or programs supporting alternative transportation. Therefore, ***no impact*** would occur.~~

The proposed project would not change the local circulation system substantially from existing conditions, and therefore it would not result in conflicts with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, and would not decrease the performance or safety of such facilities. The project site would be contained within SMUD's proposed substation site and adjacent roadways, and project construction would not make substantial changes to roads, public transit, bike paths, or sidewalks. However, some portions of the bike paths surrounding the project site, including bike lanes in adjacent streets and the Sacramento Northern Bikeway, would be affected temporarily during construction. To protect the public during the off-haul and delivery operations, the contractor would place warning signage and deploy flaggers to intermittently hold public traffic while trucks are traversing the joint-use portion of the bike paths, as set forth in Mitigation Measures 3.11-3b below. Because connectivity of the bike paths would be maintained and the safety of the public would be protected at the surrounding bike paths during project construction, the impact would be ***less than significant***.

~~Also, because of the temporary nature of project construction, it would not conflict with the City's adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities. Therefore, the impact would be ***less than significant***.~~

Impact 3.11-2. Conflict or be inconsistent with CEQA Guidelines§ 15064.3, subdivision (b)?

No Impact. The impact under the threshold above would be significant if the project would generate work VMT per employee exceeding 15% below the existing average work VMT per employee in the area. <u>The City of Sacramento uses a small-project screening criteria of 110 daily vehicle trips to determine if potential VMT impacts may occur and whether further study is warranted. As described previously, the Project would not generate or attract greater than 110 daily vehicle trips and would meet the small-project screening criteria</u>. The Project would not require a change to the existing land use designation. As described above under Impact 3.11-1, the change in operations and maintenance following project completion would be minimal compared to existing conditions. Therefore, **no impact** would occur as a result of project operations.

Impact 3.11-3. 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 Impact with Mitigation. Trucks delivering materials and removing material and debris, as well as project-related construction worker commute traffic, would enter and exit the project site along 12th Street, North B Street, and A Street. Slow-moving trucks entering and exiting the project site could pose hazards to vehicles, pedestrians, and bicyclists on 12th Street, North B Street, A Street, and 16th Street immediately adjacent to the project site.

Pavement sections on area roadways are designed to carry high volumes of heavy-duty vehicles. The presence of heavy-duty trucks during project construction could, however, accelerate wear and tear on the local roadways along the haul route. In addition to shortening the life of pavement sections, heavy-duty truck traffic could cause more immediate road damage, such as cracks and potholes. Potential damage to pavement would increase traffic hazards on local roadways. Therefore, this impact would be potentially significant. SMUD would implement Mitigation Measures 3.11-3a and 3.11-3b, as follows:

Mitigation Measure 3.11-3a: Protect Bicycle Facilities

SMUD shall prepare site plans showing all required bikeway facilities in compliance with City of Sacramento Standards. The Project entitlements shall be conditioned to provide the required bikeway facilities as part of an improvement plan which includes alternate on-street and separated bikeway facilities that connect to the City's bicycle network. The project applicant shall work with the City to ensure that the proposed bikeway facilities would achieve the intent of the Bikeway Master Plan and meet the City's standards. Modifications to the proposed bikeways shall be made to satisfy the requirements of the City.

Mitigation Measure 3.11-3b. Repair Damaged Roadways and Bike Paths Following Construction

During project construction, signage and flaggers will be deployed at locations where construction trucks cross roadways, pedestrian routes and bikeways, to reduce the potential hazard posed to other drivers, pedestrians, and bicyclists. Details regarding traffic control, including any alternate access routes to existing facilities and timing of control measures, will be further described in a Traffic Control Plan to be submitted for approval by the City of Sacramento. Furthermore, following completion of construction, SMUD will assess and repair any project-related damage to roadways and paved bicycle/pedestrian paths that were affected during construction, including all project-related potholes, fractures, or other damages.

Implementation of **Mitigation Measures 3.11-3a** and **3.11-3b** would reduce the potentially significant impact of damaged roadways and/or bike paths to **less than significant** by protecting pedestrians and bicyclists during construction and requiring repairs to any impacted facilities following construction.

Impact 3.11-4. Result in inadequate emergency access?

Less-than-Significant Impact. Emergency access to roadways in the project area could be affected by project construction. Slow-moving trucks entering and exiting the project site along North B Street and North 12th Street could delay the movement of emergency vehicles. Temporary lane closures during duct bank installation in local roads also could delay movement of emergency vehicles. However, flaggers would be deployed in these areas as needed to assist truck drivers and traffic flow around construction areas. Because flaggers would be present to control traffic in the event of an emergency to allow unimpeded movement of emergency vehicles, the impact would be **less than significant**.

3.12 Tribal Cultural Resources

This section analyzes and evaluates the potential impacts of the project on known and unknown Tribal Cultural Resources (TCRs). TCRs, as defined by Assembly Bill (AB) 52, Statutes of 2014, in Public Resources Code (PRC) Section 21074, are sites, features, places, cultural landscapes, sacred places and objects, with cultural value to a Tribe. A Tribal Cultural Landscape is defined as a geographic area (including both cultural and natural resources and the wildlife therein), associated with a historic event, activity, or person or exhibiting other cultural or aesthetic values. Unanticipated Native American human remains would also be considered a TCR and are therefore analyzed in this section.

3.12.1 Regulatory Setting

Federal

National Register of Historic Places

The National Register of Historic Places (NRHP) is the nation's master inventory of known historic properties. It is administered by the National Park Service and includes listings of buildings, structures, sites, objects, and districts that possess historic, architectural, engineering, archaeological, or cultural significance at the national, state, or local level.

The formal criteria (36 CFR 60.4) for determining NRHP eligibility are as follows:

1. The property is at least 50 years old (however, properties under 50 years of age that are of exceptional importance or are contributors to a district can also be included in the NRHP);
2. It retains integrity of location, design, setting, materials, workmanship, feeling, and associations; and
3. It possesses at least one of the following characteristics:

   Criterion A — Is associated with events that have made a significant contribution to the broad patterns of history (events).

   Criterion B — Is associated with the lives of persons significant in the past (persons).

   Criterion C — Embodies the distinctive characteristics of a type, period, or method of construction, or represents the work of a master, or possesses high artistic values, or represents a significant, distinguishable entity whose components may lack individual distinction (architecture).

   Criterion D — Has yielded, or may be likely to yield, information important in prehistory or history (information potential).

Listing in the NRHP does not entail specific protection or assistance for a property but it does guarantee consideration in planning for federal or federally-assisted projects, eligibility for federal tax benefits, and qualification for federal historic preservation assistance. Additionally, project effects on properties listed in the NRHP must be evaluated under CEQA.

State

California Register of Historical Resources

All properties in California that are listed in or formally determined eligible for listing in the NRHP are also listed in the California Register of Historical Resources (CRHR). The CRHR is a listing of State of California resources that are significant in the context of California’s history. It is a Statewide program with a scope and with criteria for inclusion similar to those used for the NRHP. In addition, properties designated under municipal or county ordinances are also eligible for listing in the CRHR.

A historical resource must be significant at the local, state, or national level under one or more of the criteria defined in the California Code of Regulations Title 15, Chapter 11.5, Section 4850 to be included in the CRHR. The CRHR criteria are tied to CEQA because any resource that meets the criteria below is considered a significant historical resource under CEQA. As noted above, all resources listed in or formally determined eligible for listing in the NRHP are automatically listed in the CRHR.

The CRHR uses four evaluation criteria:

Criterion 1 Is associated with events that have made a significant contribution to the broad patterns of local or regional history, or the cultural heritage of California or the United States.

Criterion 2 Is associated with the lives of persons important to local, California, or national history.

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

Criterion 4 Has yielded, or has the potential to yield, information important to the prehistory or history of the local area, California, or the nation.

Similar to the NRHP, a historical resource must meet one of the above criteria and retain integrity to be listed in the CRHR. The CRHR uses the same seven aspects of integrity used by the NRHP.

California Environmental Quality Act

CEQA requires public agencies to consider the effects of their actions on “Tribal Cultural Resources.” PRC Section 21084.2 establishes that “[a] project with an effect that may cause a substantial adverse change in the significance of a Tribal Cultural Resource is a project that may have a significant effect on the environment.” PRC Section 21074 states:

a) “Tribal Cultural Resources” are either of the following:

    1) Sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American Tribe that are either of the following:

i.) Included or determined to be eligible for inclusion in the CRHR.

ii.) Included in a local register of historical resources as defined in subdivision (k) of Section 5020.1.

2) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Section 5024.1. In applying the criteria set forth in subdivision (c) of Section 5024.1 for the purposes of this paragraph, the lead agency shall consider the significance of the resource to a California Native American Tribe.

b) A cultural landscape that meets the criteria of subdivision (a) is a Tribal Cultural Resource to the extent that the landscape is geographically defined in terms of the size and scope of the landscape.

c) A historical resource described in Section 21084.1, a unique archaeological resource as defined in subdivision (g) of Section 21083.2, or a “nonunique archaeological resource” as defined in subdivision (h) of Section 21083.2 may also be a Tribal Cultural Resource if it conforms with the criteria of subdivision (a).

Assembly Bill 52

AB 52, signed by the California Governor in September of 2014, established a new class of resources under CEQA: “Tribal Cultural Resources,” defined in PRC Section 21074. Pursuant to CEQA requirements, lead agencies undertaking CEQA review must, upon written request of a California Native American Tribe, begin consultation before the release of an EIR, negative declaration, or mitigated negative declaration.

Health and Safety Code, Section 7052

Section 7050.5 of the Health and Safety Code requires that construction or excavation be stopped in the vicinity of discovered human remains until the coroner can determine whether the remains are those of a Native American. If they are determined to be those of a Native American, the coroner must contact NAHC.

California Native American Historical, Cultural, and Sacred Sites Act

The California Native American Historical, Cultural, and Sacred Sites Act (PRC Section 5097.9) applies to both State and private lands. The act requires, upon discovery of human remains, that construction or excavation activity cease and that the county coroner be notified. If the remains are those of a Native American, the coroner must notify the NAHC, which notifies (and has the authority to designate) the most likely descendants (MLD) of the deceased. The act stipulates the procedures the descendants may follow for treating or disposing of the remains and associated grave goods.

Public Resource Code Section 5097

PRC Section 5097 specifies the procedures to be followed in the event of the unexpected discovery of human remains on nonfederal land. The disposition of Native American human burials falls within the jurisdiction of the NAHC. Section 5097.5 of the Code states the following:

> No person shall knowingly and willfully excavate upon, or remove, destroy, injure, or deface any historic or prehistoric ruins, burial grounds, archaeological or vertebrate paleontological site, including fossilized footprints, inscriptions made by human agency, or any other archaeological, paleontological or historical feature, situated on public lands, except with the express permission of the public agency having jurisdiction over such lands. Violation of this section is a misdemeanor.

3.12.2 Environmental Setting

Pre-Colonial Environmental Setting

Valley Nissenan

The project area is situated within the traditional territory of the Nisenan. The language of the Nisenan, which includes several dialects, is classified within the Maiduan family of the Penutian linguistic stock. Kroeber (1925) recognized three Nisenan dialects: Northern Hill, Southern Hill, and Valley. The Nisenan territory included the drainages of the Yuba, Bear, and American Rivers, and the lower drainages of the Feather River, extending from the crest of the Sierra Nevada to the banks of the Sacramento River. According to Bennyhoff (1961:204–209), the southern boundary with the Miwok was probably a few miles south of the American River, bordering a shared area used by both Miwok and Nisenan groups that extended to the Cosumnes River. It appears that the foothills Nisenan distrusted the valley peoples but had a mostly friendly relationship with the Washoe to the east. Elders recall intergroup marriage and trade, primarily involving the exchange of acorns for fish procured by the Washoe (Wilson 1972:33). The northern boundary has not been clearly established due to similarities in language with neighboring tribes (Wilson and Towne 1978:387–389).

Nisenan settlement locations depended primarily on elevation, exposure, and proximity to water and other resources. Permanent villages were usually located on low rises along major watercourses. Houses were domed structures measuring 10 to 15 feet in diameter and covered with earth and tule reeds or grass. Brush shelters were used in the summer and at temporary camps during food-gathering rounds. Larger villages often had semi-subterranean dance houses that were covered in earth and tule reeds or brush, with a central hole at the top to allow the escape of smoke, and an east-facing entrance. Another common village structure was the granary, which was used for storing acorns.

Several political divisions in the Nisenan territory, constituting tribelets, had headmen in the larger villages. However, the relative levels of influence in these larger population centers are unknown. All of these larger villages were located in the foothills. More substantial and permanent Nisenan villages generally were not established on the valley plain between the Sacramento River and the foothills, although this area was used as a rich hunting and gathering ground. One tribelet consisted of people occupying the territory between the Bear River and the Middle Fork American River (Wilson and Towne 1978). According to Kroeber (1925:831), the larger villages could have had populations exceeding 500 individuals, although small settlements consisting of 15 to 25 people and extended families were common.

The Nisenan occupied permanent settlements from which specific task groups set out to harvest the seasonal bounty of flora and fauna provided by the rich valley environment. The Valley Nisenan economy involved riparian resources, in contrast to the Hill Nisenan, whose resource base consisted primarily of acorn and game procurement. The only domestic plant was native tobacco (*Nicotiana* sp.), but many wild species were closely husbanded. The acorn crops from the blue oak (*Quercus douglasii*) and black oak (*Q. kelloggii*) were carefully managed resources. Acorns were stored in granaries in anticipation of winter. Deer, rabbit, and salmon were the chief sources of animal protein in the indigenous diet, but many insect and other animal species were taken when available (Wilson and Towne 1978:389).

The decimation of the Nisenan culture in the nineteenth century as a result of European colonization, coupled with a reluctance to discuss Nisenan spiritual beliefs and practices, makes it difficult to describe these practices in any detail. However, historic records document a number of observances and dances, some of which are still performed today, that were important ceremonies in early historic times. The Kuksu religion, the basic religious system noted throughout Central California, appeared among the Nisenan. Membership was restricted to those initiated in its spirit and deity-impersonating rites. However, the Kuksu was only one of several levels of religious practice among the Nisenan. Various dances associated with mourning and the change of seasons were also important. One of the last major additions to Nisenan spiritual life occurred sometime shortly after 1872 with a revival of the Kuksu as an adaptation to the Ghost Dance religion (Wilson and Towne 1978). Today, Nisenan descendants are reinvesting in their traditions and represent a growing and thriving community.

Following documentation by the Department of Interior for the existence of a separate, cohesive band of Maidu and Miwok Indians, occupying a village on the outskirts of the City of Auburn in Placer County, the United States acquired land in trust for the Auburn Band in 1917 near the City of Auburn and formally established a reservation, known as the Auburn Rancheria. Tribal members continued to live on the reservation as a community despite great adversity.

However, in 1967, the United States terminated federal recognition of the Auburn Band, and, in 1970, President Nixon declared the policy of termination a failure. In 1976, both the United States Senate and House of Representatives expressly repudiated this policy in favor of a new federal policy entitled Indian Self-Determination.

In 1991, surviving members of the Auburn Band reorganized their tribal government as the United Auburn Indian Community and requested that the United States formally restore their federal recognition. In 1994, Congress passed the Auburn Indian Restoration Act, which restored the Tribe’s federal recognition. The Act provided that the Tribe may acquire land in Placer County to establish a new reservation.

Today, Nisenan descendants and other tribes are reinvesting in their traditions and represent a growing and thriving community that is actively involved in defining their role as stewards of their ancestor’s sites including the identification of TCRs. TCRs provide the backdrop to religious understanding, traditional stories, knowledge of resources such as varying landscapes, bodies of water, animals and plants, and self-identity. Knowledge of place is central to the continuation and persistence of culture, even if former Nisenan and Miwok occupants live removed from their traditional homeland. Consulting tribes view these interconnected sites and places as living entities; their associations and feeling persist and connect with descendant communities (UAIC 2020).

Plains Miwok

Plains Miwok are members of the Utian Language Family of the Penutian Stock. Plains Miwok inhabited the lower reaches of the Mokelumne and Cosumnes Rivers and the banks of the

Sacramento River from Rio Vista to Freeport (JCC 2020:6.4). The basic social and economic group of Plains Miwok was the family or household unit, with the nuclear and/or extended family forming a corporate unit. These basic units were combined into distinct, named village or hamlet groups, which functioned as headquarters of a localized patrilineage. Lineage groups were important political and economic units that combined to form tribelets, with the largest sociopolitical unit of Plains Miwok numbering between 300 and 500 persons (JCC 2020:6.4). Each tribelet had a chief or headman who exercised political control over the villages that comprised it. Tribelets assumed the name of the head village where the chief resided. The office of tribelet chief was hereditary, with the chieftainship being the property of a single patrilineage within the tribelet. The office usually passed from father to son, but in the absence of a male heir a daughter could assume the office of chief (JCC 2020:6.4). Plains Miwok built a variety of structures including residential dwellings, ceremonial structures, semisubterranean sweat lodges, and menstruating huts. The typical dwelling was a thatched house, consisting of a conical framework of poles that was covered by brush, grass, or tules. Semi subterranean earth lodge roundhouses were also built for ceremonial gatherings, assemblies, local feasts, and housing visitors (JCC 2020:6.4-5). A variety of flaked and ground stone tools were common among Plains Miwok (e.g., knives, arrow and spear points, and rough cobble and shaped pestles). Plains Miwok imported obsidian, which was a highly valued material for tool manufacture. They also maintained trading relationships with neighboring groups for commodities such as salt, marine shells, and basketry. In addition, other tools and weapons were made of bone and wood, including both simple and sinew-backed bows, arrow shafts and points, looped stirring sticks, flat-bladed mush paddles, pipes, and hide preparation equipment. Cordage was made from plant material and used to construct fishing nets and braided and twined tumplines. Soaproot brushes were commonly used during grinding activities to collect meal and/or flour (JCC 2020:6.5). Fishing formed a large component of Plains Miwok subsistence activity. Consequently, they used an extensive assemblage of fishing-related implements and facilities including: spears; cordage lines with bone fishhooks; harpoons with detachable points; dams for stream diversion; nets of cordage and basketry; weirs; and an array of fish traps. In addition, tules, lashed logs, and bark rafts were used to acquire resources and facilitate travel (JCC 2020:6.5). Specialized food processing and cooking techniques used by Plains Miwok included grinding and leaching of ground acorn and buckeye meal. Acorns, buckeyes, pine nuts, seeds and other plant foods, and meat were routinely processed using bedrock mortars and pestles. A soaproot brush was used to sweep meal into mortar cups and collect flour. Fist-sized, heated stones were used to cook and/or warm liquid-based foods such as acorn gruel. In addition to these plant resources, other plants may have been managed, primarily by controlled burning, for both food (e.g., edible grasses and seed producing plants) and the manufacture of baskets and other useful equipment (JCC 2020:6.5).

Contemporary Native American Setting

Archaeologists routinely focus on traditional Native American culture and ignore current and vibrant Native American culture. This approach is not sufficient to provide a context or set of values maintained by the current Native American community related to their history and the landscape. Tribes view themselves as contemporary stewards of their culture and the landscape, representing a continuum from the past to the present. They are resilient, vibrant, and active in the community. Tribes maintain their connection to their history and ongoing culture by practicing traditional ceremonies, engaging in traditional practices (e.g., basketry), and conducting public education and interpretation. The acknowledgement of Native American history and the persistence of Tribes cannot be overlooked and should be recognized. Indeed, the Native American community and their history are commemorated in the City of Sacramento, on the grounds of the Capitol, and at Sacramento City Hall (JCC 2020:6.7).

Known Ethnographic Villages Near Downtown Sacramento

Villages along the Sacramento and American rivers include *Pujune*, *Momol*, *Sahmah*, *Demba*, *Yamahepu*, and *Sa'cum*. *Pujune* is located on the north side of the American River, about one-quarter mile east of its confluence with the Sacramento River. *Momol* is located on the south side of the American River, opposite the village of *Pujune*. *Sahmah* is located the east side of the Sacramento River, south of its confluence with the American River. *Demba* is located on the south side of the Sacramento River about one-half mile east of the Interstate 80 bridge crossing over the river. *Yamahepu* is located on the north side of the American River near the Highway 160 bridge crossing over the river. *Sa'cum* is located at Cesar Chavez Park in Sacramento.

In addition, Tribes have identified lake *Wanoho Pakan* as culturally important. A lake, originally named *Wanoho Pakan* by Native American Tribes, formerly extended from 3rd Street to 5th Street and north of I Street; the area is now occupied by the Southern Pacific railroad depot. *Wanoho Pakan* was and continues to be a place of cultural significance and value to Tribes. Subsequent to Euroamerican settlement and development of Sacramento, *Wanoho Pakan* became known as Sutter Lake and later as China Slough (JCC 2020:4.4).

The presence and distribution of the six villages and *Wanoho Pakan* indicate that the area encompassed by modern Sacramento was a landscape occupied and successfully used by Native Americans. Indeed, beyond any physical presence (e.g., archaeological sites and artifacts) of Native American occupation, the landscape is part of the history of Native Americans in the Sacramento area. The development and change of the landscape over time tells a story important to and valued by the Native American community and also the history of Sacramento and the Central Valley (JCC 2020:6.5,6.7).

3.12.3 Records Searches and Consultation

Records Search

On November 1, 2022 a records search was conducted within one-quarter mile of the project site at the North Central Information Center (NCIC), at California State University, Sacramento (NCIC File No SAC-22-215), and a supplemental search was conducted on October 15, 2024 (NCIC File No. SAC-24-158). The following information was reviewed:

- site records of previously recorded cultural resources,
- previous cultural studies,
- NRHP and CRHR,
- the California Historic Resources Inventory, and
- the Office of Historic Preservation Historic Properties Directory.

The records search revealed that three cultural resource investigations have been conducted within portions of the ~~current project~~ substation site, ~~and~~ an additional ~~25~~ 36 studies have been conducted within 0.25 miles of the project site, and an additional 13 studies included the entire rights-of-way for the proposed transmission lines. No previously recorded resources are located within the ~~project area~~ proposed substation site; however, four have been documented within the proposed transmission line corridors. and ~~79~~ 87 historic-era properties have been identified within 0.25 miles of the project area.

NAHC Consultation and Sacred Lands File Search

The NAHC was contacted by AECOM via email on October 31, 2022, for a Sacred Lands File & Native American Contacts List Request. The NAHC responded via email on December 9, 2022, with negative results and attached a list of Native American tribes that may have knowledge of cultural resources in the project area.

The NAHC also recommended the following be provided to Native American Tribes.

- The results of any record search that may have been conducted at an Information Center of the California Historical Resources Information System (CHRIS), including, but not limited to:
    - A listing of any and all known cultural resources have already been recorded on or adjacent to the Area of Potential Effect (APE), such as known archaeological sites;
    - Copies of any and all cultural resource records and study reports that may have been provided by the Information Center as part of the records search response;
    - Whether the records search indicates a low, moderate or high probability that unrecorded cultural resources are located in the APE; and
    - If a survey is recommended by the Information Center to determine whether previously unrecorded cultural resources are present.
- The results of any archaeological inventory survey that was conducted, including:
    - Any report that may contain site forms, site significance, and suggested mitigation measures. All information regarding site locations, Native American human remains, and associated funerary objects should be in a separate confidential addendum, and not be made available for public disclosure in accordance with Government Code Section 6254.10.
    - The result of the Sacred Lands File (SFL) check conducted through the Native American Heritage Commission, which was negative.
    - Any ethnographic studies conducted for any area including all or part of the potential APE; and
    - Any geotechnical reports regarding all or part of the potential APE.

Tribal Consultation

CEQA - AB 52 Consultation

Pursuant to Public Resources Code 21090.3.1(b)(1), tribal notifications were sent out to participating tribes United Auburn Indian Community (UAIC), the Shingle Springs Band of Miwok

Indians (SSBMI), and the Ione Band of Miwok Indians (Ione). Letters requesting consultation were sent to these groups on September 22, 2022, describing the project and served as notification and requesting a response within 30 days if the group would like to consult. No response was received from SSBMI or Ione.

In an email message dated September 30, 2022, Anna Starkey, UAIC Cultural Regulatory Specialist, stated that UAIC reviewed the project location in their Tribal Historic Information System (THRIS) database and determined that it is potentially sensitive for unrecorded tribal resources. Specifically, the project area is 20 feet west of an oral history burial site. Another oral history burial site is to the east but is a couple thousand feet away.

Further, UAIC indicated that pending the condition of the project site, a canine forensic survey may be warranted, and that a tribal monitor and an unanticipated discoveries and monitoring plan would be needed. SMUD continues to consult with UAIC.

Native American Heritage Commission

The Native American Heritage Commission (NAHC) was contacted by AECOM via email on October 31, 2022, for a Sacred Lands File & Native American Contacts List Request. The NAHC responded via email on December 9, 2022, with positive results and attached a list of Native American tribes who may have knowledge of cultural resources in the project area. The NAHC requested AB 52 and Senate Bill (SB) 18 compliance information; SB 18 does not apply to the project because there is no General Plan amendment associated with the project (which is the trigger for SB 18 compliance). Additionally, SB 18 is not a CEQA requirement and therefore is not discussed in this section. AB 52 compliance is described below. The NAHC communications are enclosed in the Historical Resources Evaluation prepared by AECOM (Appendix D).

3.12.4 Environmental Impacts and Mitigation Measures

Methods and Assumptions

Analysis Methodology

Information related to TCRs is based on findings reported in the NAHC Sacred Lands File database search, the records search results (NCIC File Number SAC-23-215), as well as the results of Native American consultation under AB 52. The analysis is also informed by the provisions and requirements of federal, state, and local laws and regulations that apply to cultural resources.

In addition, UAIC conducted a records search for the identification of TCRs for this project, which included a review of pertinent literature and historic maps, and a records search using UAIC’s THRIS. UAIC’s THRIS database is composed of UAIC’s areas of oral history, ethnographic history, and places of cultural and religious significance, including UAIC Sacred Lands that are submitted to the Native American Heritage Commission (NAHC). The THRIS resources shown in this region also include previously recorded indigenous resources identified through the CHRIS as well as historic resources and survey data.

PRC Section 21074 defines “Tribal cultural resources” as “sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American Tribe that are listed or determined eligible for listing in the CRHR, listed in a local register of historical resources, or otherwise determined by the lead agency to be a Tribal cultural resource.

For the purposes of this impact discussion, “historical resource” is used to describe historic-period, built-environment resources. TCRs, which may qualify as “historical resources” pursuant to CEQA, are analyzed separately from built-environment historical resources.

Thresholds of Significance

Based on Appendix G of the State CEQA Guidelines, the project would result in a potentially significant impact on Tribal cultural resources if it would:

- cause a substantial adverse change in the significance of a Tribal cultural resource, defined in PRC 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; or

- disturb any human remains, including those interred outside of dedicated cemeteries.

Impact Analysis

Impact 3.12-1. Would the project cause a substantial adverse change in the significance of a tribal cultural resource, including human remains, defined in Public Resources Code § 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:

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

- 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 § 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code § 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

Less than Significant Impact with Mitigation. No unique archaeological resources or TCRs have been identified on the project site; however, experience demonstrates that previously unidentified resources may well be encountered during ground disturbing activities (i.e., grading and trenching). Because TCRs may exist at the project site and could be affected by the project, this impact would be ***potentially significant***.

Mitigation Measures

Mitigation Measure 3.4-2: Halt ground-disturbing activity upon discovery of subsurface archaeological features and Tribal Cultural Resources. (See Section 3.4 Cultural Resources).

Mitigation Measure 3.12-1a

Although TCRs, including human remains, have not been identified for this project, the following mitigation measure was provided by UAIC and is intended to address the evaluation and treatment of inadvertent/unanticipated discoveries of potential TCRs, archaeological, or cultural resources during a project's ground-disturbing activities. If any suspected TCRs are discovered during ground disturbing construction activities, all work shall pause within 100 feet of the find, or an agreed upon distance based on the project area and nature of the find. A Tribal Representative from a California Native American Tribe that is traditionally and culturally affiliated with a geographic area shall be immediately notified and shall determine if the find is a TCR (PRC §21074). The Tribal Representative will make recommendations for further evaluation and treatment as necessary.

When avoidance is infeasible, preservation in place is the preferred option for mitigation of TCRs 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 continue consultation with Tribes 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 TCRs will not take place unless approved in writing by the California Native American Tribe that is traditionally and culturally affiliated with the project area.

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 TCR may include Tribal Monitoring, culturally appropriate recovery of cultural objects and belongings, and reburial of cultural objects and belongings or cultural soil.

Work at the discovery location cannot resume until all necessary investigation and evaluation of the discovery under the requirements of the CEQA, including AB 52, have been satisfied.

Note that 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 3.12-1b

In consultation with the California Native American Tribe that is traditionally and culturally affiliated with the project area, SMUD will obtain the service of forensic canines to determine the potential for the presence of human remains following site demolition of buildings and hardscape surfaces (e.g., foundations and parking areas). If the results are positive an appropriate burial mitigation plan will be developed and implemented in consultation with the California Native American Tribe that is traditionally and culturally affiliated with the project area.

Significance after Mitigation

Implementation of Mitigation Measures 3.4-2, 3.12-1a and 3.12-1b would reduce impacts associated with TCRs to a less-than-significant level because it would require the performance of professionally and Native American accepted and legally compliant procedures for the discovery of previously undocumented significant TCRs.

3.13 Utilities and Service Systems

This section describes the existing utilities and infrastructure onsite and assesses the project's short- and long-term impacts on utilities. The analysis evaluates whether the project would require the construction of additional water, wastewater, or solid waste treatment or disposal facilities, and its potential impacts on utility services. The section also discusses the addition of the proposed electrical interconnection facilities to the local grid.

Note that this section remains the same as that originally provided in the Draft EIR. No additional environmental analysis was required to address project description revisions.

3.13.1 Regulatory Setting

Federal

No federal plans, policies, regulation, or laws pertaining to utilities and service systems are applicable to this project.

State

State Water Code

Pursuant to the State Water Code, water suppliers providing water for municipal purposes to more than 3,000 customers or supplying more than 3,000 acre-feet (approximately 980 million gallons) of water annually must prepare and adopt a Urban Water Management Plan (UWMP) and update it every five years. As part of a UWMP, water agencies are required to evaluate and describe their water resource supplies and projected needs over a 20-year planning horizon, water conservation, water service reliability, water recycling, opportunities for water transfers, and contingency plans for drought events.

California Integrated Waste Management Act of 1989

The California Integrated Waste Management Act of 1989 created the California Integrated Waste Management Board, now known as CalRecycle. CalRecycle is the agency designated to oversee, manage, and track California's waste generation. CalRecycle provides grants and loans to help cities, counties, businesses, and organizations meet the State's waste reduction, reuse, and recycling goals. CalRecycle promotes a sustainable environment in which these resources are not wasted but can be reused or recycled. In addition to many programs and incentives, CalRecycle promotes the use of new technologies to divert resources away from landfills. CalRecycle is responsible for carrying out waste management programs, primarily through local enforcement agencies.

2022 California Green Building Standards Code

The standards included in the 2022 California Green Building Standards Code (CALGreen Code) (24 California Code of Regulations [CCR] Part 11) became effective on January 1, 2023. The CALGreen Code was developed to enhance the design and construction of buildings and the use of sustainable construction practices, through planning and design, energy efficiency, water efficiency and conservation, material conservation and resource efficiency, and environmental air quality.

CALGreen requires construction projects to recycle and/or salvage for reuse a minimum of 65 percent of the nonhazardous construction and demolition waste or meet a local construction and demolition waste management ordinance (whichever is more stringent). The City of Sacramento also follows the CALGreen requirements in its adopted Construction and Demolition Ordinance.

State Water Resources Control Board

The City is required to comply with the State Water Resources Control Board Order No. 2006-0003, Statewide General Waste Discharge Requirements (WDR) for Sanitary Sewer Systems, along with amendment Order No. 2008-0002-EXEC to prohibit sewer overflows and implement a management plan. The management plan is required to include systemwide cleaning, inspection and rehabilitation, along with a fats, oils and grease control program, root control program, enforcement, training, and a capital improvement program with certified funding levels (City of Sacramento 2015).

Central Valley Regional Water Quality Control Board

The City's Combined Sewer System (CSS) is also regulated by the Central Valley Regional Water Quality Control Board's (RWQCB) NPDES Permit No. CA0079111 (Order No. R5-2010-0004). The NPDES permit prohibits dry weather discharges to the river and limits wet weather discharges to the river. The permit requires treatment for discharges to the river; extensive monitoring and data analysis; systemwide cleaning and inspection; a fats, oils and grease control program; an approximately $10 million annual capital improvement program and various other specific minimum control measures (City of Sacramento 2015).

Local

City of Sacramento 2035 General Plan Update

The following goal and policies from the Utilities Element of the City of Sacramento 2035 General Plan Update (City of Sacramento 2015) are applicable to the proposed project:

- **Goal U.1.1 High-Quality Infrastructure and Services.** Provide and maintain efficient, high-quality public infrastructure facilities and services throughout the city.
    - **Policy U 1.1.1 Provision of Adequate Utilities.** The City shall continue to provide ad maintain adequate water, wastewater, and stormwater drainage utility services to areas in the city, and shall provide and maintain adequate water, wastewater, and stormwater drainage utility services to areas in the city that do not currently receive these City services upon funding and construction of necessary infrastructure.
    - **Policy U 1.1.2 Citywide Level of Service Standards.** The City shall establish and maintain service standards [Levels of Service (LOS)] for water, wastewater, stormwater drainage, and solid waste services.
    - **Policy U 1.1.3 Sustainable Facilities and Services.** The City shall continue to provide sustainable utility services and infrastructure in a cost-efficient manner.

  - **Policy U 1.1.11 Underground Utilities.** The City shall require undergrounding of all new publicly owned utility lines, encourage undergrounding of all privately-owned utility lines in new developments, and work with electricity and telecommunications providers to underground existing overhead lines.

  - **Policy U 1.1.12 Impacts to Environmentally Sensitive Lands.** The City shall locate and design utilities to avoid or minimize impacts to environmentally sensitive areas and habitats.

- **Goal U 2.1 High-Quality and Reliable Water Supply.** Provide water supply facilities to meet future growth within the City's Place of Use and assure a high-quality and reliable supply of water to existing and future residents.

  - **Policy U 2.1.9 New Development.** The City shall ensure that water supply capacity is in place prior to granting building permits for new development.

- **Goal U 3.1 Adequate and Reliable Sewer and Wastewater Facilities.** Provide adequate and reliable sewer and wastewater facilities that collect, treat, and safely dispose of wastewater.

  - **Policy U 3.1.1 Sufficient Service.** The City shall provide sufficient wastewater conveyance, storage, and pumping capacity for peak sanitary sewer flows and infiltration.

- **Goal U 4.1 Adequate Stormwater Drainage.** Provide adequate stormwater drainage facilities and services that are environmentally sensitive, accommodate growth, and protect residents and property.

  - **Policy U 4.1.1 Adequate Drainage Facilities.** The City shall ensure that all new drainage facilities are adequately sized and constructed to accommodate stormwater runoff in urbanized areas.

  - **Policy U 4.1.6 New Development.** The City shall require proponents of new development to submit drainage studies that adhere to City stormwater design requirements and incorporate measures, including "green infrastructure" and Low Impact Development (LID) techniques, to prevent on- or off-site flooding.

- **Goal U 5.1 Solid Waste Facilities.** Provide adequate solid waste facilities, meet or exceed State law requirements, and utilize innovative strategies for economic and efficient collection, transfer, recycling, storage, and disposal of refuse.

  - **Policy U 5.1.8 Diversion of Waste.** The City shall encourage recycling, composting, and waste separation to reduce the volume and toxicity of solid wastes sent to landfill facilities.

  - **Policy U 5.1.15 Recycling and Reuse of Construction Wastes.** The City shall require recycling and reuse of construction wastes, including recycling materials generated by the demolition and remodeling of buildings, with the objective of diverting 85 percent to a certified recycling processor.

- **Goal U 6.1 Adequate Level of Service.** Provide for the energy needs of the city and decrease dependence on nonrenewable energy sources through energy conservation, efficiency, and renewable resource strategies.
  - **Policy U 6.1.1 Electricity and Natural Gas Services.** The City shall continue to work closely with local utility providers to ensure that adequate electricity and natural gas services are available for existing and newly developing areas.

Sacramento City Code

Water Efficient Landscape Ordinance

The Water Efficient Landscape Ordinance (Title 15 City Code Chapter 15.92) outlines requirements for water-efficient landscapes that apply to public and private projects, including landscaped areas at least 2,500 square feet, and require a building or landscape permit, plan check, or design review. The City requires project applicants to submit a landscape documentation package for its review and approval. The landscape documentation package must contain project information, a water-efficient landscape worksheet, a soil management report, a landscape design plan, an irrigation design plan, and a grading design plan.

Construction and Demolition Debris Recycling Ordinance

The City requires all contractors to comply with the Construction and Demolition Debris Recycling Ordinance (Title 8 City Code Chapter 8.124), to reduce all project waste by weight from entering landfill facilities by 65 percent through recycling. The ordinance applies to all new construction valued at $200,000 or more. The City requires contractors to prepare a waste management plan before obtaining building permits. The waste management plan must identify the sources of recyclable materials, outline a recycling method (i.e., self-separation or mixed recovery), and identify a self-haul or franchise waste hauler. Contractors are required to document the quantities of building materials recycled, salvaged, reused, and/or disposed during construction on a waste management log. The waste management log must be submitted to City Solid Waste Services within 30 days of project completion (City of Sacramento 2023a).

3.13.2 Environmental Setting

Water Supply, Transmission, and Treatment Facilities

Water supply is provided by the City of Sacramento from a combination of surface water from the American and Sacramento rivers and groundwater pumped from the North and South American Subbasins. Approximately 80 percent of the City’s supply comes from surface water and 20 percent comes from groundwater (City of Sacramento 2023b). The City operates and maintains the Sacramento River Water Treatment Plant (which treats Sacramento River water), E. A. Fairbairn Water Treatment Plant (which treats American River water), 18 high-lift service pumps at the water treatment plants, 28 groundwater wells that deliver potable water to the distribution system, 12 storage reservoirs, and approximately 1,800 miles of water distribution and transmission mains (City of Sacramento 2021).

Existing water transmission mains are located in surface streets throughout the project area, and lateral connections provide water to the existing warehouse buildings at the proposed substation site, along with adjacent buildings. The nearest major water treatment facility is the Sacramento River Water Treatment Plant, located approximately 0.75-mile west of the project site. There are no groundwater supply wells on or near the project site. The approximately 70,000 square feet of warehouse uses on-site generate an estimated water demand of 0.04 million gallons per day (mgd) (California Air Pollution Control Officers Association 2022).[1]

Wastewater Collection, Conveyance, and Treatment Facilities

The City of Sacramento Department of Utilities (DOU) is responsible for operating and maintaining the public sewer system within the City Service Area, which includes approximately 65 percent of the geographical area of the City. The sewer system consists of a CSS[2] in the older, central areas of the City (including the project site) and a newer Separated Sewer System in the remaining City service area. The remaining areas of the City are served by the Sacramento Area Sewer District (SASD). Flows conveyed by the City sewer system are routed to the Sacramento Regional Wastewater Treatment Plan (SRWTP) for treatment and disposal via an interceptor system consisting of large diameter pipes and pump stations (City of Sacramento 2018). The SRWTP, located east of the Sacramento River near Elk Grove, is owned and operated by the Sacramento County Regional Sanitation District (Regional San). The WWTP is permitted to discharge an average dry-weather flow of 181 million gallons per day (mgd) of treated wastewater to the Sacramento River (Central Valley Regional Water Quality Control Board 2021).

Existing sewer lines are located in surface streets throughout the project area, and lateral connections convey wastewater flows from the existing warehouse buildings at the proposed substation site to the public sewer system. Using the previously calculated values for water demand of the existing warehouse uses, the existing wastewater flows generated at the site amount to approximately 0.038 mgd.[3]

Stormwater Drainage

Stormwater runoff in the City flows into either the City's CSS or individual drainage pump stations located throughout the City and maintained by the DOU. Stormwater runoff enters the drainage system through a network of drain inlets, catch basins, and below-grade conveyance lines, and is ultimately conveyed to the Sacramento and American Rivers. Drainage facilities are located in North B Street and North 14th Street which convey stormwater from the site into the City's system.

There are several pump station facilities in proximity to the project site, including one located just west on North 12th Street (City of Sacramento 2015). Stormwater on the project site likely flows toward storm drains located along the eastern boundary and to nearby pump stations for conveyance to the American River. Due to the lack of extensive impermeable surface area on the southern portion of the site, some stormwater likely infiltrates into the subsurface.

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1 Based on CalEEMod water demand rates of 231,250 gallons per year per 1,000 square feet for a warehouse land use.
2 A conveyance system used for both sewer and stormwater flows.
3 Based on the CalEEMod standard wastewater generation rate of 85 percent of total water usage.

Solid Waste

Solid waste collected by the City is transported to the Kiefer Landfill (City of Sacramento 2015). 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 classified as a Class III municipal solid waste landfill facility and is permitted to accept general residential, commercial, and industrial refuse for disposal, including municipal solid waste, construction and demolition debris, green materials, agricultural debris, and other nonhazardous designated debris. According to the California Department of Resources Recycling and Recovery (CalRecycle), the Kiefer Landfill has a maximum permitted throughput of 10,815 tons per day, a total maximum permitted capacity of 147.4 million cubic yards, a remaining capacity of approximately 4.1 million cubic yards, and an anticipated closure date of January 1, 2064 (CalRecycle 2019).

Electric Power, Natural Gas, and Telecommunications

SMUD is a community-owned electric service responsible for the acquisition, generation, transmission, and distribution of electrical service to customers in the City of Sacramento. SMUD sources power from various sources, including hydropower; natural-gas-fired generators; renewable energy such as solar, wind, hydro, and biomass; and power purchased on the wholesale market. There are several existing or planned SMUD facilities near the project site including the Station E electrical substation located approximately 0.5 miles to the east, Station G electrical substation (under construction) and Station H (future substation) located approximately 0.7 miles to the southwest. Existing 115-kilovolt (kV) electrical transmission lines are located underground and overhead along surface streets in the vicinity of the project site.

PG&E provides natural gas service to the City. During the winter, most natural gas resources are imported from Canada on a supply and demand basis, and the balance is supplied from California production wells. During the summer, this ratio is reversed (City of Sacramento 2015). There are no natural gas transmission mains in the project area (PG&E 2023).

Telecommunication services in the City are provided by various companies via a combination of underground facilities and above ground cellular towers.

3.13.3 Environmental Impacts and Mitigation Measures

Methods and Assumptions

The analysis of project impacts on utilities and service systems was based on a review of existing information about the utilities present within and near the site, and the service systems that serve the area occupied by the proposed project. The information obtained from these sources was reviewed and summarized to establish existing conditions and identify potential environmental effects, based on the standards of significance presented in this section.

In determining the level of significance, the analysis assumes that the proposed project would comply with relevant state and local ordinances and regulations (see Section 3.13.1, “Regulatory Setting”).

Thresholds of Significance

Based on Appendix G of the State CEQA Guidelines, the proposed project would result in a potentially significant impact related to utilities and service systems if it would:

- require or result in the relocation or construction of new or expanded water, wastewater treatment facilities, or storm water drainage, electrical power, natural gas, or telecommunication facilities, the construction or relocation of which could cause significant environmental effects;
- not have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years;
- result in a determination by the wastewater treatment provider which serves or may serve the project that it does not have adequate capacity to serve the project's projected demand in addition to the provider's existing commitments;
- 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; or
- not comply with federal, State, or local management and reduction statutes and regulations related to solid waste.

Impacts related to stormwater drainage facilities are addressed in <u>Recirculated Draft</u> EIR Section 3.9, "Hydrology and Water Quality."

Impact Analysis

Impact 3.13-1. Require or result in the relocation or construction of new or expanded water, or wastewater treatment facilities or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?

Less-than-Significant Impact. The proposed project would replace an existing warehouse building with an electrical substation and construct approximately ~~eight~~ <u>nine</u> miles of transmission lines below- and above-grade to connect to nearby substations. New utility connections would be required for water, wastewater, stormwater drainage, electric power, and telecommunications service at the proposed substation.

Lateral water service lines from the proposed substation would connect to existing distribution lines in North B Street. The proposed project would result in minimal water demand during construction and operation, primarily for dust control and potable water use in restroom facilities, respectively. As described further below under Impact 3.13-2, the proposed project is anticipated to result in a net decrease in water demand on-site, and there is adequate water supply available to meet project demands. The minimal project water demand would not require relocation or construction of new or expanded water facilities.

During construction, only small volumes of wastewater would be generated by workers on the project site. Once operational, the proposed project would also generate minimal amounts of wastewater from operations and maintenance staff using restroom facilities at the substation.

Wastewater would be disposed of at the SRWTP, which has a treatment capacity of 181 mgd. Regional San expects that with water conservation measures throughout its service area, the existing 181 mgd average dry-weather flow capacity would be adequate for at least 40 years (Regional San 2014). Thus, the minimal amount of wastewater generated by the proposed project would not require the construction of new facilities.

During construction, stormwater would be managed in compliance with the NPDES Construction General Permit, which would reduce the rate and volume of runoff leaving the site and entering the storm drain system (see Section 3.9, "Hydrology and Water Quality"). The proposed project would construct new drainage facilities at the substation site, which would convey flows from the site into the City's drainage system. The drainage facilities would be sized appropriately for the expected level of stormwater runoff, and off-site drainage facilities would not need to be relocated or constructed.

The proposed project would rely on existing telecommunication service providers in the area to meet the needs of the new substation. The proposed project itself is an electric power facility, the environmental effects of which are described throughout this Recirculated Draft EIR. No construction or relocation of electric power facilities would be required beyond those included in the proposed project. Existing utility providers would be coordinated with during design and pre-construction planning to ensure utility conflicts are avoided to the maximum extent feasible during construction. For these reasons, this impact would be ***less than significant***.

Impact 3.13-2. Have sufficient water supplies available to serve the project and reasonably foresee future development during normal, dry and multiple dry years?

Less-than-Significant Impact. The proposed project would replace the existing warehouse building on-site, which is estimated to generate approximately 0.04 mgd of water demand, with an electrical substation. SMUD would install one restroom for use by SMUD workers at the proposed substation. The new control building and project site generally would be unoccupied, with SMUD maintenance employees visiting the project site intermittently to conduct routine checks and perform routine maintenance. Thus, project operation is anticipated to result in a net decrease in water demand.

The proposed project would not include any new housing or employment opportunities that would require water supplies. The proposed project's water demand would be met via existing supplies from the City of Sacramento DOU. Because the proposed project's water demand would be less than the demand from existing building on-site, this impact would be ***less than significant.***

Impact 3.13-3. Result in a determination by the wastewater treatment provider, which serves or may serve the project that it has adequate capacity to serve the project's projected demand, in addition to the provider's existing commitments?

Less-than-Significant Impact. Minimal amounts of wastewater would be generated by construction workers during the construction phase of the proposed project. Operations and maintenance staff would also generate small volumes of wastewater once the project is built. The existing warehouse building on-site would be replaced by the proposed substation, which is expected to result in a net decrease in wastewater generation on-site due to the lack of permanent occupants at the facility. As described above under Impact 3.13-1, wastewater generated by the proposed project would be disposed of at the SRWTP, which has an existing average dry-weather flow capacity of 181 mgd and is expected to have adequate capacity for the next several decades. Therefore, there would be adequate capacity to serve the proposed project's treatment demands, and the impact would be ***less than significant.***

Impact 3.13-4. Generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?

Less-than-Significant Impact. Construction of the proposed project would generate construction and demolition debris requiring appropriate disposal at Kiefer Landfill, which serves the project site and the City as a whole. The existing approximately 70,000-square-foot warehouse building on the proposed substation site would be demolished and building materials such as wood, glass, metal, and concrete would need to be disposed of.

A minimum of 65 percent of construction and demolition debris would be recycled pursuant to the City Construction and Demolition Debris Ordinance and CALGreen Code. This would reduce the burden placed on solid waste disposal infrastructure and align with statewide, regional, and local solid waste reduction goals. As noted, Kiefer Landfill has a remaining capacity of approximately 4.1 million cubic yards, and an anticipated closure date of January 1, 2064. Once operational, the proposed project would generate a negligible amount of solid waste, consisting of crew lunches, packaging materials associated with replacement parts, and old parts. Therefore, the waste generated by the proposed project would not exceed the capacity of any landfill or impair the attainment of solid waste reduction goals. This impact would be ***less than significant.***

Impact 3.13-5. Comply with federal, State, and local management and reductions statutes and regulations related to solid waste?

Less-than-Significant Impact. The project would cause a temporary increase in the generation of solid waste as a result of construction activities. However, construction waste would be recycled in compliance with local and statewide waste reduction regulations. Operation of the proposed project would generate a negligible amount of solid waste that would not conflict with any statues or regulations related to solid waste. Therefore, this impact would be ***less than significant.***

4.0 CUMULATIVE IMPACTS

4.1 CEQA Requirements

Section 15130(a) of the State CEQA Guidelines requires a discussion of the cumulative impacts of a project when the project's incremental effect is cumulatively considerable. Cumulatively considerable, as defined in CEQA Guidelines Section 15065(a)(3), means that the "incremental effects of an individual project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects." State CEQA Guidelines Section 15355 defines a cumulative impact as two or more individual effects that, when considered together, are considerable or that compound or increase other environmental impacts. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time. The purpose of the cumulative analysis is to allow decision makers to better understand the impacts that might result from approval of past, present, and reasonably foreseeable future projects (i.e., cumulative projects), in conjunction with the proposed project addressed in this EIR.

4.2 Cumulative Impact Approach

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

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

Table 4-1 identifies the cumulative projects in the project vicinity that are evaluated in the cumulative analysis. The location of these cumulative projects in relationship to the proposed project is illustrated in Figure 4-1.

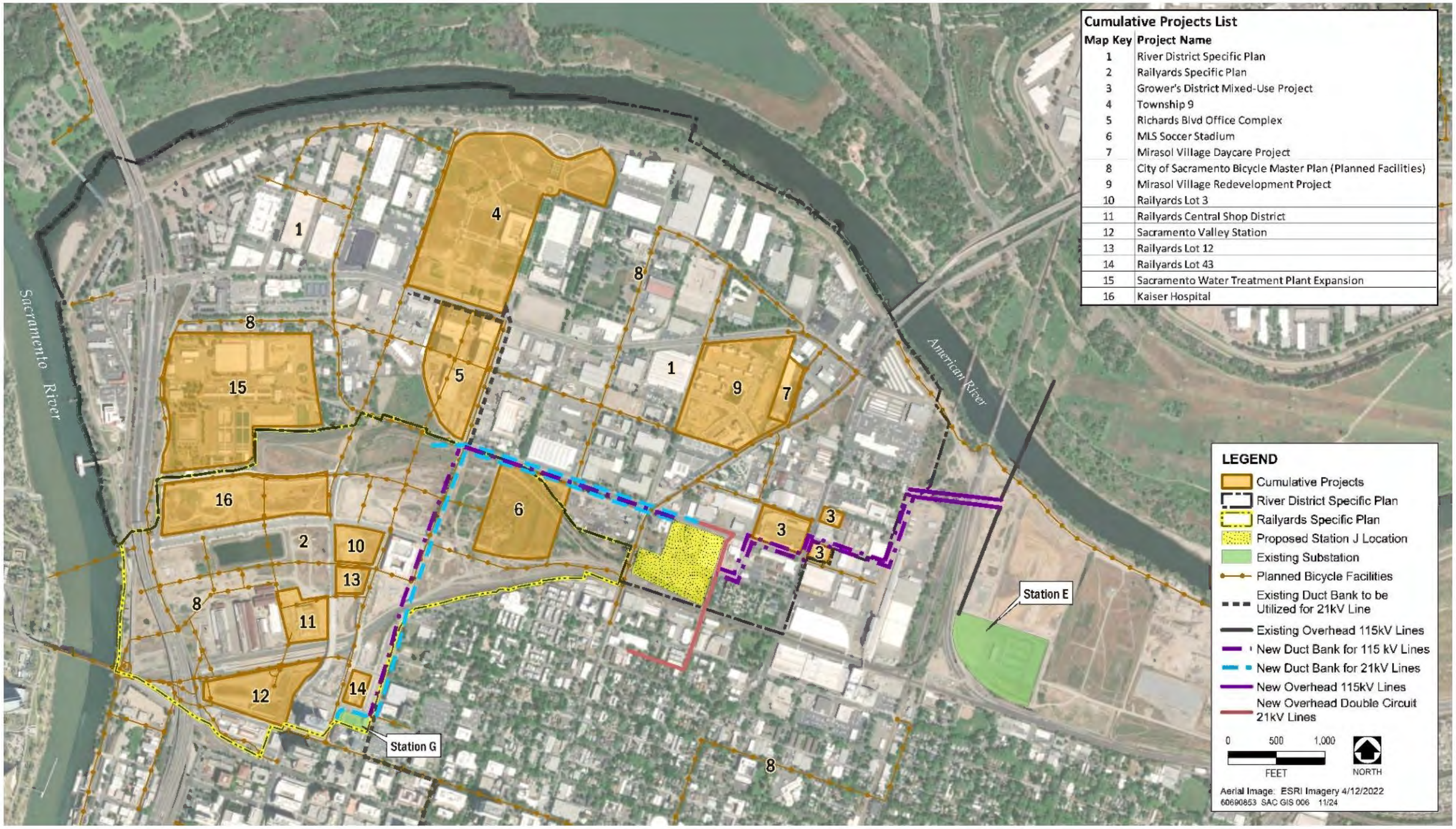

Figure 4-1: Cumulative Projects

Table 4-1. Cumulative Projects List

No.	Project Name	Location	Description
1	River District Specific Plan	773-acre area bounded by the American River on the north, the Sacramento River on the west, the Sacramento Railyards Specific Plan area on the south, and North 16th street on the east. The proposed project site is located within the Specific Plan Area.	Planned for development with 8,144 dwelling units, 3.956 million square feet of office, 854,000 square feet of retail/wholesale, 1.463 million square feet of light industrial, 55.5 acres of parks and open space, and 3,044 hotel units.
2	Railyards Specific Plan	224-acre site in downtown Sacramento, bounded by the Central Business District on the south, the Sacramento River on the west, North B Street and the River District on the north, and the federal courthouse and the Alkali Flat neighborhood on the east.	Planned for development with approximately 6,000-10,000 new dwelling units, 514,270 square feet of retail, 2.75-3.86 million square feet of office, 771,405 square feet of flexible mixed-use, 1.23 million square feet of medical, a 25,000-person stadium, 1,100 hotel rooms, 485,390 square feet of historic and cultural uses, and 30 acres of open space.
~~3~~	~~Station H Substation~~	~~601 H Street~~	~~Planned SMUD bulk electrical substation.~~
3	Grower's District Mixed-use Project	200, 211, and 215 North 16th Street	Adaptive reuse of two historic structures (including General Produce warehouse building) and construction of 525 residential units and approximately 140,000 square feet of commercial space.
4	Township 9	60-acre site between Richards Boulevard and the American River.	Approximately 3,000 residential units, 800,000 square feet of office space, and 100,000 square feet of retail space. Under construction as of August 2023.
5	Richards Boulevard Office Complex	17.3-acre site bound on the north by Richards Boulevard and on the east by North 7th Street.	Four office towers and amenities totaling approximately 1.25 million gross square feet with on-site and structured above-grade parking. Includes construction of three new roads to facilitate traffic and pedestrian flow in and around the campus. Under construction as of August 2023.
6	MLS Soccer Stadium	13-acre site between 8th and 10th Streets north of Railyards Boulevard.	Planned for future development of a 25,000-person soccer stadium.
7	Mirasol Village Daycare	475 Pipevine Street	New 6,495-square-foot single-story day care center. Proposed building would contain four classrooms and associated office space.
~~8~~	~~North 12th Street Streetscape Improvements Project~~	~~North 12th Street from North B Street to Richards Boulevard~~	~~New sidewalk on the east side of North 12th Street from North B Street to Richards Boulevard. Improvements include removing barriers and constructing additional drainage, curbs and gutters, street lighting and a wrought iron fence to separate pedestrians from the light rail tracks.~~

No.	Project Name	Location	Description
8	City of Sacramento Bicycle Master Plan	Various locations	Class 1 shared-use paths, Class 2 bicycle lanes, and Class 4 separated bikeways are planned for construction in the project area, including on North B Street, Ahern Street, North C Street, North 12 Street, and along the American River as a future phase of the Two Rivers Bike Trail.
9	Mirasol Village Redevelopment Project	1200 Richards Boulevard	427 multi-family residential units on 22 acres
10	Railyards Lot 3	Railyards Boulevard and 5th Street	432 multi-family residential units on 3.4 acres
11	Railyards Central Shop District	South of Railyards Boulevard and 5th Street	Adaptive reuse of 8 historic buildings to create approximately 500ksf of retail space, and an expansion to the State Railroad Museum, oriented around a central plaza.
12	Sacramento Valley Station	West of F Street and 5th Street	Redevelopment and improvement of the existing Sacramento Valley Station to include new bus bays, expansion of train capacity, parking, bicycle facilities, and other ancillary improvements.
13	Railyards Lot 12	Between 5th and 6th Streets, south of Railyards Boulevard	Two six-story office and retail buildings, including 7,500 square feet of ground-floor retail space
14	Railyards Lot 43	6th Street and F Street	Five-story apartment complex with 300 residential units
15	Sacramento Water Treatment Plant	1 Water Street	2030 City of Sacramento Water Treatment Plant expansion; projected to include an approximate 17 MW increase in demand
16	Kaiser Hospital	West of corner of 5th Street and Railyards Boulevard	Eight-story, 312-bed hospital and five-story medical office

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4.3 Cumulative Setting

4.3.1 Geographic Scope

For each resource area, cumulative impacts may occur over different geographic areas. For example, the project effects on air quality would combine with the effects of projects in the entire air basin, whereas noise impacts would primarily be localized to the surrounding area. The geographic area that could be affected by the proposed project varies depending upon the type of environmental issue being considered. Section 15130(b)(3) of the CEQA Guidelines states that lead agencies should define the geographic scope of the area affected by the cumulative effect. Table 4-2 below provides a summary of the different geographic areas used to evaluate cumulative impacts.

Table 4-2. Geographic Considerations in Cumulative Analysis

Resource Area	Geographic Scope
Aesthetics	Project site and adjacent parcels
Air Quality	Sacramento Valley Air Basin, Project site and adjacent parcels
Biological Resources	Project site and adjacent parcels
Cultural Resources	Project site and adjacent parcels
Energy	Energy provider's territory
Geology, Soils, and Paleontological Resources	Project site and adjacent parcels
Greenhouse Gas	Planet-wide
Hazards and Hazardous Materials	Project site and adjacent parcels
Hydrology and Water Quality	American River watershed
Noise and Vibration	Project site and adjacent parcels
Transportation	Citywide
Tribal Cultural Resources	Project site and adjacent parcels
Utilities and Service Systems	Citywide

4.4 Cumulative Impact Analysis

4.4.1 Aesthetics

The proposed project would result in less-than-significant aesthetic impacts during construction and operation. Concurrent construction may occur in the project vicinity due to site-specific development under the River District Specific Plan, the Railyards Specific Plan, or planned municipal improvements such as new sidewalks and bikeways. Even if nearby parcels were approved for site-specific development projects and construction were to occur simultaneously, the project area does not contain notable scenic resources that could be adversely affected. As described in Section 3.1, "Aesthetics", the only scenic views and resources nearby include those provided along the American River to the north/northeast, particularly along the Sacramento Northern Bikeway, and historic buildings within the North 16th Street Historic District. The proposed project would have a minimal impact on scenic views and resources in these areas and would not combine with other cumulative projects to create a significant impact because the proposed electrical transmission lines would be placed underground or in discrete overhead locations. Further, all cumulative projects in the area would be subject to the City's design review process (depending on the proposed use and location) to ensure consistency with the River District Specific Plan or Railyards Specific Plan design guidelines, which would minimize or reduce aesthetic impacts. For these reasons, the proposed project's contribution to a significant cumulative aesthetics impact would be less than cumulatively considerable and would result in a less-than-significant cumulative aesthetic impact.

4.4.2 Air Quality

By its nature, air pollution is largely a cumulative impact. All new development that would result in an increase in air pollutant emissions would contribute to cumulative air quality impacts. The proposed project would result in a less-than-significant-with-mitigation air quality impact during construction and operation. Cumulative projects throughout the air basin would generate construction and operational air emissions that could contribute to regional air quality impacts. A project's emissions may be individually limited, but cumulatively considerable when taken in combination with past, present, and future development projects. As discussed in relation to project-level air quality impacts in Sections 3.2-1 and 3.2-2, the thresholds of significance are relevant to whether a project's individual emissions would result in a cumulatively considerable incremental contribution to the existing cumulative air quality conditions. If a project's emissions would be less than those threshold levels, the project would not be expected to result in a cumulatively considerable incremental contribution to the significant cumulative impact (SMAQMD 2020). Construction and operational emissions associated with the proposed project would not exceed the thresholds of significance recommended by the SMAQMD. These thresholds are designed to identify those projects that would result in significant levels of air pollution, and to assist the region in attaining the applicable CAAQS and NAAQS. In addition, with implementation of Mitigation Measure 3.2-1a (SMAQMD Basic Construction Emission Control Practices) and Mitigation Measure 3.2-1b (SMAQMD PM Operational Best Management Practices), the proposed project would not generate substantial fugitive dust emissions during construction or operation nor exceed the thresholds of significance applicable to PM.

Exposure of sensitive receptors to substantial pollutant concentrations, such as toxic air contaminants (TACs), or other emissions (such as those leading to odors) generally occurs on a localized rather than regional basis. The geographic context for the cumulative analysis of exposure of sensitive receptors to substantial pollutant concentrations or other emissions, such as those leading to odors, would be the immediate vicinity of the project site. The temporal context would include those probable future projects that have the potential to emit pollutants or other emissions that could result in exposure of the same sensitive receptors as the project during the same time period during construction or operation. Construction of the proposed project and the cumulative projects listed in Table 4-1 may occur at the same time. Although timelines for planning, design, and construction are variable, there is likely to be some overlap in construction, particularly with nearby projects planned for near- or mid-term construction such as the Grower's District Mixed-use Project and individual development projects under the River District Specific Plan or Railyard District Specific Plan. With adherence to measures detailed in these Specific Plans, each individual project would be required to implement SMAQMD Basic Construction Emission Control Practices, which would reduce construction-related TAC emission sources and potential odor sources by minimizing equipment and truck idling time and maintaining equipment in proper working condition. For these reasons, the proposed project's contribution to a significant cumulative air quality impact would be less than cumulatively considerable and would result in less-than-significant-with-mitigation cumulative regional and localized air quality impacts.

4.4.3 Biological Resources

The proposed project, when combined with other cumulative projects in the area, would not result in a significant cumulative impact on biological resources. As described in Section 3.3, "Biological Resources", the proposed project would not impact sensitive habitats or special status species due to the highly developed and disturbed nature of the project area and limited potential for special-status species occurrence. While there is potential for nesting and migratory birds to occur in the project area, the proposed project would implement mitigation measures to avoid nesting bird impacts, which would reduce the project's contribution to cumulative impacts to a less-than-significant level.

In addition, other projects in the City would also be required to undergo site-specific analyses for their potential to adversely affect sensitive natural communities, habitats and special-status plant and animal species; if potential impacts are identified, mitigation measures would be incorporated into individual projects to reduce impacts to a less-than-significant level. Given the disturbed nature of surrounding areas, cumulative impacts are not anticipated. Further, the River District Specific Plan EIR and the Railyards District EIR both found that buildout of these specific plans would not result in cumulative biological resources impacts with implementation of the mitigation measures set forth in their respective EIRs (City of Sacramento 2010, 2016b). Other cumulative projects in the area would be required to adhere to the City's tree protection requirements to minimize cumulative impacts due to tree removals (Sacramento City Code 12.56). For these reasons, the proposed project's contribution to a significant cumulative biological resources impact would be less than cumulatively considerable and would result in a less-than-significant cumulative impact on biological resources.

4.4.4 Cultural Resources

The cumulative projects analyzed in this ~~Draft~~ EIR (Table 4-1) may require excavation and grading or other activities that may affect unknown or known prehistoric cultural resources and/or historic resources. Other projects in the City of Sacramento may also have cultural resources, irrespective of their designation as such on local, state, or federal registers. Development under the River District Specific Plan may also occur on sites containing known historic resources within the North 16th Street Historic District. Any excavation or grading activities could affect these known and unknown cultural resources. Project-level analyses will determine the necessity of mitigation measures to reduce localized and site-specific impacts to these resources. Additionally, all cumulative projects would be subject to federal, state, and county laws regulating cultural resources, in addition to City of Sacramento design guidelines (e.g., River District Design Guidelines) which ensure new development is compatible with the existing historic character of the area.

As described in Section 3.4, "Cultural Resources", the existing building on the project site is not considered a historic resource and the project would implement mitigation measures to address unanticipated discovery of cultural resources during construction. Therefore, there are no anticipated project-related impacts to cultural resources. The project's contribution to a significant cumulative cultural resources impact would be less than cumulatively considerable and would not combine with other projects to result in a significant cumulative impact on cultural resources.

4.4.5 Energy

Cumulative energy impacts could occur as a result of the project in combination with the other projects in the cumulative scenario listed in Table 4-1. All projects would use energy during construction; however, the overall construction schedule and process for all projects is designed to be efficient to avoid excess monetary costs. Additionally, all projects include air quality-related measures per SMAQMD recommendations which lessen idling times of equipment and improve the efficiency during construction. As a result, any construction-related cumulative energy impact due to wasteful use would be less than significant.

The proposed project, in conjunction with other cumulative projects in Table 4-1, could result in energy impacts during operation if energy were wasted. All projects in the City are required to be constructed consistent with CALGreen Code, which requires energy efficient design and use of fixtures to ensure buildings do not waste energy. Operation of all projects in the cumulative scenario would not result in a substantial increase in demand upon energy resources because their combined energy requirements are planned for and expected in long-term forecasting for the area by SMUD, PG&E, and other regional energy suppliers. In addition, with increasingly stringent local and state regulations for energy efficiency in buildings and vehicle efficiency, energy consumption is expected to decrease over time. Therefore, the proposed project would result in a less-than-significant cumulative impact on energy resources.

4.4.6 Geology, Soils, and Paleontological Resources

Cumulatively, all other projects in the vicinity of the project site would be subject to similar geology, soils, and seismicity impacts as the proposed project. All cumulative projects occurring within the City are required to adhere to the California Building Code, City of Sacramento Grading, Erosion, and Sediment Control Ordinance, and implement mitigation measures, if necessary, to avoid impacts related to seismic, geologic, and soils hazards and/or reduce them to a less-than-significant level.

Adherence to the mitigation measure described in Section 3.6, “Geology, Soils, and Paleontological Resources” would reduce the proposed project’s impacts on paleontological resources to a less than significant level. Cumulatively, other projects in the City would also be required to include similar mitigation measures if paleontologically sensitive units would be disturbed. Project-specific analysis would identify the sensitivity of soils underlying each site and prescribe appropriate mitigation for each cumulative project. Mitigation measures identified in the River District Specific Plan EIR and the Railyards District Specific Plan EIR would be incorporated into individual developments within the respective plan areas and supplemented as needed based on project-specific characteristics to reduce or avoid impacts. For these reasons, the proposed project’s contribution to a significant cumulative geology, soils, or paleontological resources impact would be less than cumulatively considerable and would result in a less-than-significant cumulative impact on geology, soils, and paleontological resources.

4.4.7 Greenhouse Gas Emissions

The geographic scope of consideration for GHG emissions is on a global scale because such emissions contribute, on a cumulative basis, to global climate change. Given the nature of environmental consequences from GHGs and global climate change, CEQA requires that lead agencies evaluate the cumulative impacts of GHGs, even relatively small additions, on a global basis. The discussion in Section 3.7, "Greenhouse Gas Emissions" addresses cumulative GHG emissions impacts on a regional, statewide, and global basis. As described in Section 3.7, "Greenhouse Gas Emissions," project construction and operational GHG impacts would be less than cumulatively considerable; therefore, the proposed project would result in a less-than-significant GHG emissions cumulative impact.

4.4.8 Hazards and Hazardous Materials

Cumulative projects in the City of Sacramento are likely to be proposed on sites that were previously developed with industrial or commercial uses. It is possible that hazardous materials may have been stored and used on, and/or transported to and from some of these properties as part of the use of the sites. Historical or current hazardous materials use could result in residual soil or groundwater contamination related to petroleum products, leaking storage tanks, or chemical releases. Contamination on sites proposed for future projects in the City could have impacts on the health and safety of construction workers, adjacent uses, and future site occupants.

In addition, many of the properties in Sacramento and surrounding cities were used for agricultural purposes prior to their development for industrial and residential uses and agricultural chemicals such as pesticides and fertilizers may have been used on-site in the past. The use of these chemicals can result in widespread residual soil contamination, sometimes in concentrations that exceed regulatory thresholds. Further, development and redevelopment of many sites may require demolition or modification of existing buildings that may contain asbestos-containing materials and/or lead paint. Demolition of these structures could expose construction workers or other persons in the vicinity to harmful levels of asbestos or lead.

Based on the above-described conditions, which are present on most project sites to varying degrees, potentially significant environmental impacts could occur under the cumulative development scenario since such conditions can lead to the exposure of residents and/or workers to substances that have been shown to adversely affect health. Each of the cumulative projects under consideration would be required to assess the potential for past or current hazardous site conditions to affect, or be affected by, site-specific developments. Cumulative projects would implement measures incorporating the requirements of applicable federal, state, and local laws and coordinate with relevant agencies, such as the Department of Toxic Substances Control and Cal/OSHA, during all phases of development. By adhering to federal and state regulations and the mitigation measures set forth in Section 3.8, "Hazards and Hazardous Materials", the proposed project's contribution to a significant cumulative hazards or hazardous materials impact would be less than cumulatively considerable and would result in a less-than-significant hazardous materials cumulative impact.

4.4.9 Hydrology and Water Quality

Buildout of the proposed project and other projects in the cumulative scenario listed in Table 4-1 would involve redevelopment of existing developed sites with substantial impervious surface. These projects would be required to conform to statewide, regional, and local regulations regarding stormwater runoff, infrastructure, and flooding. The proposed project would result in a minor increase in impervious surfaces and associated runoff but would comply with the Construction General Permit to reduce potential surface and groundwater quality impacts during construction and manage future runoff using Low Impact Development (LID) strategies in compliance with the City's Stormwater Management and Discharge Control Ordinance.

Cumulative projects in Sacramento would be required to adhere to similar conditions in compliance with statewide, regional, and local regulations. These existing regulations would address hydrology and water quality impacts from cumulative projects at a systematic level, ensuring runoff, flooding, and drainage is addressed consistently and the impacts of cumulative development are reduced or avoided. Therefore, the proposed project's contribution to a significant cumulative hydrology and water quality impact would be less than cumulatively considerable and would result in a less-than-significant cumulative impact on hydrology and water quality.

4.4.10 Noise

Construction of the proposed project and the cumulative projects listed in Table 4-1 may occur at the same time such that temporary cumulative construction related noise impacts could occur. Although timelines for planning, design, and construction are variable, there is likely to be some overlap and combination of noise effects from construction, particularly with nearby projects planned for near- or mid-term construction such as the Grower's District Mixed-use Project. However, as described in Section 3.10., "Noise", the proposed project would implement mitigation measures consistent with measures identified in the River District Specific Plan EIR to reduce construction noise impacts, which are required for all applicable development projects occurring within the bounds of the River District Specific Plan. Similar noise reduction measures would be required for projects within the Railyard District Specific Plan. With adherence to measures detailed in these Specific Plans, each individual project would be required to reduce construction noise to the extent feasible. Nonetheless, as disclosed in the River District Specific Plan EIR, development projects in this area would result in significant and unavoidable impacts related to exceedances of interior/exterior noise level limits and potential building damage from construction vibration. With implementation of mitigation measures, the proposed project would result in less-than-significant noise and vibration impacts and would not make a cumulatively considerable contribution to the identified significant impact in the River District Specific Plan EIR.

4.4.11 Transportation

The proposed project would result in short-term construction vehicle trips and intermittent vehicle trips by operations and maintenance staff. As detailed in Section 3.11, "Transportation", the proposed project would result in a less than significant transportation impact with implementation of mitigation measures to reduce the project's effect on roadway and bicycle facilities. The proposed project would not combine with other nearby projects to result in a cumulative impact because of its minimal effect on transportation facilities, vehicle miles traveled (VMT), access, and circulation. Construction vehicle traffic would be reviewed during the City of Sacramento's permitting process for all cumulative projects, including the proposed project; appropriate traffic control plans would be implemented to ensure safety hazards are minimized and access and circulation is maintained throughout the area. Overlapping construction projects utilizing the same roadways will be a primary consideration, notably with the proposed trenching on North B Street and North 7th Street, the need for temporary lane closures, and the numerous planned or ongoing development projects in the Railyards. However, effects on circulation will be minimized through the City of Sacramento's traffic control process, which will require appropriate scheduling of construction phases for all major development projects and maintenance of access on public roadways. Therefore, the proposed project's contribution to a significant cumulative transportation impact would be less than cumulatively considerable and would result in a less-than-significant cumulative transportation impact.

4.4.12 Tribal Cultural Resources

Cumulative projects in Sacramento may require excavation and grading or other activities that have the potential to affect tribal cultural resources (TCRs). As detailed in Section 3.12, “Tribal Cultural Resources”, no TCRs were identified within the project area during the cultural resources assessment and Native American outreach pursuant to AB 52. Nonetheless, ground-disturbing activities have the potential to encounter undiscovered TCRs. Mitigation measures would be implemented by the proposed project to address any unanticipated discoveries during construction. Cumulative projects would also be required to comply with AB 52 and implement mitigation measures to reduce or avoid any potential impacts. These projects would be subject to the same federal, state, and county regulations pertaining to archaeological resources and human remains. Therefore, the proposed project ‘s contribution to a significant cumulative tribal cultural resources impact would be less than cumulatively considerable and would not combine with other projects to result in a significant cumulative impact on tribal cultural resources.

4.4.13 Utilities and Service Systems

As described in Section 3.13, “Utilities and Service Systems”, the proposed project would result in less-than-significant utilities and service system impacts during construction and operation. Cumulative projects anticipated in the City of Sacramento are considered in regional forecasts which provide the basis for determining water supply, wastewater treatment, electrical service, and solid waste disposal needs. The proposed project would only make an incremental contribution to projected demands on utilities and service systems in the Sacramento region. Further, the proposed project would not result in a land use which would diverge from land use and population projections which provide the basis for long-term utility infrastructure planning.

The construction of cumulative projects in the area may occur concurrently with the proposed project, which increases the potential for utility conflicts or impacts during construction of new or modified service connections. The proposed project and other cumulative projects would coordinate with existing utility providers during design and pre-construction planning to ensure utility conflicts are avoided and disruptions to service are minimized to the maximum extent feasible. For these reasons, the proposed project’s contribution to a significant cumulative utilities and service systems impact would be less than cumulatively considerable and would result in a less-than-significant cumulative impact on utilities and service systems.

5.0 OTHER CEQA SECTIONS

Section 15126 of the CEQA Guidelines requires that all aspects of a project be considered when evaluating its impact on the environment, including planning, acquisition, development, and operation. As part of this analysis, the EIR must also identify the following: (1) significant and unavoidable environmental effects that cannot be avoided if the project is implemented, (2) significant irreversible environmental changes that would result from implementation of the project, and (3) growth-inducing impacts of the project. Although growth inducement itself is not considered an environmental effect, it could potentially lead to foreseeable physical environmental effects, which are discussed under "Growth-Inducing Impacts" below.

5.1 Significant and Unavoidable Impacts

Section 21100(b)(2)(A) of the State CEQA Guidelines provides that an EIR shall include a detailed statement setting forth "in a separate section: any significant effect on the environment that cannot be avoided if the project is implemented." Accordingly, this section provides a summary of significant environmental impacts of the project that cannot be mitigated to a less-than-significant level.

Sections 3.1 through 3.13 of this Recirculated Draft EIR describe the potential environmental impacts of the project and recommend various mitigation measures to reduce impacts, to the extent feasible. Chapter 4, "Cumulative Impacts," determines whether the incremental effects of this project are significant when viewed in connection with the effects of past projects, other current projects, and probable future projects. After implementation of the recommended mitigation measures, all of the impacts associated with development of the project would be reduced to less-than-significant levels. No significant and unavoidable impacts have been identified in this Recirculated Draft EIR.

5.2 Significant Irreversible Environmental Changes

The State CEQA Guidelines (Section 15126) require a discussion of the significant irreversible environmental changes that would be involved in a project should it be implemented. The irreversible and irretrievable commitment of resources is the permanent loss of resources for future or alternative purposes. Irreversible and irretrievable resources are those that cannot be recovered or recycled or those that are consumed or reduced to unrecoverable forms.

The project would result in the irreversible and irretrievable commitment of energy and material resources during construction and operation, including the following:

- construction materials, including such resources as soil, rocks, wood, concrete, glass, and steel;
- land area committed to new project facilities (for the project's useful life, anticipated to be 30 to 35 years or more);
- water supply for project construction (for dust control and maintaining soil compaction) and operation (for periodic operation and maintenance activities); and

- energy expended in the form of electricity, gasoline, diesel fuel, and oil for equipment and transportation vehicles that would be needed for project construction and operation.

The use of these nonrenewable resources is expected to account for a minimal portion of the region's resources and would not affect the availability of these resources for other needs within the region. Construction activities would not result in inefficient use of energy or natural resources. Construction contractors selected would use best available engineering techniques, construction and design practices, and equipment operating procedures. Long-term project operation would not result in substantial long-term consumption of energy and natural resources because the project would be designed using energy efficient technologies.

5.3 Growth-Inducing Impacts

5.3.1 CEQA Requirements

CEQA specifies that growth-inducing impacts of a project must be addressed in an EIR (CCR Section 21100[b][5]). Specifically, Section 15126.2(d) of the State CEQA Guidelines states that the EIR shall:

> Discuss the ways in which the proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. Included in this are projects which would remove obstacles to population growth (a major expansion of a wastewater treatment plant might, for example,allow for more construction in service areas). Increases in the population may tax existing community service facilities, requiring construction of new facilities that could cause significant environmental effects. Also, discuss the characteristics of some projects which may encourage and facilitate other activities that could significantly affect the environment, either individually or cumulatively. It must not be assumed that growth in any area is necessarily beneficial, detrimental, or of little significance to the environment.

Direct growth inducement would result if a project involved construction of new housing, which would facilitate new population to an area. Indirect growth inducement would result, for instance, if implementing a project resulted in any of the following:

- substantial new permanent employment opportunities (e.g., commercial, industrial, or governmental enterprises);
- substantial short-term employment opportunities (e.g., construction employment) that indirectly stimulates the need for additional housing and services to support the new temporary employment demand; and/or
- removal of an obstacle to additional growth and development, such as removing a constraint on a required public utility or service (e.g., construction of a major sewer line with excess capacity through an undeveloped area).

The State CEQA Guidelines do not distinguish between planned and unplanned growth for purposes of considering whether a project would foster additional growth. Therefore, for purposes of this Recirculated Draft EIR, to reach the conclusion that a project is growth-inducing as defined by CEQA, the EIR must find that it would foster (i.e., promote, encourage, allow) additional growth in economic activity, population, or housing, regardless of whether the growth is already approved by and consistent with local plans. The conclusion does not determine that induced growth is beneficial or detrimental, consistent with Section 15126.2(d) of the State CEQA Guidelines.

If the analysis conducted for the EIR results in a determination that a project is growth-inducing, the next question is whether that growth may cause adverse effects on the environment. Environmental effects resulting from induced growth (i.e., growth-induced effects) fit the CEQA definition of “indirect” effects in Section 15358(a)(2) of the State CEQA Guidelines. These indirect or secondary effects of growth may result in significant environmental impacts. CEQA does not require that the EIR speculate unduly about the precise location and site-specific characteristics of significant, indirect effects caused by induced growth, but a good-faith effort is required to disclose what is feasible to assess. Potential secondary effects of growth could include consequences – such as conversion of open space to developed uses, increased demand on community and public services and infrastructure, increased traffic and noise, degradation of air and water quality, or degradation or loss of plant and wildlife habitat – that are the result of growth fostered by the project.

5.3.2 Growth-Inducing Impacts of the Project

The proposed project would construct a new substation (Station J) and approximately ~~eight~~ nine miles of below- or above-grade transmission lines which would connect with nearby substations and infrastructure. The proposed project would be constructed with the intent of providing safe and reliable electrical service to existing and proposed development in the downtown Sacramento area. The proposed substation site is located within the 773-acre River District Specific Plan Area, which is envisioned for development with 8,144 dwelling units, 3.956 million square feet of office, 854,000 square feet of retail/wholesale, 1.463 million square feet of light industrial, and 3,044 hotel units (City of Sacramento 2011).

The proposed project would not directly induce growth as it would not provide new housing or large-scale job opportunities, which could encourage migration into the area. However, by providing increased reliability of electrical service to existing and future uses in the area, the proposed project could be considered to indirectly induce growth. Provision of new or more reliable electrical service could conceivably encourage growth in the area. Growth in the project area would occur consistent with the River District Specific Plan, mitigation measures in the adopted River District Specific Plan EIR, and the City of Sacramento 2035 General Plan. Land uses in the project area are designated and zoned at the parcel level pursuant to these land use plans, in addition to the City Municipal Code. Project-specific environmental review would also be conducted for individual development projects to evaluate consistency with land use plans and ensure relevant mitigation measures are incorporated to reduce any identified impacts. Given that the proposed project would serve an existing urbanized area which is planned for a specific growth envelope, subject to mitigation measures in the adopted River District Specific Plan EIR and project-level review, the growth indirectly induced by the proposed project would not cause adverse environmental effects.

5.4 Environmental Justice Evaluation

5.4.1 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 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 share of negative environmental consequences 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 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 proposed 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 impact the local community and identifies the need for implementation of additional site or local considerations, where necessary. Environmental justice 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 environmental justice and economic vitality to all communities in SMUD's service area and throughout the region with special attention to historically underserved neighborhoods.

5.4.2 Regulatory Context

California legislation, state agency programs, and guidance have been issued in recent years that aim to more comprehensively address EJ issues, including SB 1000 (2016), SB 535 (2012) and 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's (OPR's) 2020 General Plan Guidelines, Environmental Justice Element. In particular, 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.

Senate Bill 1000

SB 1000, which was enacted in 2016, amended California Government Code Section 65302 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.

Senate Bill 535 and Assembly Bill 1550

Authorized by the California Global Warming Solutions Act of 2006 (AB 32), the cap-and-trade program is one of several strategies that California uses to reduce greenhouse gases (GHGs) that cause climate change. The state's portion of the cap-and-trade auction proceeds are deposited in the Greenhouse Gas Reduction Fund (GGRF) and used to further the objectives of AB 32. In 2012, the California Legislature passed SB 535 (de Leon), directing that 25 percent of the proceeds from the GGRF go to projects that provide a benefit to DACs. In 2016, the legislature passed AB 1550 (Gomez), which now 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 mile 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 mile of, DACs.

Assembly Bill 617

AB 617 of 2017 aims to help protect air quality and public health in communities around industries subject to the state's cap-and-trade program for GHG emissions. 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 emission 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, called a community risk reduction plan in some jurisdictions. 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.

Assembly Bill 1001

California AB 1001 recently passed in the House (February 2022) and is now in the Senate awaiting a vote. This AB would amend CEQA and the Health and Safety and Public Resource Codes and will require the environmental review of projects consider environmental justice in disadvantaged communities and any negative environmental effects must be mitigated within that community.

California Department of Justice's Bureau of Environmental Justice

In February 2018, 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 communities disproportionately burdened by pollution and contamination. 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 2012, then Attorney General Kamala Harris published a fact sheet titled, "Environmental Justice at the Local and Regional Level," highlighting existing provisions in the California Government Code and CEQA principles that provide for the consideration of EJ in local planning efforts and CEQA. Attorney General Becerra cites the fact sheet on his web page, indicating its continued relevance.

California Communities Environmental Health Screening Tool

CalEnviroScreen is a mapping tool developed by the Office of Environmental Health Hazards Assessment to help identify low-income census tracts 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.

CalEnviroScreen prioritizes census tracts based on their combined pollution burden and population characteristics score, from low to high. A percentile for the overall score is then calculated from the ordered values. The California Environmental Protection Agency has designated the top 25 percent of highest scoring tracts in CalEnviroScreen (i.e., those that fall in or above the 75th percentile) as DACs, which are targeted for investment proceeds under SB 535, the state's cap-and-trade program.

Governor's Office of Planning and Research's 2020 Updated EJ Element Guidelines

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 the 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.

5.4.3 Sensitivity of Project Location

Community Description

As part of its Sustainable Communities Initiative, SMUD created and maintains the Sustainable Communities Resource Priorities Map, which reflects several data sets related to community attributes that SMUD uses to identify historically underserved communities. One of the key components of the map is the California Communities Environmental Health Screening Tool (CalEnviroScreen Version 3.0), which identifies communities facing socioeconomic disadvantages or health disadvantages such as multiple sources of pollution.[1] The 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 can be described. 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 proposed project is located in a high sensitivity area per the Sustainable Communities Resource Priorities Map (SMUD 2023). The project area is located in a high sensitivity area on the Sustainable Communities Resource Priorities Map because the project area was designated as an Opportunity Zone, a Sacramento Promise Zone, a Health Equity Focus Area by the Sierra Health Foundation, and as a DAC by state SB 535. These are tools used for targeting economic development. The project area is designated by the Healthy Sacramento Coalition as an area with consistent high rates of poor health outcomes. Furthermore, the project area is designated as a highly vulnerable community, which indicates the population that is highly vulnerable and susceptible to harm from exposure to a hazard.[2]

[1] CalEnviroScreen is a screening tool that evaluates the burden of pollution from multiple sources in communities while accounting for potential vulnerability to the adverse effects of pollution. CalEnviroScreen ranks census tracts in California based on potential exposures to pollutants (i.e., ozone, $PM_{2.5}$, traffic, pesticide use, toxic releases, and drinking water containments), adverse environmental conditions (i.e., hazardous waste generators, impaired waterbodies, groundwater threats, and solid waste facilities), socioeconomic factors (i.e., poverty, unemployment, housing burdens, education attainment, and linguistic isolation), and prevalence of certain health conditions (i.e., asthma, low birth weight, and cardiovascular rate).

[2] Vulnerability is defined as the susceptibility of a population to harm from exposure to a hazard, and its ability to prepare for, respond to, and recover from hazards.

The proposed project is located in a census tract with a CalEnviroScreen score of 94 percent or greater, which indicates the area is confronted with many burdens and vulnerabilities from environmental pollutants (SMUD 2023). The high CalEnviroScreen score is driven by environmental conditions such as multiple potential exposures to pollutants and adverse environmental conditions caused by pollution, and high health and socioeconomic vulnerability to pollution. The pollution burden of the census tract is from a high concentration of groundwater and soil cleanup sites, solid waste, impaired water, and vehicle traffic. The population characteristics of the census tract that contribute to a community's pollution burden and vulnerability include low birth weight, poverty, and unemployment.

5.4.4 Environmental Conditions

The following discussion references the analysis conducted in the IS and this Recirculated Draft EIR with a focus on environmental justice issues relevant to the project.

- **Aesthetics:** The visual characteristics of the project site and adjacent uses are typical of an urban environment. The substation site is located in a predominantly industrial area of Sacramento. The substation site is relatively flat and sparsely vegetated with a limited number of trees along the southern project perimeter. Given the flat topography, views to and from the substation site are limited to the immediately surrounding development. Surrounding land uses are visually similar to those on the site, exhibiting corrugated metal, stucco, or brick single-story buildings bordered by large, paved parking lots and storage areas with security fencing. Adjacent land uses include Salvation Army to the northwest, Fire Station No. 14 and General Produce offices to the east, First Step Communities homeless shelter and Quinn Cottages transitional housing to the southeast, and Sims Metal recycling center across North 12th Street to the west. The proposed project also includes up to 9 miles of overhead and underground transmission lines. The visual character of these surrounding areas is similarly defined by one- and two-story industrial and commercial uses with brick and stucco exteriors, along with taller and more modern buildings further south on 7th Street. A final approximately 0.2-mile section of the transmission lines would extend from North 18th Street to interconnect with the Station E substation. This portion of the project site contains undeveloped plots of land and open spaces including the Sacramento Northern Bikeway, which crosses over the American River just north of the alignment.

- **Air Quality:** The project site is generally surrounded by industrial land uses. Sensitive land uses in the project area include single- and multi-family residences southwest of the project site and single-family residences to the southeast of the project site along North A Street. The nearest sensitive receptors to the proposed project are the Salvation Army Center of Hope homeless shelter to the west of the project site, and the First Step Communities homeless shelter and Quinn Cottages transitional housing directly adjacent to the southeastern side of the project site.

- **Cultural Resources:** No cultural material, either historical or indigenous, was observed during the pedestrian survey of the proposed Station J footprint. However, during consultation with Shingle Springs, UAIC and Wilton Rancheria, it was shared that there is oral history that speaks to known resources located within proximity of the Station J footprint. It is also within a corridor that is part of a larger area where Tribal villages were located. Two historic-age built environment properties were evaluated and found not eligible for listing in the California Register of Historical Resources or the Sacramento

Register, and are therefore not considered historical resources for the purposes of CEQA.

- **Energy:** The project area is served by SMUD, which offers the Greenergy program, which offers electricity generated with 100 percent renewable and carbon-free resources.

- **Hazards and Hazardous Materials:** The project site is included on multiple lists of hazardous materials sites, as described in the environmental setting of Section 3.8, "Hazards and Hazardous Materials." However, all hazardous materials previously identified on the site have been removed in accordance with applicable regulations.

- **Noise:** The existing noise environment near the project area is influenced ambient noise sources in the vicinity, including vehicles on local roads, train noise from the nearby Union Pacific Railroad, construction from the nearby Railyards development, and mechanical equipment on buildings in the vicinity. The existing noise environment near the project area also is influenced by natural sources (e.g., wind and birds). The closest noise-sensitive receptors to the project area are residents along A Street to the ~~west~~ southeast of the project site, ~~and office uses of~~ the Salvation Army Center of Hope shelter to the northwest of the project site, an office at 721 North B Street, an office at 701 E Street, and apartments along 7th Street. The structures closest to the project area that would be evaluated for structural damage from vibration also would be ~~an apartment complex~~ these receptors, which ~~is~~ are approximately 50 feet from the primary project construction areas~~, to the northeast~~. These residences and offices could experience noise associated with project construction, increased traffic, and stationary sources emanating from the station (e.g., transformers, cooling fans, and supporting equipment [e.g., switch gear, circuit breaker, capacitor, and wiring]).

- **Public Services:** Fire and police protection services are provided by Sacramento Fire Department and Sacramento Police Department, respectively.

- **Tribal Cultural Resources:** No unique archaeological resources or Tribal Cultural Resources (TCRs) have been identified on the project site. However, during consultation with Shingle Springs, UAIC and Wilton Rancheria, it was shared that there is oral history that speaks to known resources located within proximity of the Station J footprint. It is also within a corridor that is part of a larger area where Tribal villages were located.

- **Transportation:** Main access to the project site would be from 12th Street, North B Street, and A Street during construction, and through gates from ~~the~~ A Street and the existing alley during operations. Bikeways are located in the project vicinity along all major arterials and collectors. Those that would be affected by the proposed project include 12th Street west of the project site, North B Street to the north, and 16th Street to the east. In addition, Sacramento Regional Transit provides public transportation in the project vicinity, offering a combination of advance reservations and scheduled bus and light rail services from surrounding communities to downtown Sacramento. The closest bus and light rail routes are located along North B Street to the north, and along 16th Street north of the project site.

- **Utilities:** Existing utility service is provided by SMUD and the City of Sacramento to nearby uses.

5.4.5 Evaluation of the Project's Contribution to a Community's Sensitivity

As noted previously, the proposed substation would include demolition of all existing on-site structures and construction of new infrastructure to include sizing for five 40 MVA 115/21kV transformers (200 MVA), including up to 7 miles of overhead and underground 115kV and 21kV connections into the substation from nearby existing SMUD facilities and infrastructure. The project's contributions to the community's sensitivity are as follows:

- **Aesthetics:** The proposed Station J would replace existing industrial warehouse buildings with a substation in a predominantly industrial area of the City. As discussed in Section 3.1, "Aesthetics," the proposed substation would be visually similar to other substations in proximity (e.g., Stations E and G) and would not be constructed in an area that is recognized for its scenic qualities. Other elements of the proposed project (transmission lines and riser poles) would also be compatible with the industrial character of the area. The City's design review process would provide opportunities to refine the proposed project's final design to further minimize visual impacts and ensure compatibility with adjacent land uses. As a result, publicly accessible views would either be maintained or improved as a result of the City's design review process.

- **Air Quality:** Project construction activities would occur intermittently throughout the day and would not serve as a constant source of emissions from the project site. Emissions associated with construction activities would vary day to day and would also occur at varying distances from the nearest sensitive receptors. As discussed in Section 3.2, "Air Quality," trucks and off-road equipment would not operate in the immediate vicinity of any sensitive receptor for an extended period of time and the potential exposure to TAC emission concentrations would be limited. In addition, as described above, $PM_{2.5}$ emissions during construction would not exceed the Sacramento Metropolitan Air Quality Management District's (SMAQMD's) threshold of significance of 82 pounds per day. Furthermore, the project would implement Mitigation Measure 3.2-1a to comply with the SMAQMD-required emission reduction measures, including minimizing equipment and truck idling time and maintaining construction equipment in proper working condition, which would also reduce construction-related TAC emissions.

- **Cultural Resources:** As discussed in Section 3.4, "Cultural Resources," the project would not affect known cultural resources; however, project-related ground-disturbing activities could result in discovery or damage of yet undiscovered archaeological resources as defined in State CEQA Guidelines Section 15064.5. Implementation of Mitigation Measure 3.4-2 would reduce impacts associated with archaeological resources to a less-than-significant level because it would require the performance of professionally accepted and legally compliant procedures for the discovery of previously undocumented significant archaeological resources.

- **Energy:** The project would not affect access to electricity since electrical service would be maintained throughout construction.

- **Hazards and Hazardous Materials:** As discussed in Section 3.8, project construction has the potential to disturb contaminated soils, requiring proper characterization and disposal. Construction of the project would involve soil excavation, and thus could encounter soil contaminants from former activities at the project site or that may have migrated from the facility located across North 12th Street from the project site. This could potentially expose construction workers, the public, or the environment to hazards. However, measures for detection, testing, and proper handling and disposal of potentially contaminated soils encountered during construction would avoid or substantially minimize any potential impacts from contaminated soils from known or unknown hazardous materials sources. Implementation of Mitigation Measures 3.8-1a and 3.8-1b would minimize potential for accidental release into the environment or a substantial hazard to the public. Upon completion of construction, no on-site operations would involve the use, transport, or disposal of potential hazardous materials.

- **Noise:** Noise would be generated during construction, but it would be temporary, conducted in compliance with the City of Sacramento Noise Ordinance, and similar to other construction type noise that occurs in downtown Sacramento. Ad discussed in Section 3.10, “Noise,” implementation of mitigation measures would reduce the impact of daytime construction-related traffic noise along the roadway segments. No substantial increases in ambient noise levels at sensitive receptors in the area would occur.

- **Public Services:** The proposed project would not generate new residents, which is the driving factor for fire and police protection services. As discussed in the Initial Study, there would be no impact related to the provision of public services.

- **Transportation:** The project site would be contained within SMUD’s proposed substation site and adjacent roadways, and project construction would not make substantial changes to roads, public transit, bike paths, or sidewalks. Connectivity of the bike paths would be maintained and the safety of the public would be protected at the surrounding bike paths during project construction.

- **Tribal Cultural Resources:** As discussed in Section 3.12, “Tribal Cultural Resources,” no unique archaeological resources or TCRs have been identified on the project; however, these resources may be encountered during ground disturbing activities (i.e., grading and trenching). Implementation of Mitigation Measures 3.12-1a and 3.12-1b would reduce impacts associated with TCRs to a less-than-significant level because it would require the performance of professionally and Native American accepted and legally compliant procedures for the discovery of previously undocumented significant TCRs.

- **Utilities:** The proposed project would not adversely affect the provision of utilities to existing and future uses in the project area. The project is intended to ensure continued and reliable electrical service within the downtown Sacramento area, and no interruption or reduction in service capacity would occur as a result of the project.

As described for each environmental resource area, the project would not contribute to the community’s current sensitivity.

5.4.6 Summary of Environmental Justice Assessment

Per SMUD’s Sustainable Communities Resource Priorities Map, which reflects several data sets related to community attributes that SMUD uses to identify historically underserved communities, the project site is located in a high sensitivity area (SMUD 2023), due in part to the project area’s designation as an Opportunity Zone, a Sacramento Promise Zone, and as a DAC by state SB 535. Project construction could affect previously undiscovered cultural and

TRCs, expose the public to potentially contaminated soils, and expose sensitive receptors to increased noise in the area; however, mitigation measures are included to reduce the potential impacts to less-than-significant levels. Further, objectives of the project include providing safe and reliable electrical service to existing and proposed development in the downtown Sacramento area, which is intended to maintain or improve living conditions for residents and communities in the area. As a result, the project does not have the potential to further affect the community and/or worsen existing adverse environmental conditions. Therefore, ***no existing environmental justice conditions would be worsened*** as a result of the project.

Although the project would not worsen existing environmental justice conditions, as a leader in building healthy communities, one of SMUD's Sustainable Communities goals is to help bring environmental equity and economic vitality to all communities. By investing in underserved neighborhoods and working with community partners, SMUD is part of a larger regional mission to deliver energy, health, housing, transportation, education and economic development solutions to support sustainable communities.

6.0 ALTERNATIVES

6.1 Introduction to Alternatives

The California Code of Regulations (CCR) Section 15126.6(a) (State CEQA Guidelines) requires EIRs to describe "… a range of reasonable alternatives to the proposed project, or to the location of the proposed project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project and evaluate the comparative merits of the alternatives. An EIR need not consider every conceivable alternative to a project. Rather, it must consider a range of potentially feasible alternatives that will avoid or substantially lessen the significant adverse impacts of a project and foster informed decision making and public participation. An EIR is not required to consider alternatives that are infeasible. The lead agency is responsible for selecting a range of project alternatives for examination and must publicly disclose its reasoning for selecting those alternatives. There is no ironclad rule governing the nature or scope of the alternatives to be discussed other than the "rule of reason." This section of the State CEQA Guidelines also provides guidance regarding what the alternatives analysis should consider. Subsection (b) further states the purpose of the alternatives analysis is as follows:

> Because an EIR must identify ways to mitigate or avoid the significant effects that a project may have on the environment (Public Resources Code [PRC] Section 21002.1), the discussion of alternatives shall focus on alternatives to the project or its location which are capable of avoiding or substantially lessening any significant effects of the project, even if these alternatives would impede to some degree the attainment of the project objectives, or would be more costly.

The State CEQA Guidelines require that the EIR include sufficient information about each alternative to allow meaningful evaluation, analysis, and comparison with the project. If an alternative would cause one or more significant effects in addition to those that would be caused by the project as proposed, the significant effects of the alternative must be discussed, but in less detail than the significant effects of the project as proposed (CCR Section 15126.6[d]).

The State CEQA Guidelines further require that the "no project" alternative be considered (CCR Section 15126.6[e]). The purpose of describing and analyzing a no project alternative is to allow decision makers to compare the impacts of approving a project with the impacts of not approving the project. If the no project alternative is the environmentally superior alternative, CEQA requires that the EIR "…shall also identify an environmentally superior alternative among the other alternatives." (CCR Section 15126[e][2]).

In defining "feasibility" (e.g., "… feasibly attain most of the basic objectives of the project…"), CCR Section 15126.6(f) (1) states, in part:

Among the factors that may be taken into account when addressing the feasibility of alternatives are site suitability, economic viability, availability of infrastructure, general plan consistency, other plans or regulatory limitations, jurisdictional boundaries (projects with a regionally significant impact should consider the regional context), and whether the proponent can reasonably acquire, control or otherwise have access to the alternative site (or the site is already owned by the proponent). No one of these factors establishes a fixed limit on the scope of reasonable alternatives.

In determining what alternatives should be considered in the EIR, it is important to consider the objectives of the project, the project's significant effects, and unique project considerations. These factors are crucial to the development of alternatives that meet the criteria specified in Section 15126.6(a). Although, as noted above, EIRs must contain a discussion of "potentially feasible" alternatives, the ultimate determination as to whether an alternative is feasible or infeasible is made by the lead agency's decision making body, here the SMUD Board of Directors (Board). (See PRC Sections 21081.5, 21081[a] [3].)

6.2 Considerations for Selection of Alternatives

6.2.1 Attainment of Project Objectives

As described above, one factor that must be considered in selection of alternatives is the ability of a specific alternative to attain most of the basic objectives of the project (CCR Section 15126.6[a]). Chapter 2, "Project Description," articulated SMUD's project objectives for the proposed Station J project, which are repeated below:

- provide safe and reliable electrical service to existing and proposed development in the downtown Sacramento area;
- meet SMUD's goals of ensuring electrical service reliability in the downtown Sacramento area by 2030;
- provide greater operational flexibility between circuits and substations in the area;
- maximize the use of available SMUD property and resources;
- minimize impacts to nearby sensitive receptors; and,
- minimize potential conflicts with existing planning efforts within the City of Sacramento.

6.2.2 Summary of Project Impacts

Sections 3.1 through 3.13 of this Recirculated Draft EIR address the project-specific environmental impacts of the project. Potentially feasible alternatives were developed with consideration of avoiding or lessening any significant impacts of the project. The Initial Study prepared for the project determined that several resource areas would not result in any potentially significant impacts, and these resource areas were not addressed further in this Recirculated Draft EIR. Several resource areas were determined, based on the Initial Study, to have potential for significant impacts and were carried forward for analysis in the Recirculated Draft EIR. All significant impacts were found to be mitigable to a less-than-significant level. In summary, the potentially significant impacts of the project are:

Air Quality

- Impact 3.2-1. Conflict with or obstruct implementation of the applicable air quality plan;
- Impact 3.2-2. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard.

Biological Resources

- Impact 3.3-1. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or the U.S. Fish and Wildlife Service;

- Impact 3.3-5. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.

Cultural Resources

- Impact 3.4-2. Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5.

Geology, Soils, and Paleontological Resources

- Impact 3.6-5. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.

Hazards and Hazardous Materials

- Impact 3.8-1. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials;

- Impact 3.8-2. Create a significant hazard or the environment through reasonably foreseeable upset and/or accident conditions involving the release of hazardous materials into the environment;

- Impact 3.8-4. 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 create a significant hazard to the public or the environment.

Noise

- Impact 3.10-1. Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.

- Impact 3.10-2. Generation of excessive groundborne vibration or groundborne noise levels.

Transportation and Traffic

- Impact 3.11-3. Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).

Tribal Cultural Resources

- Impact 3.12-1. Cause a substantial adverse change in the significance of a Tribal cultural resource, including human remains.

Feasible mitigation is available to reduce all significant impacts to less than significant, as identified in Sections 3.1 through 3.13 in this Recirculated Draft EIR.

6.2.3 Alternatives Considered but Not Evaluated Further

State CEQA Guidelines Section 15126.6(c) provides the following guidance in selecting a range of reasonable alternatives for the project. The range of potential alternatives for the project shall include those that could feasibly accomplish most of the basic objectives of the project and could avoid or substantially lessen one or more of the significant effects. Feasibility can be based on a wide range of factors and influences. The CEQA Guidelines Section 15126(f)(1) advise that such factors can include, but are not necessarily limited to, the suitability of an alternate site, economic viability, availability of infrastructure, consistency with a general plan or with other plans or regulatory limitations, jurisdictional boundaries, and whether the project proponent can “reasonably acquire, control or otherwise have access to the alternative site”. The EIR should also identify any alternatives that were considered by the lead agency, but were rejected during the planning or scoping process, and briefly explain the reasons underlying the lead agency’s determination. Figure 6-1 shows alternative sites that were considered for the proposed Station J site; two of the sites were dismissed from further consideration, as described further below. An additional project design and construction methodology was also considered and dismissed.

Alternative Site 1

Alternative Site 1 consists of an approximately 5.1-acre site located approximately 1,000 feet west of the proposed Station J site. This site was considered as part of the initial site selection assessment; however, the property owner declined to consider acquisition of the site by SMUD. Further, the City did not approve of this location due to its designation as a key development node in the Railyards Specific Plan and potential to serve as a gateway at the eastern end of the plan area. Therefore, this alternative is not evaluated further in this Recirculated Draft EIR.

Alternative Site 2

Alternative Site 2 consists of an approximately 5-acre site located immediately adjacent to the west of the proposed Station J site. This site was considered as part of the initial site selection assessment; however, the property owner declined to consider acquisition of the site by SMUD. Therefore, this alternative is not evaluated further in this Recirculated Draft EIR.

Overhead Transmission Lines Alternative

An alternative which implements overhead transmission lines along surface streets could potentially reduce impacts related to unanticipated discoveries of cultural or Tribal cultural resources, in addition to reducing construction impacts to access and circulation resulting from trenching within the roadway. However, overhead transmission lines are not consistent with City of Sacramento General Plan policies requiring undergrounding of all transmission lines throughout the City (General Plan Policy U 1.1.11), in addition to SMUD standards and specifications for undergrounding transmission lines. Therefore, this alternative is not evaluated further in this Recirculated Draft EIR.

Alternative Underground Routes

Alternative routes in surrounding surface streets could potentially be used for installation of the proposed duct banks for the 21kV and 115kV lines. For example, North 12th Street and surrounding surface streets could be used as an alternative route to the proposed route going west on North B Street and south down 7th Street. However, most alternative routes would lead to a greater degree of residential impacts related to noise, air quality, and traffic disruptions without offering an appreciable environmental benefit or would require longer and more circuitous routes between the proposed Station J site and Station G. Therefore, consideration of alternative routes was limited to feasible routes between Station E and the proposed Station J site; other alternative underground routes have been dismissed from consideration.

6.3 Alternatives Selected for Detailed Analysis

CEQA requires consideration of a reasonable range of alternatives. In light of the extensive work SMUD has already done to screen suitable sites and modify site development to reduce impacts, the fact that all impacts can be mitigated to less-than-significant levels, and the considerations discussed above, the two alternatives considered herein in addition to the No Project Alternative present a "reasonable" range of alternatives. Alternatives evaluated in this Recirculated Draft EIR are:

- **Alternative A (No Project)**, which assumes no development occurs on the Station J site or in surrounding streets along the proposed transmission line route to Station E, and the site remains in use as it exists or is redeveloped as allowed per existing General Plan and zoning;

- **Alternative B (Site 4 Substation Location)**, which assumes that an alternative, 5- to 6-acre site owned by Union Pacific Railroad at the corner of North 7th Street and North B Street is developed as the Station J site (see Figure 6-1); and

- **Alternative C (Transmission Line Routing Option)**, which assumes that a slightly modified alternative transmission line alignment is implemented from the current Station J site to the interconnection with Station E (see Figure 6-2).

Each of these alternatives is described in more detail and analyzed below.

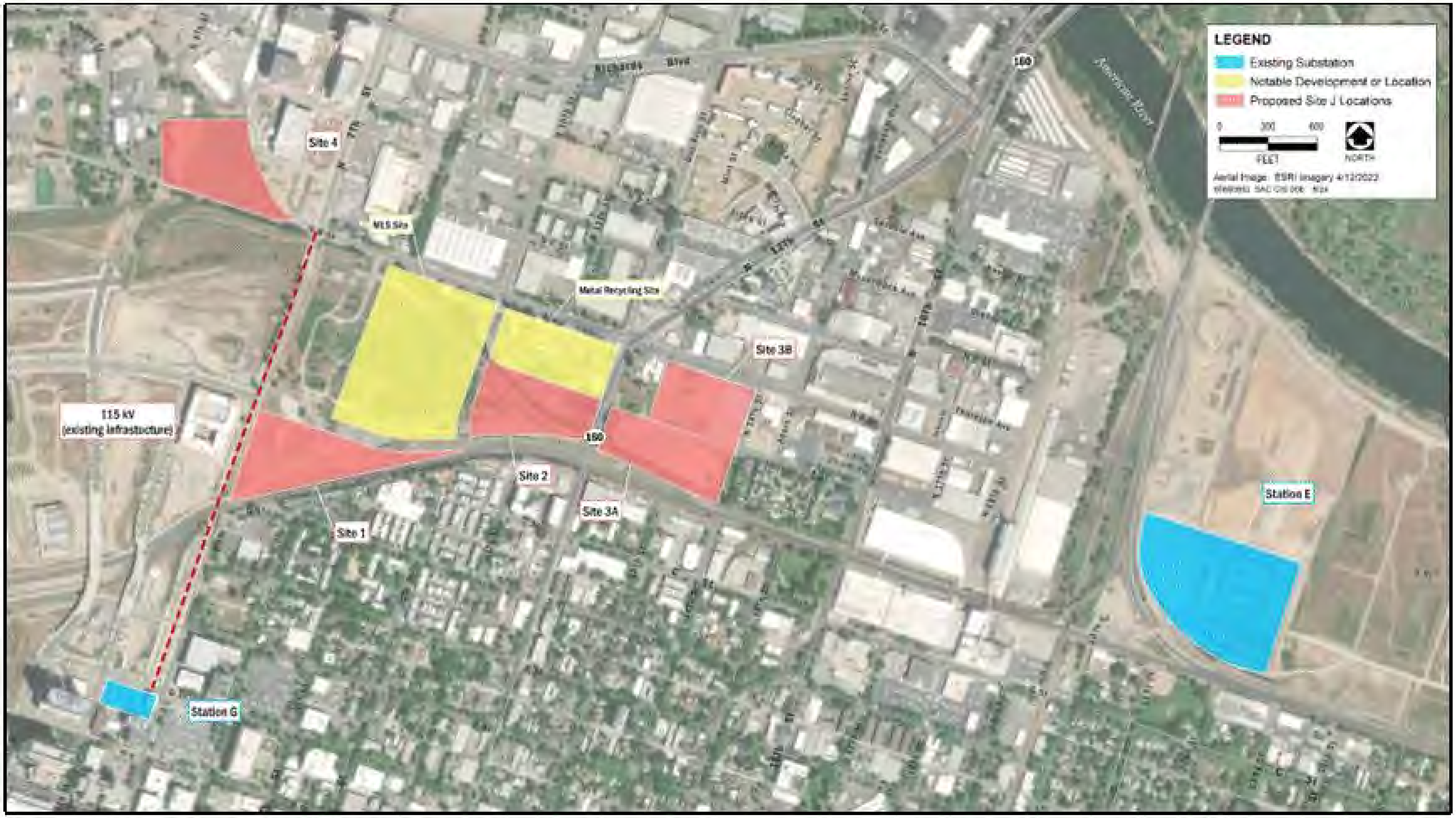

Figure 6-1: Station J Alternative Site Locations

6.3.1 Alternative A (No Project)

State CEQA Guidelines Section 15126.6(e)(1) requires that the no project alternative be described and analyzed "to allow decision makers to compare the impacts of approving the project with the impacts of not approving the project." The no project analysis is required to discuss "the existing conditions at the time the notice of preparation is published…as well as what would be reasonably expected to occur in the foreseeable future if the project were not approved, based on current plans and consistent with available infrastructure and community services" (Section 15126.6[e][2]).

Currently, the 10.3-acre ~~project~~ substation site consists of two buildings, an approximately 5,580 square foot single story maintenance shop building and an approximately 66,000 square foot single story distribution warehouse with loading docks, and office space. The prior produce operation on the site is no longer active and Alternative A assumes future use of the ~~project~~ substation site in a no project scenario to be consistent with the General Plan.

The ~~project~~ substation site has a General Plan designation of Employment Center Low Rise (floor area ratio [FAR] 0.15 – 1.0) and is zoned C-4 – SPD, Heavy Commercial – Special Planning District. The purpose of the C-4 Zone is to provide for warehousing, distribution activities, and commercial uses that have minimal undesirable impact upon nearby residential areas. Minimal light manufacturing and processing are permitted. The maximum height is 75 feet, and the maximum density is 60 dwelling units per net acre. Existing development on the ~~project~~ substation site has a FAR of approximately 0.16, meaning that it is reasonably foreseeable that a much denser development could be proposed for the ~~project~~ substation site. Additionally, the site is located within the River District, which is envisioned for redevelopment as a mixed-use community with light industrial, residential, and retail/commercial uses. Given the allowable uses under the current General Plan designation and zoning, the ~~project~~ substation site could be redeveloped with a similar industrial warehouse, distribution, and/or commercial use. For purposes of this analysis, the maximum FAR allowed by the General Plan is assumed, and similar land uses are assumed to be developed, which amounts to an industrial warehouse building approximately 450,000 square feet in size[1].

Environmental Analysis

If the Station J site were to remain as it is under existing conditions, and no redevelopment were to occur per the City's General Plan, River District Specific Plan, and zoning code, then no environmental impacts would occur. Therefore, the No Project/No Development Alternative would have less impacts than the proposed project; however, the following analysis assumes that the site would be redeveloped as is reasonably foreseeable per the City's General Plan, River District Specific Plan, and zoning code. As stated above, this analysis assumes approximately 450,000 square feet of industrial warehouse uses would be developed on the site. The building would likely be multiple stories to leave space for parking areas, storage, driveways, and landscaping.

[1] The 10.3-acre site converts to approximately 450,000 square feet. A FAR of 1.0, the maximum allowed by the General Plan, on an approximately 450,000-square-foot site amounts to a building of 450,000 square feet (FAR = Total Area of Building / Total Area of the Parcel).

Aesthetics

Alternative A would result in more intensive development on the ~~project~~ substation site, which would result in a departure from the visual character of the site and the surrounding area. Redeveloping the site with a substantially larger industrial warehouse building would likely result in an increased potential for aesthetic impacts due to increased light and glare or inconsistency with design standards in the nearby North 16th Street Historic District. However, design review would also be completed for potential redevelopment under Alternative A, which would reduce aesthetic impacts. Therefore, Alternative A would be expected to have similar aesthetic impacts as the proposed project. *(Similar Impact)*

Air Quality

Alternative A would have greater air quality impacts than the proposed project due to emissions from the increased level of construction and greater automobile and/or truck trip generation from a large-scale employment use. Therefore, there would be a greater air quality impact. *(Greater Impact)*

Biological Resources

Alternative A would redevelop the entire ~~project~~ substation site, similar to what would occur under the proposed project. There would be a similar level of vegetation removal required. No additional biological resources would be affected. Therefore, the biological resources impact would be similar. *(Similar Impact)*

Cultural Resources

Alternative A would redevelop the entire ~~project~~ substation site, similar to what would occur under the proposed project. However, the proposed project would likely result in greater ground disturbance due to the length of transmission line proposed for underground installation and the increased potential for unanticipated discovery of cultural resources. Therefore, Alternative A could have less impact on cultural resources. *(Less Impact)*

Energy

Alternative A would result in energy consumption during construction and operation but would not be anticipated to be wasteful, inefficient, or unnecessary with compliance with CALGreen Code, the California Building Code, and other local standards for energy efficiency. Therefore, the energy impact would be similar. *(Similar Impact)*

Geology, Soils, and Paleontological Resources

Alternative A would have similar impacts to geology and soils because soil types and geologic features would remain the same. Alternative A would likely result in less areas of ground disturbance than the proposed project because development would likely be limited to within the existing substation site and there would be no transmission line component. Similar to the discussion above for cultural resources, this would result in less potential for unanticipated discovery of paleontological resources. Therefore, Alternative A would have less impact on paleontological resources. *(Less Impact)*

Greenhouse Gas Emissions

Greenhouse gas emissions from construction and operation of the Alternative A would likely be greater than the proposed project given the increased size and scale of development. Additionally, daily vehicle trips to and from the site would contribute GHG emissions that would be far less than the intermittent vehicle trips from inspections and maintenance of the proposed substation. Therefore, the GHG emissions impact would be greater. *(Greater Impact)*

Hazards and Hazardous Materials

The same project site would be redeveloped under this alternative, which would have similar hazardous materials impacts as the proposed project. Therefore, the hazards and hazardous materials impact would be similar. *(Similar Impact)*

Hydrology and Water Quality

Alternative A would be expected to have similar hydrology and water quality impacts related to stormwater runoff during construction and post-construction treatment of runoff from impervious surface areas. These impacts would be similarly reduced by complying with existing regulations, such as the NPDES Construction General Permit and the City's Grading Ordinance and SQIP. Therefore, hydrology and water quality impacts would be similar. *(Similar Impact)*

Noise

Alternative A would likely result in a longer construction duration and noise exposure due to the overall maximum size of development. This would be expected to have greater construction noise impacts than the proposed project. Additionally, vehicle traffic and parking lot noise would be greater under this alternative. Therefore, noise impacts would be greater. *(Greater Impact)*

Transportation and Traffic

Transportation impacts under Alternative A would be greater due to the frequency and scale of operational vehicle trips for an industrial warehouse use. The proposed project requires minimal vehicle trips for intermittent inspections and maintenance. Therefore, transportation and traffic impacts would be greater. *(Greater Impact)*

Tribal Cultural Resources

Alternative A would redevelop the entire project site, similar to what would occur under the proposed project. However, the proposed project would likely result in greater ground disturbance due to the length of transmission line proposed for underground installation and the increased potential for unanticipated discovery of Tribal cultural resources. Therefore, Alternative A would have less impact on Tribal cultural resources. *(Less Impact)*

Utilities and Service Systems

Alternative A would result in a more intensive use of the site with respect to water demand, wastewater treatment and conveyance, and solid waste disposal. Therefore, Alternative A would have a greater impact on utilities and service systems. *(Greater Impact)*

6.3.2 Alternative B (Site 4 Substation Location)

Alternative B assumes that an alternative, 5- to 6-acre site owned by Union Pacific Railroad at the corner of North 7th Street and North B Street is developed as the Station J site. This alternative site is located approximately 0.5-mile west of the proposed Station J site. The transmission line alignment for Alternative B would follow a similar path in surface streets (North B Street, North 16th Street, Thornton Avenue, and North 18th Street) before interconnecting with Station E.

Environmental Analysis

Aesthetics

Alternative B would occur in proximity to the proposed Station J site, in a developed industrial district where minimal scenic vistas or resources are provided. Alternative B would develop an existing undeveloped site which consists primarily of non-native grasses and ruderal species, meaning the visual change would be greater than the proposed project. However, the site is also surrounded by urban development and located within the Railyard Specific Plan Area. Redevelopment at higher densities is expected in this area, and development of this vacant site with a substation would not conflict with existing or anticipated visual character of the area. Therefore, aesthetic impacts would be similar to the proposed project. *(Similar Impact)*

Air Quality

Alternative B would also result in the construction of a bulk substation of similar size and scale to the proposed project. Thus, construction processes and operation of the substation would be similar to the proposed project. The minor increase in transmission line length to reach Station E would likely not substantially affect the level of criteria pollutants, toxic air contaminants, or odors generated during construction. Therefore, air quality impacts would be similar to the proposed project. *(Similar Impact)*

Biological Resources

Alternative B would result in development of the currently vacant plot of land at the corner of North B Street and North 7th Street. There would be a similar level of vegetation removal required. This alternative site likely provides minimal habitat values for species in the area due to the extent of surrounding development and former disturbance of the site. Nesting and foraging habitat for bird species may be affected, similar to the proposed project. No additional sensitive biological resources would be affected. Therefore, the biological resources impact would be similar. *(Similar Impact)*

Cultural Resources

Alternative B would result in ground disturbance at the existing undeveloped site and along the length of the transmission line alignment. Construction activities would have similar potential to encounter unanticipated cultural resources, which may be determined to be significant under CEQA. No historic structures would be affected by this alternative, as no buildings are located on the site, and it's anticipated that impacts would be similar with standard controls for unanticipated discoveries. (*Similar Impact)*

Energy

Alternative B would result in energy consumption during construction and operation but would not be anticipated to be wasteful, inefficient, or unnecessary with compliance with CALGreen Code, the California Building Code, and other local standards for energy efficiency. Therefore, the energy impact would be similar. *(Similar Impact)*

Geology, Soils, and Paleontological Resources

Alternative B would be located approximately 0.5-mile west of the proposed ~~project~~ substation site and would result in similar levels of ground disturbance as the proposed project. Impacts to geology and soils would not be substantially different because soil types and geologic features are expected to be similar. Paleontological resources may also be encountered under this alternative due to subsurface disturbance at the site and along the transmission line alignment. However, impacts would be similar with standard controls for unanticipated discoveries. *(Similar Impact)*

Greenhouse Gas Emissions

Greenhouse gas emissions from construction of a substation at an alternate site and the installation of subsurface transmission lines along a similar route are anticipated to be similar. Operations and maintenance activities under Alternative B would be the same as the proposed project. Therefore, the GHG impact would be similar. *(Similar Impact)*

Hazards and Hazardous Materials

Alternative B was identified as containing hazardous materials, including arsenic and lead, and is listed on the Cortese List (Department of Toxic Substances Control 2023). The DTSC and the property owner (UPRR) signed a Voluntary Cleanup Agreement in 2005 to investigate the presence of hazardous substances and consider remedial alternatives. Following appropriate investigation of the site, the Voluntary Cleanup Agreement was terminated in 2017, under the condition that the site will need additional investigation and remediation if current exposure conditions are changed, or soil is disturbed. As such, this site has existing hazardous materials concerns and site development would likely result in potential risks to human health or the environment without appropriate remediation or containment. Therefore, hazardous materials impacts under this alternative would be greater than the proposed project. *(Greater Impact)*

Hydrology and Water Quality

Alternative B would be expected to have similar hydrology and water quality impacts related to stormwater runoff during construction and post-construction treatment of runoff from impervious surface areas. These impacts would be similarly reduced by complying with existing regulations, such as the NPDES Construction General Permit and the City's Grading Ordinance and SQIP. Therefore, hydrology and water quality impacts would be similar. *(Similar Impact)*

Noise

Noise exposure during construction and operation of Alternative B would be similar to the proposed project because the overall size and scale of development would not change. There are no sensitive receptors, such as residences or schools, in the site vicinity. Therefore, noise impacts would be similar. *(Similar Impact)*

Transportation and Traffic

Alternative B would likely result in similar construction traffic delays due to material deliveries, off-haul of excavated soil, and trenching in the roadway to install the subsurface transmission line. Vehicle trips during operation would not change between Alternative B and the proposed project, limited to intermittent trips for worker inspections and maintenance. Therefore, transportation and traffic impacts would be similar. *(Similar Impact)*

Tribal Cultural Resources

Alternative B would result in ground disturbance at the existing undeveloped site and along the length of the transmission line alignment. Construction activities would have similar potential to encounter unanticipated Tribal cultural resources, which may be determined to be significant under CEQA in consultation with local Tribal representatives. Due to the similar scale of development and proximity of this site to the proposed Station J site, impacts to Tribal cultural resources would be similar. *(Similar Impact)*

Utilities and Service Systems

Alternative B would not generate substantial new demand on utilities and service systems when compared to the proposed project. The estimated amounts of water demand, wastewater treatment, and solid waste generation would be similar. Therefore, the impact on utilities and service systems would be similar. *(Similar Impact)*

6.3.3 Alternative C (Transmission Line Routing Option)

Alternative C assumes that a slightly modified 115 kV transmission line alignment is implemented to interconnect the current Station J site with Station E (see Figure 6-2). Under this alternative, the Station J site would remain in the currently proposed location. The alternate transmission line alignment would extend from the Station J site east on North A Street, travel north on Ahem Street until McCormack Avenue, then travel east on McCormack Avenue and Dreher Street until North 18th Street, at which point it would align with the proposed alignment and interconnect with Station E.

Aesthetics

Alternative C would also result in the development of a substation at the identified Station J site. The only change would be the location of the subsurface transmission line along local streets, which would have no visual change compared to the proposed project. Therefore, aesthetic impacts would be similar to the proposed project. *(Similar Impact)*

Air Quality

Alternative C would also result in the construction of a bulk substation at the same size and scale as the proposed project. Thus, construction processes and operation of the substation would be similar to the proposed project. The small difference in alignment would not affect the level of criteria pollutants, toxic air contaminants, or odors generated during construction. Therefore, air quality impacts would be similar to the proposed project. *(Similar Impact)*

Biological Resources

Alternative C would redevelop the entire project site, similar to what would occur under the proposed project. There would be a similar level of vegetation removal required and similar mitigation measures to reduce potential migratory bird and VELB impacts would be implemented. No additional biological resources would be affected. Therefore, the biological resources impact would be similar. *(Similar Impact)*

Cultural Resources

Alternative C would redevelop the entire project site, similar to what would occur under the proposed project. The level of ground disturbance and potential for unanticipated discovery of cultural resources would be similar. The minor change in transmission line alignment would not result in a substantial difference in potential for encountering cultural resources; the modified alignment would also be placed under paved surface streets. Therefore, this alternative would have similar impact on cultural resources. *(Similar Impact)*

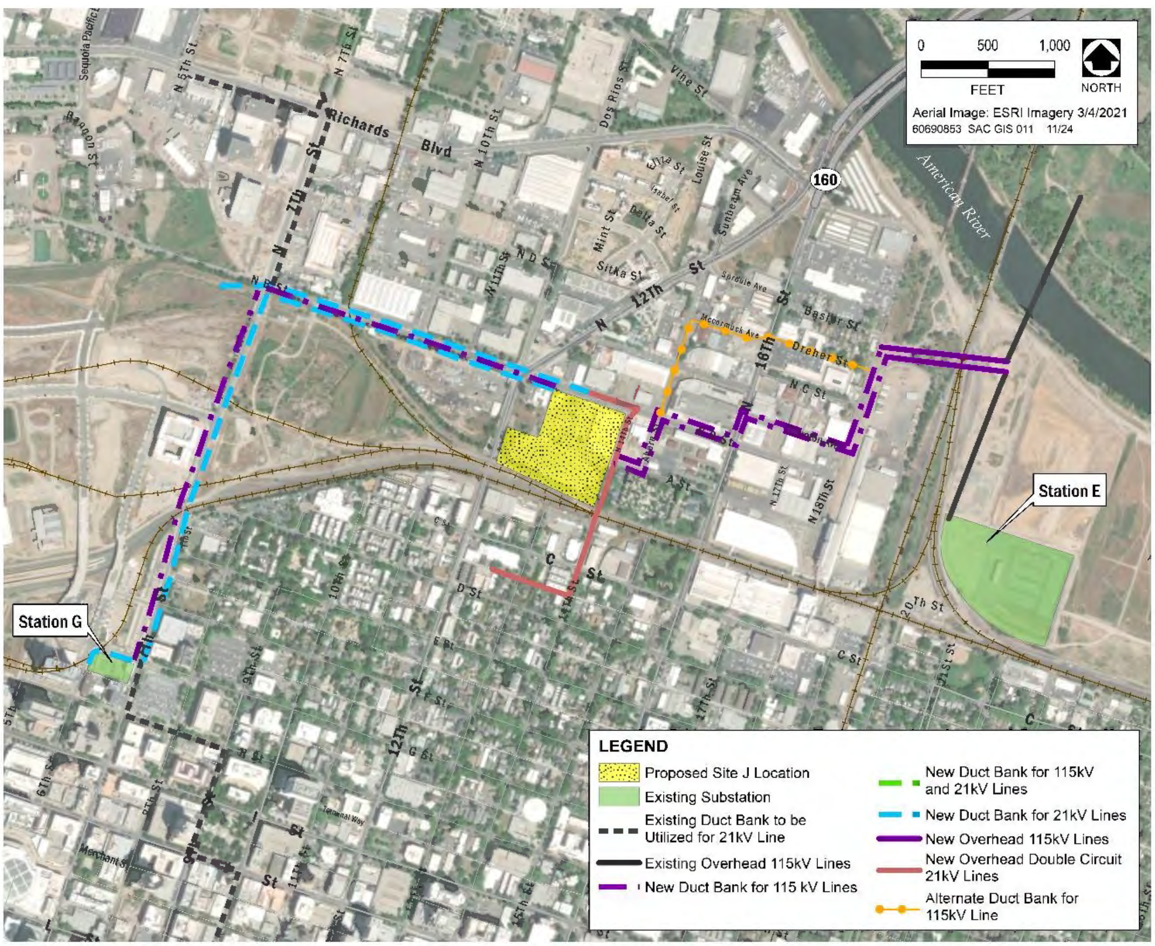

Figure 6-2: Alternative C Transmission Line Routing Option

Energy

Alternative C would result in energy consumption during construction and operation but would not be anticipated to be wasteful, inefficient, or unnecessary with compliance with CALGreen Code, the California Building Code, and other local standards for energy efficiency. Therefore, the energy impact would be similar. *(Similar Impact)*

Geology, Soils, and Paleontological Resources

Impacts to geology and soils would not be substantially different because soil types and geologic features are expected to be similar. Paleontological resources may also be encountered under this alternative due to subsurface disturbance at the site and along the transmission line alignment. However, impacts would be similar with standard controls for unanticipated discoveries. *(Similar Impact)*

Greenhouse Gas Emissions

Greenhouse gas emissions from installation of subsurface transmission lines along a slightly modified route are anticipated to be similar. Operations and maintenance activities under Alternative C would be the same as the proposed project. Therefore, the GHG impact would be similar. *(Similar Impact)*

Hazards and Hazardous Materials

The same project site would be redeveloped under Alternative C, which would result in similar hazardous materials impacts as the proposed project. The minor change in alignment is not anticipated to result in substantially different impacts and would not encounter any listed hazardous materials sites. Therefore, the hazards and hazardous materials impact would be similar. *(Similar Impact)*

Hydrology and Water Quality

Alternative C would be expected to have similar hydrology and water quality impacts related to stormwater runoff during construction and post-construction treatment of runoff from impervious surface areas. These impacts would be similarly reduced by complying with existing regulations, such as the NPDES Construction General Permit and the City's Grading Ordinance and SQIP. Therefore, hydrology and water quality impacts would be similar. *(Similar Impact)*

Noise

Noise exposure during construction and operation of the Alternative C would be similar to the proposed project because the overall size and scale of development would not change; however, Alternative C would result in open trench construction directly in front of residences on Dreher Street. This would result in an increase in temporary noise impacts on sensitive receptors compared to the proposed project. Therefore, noise impacts would be greater. *(Greater Impact)*

Transportation and Traffic

Alternative C would result in similar construction traffic delays due to material deliveries, off-haul of excavated soil, and trenching in the roadway to install the subsurface transmission line. Vehicle trips during operation would not change between Alternative C and the proposed project, limited to intermittent trips for worker inspections and maintenance. Therefore, transportation and traffic impacts would be similar. *(Similar Impact)*

Tribal Cultural Resources

Alternative C would result in ground disturbance at the proposed Station J site and along the length of the transmission line alignment. Construction activities would have similar potential to encounter unanticipated Tribal cultural resources, which may be determined to be significant under CEQA in consultation with local Tribal representatives. Due to the similar scale of development and proximity of the alternative site, impacts to Tribal cultural resources would be similar. *(Similar Impact)*

Utilities and Service Systems

Alternative C would not generate substantial new demand on utilities and service systems when compared to the proposed project. The estimated amounts of water, wastewater, and solid waste generation would be similar. Therefore, the impact on utilities and service systems would be similar. *(Similar Impact)*

6.4 Comparison of Alternatives

Table 6-1 summarizes the environmental analysis provided above for the project alternatives.

6.5 Environmentally Superior Alternative

CCR Section 15126.6 suggests that an EIR should identify the “environmentally superior” alternative. “If the environmentally superior alternative is the ‘no project’ alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives.” As shown in the Summary of Project Impacts, all significant project impacts would be mitigable. Therefore, this alternatives analysis was focused on identifying potentially viable alternatives that would meet the project objectives while lessening the severity of potential environmental impacts.

Alternative A (No Project) was determined to be the environmentally superior alternative because it would lessen all environmental impacts which would result under the proposed project if not developed. However, the No Project Alternative would not meet most of the project objectives. Alternative B would result in greater hazardous materials impacts due to its presence on the Cortese List and potential for impacts to worker health, safety, and the environment due to the contaminants present. Alternative C would result slightly greater construction-related noise impacts but would otherwise remain the same as the proposed project.

Consistent with State CEQA Guidelines (CCR Section 15126.6 [e][2]), because the environmentally superior alternative would be the No Project Alternative, another environmentally superior alternative shall be identified. Based on the environmental analysis provided above, Alternative C would have similar impacts to the proposed project with the exception of slightly increased construction noise impacts, which would be temporary. Therefore, Alternative C would not be environmentally superior as it would not reduce any impacts of the proposed project.

The proposed project would best meet the identified project objectives while reducing all potential environmental impacts to less than significant. The environmental impact differences between the proposed project and Alternative C are not substantial enough that one is clearly superior over the other.

Table 6-1. Comparison of the Environmental Impacts of the Alternatives in Relation to the Proposed Project

Resource Area	Proposed Project	Alternative A (No Project)	Alternative B (Site 4 Substation Location)	Alternative C (Transmission Line Routing Option)
Aesthetics	LTS	Similar Impact	Similar Impact	Similar Impact
Air Quality	LTS/M	Greater Impact	Similar Impact	Similar Impact
Biological Resources	LTS/M	Similar Impact	Similar Impact	Similar Impact
Cultural Resources	LTS/M	Less Impact	Similar Impact	Similar Impact
Energy	LTS	Similar Impact	Similar Impact	Similar Impact
Geology, Soils, and Paleontological Resources	LTS/M	Less Impact	Similar Impact	Similar Impact
Greenhouse Gas Emissions	LTS	Greater Impact	Similar Impact	Similar Impact
Hazards and Hazardous Materials	LTS/M	Similar Impact	Greater Impact	Similar Impact
Hydrology and Water Quality	LTS	Similar Impact	Similar Impact	Similar Impact
Noise	LTS/M	Greater Impact	Similar Impact	Greater Impact
Transportation	LTS/M	Greater Impact	Similar Impact	Similar Impact
Tribal Cultural Resources	LTS/M	Less Impact	Similar Impact	Similar Impact
Utilities and Service Systems	LTS	Greater Impact	Similar Impact	Similar Impact

Notes: LTS = Less-than-significant impacts; LTS/M = Less-than-significant impacts with mitigation incorporated
Source: Compiled by AECOM 2023

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Bargas Staff ....Biological Resources, Paleontological Resources

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None.

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APPENDIX A
NOTICE OF PREPARATION, INITIAL STUDY AND COMMENT LETTERS

NOTICE OF PREPARATION OF AN ENVIRONMENTAL IMPACT REPORT

Date: February 17, 2023

To: Agencies and Interested Parties

Lead Agency: Sacramento Municipal Utility District (SMUD)
6201 S Street, MS B203
Sacramento, CA 95817-1899
Contact: Rob Ferrera at (916) 732-6676

Subject: Station J Bulk Transmission Substation Project Environmental Impact Report

Review Period: February 22, 2023 to March 23, 2023

SMUD proposes to develop the Station J Bulk Transmission Substation Project (also referred to as "the project") located on a 10.3-acre site at 1220 North B Street in a developed area of downtown Sacramento. The project would consist of demolition of existing on-site structures and construction of new infrastructure to support up to five 40 MVA (megavolt amperes) 115/21kV transformers for a total of up to 200 MVA, including up to 8 miles of overhead and or underground 115kV and 21kV connections into the substation from nearby existing SMUD facilities and infrastructure. As the lead agency for California Environmental Quality Act (CEQA) compliance, SMUD is responsible for considering whether to certify the Environmental Impact Report (EIR) and determining if the project should be approved. SMUD will prepare an EIR to satisfy the requirements of CEQA, California Public Resources Code (PRC) Section 21000 et seq.

Purpose of Notice: In accordance with CEQA, SMUD is distributing this notice of preparation (NOP) to solicit comments on the scope of the EIR that is being prepared for the Station J Bulk Transmission Substation Project.

This NOP has been prepared pursuant to Sections 15082 and 15083 of the CEQA Guidelines. The release of this NOP starts a 30-day public scoping period that begins on February 22, 2023 and ends on March 23, 2023. The purpose of the NOP is to provide sufficient information about the proposed project and its potential environmental effects to allow agencies and interested parties the opportunity to provide a meaningful response regarding the scope and content of the EIR, including possible environmental impacts, mitigation measures, and alternatives.

Project Location: The project as proposed would be located on a 10.3-acre site at 1220 North B Street in a developed area of downtown Sacramento, as shown on Figures 2-1 and 2-2. The project site is bordered by North B Street to the north, North 14th Street to the east, Union Pacific Railroad (UPRR) tracks to the south, and North 12th Street to the west.

The proposed project site is relatively flat and sparsely vegetated with a limited number of trees along the southern project perimeter. The site comprises 11 contiguous Assessor's parcels, currently containing two buildings, an approximately 66,000 square foot single story distribution warehouse with loading docks and office space; and an approximately 5,580 square foot single story maintenance shop building. Both buildings are situated toward the front of the property along North B Street. The rear of the property consists of approximately 3.9 acres of yard storage and is adjacent to UPRR to the south. Adjacent land uses include a Salvation Army facility to the northwest, General Produce offices to the east, First Step Communities homeless shelter and Quinn Cottages transitional housing to the southeast, and Sims Metal recycling center across North 12th Street to the west. Several SMUD facilities are nearby the project site including the Station E electrical substation located approximately 0.5 miles to the east, Station G electrical substation and Station H (future substation adjacent to Station G) located approximately 0.7 miles to the southwest.

Project Objectives: Objectives for the project include:

- provide safe and reliable electrical service to existing and proposed development in the downtown Sacramento area;
- provide greater operational flexibility between circuits and substations in the area;
- maximize the use of available SMUD property and resources;
- minimize impacts to nearby sensitive receptors; and,
- minimize potential conflicts with existing planning efforts within the City of Sacramento.

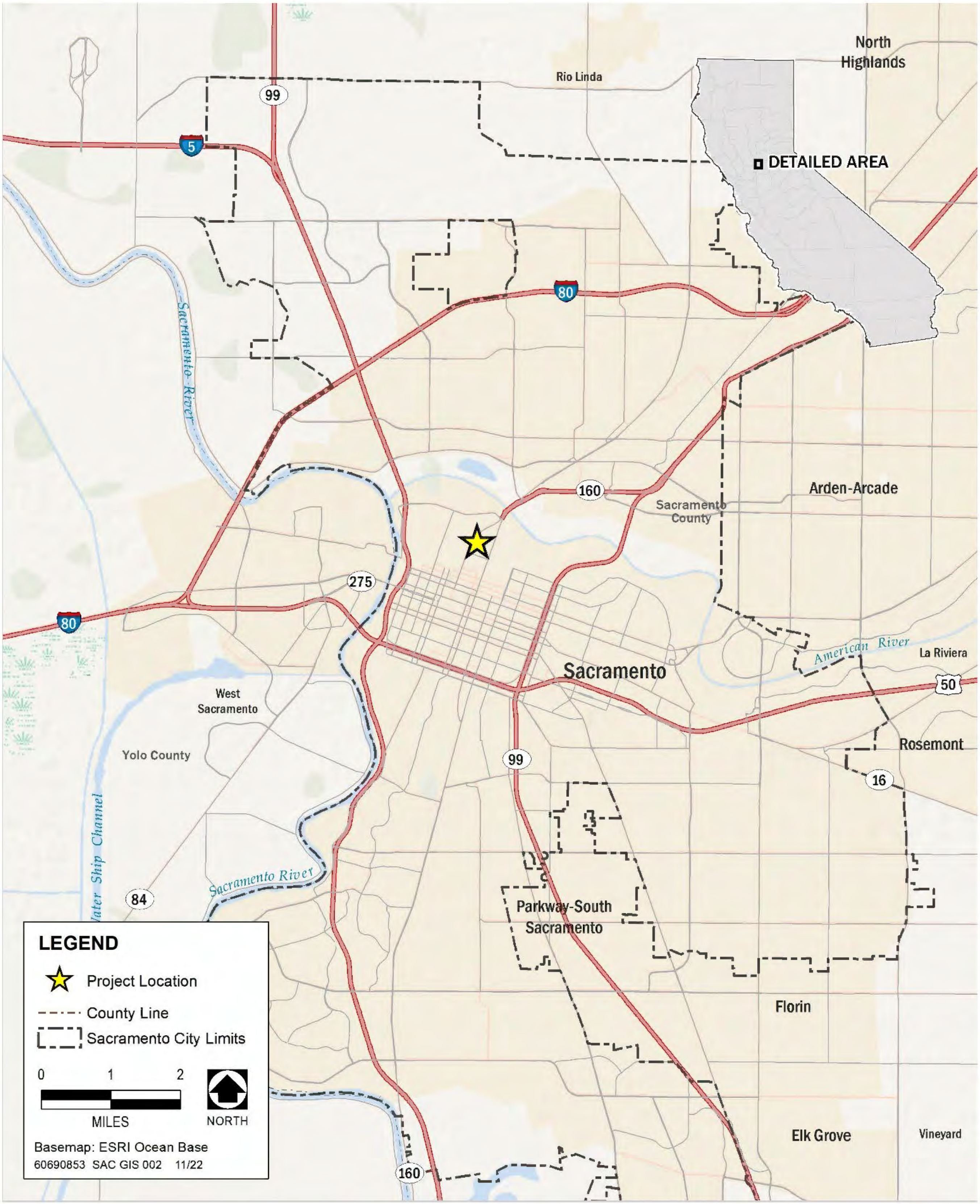

Figure 1 Project Vicinity

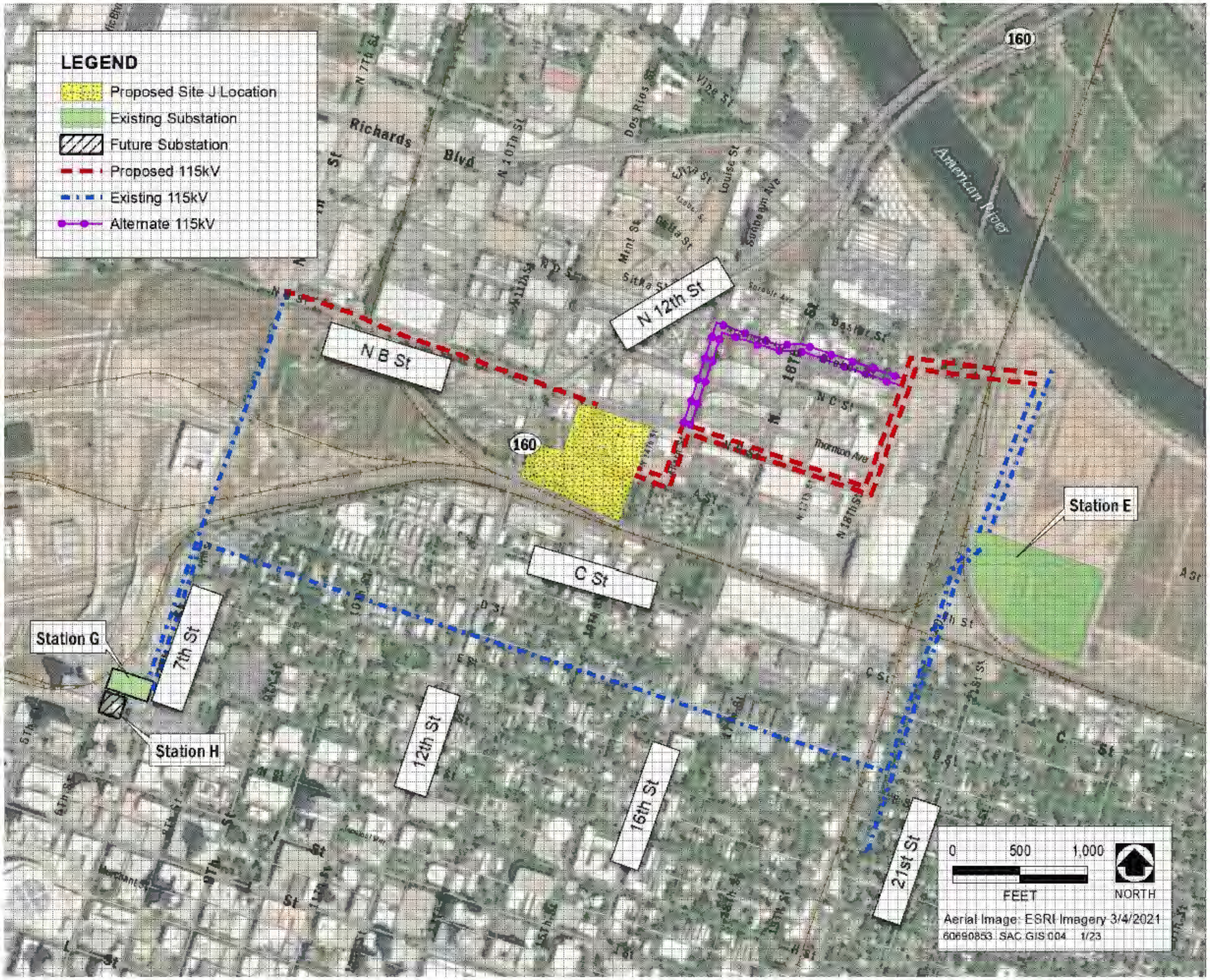

Figure 2 Project Location

Description of Proposed Project: The proposed substation would include demolition of all existing on-site structures and construction of new infrastructure to include sizing for five 40 MVA 115/21kV transformers, (200 MVA). Initial installation of two 40 MVA transformers is anticipated to occur by 2030. The project may also include up to 8 miles of overhead and or underground 115kV and 21kV connections into the substation from nearby existing SMUD facilities and infrastructure. The site includes space for expansion as anticipated future needs become imminent. It is SMUD's goal for the project to provide consistent and reliable electrical service to much of downtown Sacramento by capitalizing on SMUD's existing local assets.

The new substation would be connected to SMUD's bulk electric system via three new 115kV transmission lines described below:

- One of the transmission lines will connect to SMUD's Station G downtown substation. This will be an underground transmission line. This line will start at the corner of 7th Street and G Street and route north along 7th Street. The line will then head east along North B Street and enter the Station J from the north side. This line will be encased in a concrete duct bank.
- The other two transmission lines will loop in an existing overhead transmission line that currently connects SMUD's Elverta and Station E bulk substations. By looping in the line two new lines will be created. Both lines will be a combination of overhead and underground. The lines will begin at a site north of Station E (location of the former North City Substation) where SMUD will install up to two new steel pole structures to intercept the existing line. From these structure(s) the lines will head west overhead approximately 900 feet to a set of steel riser poles. These poles will be used to transition the line from overhead to underground. The riser poles will be installed just north of Basler Street and North 18th Street. From there the lines will go underground and traverse one of two proposed routes as follows.
    - Route 1: The lines would head south along North 18th Street to Dreher Street. On Dreher Street the lines would head west until reaching Ahern Street. At Ahern Street the lines would head south until reaching A Street. At A Street the lines would head west and enter Station J. The lines will be encased in a concrete duct bank.
    - Route 2: The lines would head south along North 18th Street until reaching North B Street. At North B Street the lines would head west until reaching Ahern Street. At Ahern Street the lines would head south to A Street. At A Street the lines would head west and enter Station J. The lines will be encased in a concrete duct bank.

The proposed substation would house electrical equipment, including power transformers, gas insulated equipment, switchgear, capacitors, instrument transformers, control and relay equipment, remote monitoring equipment, telecommunications equipment, batteries, steel structures, switches, underground conductor and cable, an electrical bus, and a control building. Station J would include up to five 40 MVA 115/21 kV transformers to serve the SMUD network.

Construction equipment and materials staging would generally occur within the project site. While offsite staging areas have not yet been identified and would be identified by the contractor based on availability at the time, it is assumed that any offsite staging areas would be within one mile of the project site. During construction, access to the project site would be maintained, with the primary access point for construction equipment, deliveries, and workers located from North B Street or North 14th Street. Temporary road closures could occur during construction and would vary in location and duration based on construction requirements. Additionally, construction activities would occur during daylight hours and would not require nighttime lighting.

Construction is anticipated to begin in 2026 and be completed in 2030. Timing is based on load growth and the planned 2030 City of Sacramento Water Treatment Plant expansion, which is projected to include approximately 17 MW demand based upon current load factors.

Potential Approvals and Permits 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 CEQA documentation and determining if the project should be approved. Other potential permits required from other agencies could include:

State

- **California Department of Transportation:** Permits and/or transportation management plan for any oversized equipment or excessive loads on State Highways.

- **California's Department of Toxic Substances Control (DTSC):** Approval of permit or modified permit for project installation impacts at City landfill.

Local

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

- **City of Sacramento:**
  - Encroachment permit.
  - Design review.
  - Improvement plans.
  - National Pollution Discharge Elimination System (NPDES) permit.
  - Tree removal permit – to comply with the City of Sacramento Tree Ordinance.
  - Transmission Facilities Permit – to comply with Sacramento City Code requirements.

Potential Environmental Effects: The EIR will describe the significant direct and indirect environmental impacts of the project. The EIR also will evaluate the cumulative impacts of the project, defined as impacts that could be exacerbated when considered in conjunction with other related past, present, and reasonably foreseeable future projects. SMUD anticipates that the project could result in potentially significant environmental impacts in the following resource areas, which will be further evaluated in the EIR:

- **Aesthetics**
- **Air Quality**
- **Biological Resources**
- **Cultural Resources**
- **Geology and Soils**
- **Greenhouse Gas Emissions**
- **Hazards and Hazardous Materials**
- **Hydrology and Water Quality**
- **Noise and Vibration**
- **Transportation**
- **Tribal Cultural Resources**
- **Utilities**

These potential impacts will be assessed and discussed in detail in the EIR, and feasible and practicable mitigation measures will be recommended to reduce any identified significant or potentially significant impacts.

SMUD anticipates that the project would not result in significant environmental impacts in the following resource areas, which will not be further evaluated in the EIR: agriculture and forestry resources, energy, land use and planning, mineral resources, population and housing, public services, recreation, and wildfire. SMUD has prepared an Initial Study (IS) that provides analysis of these resource areas.

Comment Period: Written comments on the NOP can be sent anytime during the NOP review period which begins February 22, 2023 and ends on March 23, 2023. Please send your written or electronic responses, with appropriate contact information, to the following address:

Rob Ferrera
Sacramento Municipal Utility District
Environmental Management
P.O. Box 15830 MS B203
Sacramento, CA 95852-1830
rob.ferrera@smud.org

Digital copies of the NOP are available on at smud.org/StationJ.

Public Meeting: Written comments on the NOP may also be provided during the virtual public meeting to be held March 9, 2023 at 5:30 p.m. During the scoping session, project information can be discussed with SMUD staff and written NOP comments will also be accepted via email. If you have questions regarding the NOP or the public meeting, please contact Rob Ferrera at the email address shown above. Access to the public meeting will be provided through a meeting link found at smud.org/StationJ.

Sacramento Municipal Utility District

Station J Bulk Transmission Substation Project

Initial Study

January 2023

Powering forward. Together.

SMUD®

Sacramento Municipal Utility District

Station J Bulk Transmission Substation Project

Initial Study • January 2023

Lead Agency:

Sacramento Municipal Utility
District 6201 S Street, MS B209
Sacramento, CA

95817-1899 or

P.O. Box 15830 MS B209
Sacramento, CA
95852-1830
Attn: Rob Ferrera
(916) 732-6676 or rob.ferrera@smud.org

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TABLE OF CONTENTS

FIGURES

ACRONYMS AND OTHER ABBREVIATIONS

AB	Assembly Bill
ACM	asbestos containing materials
bgs	below ground surface
CCR	California Code of Regulations
CEQA	California Environmental Quality Act
cfm	cubic feet per minute
CMU	concrete masonry unit
dBA	decibels A-weighting
EIR	Environmental Impact Report
ERCS	Environmental Resources and Customer Service
GHG	greenhouse gases
HP	horsepower
HRIR	
I-5	Interstate 5
IS	Initial Study
LBP	lead-based paint
MMRP	mitigation monitoring and reporting program
MVA	megavolt ampere
NAHC	Native American Heritage Commission
NOP	Notice of Preparation
NPDES	National Pollutant Discharge Elimination System
NRHP	National Register of Historic Places
PRC	Public Resources Code

Project	Station J Bulk Transmission Substation Project
RPS	renewable portfolio standard
SF6	sulfur hexafluoride
SFD	Sacramento Fire Department
SMAQMD	Sacramento Metropolitan Air Quality Management District
SMUD	Sacramento Municipal Utility District
SPD	Sacramento Police Department
UPRR	Union Pacific Railroad
VOC	volatile organic compounds

1.0 INTRODUCTION

1.1 Project Overview

The Sacramento Municipal Utility District (SMUD) proposes to construct a new electrical substation (Station J) on a 10.3-acre site at 1220 North B Street in a developed area of downtown Sacramento ("Station J Bulk Transmission Substation Project" or "project").

1.2 Purpose of Document

This Initial Study (IS) has been prepared by SMUD to evaluate potential environmental effects resulting from the Station J Substation 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 provisions of CEQA, SMUD is distributing this IS along with a Notice of Preparation (NOP) of an environmental impact report (EIR) to solicit comments on the scope and analysis of the EIR. The NOP will be distributed to property owners within 500 feet of the project site, as well as to the State Clearinghouse / Governor's Office of Planning and Research and each responsible and trustee agency. The IS and NOP will be available a 30-day scoping period during which time comments may be submitted to SMUD. The scoping period begins on February 22, 2023 and ends on March 23, 2023.

If you wish to send written comments (including via e-mail), they must be received by close of business on March 23, 2023. Written comments should be addressed to:

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

E-mail comments may be addressed to rob.ferrera@smud.org. If you have questions regarding the IS or NOP, please call Rob Ferrera at (916) 732-6676.

Digital copies of the IS and NOP are available on the internet at: https://www.smud.org/CEQA. Hardcopies of the IS and NOP 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 CEQA Process

The purpose of an NOP is to provide sufficient information about the project and its potential environmental impacts to allow agencies and interested parties the opportunity to provide a meaningful response related to the scope and content of the EIR, including mitigation measures that should be considered and alternatives that should be addressed (CCR Section 15082[b]). Comments submitted in response to the NOP are used by the lead agency to identify broad topics to be addressed in the EIR. Comments on environmental issues received during the NOP public comment period are considered and addressed, where appropriate, in the Draft EIR.

The Draft EIR will be released for a 45-day public review period during which time agencies and individuals may submit written comments regarding the Draft EIR. Following public review of the Draft EIR, a Final EIR will be prepared that will include both written and oral comments on the Draft EIR that were received during the public review period. The Final EIR will also include responses to those comments and any revisions to the Draft EIR.

Before taking action on the project, the lead agency is required to certify that the EIR has been completed in compliance with CEQA, that the decision-making body reviewed and considered the information in the EIR, and that the EIR reflects the independent judgment of the lead agency.

1.4 SMUD Board Approval Process

The SMUD Board of Directors must certify the EIR and approve the mitigation monitoring and reporting program (MMRP) before it can approve the project. Prior to that, the project and relevant environmental documentation will be formally presented at a SMUD Environmental Resources and Customer Service (ERCS) Committee meeting for consideration, discussion, and recommendation to the Board. The SMUD Board of Directors will then consider certification of the EIR and adoption of the 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 IS 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, a less-than-significant impact with mitigation incorporated, or a potentially significant impact. Where needed to reduce impacts to a less-than-significant level, mitigation measures are presented.

- **Chapter 4: List of Preparers.** This chapter lists the organizations and people that prepared the document.
- **Chapter 5: References.** This chapter lists the references used in preparation of this Draft IS.

1.6 Environmental Factors Potentially Affected

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.

☒ Aesthetics	☐ Agriculture and Forestry Resources	☒ Air Quality
☒ Biological Resources	☒ Cultural Resources	☐ Energy
☒ 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	☐ Wildfire	☐ Mandatory Findings of Significance
☐ None with Mitigation		

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.

________________	February 17, 2023
Signature	Date
Rob Ferrera	Environmental Specialist
Printed Name	Title

Sacramento Municipal Utility District Agency

2.0 PROJECT DESCRIPTION

2.1 Introduction

The project would include demolition of existing on-site structures and construction of new infrastructure to support up to five 40 MVA 115/21kV transformers for a total of up to 200 MVA, including up to 8 miles of overhead and or underground 115kV and 21kV connections into the substation from nearby existing SMUD facilities and infrastructure.

2.2 Project Objectives

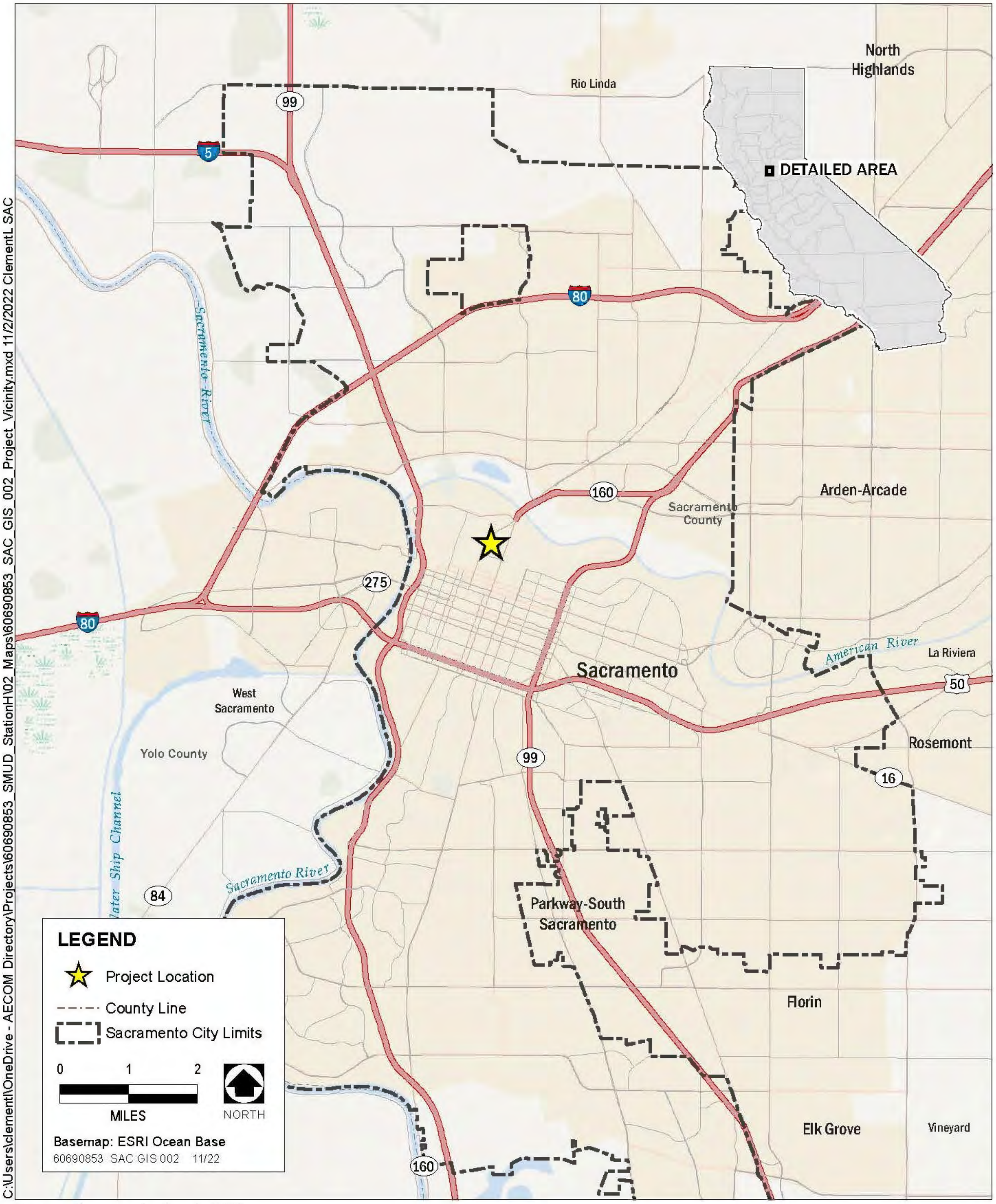
SMUD's objectives for the project include the following:

- provide safe and reliable electrical service to existing and proposed development in the downtown Sacramento area;
- meet SMUD's goals of ensuring electrical service reliability in the downtown Sacramento area by 2030;
- provide greater operational flexibility between circuits and substations in the area;
- maximize the use of available SMUD property and resources;
- minimize impacts to nearby sensitive receptors; and,
- minimize potential conflicts with existing planning efforts within the City of Sacramento.

2.3 Project Location

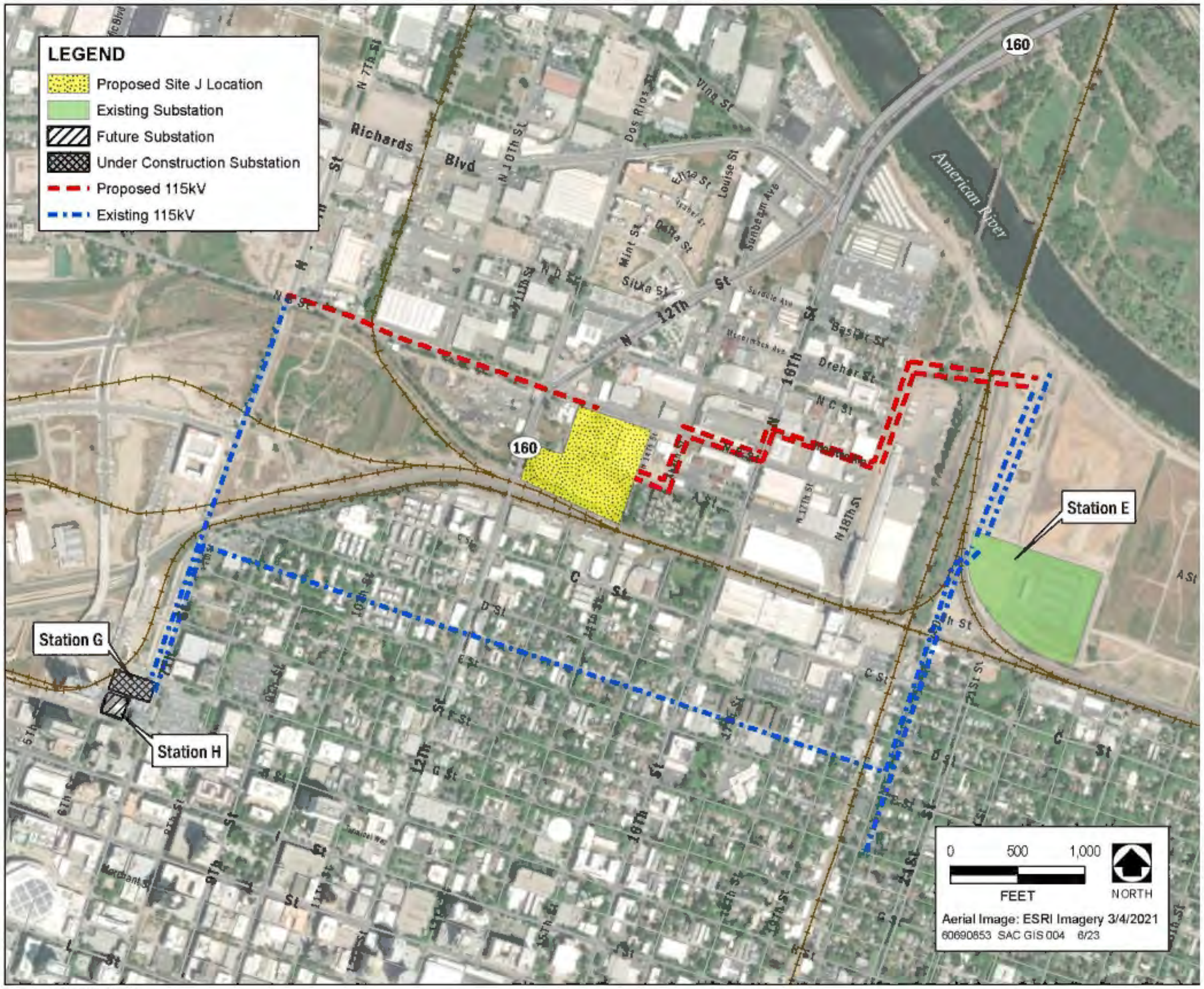
The project would be located on a 10.3-acre site at 1220 North B Street in a developed area of downtown Sacramento, as shown on Figures 2-1 and 2-2. The project site is bordered by North B Street to the north, North 14th Street to the east, Union Pacific Railroad (UPRR) tracks to the south, and North 12th Street to the west.

The project site is relatively flat and sparsely vegetated with a limited number of trees along the southern project perimeter. The site consists of 11 contiguous Assessor's parcels, currently containing two buildings, an approximately 5,580 square foot single story maintenance shop building and an approximately 66,000 square foot single story distribution warehouse with loading docks, and office space. Both buildings are situated towards the front of the property along North B Street. The rear of the property consists of approximately 3.9 acres of yard storage and is adjacent to UPRR to the south. Adjacent land uses include Salvation Army to the northwest, General Produce offices to the east, First Step Communities homeless shelter and Quinn Cottages transitional housing to the southeast, and Sims Metal recycling center across North 12th Street to the west. There are several SMUD facilities nearby the project site including the Station E electrical substation (under construction) located approximately 0.5 miles to the east, Station G electrical substation (under construction) and Station H (future substation) located approximately 0.7 miles to the southwest.



Source: Sacramento County 2022

Figure 2-1: Regional Location Map – Station J Substation



Source:SMUD 2022

Figure 2-2: Station J Project Site and Vicinity

2.4 Project Description

The proposed substation would include demolition of all existing on-site structures and construction of new infrastructure to include sizing for five 40 MVA 115/21kV transformers (200 MVA). The proposed substation would house electrical equipment, including power transformers, gas insulated equipment, switchgear, capacitors, instrument transformers, control and relay equipment, remote monitoring equipment, telecommunications equipment, batteries, steel structures, switches, underground conductor and cable, an electrical bus, and a control building. Station J would include up to five 40 MVA 115/21kV transformers to serve the SMUD network. Each power transformer would contain up 10,000 gallons of insulating oil. Typically, mineral oil is used in the transformers. Each transformer would have a secondary containment system to collect and hold any oil leaks from the transformer. The maximum average sound level for each transformer would not exceed 80 decibel A-weighting (dBA) measured at a distance of 6 feet around the periphery of the transformer (Note that these measurements are usually made at one-third and at two-thirds height of the transformer tank). The proposed substation would be surrounded by 8 to 10-foot tall concrete masonry unit (CMU) walls to provide visual screening from nearby uses.

Initial installation of two 40 MVA transformers is anticipated to occur by 2030. The project would also include up to 7 miles of overhead and underground 115kV and 21kV connections into the substation from nearby existing SMUD facilities and infrastructure. The site also includes space for expansion as future needs are identified.

As part of the project, SMUD may use limited amounts of Sulfur Hexafluoride (SF_6), a common insulating gas for high-voltage electrical systems, at the project site. Use of the proposed electrical equipment would comply with recordkeeping, reporting, and leakage emission limit requirements in accordance with California Air Resources Board regulations for reduction of SF_6 emissions. As part of substation operations and maintenance activities, SMUD would monitor existing substation equipment to accurately and immediately identify any SF_6 leaks and immediately repair leaks that are discovered. SMUD is also an active member of the SF_6 Emission Reduction Partnership, which focuses on reducing emissions of SF_6 from transmission and distribution sources.

The new substation would be connected to SMUD's bulk electric system via three new 115kV transmission lines described below:

- One of the transmission lines would connect to SMUD's Station G downtown substation. This would be an underground transmission line. This line would start at the corner of 7th Street and G Street and route north along 7th Street. The line would then head east along North B Street and enter the Station J from the north side. This line would be encased in a concrete duct bank.
- The other two transmission lines would loop in an existing overhead transmission line that currently connects SMUD's Elverta and Station E bulk substations. By looping in the line two new lines would be created. Both lines would be located in a combination of overhead and underground alignments. The lines would begin at Station E where SMUD would install up to three new steel pole structures to intercept the existing line. From these structure(s) the lines would head west overhead approximately 900 feet to a set of steel riser poles. Pole structures would be approximately 100 feet tall. Concrete foundations for poles are typically nine feet in diameter to a depth of 25 to 30 feet below ground surface (bgs). These poles

would be used to transition the line from overhead to underground. The riser poles would be installed just north of Basler Street and North 18th Street. From here the lines would transition to underground duct bank and head south along North 18th Street to Thornton Avenue. On Thornton Avenue the lines would continue underground heading west until reaching North 16th Street. At North 16th Street the lines would head south until reaching North B Street. At North B Street the lines would head west to Ahern Street. At Ahern Street the lines would head south to North A Street and enter the Station J to the west from North A Street. The lines would be encased in a concrete duct bank.

2.4.1 Project Operation

During normal operations, the substation would be operated remotely and continuously. The new control building and substation site would remain unoccupied except for periodic visits by SMUD personnel and maintenance employees to conduct routine checks and maintenance. Maintenance workers and other SMUD employees would access the site through North B Street or North 14th Street.

2.4.2 Project Construction

Project construction would include excavations for new connections and installation of new equipment to a depth of 15 to 30 feet bgs; however, piles needed for seismic stability/support could reach a depth of approximately 55 feet bgs or more, pending geotechnical study results. Duct bank trenching would total approximately 5,500 linear feet to a depth and width of 4 feet.

Construction equipment and materials staging would generally occur within the project site. While offsite staging areas have not yet been identified and would be identified by the contractor based on availability at the time, it is assumed that any offsite staging areas would be within one mile of the project site. During construction, access to the project site would be maintained, with the primary access point for construction equipment, deliveries, and workers located from North B Street or North 14th Street. Temporary roadway lane closures could occur during construction of the underground duct bank and would vary in location and duration based on construction requirements. Additionally, the majority of construction activities would occur during daylight hours; however, there may be a need for evening or nighttime work for specific tasks that cannot be performed during the day.

Construction would require an average daily worker population of approximately 10 workers, with approximately 30 workers during peak construction activities associated with on-site demolition, excavation, and heavy equipment deliveries and installations.

2.4.3 Project Schedule and Phasing

The construction of Station J would occur in seven phases. The phases of the project and required equipment and durations are described below. Construction would require approximately 95 weeks. The phases may be intermittent and not all pieces of construction equipment would be used for the entire duration of a construction phase. A summary table of the project, including estimated duration of each phase, is provided in Table 2-1 below.

Table 2-1. Phases and Duration for the Station J Bulk Transmission Substation Project

Project Phase	Duration
1. Demolition	16 weeks
2. Grading, Drainage, and Access	15 weeks
3. Perimeter Wall and Retaining Wall	12 weeks
4. Civil Construction	12 weeks
5. Grounding, Conduit, Encasement	12 weeks
6. Steel Erection	8 weeks
7. Electrical Equipment Assembly (new substation, new transmission lines, and cutover)	26 weeks
Total	**101 weeks**

Source: Adapted by AECOM in 2022

Construction is anticipated to begin 2027 and would be completed in 2030. Project implementation timing is based on load growth and the 2030 City of Sacramento Water Treatment Plant expansion which is projected to include an approximate 17 MW increase in demand based upon current load factors. Construction intensity and hours would be in accordance with the City's Noise Ordinance, contained in Title 8, Chapter 8.68 of the Sacramento City Code. Construction would be limited to the hours between 7 a.m. and 6 p.m. Monday through Saturday, and between the hours of 9 a.m. and 6 p.m. on Sunday. Typically, construction activities would occur Monday through Friday, with work occurring on the weekend only when necessary.

Phase 1: Demolition

Demolition and removal of existing structures at the project site would include removal of existing structures, vegetation clearing and grubbing, and any environmental clean-up activities required for soil remediation. Demolition of existing structures would require upwards of 16 weeks and would include use of the following vehicles and equipment: excavators with breakers; semi-end dumps; front loaders; 1-ton service trucks; a pavement grinder; 30-ton crane; 49-horsepower (hp) air compressors (250 cubic feet per minute [cfm]); water truck; 20-hp generator; street sweeper, and construction staff vehicles.

Phase 2: Grading, Drainage, and Access Road

The project's site would be graded for substation equipment, drainage, and access improvements. Approximately 47,000 cubic yards of material for engineered fill would be imported to the project's site. Grading, drainage facilities, and access road creation would require approximately 15 weeks, and include use of the following equipment: grader; scraper; sheepsfoot compactor; 1-ton service trucks; 20-ton tandem haul trucks; rubber tire drill rig; 5-ton 20-foot semi flatbed truck to deliver casings; front loader; semi-end dump truck; 30-ton crane; water truck; 20-hp generator; street sweeper; and construction staff vehicles.

Phase 3: Perimeter Wall and Retaining Wall

A perimeter wall and retaining wall would be constructed. Construction of the perimeter wall, perimeter grounding, and the retaining wall would require approximately 12 weeks, and include use of the following equipment: 2-ton trucks; skid steers with drills; semi-flatbed truck for material delivery; backhoe; concrete trucks; 3- to 5-ton roller; street sweeper; and construction staff vehicles.

Phase 4: Civil Construction

Water lines, drainage pipes, and foundations would be installed. Construction of water lines, drainpipe, foundations, and the cable trough would require approximately 12 weeks and use the following equipment: truck-mounted drill rig; track-mounted drill rig; 1-ton service truck; front loader; semi-end dump trucks; 5-ton 20-foot semi flatbed truck for materials delivery; 16-hp welder; water truck; concrete delivery trucks; 20-hp generator; street sweeper; and construction staff vehicles.

Phase 5: Grounding, Conduit, Encasement

Electrical grounding, below-ground conduits, and encasements would be constructed and installed. Installation of the grounding, conduit and encasement would require approximately 12 weeks and use the following equipment: backhoes; 5-ton 20-foot semi flatbed truck; concrete truck; 3- to 5-ton roller/compactors; front loader; semi end dump trucks; 1-ton service trucks; construction employee vehicles; and a street sweeper.

Phase 6: Steel Erection

Erection of structural steel components and steel poles at the new substation would occur. Erection of the steel would require 8 weeks and the following vehicles and equipment: semi flatbed trucks for steel delivery; 60-ton crane; 60-foot manlifts; 10,000- pound reach forklift; construction employee vehicles; 1-ton service trucks; 20-hp generator; 16-hp welder; and a street sweeper.

Phase 7: Electrical Equipment Assembly (New Substation, New Transmission Lines, and Cutover)

New substation equipment, new poles and overhead electrical conductors and cable, and new underground duct bank would be installed to provide connectivity to existing incoming electrical transmission service and outgoing distribution service. Substation battery backup systems would be installed inside the control building or in an enclosure in the substation. Assembly and installation of the substation equipment and transmission and distribution lines and the cutover would require approximately 26 weeks and include use of the following SMUD and contractor equipment: crew vehicles; crew trucks; SMUD foreman trucks; 5-ton 20-foot semi flatbed truck for deliveries; 290-ton crane; 9-axle semi flatbed trucks; 20-hp generators; SMUD network crew vehicles; a backhoe, cement truck, asphalt paver, vibrator/compactor, water truck, and a street sweeper.

2.4.4 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 CEQA documentation and determining if the project should be approved. Other potential permits required from other agencies could include:

State

- **California Department of Transportation:** Permits and/or transportation management plan for any oversized equipment or excessive loads on State Highways.

Local

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

- **City of Sacramento:**
  - Encroachment permit.
  - Design review.
  - Improvement plans.
  - National Pollution Discharge Elimination System (NPDES) permit
  - Demolition permit.
  - Tree removal permit—to comply with the City of Sacramento Tree Ordinance.
  - Transmission Facilities Permit – to comply with Sacramento City Code requirements.

3.0 ENVIRONMENTAL IMPACT EVALUATION

3.1 Evaluation of Environmental Impacts

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).

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.

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.

“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).

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.

2. 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.

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

4. 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.

5. The explanation of each issue should identify:

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

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

3.2 Aesthetics

Except as provided in Public Resources Code Section 21099, would the project:	**Potentially Significant Impact**	**Less than Significant with Mitigation Incorporated**	**Less-than-Significant Impact**	**No Impact**
a) Have a substantial adverse effect on a scenic vista?	Yes	No	No	No
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	No	No	No	Yes
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 a publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	Yes	No	No	No
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	Yes	No	No	No

3.2.1 Discussion

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

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?

Potentially Significant Impact. The project would involve demolition of existing on-site structures and construction of new infrastructure on a 10.3-acre site in a developed area of downtown Sacramento, including up to 8 miles of overhead and or underground 115kV and 21kV connections. As such, the project has the potential to have an adverse effect on nearby scenic vistas, degrade existing scenic quality, or create a new source of substantial life or glare. Therefore, project impacts related to aesthetic resources would be ***potentially significant***. An aesthetics analysis will be prepared as part of the EIR to determine the project's potential aesthetics impacts and appropriate mitigation measures will be developed if needed.

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

No Impact. Though a small portion of Interstate 5 (I-5) is designated as a scenic highway, the segment of I-5 located near the project site is not designated as a state scenic highway. The nearest designated scenic roadway is Route 160, approximately 9 miles south of the project area (Caltrans 2022). Because there are no designated state scenic highways within, adjacent to, or visible from the project area, the project would not substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway. The project would have ***no impact***, and no further analysis of this issue in the EIR is warranted.

3.3 Agriculture and Forestry 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) prepared by the California Dept. 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 the forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board.

Would the project:	**Potentially Significant Impact**	**Less than Significant with Mitigation Incorporated**	**Less-than-Significant Impact**	**No Impact**
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	No	No	No	Yes
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	No	No	No	Yes
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))?	No	No	No	Yes
d) Result in the loss of forest land or conversion of forest land to non-forest use?	No	No	No	Yes
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?	No	No	No	Yes

3.3.1 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 is located in an urbanized area and 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 (California Department of Conservation 2018a). There are no active agricultural operations within or near the project site, and there are no Williamson Act contracts associated with the project site (Sacramento Area Council of Governments 2021). 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, and no further analysis of these issues in the EIR is warranted.

3.4 Air Quality

Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make the following determinations.

Would the project:	**Potentially Significant Impact**	**Less than Significant with Mitigation Incorporated**	**Less-than-Significant Impact**	**No Impact**
a) Conflict with or obstruct implementation of the applicable air quality plan?	Yes	No	No	No
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?	Yes	No	No	No
c) Expose sensitive receptors to substantial pollutant concentrations?	Yes	No	No	No
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	Yes	No	No	No

3.4.1 Discussion

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?

Potentially Significant Impact. Construction and operation of the project could result in generation and emissions of criteria air pollutants and precursors that could 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. Activities associated with project operation would be limited and would not generate odors. However, construction activities could result in odors from the use of heavy-duty equipment. Therefore, project related air quality impacts would be ***potentially significant.*** An air quality analysis will be prepared as part of the EIR to determine the project’s potential air quality impacts and appropriate mitigation measures will be developed if needed.

3.5 Biological Resources

Would the project:	**Potentially Significant Impact**	**Less than Significant with Mitigation Incorporated**	**Less-than-Significant Impact**	**No Impact**
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife, U.S. Fish and Wildlife Service, or NOAA Fisheries?	Yes	No	No	No
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	Yes	No	No	No
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?	Yes	No	No	No
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?	Yes	No	No	No
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	Yes	No	No	No
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?	Yes	No	No	No

3.5.1 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?

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?**

Potentially Significant Impact. The project site is located in an area with a land cover that is primarily urban/built-up. The site contains scattered trees, patches of ruderal grassland, and a vegetated area. Project construction and operation could disturb or have an adverse effect on protected species or habitat if found onsite. Further evaluation of the potential for special-status plant and wildlife species, including state and federally listed species, present at the project site will be completed. Therefore, project impacts related to biological resources would be ***potentially significant***. A biological resources analysis will be prepared as part of the EIR to determine the project's potential biological resources impacts and appropriate mitigation measures will be developed if needed.

3.6 Cultural Resources

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

3.6.1 Discussion

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

Potentially Significant Impact. A Historical Resource Evaluation Report (HRER) is being prepared for the proposed project to assess potential cultural resource impacts. The project proposes trenching and excavation at the substation site and along the transmission line alignments. Ground-disturbing construction activities have the potential for unanticipated discovery of potentially significant cultural resources, which may be eligible for listing in the National Register of Historic Places (NRHP) and/or California Register of Historic Resources (CRHR). Human remains may also be encountered during ground-disturbing activities. Unanticipated cultural resources or human remains may be disturbed, destroyed, or irreversibly altered if encountered during construction. Therefore, project impacts related to cultural resources would be ***potentially significant***. A cultural resources analysis will be prepared as part of the EIR to determine the project's potential cultural resources impacts and appropriate mitigation measures will be developed if needed.

3.7 Energy

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

3.7.1 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 during project construction to operate and maintain construction equipment, transport construction materials, and for worker commutes. Gasoline and diesel fuel would be consumed during project construction for both onsite equipment use and offsite vehicle travel. The energy needs for project construction would be temporary and are not anticipated to require additional capacity or increase peak or base period demands for electricity or other forms of energy. While construction energy demands are not anticipated to cause wasteful, inefficient, and unnecessary consumption of energy, further evaluation of the project's demand will be provided in the EIR to confirm this impact would be **less than significant**.

The project would generate minimal vehicle trips during operation associated with ongoing maintenance of the facility, which would not be notably greater than the existing vehicle trips accessing the project site. These maintenance trips would be essential to ensuring that Station J serves its purpose in supplying reliable energy to customers within the SMUD service area. Station J would not directly result in an increase in consumption of energy resources; the proposed substation would meet existing and anticipated demands in the SMUD service area and increase reliability of the system. While operational energy demands are not anticipated to cause wasteful, inefficient, and unnecessary consumption of energy, further evaluation of the project's demand will be provided in the EIR to confirm 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. California's Renewable Portfolio Standard (RPS) was first established in 2002 under Senate Bill (SB) 1078 and requires all electric load serving entities to procure 60 percent of their electricity from eligible renewable energy resources by 2030 (CPUC 2022). SMUD generates power from a variety of energy sources, including hydropower, natural-gas-fired generators, renewable energy such as solar, wind, hydro, and biomass, and power purchased on the wholesale market. SMUD is statutorily required to meet RPS requirements, and the proposed project is not anticipated to conflict with ongoing compliance with the RPS. The proposed project would not conflict with state or local plans for renewable energy or energy efficiency. Therefore, the project would have **no impact**, and no further analysis of this issue in the EIR is warranted..

3.8 Geology and Soils

Would the project:	**Potentially Significant Impact**	**Less than Significant with Mitigation Incorporated**	**Less-than-Significant Impact**	**No Impact**
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving: i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.				
ii) Strong seismic ground shaking?	Yes	No	No	No
iii) Seismic-related ground failure, including liquefaction?	Yes	No	No	No
iv) Landslides?	Yes	No	No	No
b) Result in substantial soil erosion or the loss of topsoil?	Yes	No	No	No
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?	Yes	No	No	No
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	Yes	No	No	No
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	No	No	Yes
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	Yes	No	No	No

3.8.1 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.)

ii) Strong seismic ground shaking?

iii) Seismic-related ground failure, including liquefaction?

iv) Landslides?

Potentially Significant Impact. The project site is located in the Sacramento Valley, which has historically experienced a low level of seismic ground shaking. Nonetheless, the project's potential to expose people or structures to substantial adverse effects from rupture of a known earthquake fault, strong seismic ground shaking, ground failure, or landslides exists. Therefore, this impact would be ***potentially significant***. A geology and soils analysis will be prepared as part of the EIR to determine the project's potential geological impacts and appropriate mitigation measures will be developed if needed.

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?

Potentially Significant Impact. 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 could expose site soils to erosion via wind in the summer months, and to surface water runoff during storm events. Further evaluation of the soil characteristics at the project site and other conditions that could contribute to geological hazards will be completed. Therefore, project impacts related to geologic hazards would be ***potentially significant***. A geologic hazards analysis will be prepared as part of the EIR to determine the project's potential impacts and appropriate mitigation measures will be developed if needed.

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. Thus, the project would have ***no impact*** related to soil suitability for use of septic tanks or alternative wastewater disposal systems, and no further analysis of this issue in the EIR is warranted.

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

Potentially Significant. Ground-disturbing activities could result in uncovering currently unknown resources and cause a substantial change in the significance of an undiscovered unique paleontological resource or geologic feature. Therefore, project impacts related to paleontological resources would be ***potentially significant***. A paleontological resources analysis will be prepared as part of the EIR to determine the project's potential paleontological resources impacts and appropriate mitigation measures will be developed if needed.

3.9 Greenhouse Gas Emissions

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	Yes	No	No	No
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	Yes	No	No	No

3.9.1 Discussion

a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

Potentially Significant Impact. 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. Construction-related GHG exhaust emissions would be generated by sources such as heavy-duty off-road equipment, haul trucks, and worker commute. Operational emissions would be associated with worker commutes (i.e., mobile sources), energy consumption (i.e., electricity and natural gas), water consumption, and waste disposal. The project could generate greenhouse gas emissions that may have a significant impact on the environment. Therefore, project impacts related to greenhouse gas emissions would be ***potentially significant.*** A GHG analysis will be prepared as part of the EIR to determine the project's potential GHG impacts and appropriate mitigation measures will be developed if needed.

b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

Potentially Significant Impact. Project-related emissions has the potential to conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases. Therefore, this impact would be ***potentially significant***. A GHG analysis will be prepared as part of the EIR to determine the project's potential impacts and appropriate mitigation measures will be developed if needed.

3.10 Hazards and Hazardous Materials

Would the project:	**Potentially Significant Impact**	**Less than Significant with Mitigation Incorporated**	**Less-than-Significant Impact**	**No Impact**
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	Yes	No	No	No
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	Yes	No	No	No
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	Yes	No	No	No
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?	Yes	No	No	No
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	No	No	Yes
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	Yes	No	No	No
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	Yes	No	No	No

3.10.1 Discussion

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 §65962.5 and, as a result, would it create a significant hazard to the public or the environment?

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?

Potentially Significant Impact. In 2021, a Phase I Environmental Site Assessment was prepared for the property in preparation for property redevelopment to evaluate areas where past and/or current activities may have chemically impacted soil, soil gas, or groundwater. Based upon historical records, the site was initially developed between 1893 and 1902. Portions of the current buildings were constructed between 1957 and 1964. Given the timeframe of that previous site buildings may have been constructed, asbestos containing materials (ACM) and or lead-based paint (LBP) may have been deposited onto surface soil as a result of demolition activities. The potential exists that these materials are still present and are therefore considered an environmental concern. As such, the project would require demolition of all existing on-site structures and excavation of soil and remediation of volatile organic carbon (VOC) soil gas may be required prior to construction.

A Phase II is currently being completed to assess the presence of environmental contaminants on the project site. Further, 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 the use of electrical equipment as well as transmission lines and would not involve the use of hazardous materials. Project construction and operation could result in potentially significant impacts to workers and land uses surrounding the project site. Therefore, these impacts would be ***potentially significant***. A hazards and hazardous materials analysis will be prepared as part of the EIR to determine the project's potential hazards impacts and appropriate mitigation measures will be developed if needed.

e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the

project result in a safety hazard or excessive noise for people residing or working in the project area?

No Impact. The project is not located within an airport land use plan or within two miles of a public airport or public use airport. Sacramento Executive Airport is the closest airport and is located approximately 5 miles south of the project site. Thus, the project would have ***no impact*** resulting in an aviation-related safety hazard for people residing or working in the project area, and no further analysis of this issue in the EIR is warranted..

3.11 Hydrology and Water Quality

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	Yes	No	No	No
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	Yes	No	No	No
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would: (i) result in substantial erosion or siltation on- or off-site;	Yes	No	No	No
(ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;	Yes	No	No	No
(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	Yes	No	No	No
(iv) impede or redirect flood flows?	Yes	No	No	No
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	Yes	No	No	No
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	Yes	No	No	No

3.11.1 Discussion

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?

Potentially Significant Impact. The majority of the project site has already been developed with impervious surfaces; therefore, any incremental impacts on the volume of runoff are anticipated to be minimal. Project construction activities would involve the excavation and movement of soil, which has the potential to degrade water quality or alter drainage patterns compared to existing conditions. Therefore, project impacts related to hydrology and water quality would be ***potentially significant.*** A hydrology and water quality analysis will be prepared as part of the EIR to determine the project's potential hydrology and water quality impacts and appropriate mitigation measures will be developed if needed.

3.12 Land Use and Planning

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
a) Physically divide an established community?	No	No	No	Yes
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	No	Yes	No

3.12.1 Discussion

a) Physically divide an established community?

No Impact. The project would involve the construction of electrical transmission infrastructure in a highly developed area of downtown Sacramento. The proposed project would redevelop an existing site with Substation J, and the proposed high-voltage transmission lines would be installed underground or overhead. Temporary access restrictions in adjacent surface streets may occur during construction; however, traffic control would be implemented as necessary to ensure safe and continuous access is provided. Access to all surrounding properties would remain available following implementation of the project. The project would not introduce any barriers within the project area and would not physically divide an established community. There would be ***no impact***, and no further analysis of this issue in the EIR is warranted.

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?

Less than Significant Impact. The proposed project would result in the redevelopment of an existing site with Substation J and construction of approximately 8 miles of high-voltage transmission lines in the surrounding area. The project would result in a substantial land use change on the Substation J site, as it currently consists of distribution, warehouse, and office uses and would be redeveloped with the proposed substation. As described in Chapter 2, several discretionary approvals would be required for the proposed project, including a SMAQMD permit; City of Sacramento tree removal, grading, and building permits; NPDES Construction General Permit; and Caltrans permits. Additionally, the City of Sacramento 2035 General Plan contains policies which pertain to the environmental effects of projects within the City.

An inconsistency with regional plans and local general plan policies is not necessarily considered a significant impact under CEQA, unless it is related to a physical impact on the environment that is significant in its own right. Consistency with these plans, policies, and regulations will be described in the relevant resource sections under CEQA (e.g., consistency with City tree removal requirements will be discussed in Biological Resources). These technical sections will provide a detailed analysis of other relevant physical environmental effects that could result from implementation of the proposed project and identify mitigation measures, as necessary, to reduce impacts. Further evaluation in the EIR will be completed to confirm this impact would be **less than significant**.

3.13 Mineral Resources

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	No	No	No	Yes
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	No	No	Yes

3.13.1 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?

No Impact. The majority of the project area is classified as MRZ-1, which represents an area where available geologic information indicates that little likelihood exists for the presence of significant mineral resources. A small portion of the eastern project area is classified as MRZ-3, generally where the proposed transmission lines will loop into the existing overhead line connecting SMUD's Elverta and Station E Substations (California Department of Conservation 2018b). This classification represents an area where adequate information indicates significant mineral deposits are present, or where it is judged that a high likelihood exists for their presence (concrete aggregate in this particular area). Although this small portion of the project area may contain mineral resources, the surrounding area is developed with recreational, commercial, and utility uses and there is little potential for mineral resource recovery at this site. Further, there are numerous other nearby areas mapped as having a high likelihood of containing concrete aggregate in the region and the proposed project would not result in the loss of availability of this resource in the surrounding areas. Therefore, there would be ***no impact*** , and no further analysis of this issue in the EIR is warranted.

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 and surrounding area is not designated as a locally important mineral resource recovery site in the Sacramento 2035 General Plan Update (City of Sacramento 2014: Figure 6-11). Thus, project implementation would not result in a loss of availability of locally important mineral resources, and the project would have ***no impact*** related to the loss of availability of a locally important mineral resource discovery site. No further analysis of this issue in the EIR is warranted.

3.14 Noise and Vibration

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

3.14.1 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?

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

Potentially Significant Impact. Noise would be generated by the project during construction and operation. While the project would not include any operational sources of ground vibration, construction activities could generate excessive grounborne noise and vibration. The operation of heavy equipment (such as excavators) during project construction could generate noise and vibration resulting in an increase in ambient noise levels at nearby sensitive receptors, such as the First Step Communities homeless shelter and Quinn Cottages transitional housing. Daily operation of electrical substation facilities would generate noise primarily from the operation of transformer cooling equipment and fans. As such, short-term construction and long-term operation of the project could result in groundbone vibration and ambient noise levels in excess of standards established by the City or in other applicable local, state, or federal standards. Therefore, project impacts related to noise would be ***potentially significant***. A noise and vibration analysis will be prepared as part of the EIR to determine the project's potential noise and vibration impacts and appropriate mitigation measures will be developed if needed.

c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public

airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

No Impact. The project is not located within an airport land use plan or within two miles of a public airport or public use airport. Additionally, the project is not located within two miles of a private airstrip. Sacramento Executive Airport is the closest airport and is located approximately 5 miles south of the project site. Thus, the project would have ***no impact*** regarding the exposure of people residing or working in the project area to excessive aircraft-related noise levels, and no further analysis in the EIR is warranted.

3.15 Population and Housing

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

3.15.1 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 proposed project would result in the redevelopment of an existing site with Substation J and construction of approximately 8 miles of high-voltage transmission lines in the surrounding area. The project does not include new homes or businesses. Further, new electrical equipment and distribution lines would serve existing and planned future uses in the downtown area and would not induce or generate population growth. Therefore, the project would have ***no impact***, and no further analysis of this issue in the EIR is warranted.

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***, and no further analysis of this issue in the EIR is warranted.

3.16 Public Services

a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:	**Potentially Significant Impact**	**Less than Significant with Mitigation Incorporated**	**Less-than-Significant Impact**	**No Impact**
i) Fire protection?	No	No	No	Yes
ii) Police protection?	No	No	No	Yes
iii) Schools?	No	No	No	Yes
iv) Parks?	No	No	No	Yes
v) Other public facilities?	No	No	No	Yes

3.16.1 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 Sacramento Fire Department (SFD) fire protection services because the project would not generate new residents, which is the driving factor for fire protection services. 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, and no further analysis of this issue in the EIR is warranted.

Police Protection

No Impact. Implementation of the project would not increase demand for Sacramento Police Department (SPD) police protection services because the project would not generate new residents, which is the driving factor for police protection services. 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, and no further analysis of this issue in the EIR is warranted.

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, and no further analysis of this issue in the EIR is warranted.

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, and no further analysis of this issue in the EIR is warranted.

Other Public Facilities

No Impact. The project would not result in additional residents or employees that would utilize other public facilities, such as nearby transit stops or stations, nor would the project attract existing residents toward the area. Therefore, the project would have ***no impact*** on other public facilities, and no further analysis of this issue in the EIR is warranted.

3.17 Recreation

Would the project:	**Potentially Significant Impact**	**Less than Significant with Mitigation Incorporated**	**Less-than-Significant Impact**	**No Impact**
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	No	No	No	Yes
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	No	No	No	Yes

3.17.1 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 any 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***, and no further analysis of this issue in the EIR is warranted.

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 any new development that could necessitate new or expanded recreational facilities. Therefore, the project would have ***no impact***, and no further analysis of this issue in the EIR is warranted.

3.18 Transportation

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

3.18.1 Discussion

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(b), which pertains to vehicle miles travelled?

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?

Potentially Significant Impact. Project construction would involve work within existing roadways and temporary road closures which could interfere with existing vehicle, transit, bicycle, and pedestrian circulation. Project construction may also increase hazards in the project area or impact access for emergency vehicles. Vehicle miles travelled could increase over existing conditions. Therefore, project impacts related to transportation-related plans, ordinances, or policies could be ***potentially significant***. A transportation analysis will be prepared as part of the EIR to determine the project's potential transportation-related impacts and appropriate mitigation measures will be developed if needed.

3.19 Tribal Cultural Resources

Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:	**Potentially Significant Impact**	**Less than Significant with Mitigation Incorporated**	**Less-than-Significant Impact**	**No Impact**
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), or	Yes	No	No	No
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.	Yes	No	No	No

3.19.1 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)?

Potentially Significant Impact*.* The HRIR prepared for the project did not identify specific tribal cultural resources known to occur in the project area; however, the report did acknowledge the potential for undiscovered resources to be present underground. Based on the results of the archival research and field survey, there is low to moderate potential for archaeological resources to be encountered during ground-disturbing activities for the project. This may include tribal cultural resources that are eligible for listing in state or local historic registers. Significant tribal cultural resources may be disturbed, destroyed, or irreversibly altered if encountered during construction. Therefore, project impacts could be ***potentially significant***. A tribal cultural resources analysis will be prepared as part of the EIR to determine the project's potential tribal resources impacts and appropriate mitigation measures will be developed if needed.

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?**

Potentially Significant Impact*.* The proposed project is situated within the traditional territory of the Nisenan tribe. As stated previously, no tribal cultural resources are known to occur in the area; however, given the ground-disturbing activities proposed by the project, potential discovery of significant resources remains. Additionally, tribal outreach pursuant to Assembly Bill (AB) 52 is ongoing for the project; the Native American Heritage Commission (NAHC) was contacted for a list of tribal contacts who may have knowledge of significant resources in the area, and SMUD is coordinating with the provided contacts to ensure all possible resources are identified. Any resources identified by tribal representatives through this consultation process will require consideration under CEQA. Therefore, impacts related to tribal cultural resources could be ***potentially significant***. A tribal cultural resources analysis will be prepared as part of the EIR to determine the project's potential tribal resources impacts and appropriate mitigation measures will be developed if needed.

3.20 Utilities

Would the project:	**Potentially Significant Impact**	**Less than Significant with Mitigation Incorporated**	**Less-than-Significant Impact**	**No Impact**
a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	Yes	No	No	No
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	Yes	No	No	No
c) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project’s projected demand in addition to the provider’s existing commitments?	Yes	No	No	No
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??	Yes	No	No	No
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	Yes	No	No	No

3.20.1 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?

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?

Potentially Significant Impact. The project could have short- and long-term impacts on utilities or utility services and require the construction of additional water, wastewater or solid waste treatment or disposal facilities. Therefore, impacts related to the capacity of existing water, wastewater and stormwater drainage facilities, or the required expansion of existing facilities could be ***potentially significant***. A utilities analysis will be prepared as part of the EIR to determine the project's potential utilities-related impacts and appropriate mitigation measures will be developed if needed.

3.21 Wildfire

If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	No	No	No	Yes
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?	No	No	No	Yes
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	No	No	No	Yes
d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	No	No	No	Yes

3.21.1 Discussion

a) Substantially impair an adopted emergency response plan or emergency evacuation plan?

No Impact. The project site is not located in or near a state responsibility area or on lands classified as very high fire hazard severity zones and it is more than 5 miles away from the nearest such area or zone (CAL FIRE 2022). Nonetheless, construction of the project could require temporary road lane closures that could temporarily impair emergency response plans or evacuation plans. As required by the City, SMUD and its construction contractor would develop and implement a traffic control plan that would maintain access and connectivity during project construction activities. Because access and connectivity would be maintained during construction, the project would not substantially impair an emergency response plan or evacuation plan. Once construction is complete, the project would operate similar to its pre-construction condition project features, and would not impair emergency response or evacuation. Therefore, there would be ***no impact*** and no further analysis of this issue in the EIR is warranted.

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?

No Impact. The project would not exacerbate wildfire risks as the project site is not located within a wildfire hazard zone, is substantially surrounded by developed land, and is not near wildland areas. There would be ***no impact***, and no further analysis of this issue in the EIR is warranted.

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?

No Impact. As discussed above, the project involves the installation of electrical transmission and distribution infrastructure to provide supply reliability and serve existing and planned future uses in the downtown area. The project would not exacerbate fire risk because the project would adhere to all safety requirements for the equipment to be replaced. This impact would be ***less than significant***, and no further analysis of this issue in the EIR is warranted.

d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?

No Impact. The project is located in an area of predominantly flat terrain and would not involve modifications to slopes that could expose people to risks of flooding from post-fire slope instability. Project facilities would be located both aboveground and under the ground surface; however, these facilities would not result in significant changes to existing drainage. There would be ***no impact***, and no further analysis of this issue in the EIR is warranted.

3.22 Mandatory Findings of Significance

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
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 a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	Yes	No	No	No
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)?	Yes	No	No	No
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	Yes	No	No	No

3.22.1 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?

Potentially Significant Impact. The project is located in downtown Sacramento in an infill and transit-oriented area. Additional evaluation is necessary to determine whether the project would affect biological, archaeological, historic, or tribal cultural resources. This ***potentially significant*** impact will be analyzed further in the EIR.

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.)

Potentially Significant Impact. CEQA requires that SMUD assess whether its proposed project's incremental effects would be significant when viewed in connection with the effects of other projects. The project's ability to contribute incrementally to considerable environmental changes when considered in combination with other projects in the area is a ***potentially significant*** impact and will be analyzed further in the EIR.

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

Potentially Significant Impact. As discussed above, development of the proposed project would result in potentially significant impacts to aesthetics, air quality, biological resources, cultural resources, geology and soils, greenhouse gas emissions, hazards and hazardous materials, hydrology and water quality, noise, transportation, tribal cultural resources, and utilities. The EIR will evaluate environmental effects that could cause substantial adverse effects on human beings associated with the construction of this project, either directly or indirectly. This ***potentially significant*** impact will be analyzed further in the EIR.

4.0 LIST OF PREPARERS

4.1 SMUD

Rob Ferrera	Environmental Specialist

4.2 AECOM

Petra Unger	Program Manager
Jeff Thomas	Task Manager
Emily Biro	Deputy Task Manager
Danny Debrito	Environmental Planner

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APPENDIX B
AIR QUALITY AND
GREENHOUSE GAS EMISSION CALCULATIONS

Sacramento Municipal Utility District
Station J Bulk Transmission Substation Project
Recirculated Draft Environmental Impact Report • October 2024

Appendix B:
Air Pollutant and Greenhouse Gas Emissions Calculations

Station J Bulk Transmission Substation Project EIR (recirculated) Detailed Report

Table of Contents

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Station J Bulk Transmission Substation Project EIR (recirculated)
Construction Start Date	1/1/2026
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	3.00
Precipitation (days)	36.4
Location	1220 N B St, Sacramento, CA 95811, USA
County	Sacramento
City	Sacramento
Air District	Sacramento Metropolitan AQMD
Air Basin	Sacramento Valley
TAZ	506
EDFZ	13
Electric Utility	Sacramento Municipal Utility District
Gas Utility	Pacific Gas & Electric
App Version	2022.1.1.28

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
General Light Industry	10.0	1000sqft	0.11	10,000	0.00	0.00	—	—

Other Asphalt Surfaces	1.43	Acre	1.43	0.00	0.00	0.00	—	—
Other Non-Asphalt Surfaces	8.35	Acre	8.35	0.00	0.00	0.00	—	—
Road Construction	1.00	Mile	1.12	0.00	0.00	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	37.4	36.6	41.4	74.1	0.13	1.39	3.73	4.94	1.29	0.82	2.01	—	16,196	16,196	0.92	1.02	14.7	16,539
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	37.4	36.6	20.1	73.0	0.06	1.22	1.59	2.80	1.02	0.33	1.36	—	6,975	6,975	0.31	0.20	0.12	7,043
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	10.2	9.61	17.1	30.4	0.05	0.69	1.25	1.94	0.62	0.26	0.88	—	6,496	6,496	0.32	0.29	2.13	6,592
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.85	1.75	3.12	5.56	0.01	0.13	0.23	0.35	0.11	0.05	0.16	—	1,076	1,076	0.05	0.05	0.35	1,091

2.2. Construction Emissions by Year, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	37.4	36.6	41.4	74.1	0.13	1.39	3.55	4.94	1.29	0.72	2.01	—	16,196	16,196	0.92	1.02	14.7	16,539
2027	5.15	4.85	29.0	43.1	0.08	1.00	3.73	4.73	0.92	0.82	1.74	—	11,160	11,160	0.50	0.54	13.6	11,348
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	37.4	36.6	20.1	73.0	0.06	1.22	1.59	2.80	1.02	0.33	1.36	—	6,975	6,975	0.31	0.20	0.12	7,043
2027	5.12	4.79	16.7	23.8	0.06	0.54	0.91	1.39	0.50	0.22	0.70	—	6,798	6,798	0.27	0.12	0.10	6,836
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	10.2	9.61	17.1	30.4	0.05	0.69	1.25	1.94	0.62	0.26	0.88	—	6,496	6,496	0.32	0.29	2.13	6,592
2027	1.96	1.72	8.52	12.2	0.02	0.29	0.78	1.07	0.27	0.18	0.45	—	3,210	3,210	0.13	0.09	1.31	3,243
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	1.85	1.75	3.12	5.56	0.01	0.13	0.23	0.35	0.11	0.05	0.16	—	1,076	1,076	0.05	0.05	0.35	1,091
2027	0.36	0.31	1.56	2.22	< 0.005	0.05	0.14	0.19	0.05	0.03	0.08	—	532	532	0.02	0.02	0.22	537

3. Construction Emissions Details

3.1. Linear, Drainage, Utilities, & Sub-Grade (2027) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.83	1.54	13.1	15.8	0.03	0.51	—	0.51	0.47	—	0.47	—	3,508	3,508	0.14	0.03	—	3,520

Dust From Material Movement	—	—	—	—	—	—	0.63	0.63	—	0.07	0.07	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.14	0.11	0.97	1.17	< 0.005	0.04	—	0.04	0.03	—	0.03	—	260	260	0.01	< 0.005	—	260
Dust From Material Movement	—	—	—	—	—	—	0.05	0.05	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.18	0.21	< 0.005	0.01	—	0.01	0.01	—	0.01	—	43.0	43.0	< 0.005	< 0.005	—	43.1
Dust From Material Movement	—	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.31	0.31	0.20	4.24	0.00	0.00	0.81	0.81	0.00	0.19	0.19	—	874	874	0.01	0.03	2.89	887

Vendor	0.01	< 0.005	0.09	0.04	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	< 0.005	—	55.4	55.4	< 0.005	0.01	0.12	58.0
Hauling	0.27	0.06	3.99	1.63	0.02	0.04	0.63	0.68	0.04	0.17	0.21	—	2,359	2,359	0.21	0.38	4.52	2,481
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.02	0.24	0.00	0.00	0.06	0.06	0.00	0.01	0.01	—	59.0	59.0	< 0.005	< 0.005	0.09	59.7
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	4.10	4.10	< 0.005	< 0.005	< 0.005	4.29
Hauling	0.02	< 0.005	0.31	0.12	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.02	—	174	174	0.02	0.03	0.14	183
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	9.76	9.76	< 0.005	< 0.005	0.02	9.89
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.68	0.68	< 0.005	< 0.005	< 0.005	0.71
Hauling	< 0.005	< 0.005	0.06	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	28.9	28.9	< 0.005	< 0.005	0.02	30.3

3.3. Linear, Paving (2027) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.55	0.47	4.46	6.89	0.01	0.18	—	0.18	0.16	—	0.16	—	1,046	1,046	0.04	0.01	—	1,049
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.03	0.24	0.38	< 0.005	0.01	—	0.01	0.01	—	0.01	—	57.3	57.3	< 0.005	< 0.005	—	57.5
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	< 0.005	0.04	0.07	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	9.49	9.49	< 0.005	< 0.005	—	9.52
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.31	0.31	0.20	4.24	0.00	0.00	0.81	0.81	0.00	0.19	0.19	—	874	874	0.01	0.03	2.89	887
Vendor	0.01	< 0.005	0.09	0.04	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	< 0.005	—	55.4	55.4	< 0.005	0.01	0.12	58.0
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.01	0.01	0.17	0.00	0.00	0.04	0.04	0.00	0.01	0.01	—	43.7	43.7	< 0.005	< 0.005	0.07	44.3
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	3.03	3.03	< 0.005	< 0.005	< 0.005	3.17
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	7.23	7.23	< 0.005	< 0.005	0.01	7.33
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.50	0.50	< 0.005	< 0.005	< 0.005	0.53
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.5. Demolition (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	37.0	36.3	18.4	69.1	0.05	1.20	—	1.20	1.01	—	1.01	—	5,390	5,390	0.22	0.04	—	5,409
Demolition	—	—	—	—	—	—	0.57	0.57	—	0.09	0.09	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	37.0	36.3	18.4	69.1	0.05	1.20	—	1.20	1.01	—	1.01	—	5,390	5,390	0.22	0.04	—	5,409
Demolition	—	—	—	—	—	—	0.57	0.57	—	0.09	0.09	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	8.20	8.05	4.07	15.3	0.01	0.27	—	0.27	0.22	—	0.22	—	1,196	1,196	0.05	0.01	—	1,200
Demolition	—	—	—	—	—	—	0.13	0.13	—	0.02	0.02	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.50	1.47	0.74	2.80	< 0.005	0.05	—	0.05	0.04	—	0.04	—	198	198	0.01	< 0.005	—	199
Demolition	—	—	—	—	—	—	0.02	0.02	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.35	0.32	0.21	4.51	0.00	0.00	0.81	0.81	0.00	0.19	0.19	—	890	890	0.01	0.03	3.18	903
Vendor	0.01	< 0.005	0.10	0.04	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	< 0.005	—	56.7	56.7	< 0.005	0.01	0.14	59.5
Hauling	0.09	0.02	1.28	0.51	< 0.005	0.01	0.19	0.21	0.01	0.05	0.07	—	738	738	0.07	0.12	1.49	776
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.30	0.29	0.27	3.31	0.00	0.00	0.81	0.81	0.00	0.19	0.19	—	791	791	0.02	0.03	0.08	801
Vendor	0.01	< 0.005	0.11	0.04	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	< 0.005	—	56.7	56.7	< 0.005	0.01	< 0.005	59.3
Hauling	0.09	0.02	1.39	0.52	< 0.005	0.01	0.19	0.21	0.01	0.05	0.07	—	738	738	0.07	0.12	0.04	775
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.06	0.05	0.75	0.00	0.00	0.18	0.18	0.00	0.04	0.04	—	180	180	< 0.005	0.01	0.30	183
Vendor	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	12.6	12.6	< 0.005	< 0.005	0.01	13.2
Hauling	0.02	< 0.005	0.30	0.11	< 0.005	< 0.005	0.04	0.05	< 0.005	0.01	0.01	—	164	164	0.02	0.03	0.14	172
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.14	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	29.8	29.8	< 0.005	< 0.005	0.05	30.2
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	2.08	2.08	< 0.005	< 0.005	< 0.005	2.18

Hauling	< 0.005	< 0.005	0.05	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	27.1	27.1	< 0.005	< 0.005	0.02	28.5

3.7. Grading, Drainage and Access Road (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	4.65	3.90	31.4	34.1	0.09	1.29	—	1.29	1.18	—	1.18	—	9,644	9,644	0.39	0.08	—	9,677
Dust From Material Movement	—	—	—	—	—	—	1.26	1.26	—	0.14	0.14	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.97	0.81	6.53	7.11	0.02	0.27	—	0.27	0.25	—	0.25	—	2,008	2,008	0.08	0.02	—	2,015
Dust From Material Movement	—	—	—	—	—	—	0.26	0.26	—	0.03	0.03	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Roa Equipment	0.18	0.15	1.19	1.30	< 0.005	0.05	—	0.05	0.04	—	0.04	—	332	332	0.01	< 0.005	—	334
Dust From Material Movement	—	—	—	—	—	—	0.05	0.05	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.35	0.32	0.21	4.51	0.00	0.00	0.81	0.81	0.00	0.19	0.19	—	890	890	0.01	0.03	3.18	903
Vendor	0.01	< 0.005	0.10	0.04	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	< 0.005	—	56.7	56.7	< 0.005	0.01	0.14	59.5
Hauling	0.67	0.15	9.76	3.88	0.04	0.10	1.47	1.57	0.10	0.39	0.50	—	5,605	5,605	0.52	0.91	11.4	5,900
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.06	0.05	0.70	0.00	0.00	0.16	0.16	0.00	0.04	0.04	—	169	169	< 0.005	0.01	0.29	171
Vendor	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	11.8	11.8	< 0.005	< 0.005	0.01	12.4
Hauling	0.14	0.03	2.15	0.81	0.01	0.02	0.30	0.32	0.02	0.08	0.10	—	1,167	1,167	0.11	0.19	1.03	1,227
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.13	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	28.0	28.0	< 0.005	< 0.005	0.05	28.4
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.95	1.95	< 0.005	< 0.005	< 0.005	2.05
Hauling	0.03	0.01	0.39	0.15	< 0.005	< 0.005	0.05	0.06	< 0.005	0.01	0.02	—	193	193	0.02	0.03	0.17	203

3.9. Fencing and Retaining Wall (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.75	1.47	10.6	14.7	0.04	0.37	—	0.37	0.34	—	0.34	—	4,005	4,005	0.16	0.03	—	4,019
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.75	1.47	10.6	14.7	0.04	0.37	—	0.37	0.34	—	0.34	—	4,005	4,005	0.16	0.03	—	4,019
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.29	0.24	1.74	2.42	0.01	0.06	—	0.06	0.06	—	0.06	—	658	658	0.03	0.01	—	661
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	0.04	0.32	0.44	< 0.005	0.01	—	0.01	0.01	—	0.01	—	109	109	< 0.005	< 0.005	—	109
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.18	0.16	0.10	2.25	0.00	0.00	0.40	0.40	0.00	0.09	0.09	—	445	445	0.01	0.02	1.59	451
Vendor	0.03	0.01	0.49	0.19	< 0.005	< 0.005	0.08	0.08	< 0.005	0.02	0.02	—	283	283	0.02	0.04	0.68	297
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.15	0.15	0.13	1.66	0.00	0.00	0.40	0.40	0.00	0.09	0.09	—	395	395	0.01	0.02	0.04	400
Vendor	0.03	0.01	0.53	0.19	< 0.005	< 0.005	0.08	0.08	< 0.005	0.02	0.02	—	283	283	0.02	0.04	0.02	296
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.02	0.28	0.00	0.00	0.06	0.06	0.00	0.02	0.02	—	66.7	66.7	< 0.005	< 0.005	0.11	67.6
Vendor	< 0.005	< 0.005	0.08	0.03	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	46.6	46.6	< 0.005	0.01	0.05	48.8
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.05	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	11.0	11.0	< 0.005	< 0.005	0.02	11.2
Vendor	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	7.71	7.71	< 0.005	< 0.005	0.01	8.08
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.11. Civil Construction (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipm	2.82	2.36	16.7	20.6	0.06	0.57	—	0.57	0.53	—	0.53	—	5,858	5,858	0.24	0.05	—	5,878
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.34	0.28	1.99	2.46	0.01	0.07	—	0.07	0.06	—	0.06	—	699	699	0.03	0.01	—	702
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.06	0.05	0.36	0.45	< 0.005	0.01	—	0.01	0.01	—	0.01	—	116	116	< 0.005	< 0.005	—	116
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.30	0.29	0.27	3.31	0.00	0.00	0.81	0.81	0.00	0.19	0.19	—	791	791	0.02	0.03	0.08	801
Vendor	0.02	0.01	0.32	0.11	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.01	—	170	170	0.01	0.03	0.01	178
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.03	0.03	0.40	0.00	0.00	0.09	0.09	0.00	0.02	0.02	—	96.9	96.9	< 0.005	< 0.005	0.16	98.2
Vendor	< 0.005	< 0.005	0.04	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	20.3	20.3	< 0.005	< 0.005	0.02	21.3
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.07	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	16.0	16.0	< 0.005	< 0.005	0.03	16.3
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	3.36	3.36	< 0.005	< 0.005	< 0.005	3.52
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.13. Civil Construction (2027) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.80	2.34	16.1	20.6	0.06	0.54	—	0.54	0.49	—	0.49	—	5,855	5,855	0.24	0.05	—	5,875
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.13	0.11	0.76	0.97	< 0.005	0.03	—	0.03	0.02	—	0.02	—	275	275	0.01	< 0.005	—	276
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.14	0.18	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	45.5	45.5	< 0.005	< 0.005	—	45.7

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.29	0.25	0.26	3.11	0.00	0.00	0.81	0.81	0.00	0.19	0.19	—	777	777	0.02	0.03	0.08	787
Vendor	0.02	0.01	0.30	0.11	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.01	—	166	166	0.01	0.02	0.01	174
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.15	0.00	0.00	0.04	0.04	0.00	0.01	0.01	—	37.4	37.4	< 0.005	< 0.005	0.06	37.9
Vendor	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	7.80	7.80	< 0.005	< 0.005	0.01	8.16
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	6.20	6.20	< 0.005	< 0.005	0.01	6.28
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.29	1.29	< 0.005	< 0.005	< 0.005	1.35
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.15. Grounding, Conduit, Encasement (2027) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	1.71	1.44	11.2	17.8	0.03	0.38	—	0.38	0.35	—	0.35	—	3,530	3,530	0.14	0.03	—	3,542
Architectural Coatings	3.08	3.08	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.71	1.44	11.2	17.8	0.03	0.38	—	0.38	0.35	—	0.35	—	3,530	3,530	0.14	0.03	—	3,542
Architectural Coatings	3.08	3.08	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.29	0.24	1.87	2.97	0.01	0.06	—	0.06	0.06	—	0.06	—	590	590	0.02	< 0.005	—	592
Architectural Coatings	0.52	0.52	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipm	0.05	0.04	0.34	0.54	< 0.005	0.01	—	0.01	0.01	—	0.01	—	97.7	97.7	< 0.005	< 0.005	—	98.0
Architectural Coatings	0.09	0.09	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.31	0.31	0.20	4.24	0.00	0.00	0.81	0.81	0.00	0.19	0.19	—	874	874	0.01	0.03	2.89	887
Vendor	0.04	0.01	0.64	0.25	< 0.005	0.01	0.11	0.11	0.01	0.03	0.03	—	388	388	0.02	0.06	0.86	406
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.29	0.25	0.26	3.11	0.00	0.00	0.81	0.81	0.00	0.19	0.19	—	777	777	0.02	0.03	0.08	787
Vendor	0.04	0.01	0.69	0.26	< 0.005	0.01	0.11	0.11	0.01	0.03	0.03	—	388	388	0.02	0.06	0.02	405
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.04	0.04	0.53	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	133	133	< 0.005	0.01	0.21	135
Vendor	0.01	< 0.005	0.11	0.04	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	0.01	—	64.8	64.8	< 0.005	0.01	0.06	67.8
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.10	0.00	0.00	0.02	0.02	0.00	0.01	0.01	—	22.1	22.1	< 0.005	< 0.005	0.03	22.3
Vendor	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	10.7	10.7	< 0.005	< 0.005	0.01	11.2
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.17. Steel Erection (2027) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.21	1.85	13.7	15.3	0.04	0.46	—	0.46	0.42	—	0.42	—	4,631	4,631	0.19	0.04	—	4,647
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.25	0.21	1.54	1.72	< 0.005	0.05	—	0.05	0.05	—	0.05	—	520	520	0.02	< 0.005	—	522
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	0.04	0.28	0.31	< 0.005	0.01	—	0.01	0.01	—	0.01	—	86.1	86.1	< 0.005	< 0.005	—	86.4
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.31	0.31	0.20	4.24	0.00	0.00	0.81	0.81	0.00	0.19	0.19	—	874	874	0.01	0.03	2.89	887
Vendor	0.06	0.02	0.92	0.36	< 0.005	0.01	0.15	0.16	0.01	0.04	0.05	—	554	554	0.03	0.08	1.23	580
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.03	0.36	0.00	0.00	0.09	0.09	0.00	0.02	0.02	—	89.5	89.5	< 0.005	< 0.005	0.14	90.7
Vendor	0.01	< 0.005	0.11	0.04	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	0.01	—	62.2	62.2	< 0.005	0.01	0.06	65.1
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	< 0.005	0.07	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	14.8	14.8	< 0.005	< 0.005	0.02	15.0
Vendor	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	10.3	10.3	< 0.005	< 0.005	0.01	10.8
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.19. Electrical Equipment Assembly (2027) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.96	0.80	6.60	5.92	0.01	0.27	—	0.27	0.25	—	0.25	—	1,458	1,458	0.06	0.01	—	1,463
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.96	0.80	6.60	5.92	0.01	0.27	—	0.27	0.25	—	0.25	—	1,458	1,458	0.06	0.01	—	1,463
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.35	0.29	2.37	2.12	0.01	0.10	—	0.10	0.09	—	0.09	—	523	523	0.02	< 0.005	—	525
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.06	0.05	0.43	0.39	< 0.005	0.02	—	0.02	0.02	—	0.02	—	86.6	86.6	< 0.005	< 0.005	—	86.9
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.31	0.31	0.20	4.24	0.00	0.00	0.81	0.81	0.00	0.19	0.19	—	874	874	0.01	0.03	2.89	887
Vendor	0.01	< 0.005	0.09	0.04	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	< 0.005	—	55.4	55.4	< 0.005	0.01	0.12	58.0
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.29	0.25	0.26	3.11	0.00	0.00	0.81	0.81	0.00	0.19	0.19	—	777	777	0.02	0.03	0.08	787
Vendor	0.01	< 0.005	0.10	0.04	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	< 0.005	—	55.4	55.4	< 0.005	0.01	< 0.005	57.9
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.10	0.09	0.08	1.14	0.00	0.00	0.28	0.28	0.00	0.07	0.07	—	286	286	0.01	0.01	0.45	290
Vendor	< 0.005	< 0.005	0.03	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	19.9	19.9	< 0.005	< 0.005	0.02	20.8
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.02	0.21	0.00	0.00	0.05	0.05	0.00	0.01	0.01	—	47.4	47.4	< 0.005	< 0.005	0.07	48.0
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	3.29	3.29	< 0.005	< 0.005	< 0.005	3.44
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

4. Operations Emissions Details

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Linear, Drainage, Utilities, & Sub-Grade	Linear, Drainage, Utilities, & Sub-Grade	6/16/2027	7/22/2027	5.00	27.0	—
Linear, Paving	Linear, Paving	7/16/2027	8/12/2027	5.00	20.0	—
Demolition	Demolition	1/1/2026	4/23/2026	5.00	81.0	—
Grading, Drainage and Access Road	Grading	4/24/2026	8/7/2026	5.00	76.0	—

Fencing and Retaining Wall	Building Construction	8/8/2026	10/30/2026	5.00	60.0	—
Civil Construction	Building Construction	11/1/2026	1/24/2027	5.00	60.0	—
Grounding, Conduit, Encasement	Building Construction	1/25/2027	4/19/2027	5.00	61.0	—
Steel Erection	Building Construction	4/20/2027	6/15/2027	5.00	41.0	—
Electrical Equipment Assembly	Building Construction	6/16/2027	12/15/2027	5.00	131	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Linear, Drainage, Utilities, & Sub-Grade	Scrapers	Diesel	Average	1.00	8.00	423	0.48
Linear, Drainage, Utilities, & Sub-Grade	Rough Terrain Forklifts	Diesel	Average	1.00	8.00	96.0	0.40
Linear, Drainage, Utilities, & Sub-Grade	Signal Boards	Electric	Average	2.00	8.00	6.00	0.82
Linear, Drainage, Utilities, & Sub-Grade	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37
Linear, Drainage, Utilities, & Sub-Grade	Graders	Diesel	Average	1.00	8.00	148	0.41
Linear, Drainage, Utilities, & Sub-Grade	Plate Compactors	Diesel	Average	1.00	8.00	8.00	0.43
Linear, Drainage, Utilities, & Sub-Grade	Pumps	Diesel	Average	1.00	8.00	11.0	0.74
Linear, Drainage, Utilities, & Sub-Grade	Air Compressors	Diesel	Average	1.00	8.00	37.0	0.48
Linear, Drainage, Utilities, & Sub-Grade	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Linear, Paving	Rollers	Diesel	Average	1.00	8.00	36.0	0.38
Linear, Paving	Paving Equipment	Diesel	Average	1.00	8.00	89.0	0.36

Linear, Paving	Pavers	Diesel	Average	1.00	8.00	81.0	0.42
Linear, Paving	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37
Linear, Paving	Signal Boards	Electric	Average	2.00	8.00	6.00	0.82
Demolition	Excavators	Diesel	Average	2.00	8.00	36.0	0.38
Demolition	Sweepers/Scrubbers	Diesel	Average	1.00	8.00	36.0	0.46
Demolition	Off-Highway Trucks	Diesel	Average	2.00	8.00	376	0.38
Demolition	Cranes	Diesel	Average	1.00	8.00	367	0.29
Demolition	Tractors/Loaders/Backhoes	Diesel	Average	2.00	8.00	84.0	0.37
Demolition	Crushing/Proc. Equipment	Gasoline	Average	1.00	8.00	12.0	0.85
Demolition	Generator Sets	Diesel	Average	1.00	8.00	20.0	0.74
Demolition	Air Compressors	Diesel	Average	2.00	8.00	49.0	0.48
Grading, Drainage and Access Road	Graders	Diesel	Average	2.00	8.00	148	0.41
Grading, Drainage and Access Road	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37
Grading, Drainage and Access Road	Scrapers	Diesel	Average	2.00	8.00	423	0.48
Grading, Drainage and Access Road	Sweepers/Scrubbers	Diesel	Average	1.00	8.00	36.0	0.46
Grading, Drainage and Access Road	Off-Highway Trucks	Diesel	Average	2.00	8.00	376	0.38
Grading, Drainage and Access Road	Plate Compactors	Diesel	Average	2.00	8.00	8.00	0.43
Grading, Drainage and Access Road	Bore/Drill Rigs	Diesel	Average	1.00	8.00	83.0	0.50
Grading, Drainage and Access Road	Cranes	Diesel	Average	1.00	8.00	367	0.29
Grading, Drainage and Access Road	Generator Sets	Diesel	Average	1.00	8.00	20.0	0.74

Fencing and Retaining Wall	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37
Fencing and Retaining Wall	Sweepers/Scrubbers	Diesel	Average	1.00	8.00	36.0	0.46
Fencing and Retaining Wall	Off-Highway Trucks	Diesel	Average	2.00	8.00	376	0.38
Fencing and Retaining Wall	Skid Steer Loaders	Diesel	Average	3.00	8.00	71.0	0.37
Fencing and Retaining Wall	Rollers	Diesel	Average	1.00	8.00	36.0	0.38
Civil Construction	Generator Sets	Diesel	Average	2.00	8.00	20.0	0.74
Civil Construction	Welders	Diesel	Average	1.00	8.00	46.0	0.45
Civil Construction	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37
Civil Construction	Sweepers/Scrubbers	Diesel	Average	1.00	8.00	36.0	0.46
Civil Construction	Dumpers/Tenders	Diesel	Average	4.00	4.00	16.0	0.38
Civil Construction	Off-Highway Trucks	Diesel	Average	3.00	8.00	376	0.38
Civil Construction	Bore/Drill Rigs	Diesel	Average	2.00	8.00	83.0	0.50
Grounding, Conduit, Encasement	Tractors/Loaders/Backhoes	Diesel	Average	6.00	8.00	84.0	0.37
Grounding, Conduit, Encasement	Sweepers/Scrubbers	Diesel	Average	1.00	8.00	36.0	0.46
Grounding, Conduit, Encasement	Off-Highway Trucks	Diesel	Average	1.00	8.00	376	0.38
Grounding, Conduit, Encasement	Rollers	Diesel	Average	2.00	8.00	36.0	0.38
Steel Erection	Forklifts	Diesel	Average	1.00	8.00	82.0	0.20
Steel Erection	Generator Sets	Diesel	Average	1.00	8.00	20.0	0.74
Steel Erection	Cranes	Diesel	Average	1.00	8.00	367	0.29
Steel Erection	Welders	Diesel	Average	1.00	8.00	46.0	0.45
Steel Erection	Sweepers/Scrubbers	Diesel	Average	1.00	8.00	36.0	0.46
Steel Erection	Off-Highway Trucks	Diesel	Average	2.00	8.00	376	0.38

Steel Erection	Aerial Lifts	Diesel	Average	2.00	8.00	46.0	0.31
Electrical Equipment Assembly	Generator Sets	Diesel	Average	2.00	8.00	20.0	0.74
Electrical Equipment Assembly	Cranes	Diesel	Average	1.00	8.00	367	0.29
Electrical Equipment Assembly	Sweepers/Scrubbers	Diesel	Average	1.00	8.00	36.0	0.46

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Demolition	—	—	—	—
Demolition	Worker	80.0	14.3	LDA,LDT1,LDT2
Demolition	Vendor	2.00	8.80	HHDT,MHDT
Demolition	Hauling	10.2	20.0	HHDT
Demolition	Onsite truck	—	—	HHDT
Grading, Drainage and Access Road	—	—	—	—
Grading, Drainage and Access Road	Worker	80.0	14.3	LDA,LDT1,LDT2
Grading, Drainage and Access Road	Vendor	2.00	8.80	HHDT,MHDT
Grading, Drainage and Access Road	Hauling	77.3	20.0	HHDT
Grading, Drainage and Access Road	Onsite truck	—	—	HHDT
Fencing and Retaining Wall	—	—	—	—
Fencing and Retaining Wall	Worker	40.0	14.3	LDA,LDT1,LDT2
Fencing and Retaining Wall	Vendor	10.0	8.80	HHDT,MHDT
Fencing and Retaining Wall	Hauling	0.00	20.0	HHDT
Fencing and Retaining Wall	Onsite truck	—	—	HHDT
Civil Construction	—	—	—	—
Civil Construction	Worker	80.0	14.3	LDA,LDT1,LDT2

Civil Construction	Vendor	6.00	8.80	HHDT,MHDT
Civil Construction	Hauling	0.00	20.0	HHDT
Civil Construction	Onsite truck	—	—	HHDT
Grounding, Conduit, Encasement	—	—	—	—
Grounding, Conduit, Encasement	Worker	80.0	14.3	LDA,LDT1,LDT2
Grounding, Conduit, Encasement	Vendor	14.0	8.80	HHDT,MHDT
Grounding, Conduit, Encasement	Hauling	0.00	20.0	HHDT
Grounding, Conduit, Encasement	Onsite truck	—	—	HHDT
Linear, Drainage, Utilities, & Sub-Grade	—	—	—	—
Linear, Drainage, Utilities, & Sub-Grade	Worker	80.0	14.3	LDA,LDT1,LDT2
Linear, Drainage, Utilities, & Sub-Grade	Vendor	2.00	8.80	HHDT,MHDT
Linear, Drainage, Utilities, & Sub-Grade	Hauling	33.3	20.0	HHDT
Linear, Drainage, Utilities, & Sub-Grade	Onsite truck	—	—	HHDT
Linear, Paving	—	—	—	—
Linear, Paving	Worker	80.0	14.3	LDA,LDT1,LDT2
Linear, Paving	Vendor	2.00	8.80	HHDT,MHDT
Linear, Paving	Hauling	0.00	20.0	HHDT
Linear, Paving	Onsite truck	—	—	HHDT
Steel Erection	—	—	—	—
Steel Erection	Worker	80.0	14.3	LDA,LDT1,LDT2
Steel Erection	Vendor	20.0	8.80	HHDT,MHDT
Steel Erection	Hauling	0.00	20.0	HHDT
Steel Erection	Onsite truck	—	—	HHDT
Electrical Equipment Assembly	—	—	—	—
Electrical Equipment Assembly	Worker	80.0	14.3	LDA,LDT1,LDT2

Electrical Equipment Assembly	Vendor	2.00	8.80	HHDT,MHDT
Electrical Equipment Assembly	Hauling	0.00	20.0	HHDT
Electrical Equipment Assembly	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
Grounding, Conduit, Encasement	0.00	0.00	15,000	5,000	25,561

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (Cubic Yards)	Material Exported (Cubic Yards)	Acres Graded (acres)	Material Demolished (Building Square Footage)	Acres Paved (acres)
Linear, Drainage, Utilities, & Sub-Grade	—	7,200	1.12	0.00	—
Demolition	0.00	0.00	0.00	71,580	—
Grading, Drainage and Access Road	47,000	—	228	0.00	—

5.6.2. Construction Earthmoving Control Strategies

Control Strategies Applied	Frequency (per day)	PM10 Reduction	PM2.5 Reduction
Water Exposed Area	2	61%	61%
Water Demolished Area	2	36%	36%

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
General Light Industry	0.00	0%
Other Asphalt Surfaces	1.43	100%
Other Non-Asphalt Surfaces	8.35	0%
Road Construction	1.12	100%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2027	117	375	0.01	< 0.005
2026	0.00	375	0.01	< 0.005

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

Cal-Adapt midcentury 2040–2059 average projections for four hazards are reported below for your project location. These are under Representation Concentration Pathway (RCP) 8.5 which assumes GHG emissions will continue to rise strongly through 2050 and then plateau around 2100.

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	20.2	annual days of extreme heat
Extreme Precipitation	6.00	annual days with precipitation above 20 mm
Sea Level Rise	0.00	meters of inundation depth
Wildfire	0.00	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (Radke et al., 2017, CEC-500-2017-008), and consider inundation location and depth for the San Francisco Bay, the Sacramento-San Joaquin River Delta and California coast resulting different increments of sea level rise coupled with extreme storm events. Users may select from four scenarios to view the range in potential inundation depth for the grid cell. The four scenarios are: No rise, 0.5 meter, 1.0 meter, 1.41 meters
Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	N/A	N/A	N/A	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A

Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	N/A	N/A	N/A	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	47.0
AQ-PM	39.2
AQ-DPM	85.6
Drinking Water	16.8
Lead Risk Housing	81.9
Pesticides	54.3
Toxic Releases	31.5
Traffic	85.4
Effect Indicators	—
CleanUp Sites	100.0
Groundwater	98.0
Haz Waste Facilities/Generators	98.9
Impaired Water Bodies	97.5
Solid Waste	91.8
Sensitive Population	—
Asthma	97.6
Cardio-vascular	76.4
Low Birth Weights	100
Socioeconomic Factor Indicators	—
Education	63.9
Housing	56.0
Linguistic	8.49
Poverty	98.7
Unemployment	99.8

7.2. Healthy Places Index Scores

The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Economic	—
Above Poverty	—
Employed	—
Median HI	—
Education	—
Bachelor's or higher	—
High school enrollment	—
Preschool enrollment	—
Transportation	—
Auto Access	—
Active commuting	—
Social	—
2-parent households	—
Voting	—
Neighborhood	—
Alcohol availability	—
Park access	—
Retail density	—
Supermarket access	—
Tree canopy	—
Housing	—
Homeownership	—
Housing habitability	—
Low-inc homeowner severe housing cost burden	—
Low-inc renter severe housing cost burden	—

Uncrowded housing	—
Health Outcomes	—
Insured adults	—
Arthritis	3.2
Asthma ER Admissions	17.3
High Blood Pressure	0.9
Cancer (excluding skin)	66.1
Asthma	0.4
Coronary Heart Disease	2.1
Chronic Obstructive Pulmonary Disease	0.3
Diagnosed Diabetes	1.0
Life Expectancy at Birth	0.0
Cognitively Disabled	0.1
Physically Disabled	0.8
Heart Attack ER Admissions	33.9
Mental Health Not Good	0.6
Chronic Kidney Disease	2.7
Obesity	0.0
Pedestrian Injuries	0.0
Physical Health Not Good	0.4
Stroke	1.2
Health Risk Behaviors	—
Binge Drinking	84.3
Current Smoker	0.0
No Leisure Time for Physical Activity	7.0
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	0.0

Children	3.5
Elderly	95.0
English Speaking	0.0
Foreign-born	0.0
Outdoor Workers	73.7
Climate Change Adaptive Capacity	—
Impervious Surface Cover	25.0
Traffic Density	0.0
Traffic Access	59.5
Other Indices	—
Hardship	0.0
Other Decision Support	—
2016 Voting	0.0

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	99.0
Healthy Places Index Score for Project Location (b)	—
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	Yes
Project Located in a Low-Income Community (Assembly Bill 1550)	Yes
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

a: The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.
b: The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

Screen	Justification
Land Use	On-site building and other development + off-site linear trenching based on Project Description and data inputs from project team. Off-site linear trenching for electrical.
Construction: Construction Phases	Linear work for utility transmission line in existing right-of-way,
Construction: Off-Road Equipment	Project-specific equipment. Linear work for utility transmission line in existing right-of-way.
Construction: Trips and VMT	Estimating up to 40 workers daily in each phase.
Operations: Vehicle Data	Project-specific weekday trip per day.
Operations: Fleet Mix	Project operation vehicles are to be only light-heavy-duty trucks.
Operations: Energy Use	No electricity consumption
Operations: Water and Waste Water	No water consumption
Operations: Solid Waste	No solid waste generation
Operations: Refrigerants	Remotely operated building
Construction: Dust From Material Movement	—

APPENDIX C
BIOLOGICAL RESOURCES REPORT

CEQA Biological Resources
SMUD Substation J
Sacramento County, California




Prepared For: Jeff Thomas
AECOM
300 Lakeside Dr., Suite 400
Oakland, CA 94612

Report Date: August 2023

BARGAS

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Review Team:	Jinnah Benn, Dustin Baumbach, and Linda Nations
Recommended Citation:	Bargas. 2023. DRAFT CEQA Biological Resources – Substation J, Sacramento, California. Prepared for AECOM. August 2023

Table of Contents

List of Figures

List of Tables

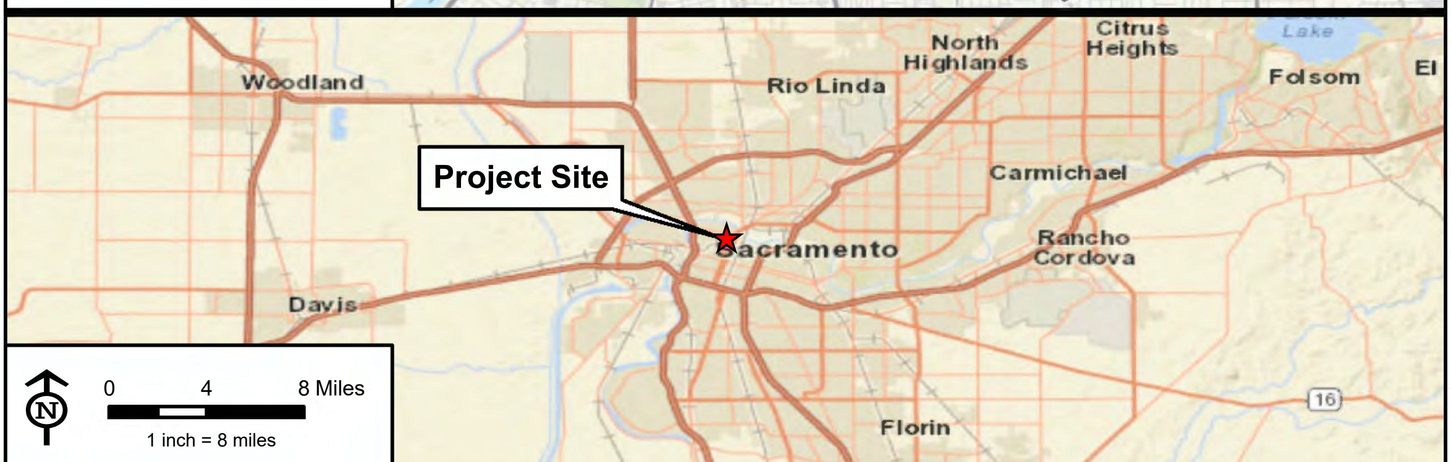
Appendices

1 Introduction

Bargas Environmental Consulting, LLC (Bargas) has prepared this CEQA Biological Resources section on behalf of AECOM. Sacramento Municipal Utility District (SMUD) proposes to develop new energy infrastructure in anticipation of planned development north of downtown Sacramento. This document analyzes the potential biological effects of that proposal consistent with the California Environmental Quality Act (CEQA).

1.1 Project Location

The Project site is 10.28 acres located at 1220 North B Street in the City of Sacramento, Sacramento County, California just north of the city center. The Project site is bordered by North B Street to the north, North 14th Street to the east, Union Pacific Railroad tracks to the south, and North 12th Street to the west. There are currently two buildings on site, one being an approximately 5,580 square foot single story maintenance shop building and the other an approximately 66,000 square foot single story distribution warehouse with loading docks and office space. Both buildings are situated towards the front of the property along North B Street. The rear of the property consists of approximately 3.9 acres of yard storage and is adjacent to railroad tracks. The zoning designation of the property is C-4 – SPD, Heavy Commercial – Special Planning District. There is currently an easement for North A Street that partially bisects the property. In addition to the 10.28-acre site, a 115 kV line is proposed to run northwest along N Street for approximately 0.5 mile to connect to an existing line. Another 115 kV line is proposed to run a short distance southeast on A Street before turning and running northeast for one block on Ahern Street. The line would then turn southeast again for approximately 0.25 mile along North B Street before turning northeast for approximately 0.17 mile. The line would then cut east across an undeveloped lot for approximately 0.20 mile to connect to an existing line (**Figures 1 & 2**). An alternative route for the second line is also shown on Figure 2.



Source: ESRI ArcGIS Online Basemap - World Topographic Map, World Street Map

BARGAS Environmental Consulting

Public Land Survey System (PLSS):
Mount Diablo Meridian,Township 9N, Range 4E, Section 00

USGS Quad(s): Sacramento East (2021)

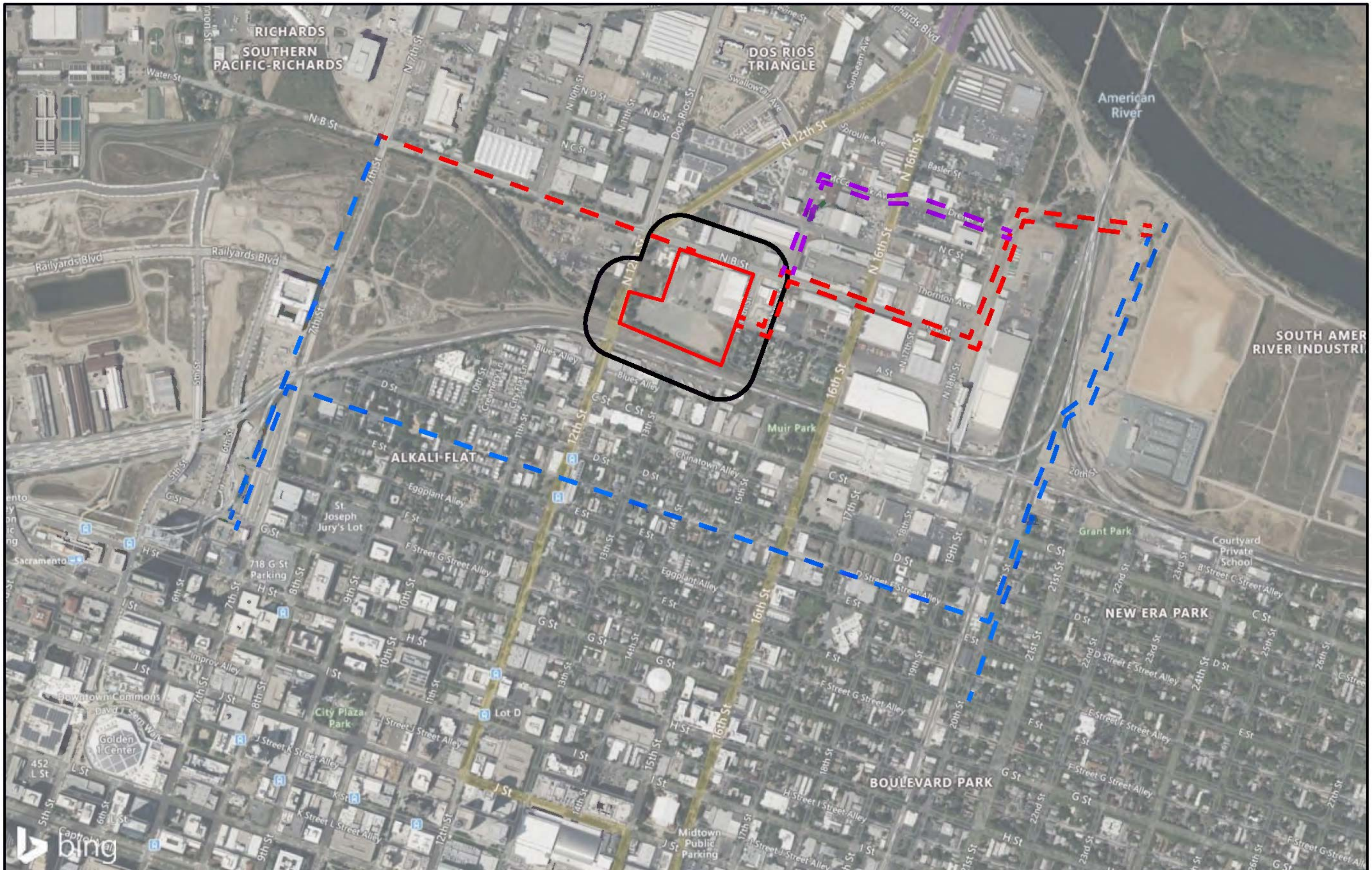
Watershed: Lower Sacramento (18020163)

Project Site Coordinates: - 10S 631976 4272261

Figure 1
Project Site and Vicinity

Station J

Map Created: 7/14/2023, Created By: Dustin Baumbach, Map Revised: N/A, Bargas Project Number: 1216-19



Source: Bing Maps Hybrid

0 500 1,000 Feet

1 inch = 1,000 feet

BARGAS Environmental Consulting

Site

Biological Study Area

Proposed Transmission Line

Alternate Transmission Line

Existing Transmission Line

Figure 2
Study Area

Station J

Map Created: 7/14/2023, Created By: Dustin Baumbach, Map Revised: NA, Bargas Project Number: 1216-19

1.2 Project Description

The project will require the construction of new infrastructure to include sizing for five 40 MVA 115/21kV transformers (200 MVA). Initial installation of two 40 MVA transformers is anticipated to occur by 2030. Timing is based on load growth and the 2030 City of Sacramento Water Treatment Plant expansion which is projected to include approximately 17 MW demand based upon current load factors. The site includes space for expansion as future needs are identified. The project may include up to eight miles of overhead and/or underground 115 kV and 21 kV connections into the substation from nearby existing SMUD facilities and infrastructure.

1.3 Definitions

This report will use the following definitions for areas referred to herein:

- **Project site:** The Project site is defined as the 10.28 acres being analyzed for Project entitlements. In addition, the 115 kV transmission lines shown as “Proposed” and “Alternative” on Figure 2 are included in the Project site.
- **Biological Study Area:** The Biological Study Area is defined as the Project site and a 250-foot buffer. This is the area within which biological resources were fully analyzed.
- **Regional Study Area:** The Regional Study Area is defined as the Project site and a 1.5-mile buffer. The regional study area was used as a basis for determining special status biological resource records for consideration in this report.

1.4 Summary of CEQA Findings

In **Section 5** of this Assessment, the following conclusions are drawn regarding the potential effects of the Project under CEQA when considering all adverse effects, as well as avoidance and minimization measures:

- The Project will not have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations by the California Department of Fish and Wildlife (CDFW) or U.S. Fish and Wildlife Service (USFWS).
- The Project will not have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the CDFW and USFWS.
- The Project will not have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.
- The Project will not interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established 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.
- The Project will not conflict with any local policies or ordinances protecting biological resources, such as tree preservation policy or ordinance.
- The Project will not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

2 Regulatory Setting

2.1 Federal

2.1.1 Federal Endangered Species Act

The Federal Endangered Species Act (FESA) is the federal government's regulations protecting rare and declining plant and wildlife species. FESA is jointly implemented by the United States Fish and Wildlife Service (USFWS) and the National Marine Fisheries Service (NMFS, marine resources only). FESA protects species using the following status designations:

- A federally **endangered** species is a species of invertebrate, plant, or wildlife formally listed by the USFWS under FESA as facing extinction throughout all or a significant portion of its geographic range.
- A federally **threatened** species is one formally listed by the USFWS as likely to become endangered within the foreseeable future throughout all or a significant portion of its range.
- A **proposed** threatened or endangered species is one officially proposed by the USFWS for addition to the federal threatened or endangered species lists.
- **Candidate** species are "plants and animals for which the USFWS has sufficient information on their biological status and threats to propose them as endangered or threatened under FESA, but for which development of a proposed listing regulation is precluded by other higher priority listing activities" (USFWS 2023).

"Take" of a federally endangered or threatened species or its habitat is prohibited by federal law without a special permit. The term "take," under FESA, means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in such conduct. "Harm" is defined by the USFWS to encompass "an act which actually kills or injures wildlife. Such an act may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding or sheltering" (50 CFR § 17.3).

Section 10(a)(1)(B) of the FESA allows for take of a threatened or endangered species incidental to development activities once a Habitat Conservation Plan (HCP) has been prepared to the satisfaction of the USFWS and a Section 10(a) incidental take permit has been issued to an applicant. For federal projects (including those involving federal funding), Section 7 of the FESA allows for consultation between the affected agency and the USFWS to determine what measures may be necessary to compensate for the incidental take of a listed species. A federal project is any project that is proposed by a federal agency or is at least partially funded or authorized by a federal agency. Additionally, if the listed species or its habitat occurs in a portion of the project subject to federal jurisdiction (such as waters of the United States by the United States Army Corps of Engineers under Section 404 of the Clean Water Act), then consultation under Section 7 of the FESA is usually permissible and may be required.

FESA also requires the USFWS to consider whether there are areas of habitat essential to conservation for each listed species. **Critical habitat** designations protect these areas, including habitat that is currently unoccupied but may be essential to the recovery of a species. An area is designated as critical habitat after the USFWS publishes a proposed Federal regulation in the Federal Register and then receives and considers public comments on the proposal. The final boundaries of critical habitat are officially designated when published in the Federal Register.

2.1.2 Migratory Bird Treaty Act

The Migratory Bird Treaty Act of 1918 (MBTA) is a federal law governing the taking, killing, possession, transportation, and importation of various birds, their eggs, parts, and nests. The take of any number of a bird species listed as protected on any one of four treaty lists is governed by the MBTA's regulation of taking migratory birds for educational, scientific, and recreational purposes and requiring harvest to be limited to levels that prevent over utilization. The MBTA also prohibits taking, possession, import, export, transport, selling, purchase, barter, or offering for sale, purchase or barter, certain bird species, their eggs, parts, and nests, except as authorized under a valid permit (50 CFR 21.11).

2.1.3 Clean Water Act of the United States

The regulatory setting with regards to aquatic resources is framed by current enabling legislation and case law. Under Section 404 of the Clean Water Act (CWA), the U.S. Army Corps of Engineers (USACE) regulates the discharge of dredged and fill materials into “waters of the U.S.” Jurisdictional waters of the U.S. include “territorial seas, and waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including waters which are subject to the ebb and flow of the tide; tributaries; lakes and ponds, and impoundments of jurisdictional waters; and adjacent wetlands” (33 Code of Federal Regulations [CFR] § 328.3). Certain waters of the U.S. are considered “special aquatic sites” because they are generally recognized as having ecological value; such sites include sanctuaries and refuges, wetlands, mudflats, vegetated shallows, and riffle and pool complexes (40 CFR § 230). Special aquatic sites are defined by the U.S. Environmental Protection Agency (USEPA) and may be afforded additional consideration in a project’s permit process. The USACE also regulates navigable waters under Section 10 of the Rivers and Harbors Act of 1899. Navigable waters are defined as “… those waters of the U.S. that… are presently used, or have been used in the past, or may be susceptible to use to transport interstate or foreign commerce” (33 CFR § 322.2). Projects that place fill in jurisdictional wetlands and non-wetland waters of the U.S. require a permit from the USACE under Section 404 of the CWA. The USACE issues nationwide permits for specific types of activities with minimal individual or cumulative adverse environmental impacts. Individual permits are required for large and/or complex projects or projects that exceed the impact threshold for nationwide permits. Recent federal rulemaking has modified how the USACE defines certain waters of the U.S. The most pertinent rules are summarized below.

The USEPA published a revised definition of "waters of the United States" on December 7, 2021 in response to President Biden’s Executive Order 13990 (86 Federal Register 7037) and after Pascua Yaqui Tribe v. EPA in which the U.S. District Court of the District of Arizona "vacated and remanded" the Navigable Waters Protection Rule (86 Federal Register 69372). The proposed revision was published in the Federal Register on January 18, 2023 and took effect on March 20, 2023. Due to ongoing litigation, the agencies are interpreting “waters of the United States” consistent with pre-2015 regulations and the Supreme Court cases of Rapanos v. United States and Carabell v. United States (USEPA 2008), meaning the USACE will assert jurisdiction over traditional navigable waters (TNW) and the following types of features are determined to have "significant nexus" to a TNW:

1. wetlands adjacent to TNWs,
2. non-navigable tributaries of TNWs that are relatively permanent where the tributaries typically flow year-round or have continuous flow at least seasonally, and
3. wetlands that directly abut non-navigable tributaries of TNWs.

2.2 State of California

2.2.1 California Environmental Quality Act

CEQA is a public disclosure process codified by California Public Resources Code 21000, requiring decision-makers to analyze the environmental impacts of a project, disclose those impacts to the public, and mitigate environmental impacts to the extent feasible. The state or local lead agency provides an evaluation of project effects on biological resources; determining the significance of those effects is guided by Appendix G of the CEQA guidelines. These evaluations must consider direct effects on a biological resource within the project site itself, indirect effects on adjacent resources, and cumulative effects within a larger area or region. Effects can be locally important but not significant according to CEQA if they would not substantially affect the regional population of the biological resource. Significant adverse impacts on biological resources would include the following:

- Substantial adverse effects on any species identified as candidate, sensitive, or special status in local or regional plans, policies, or regulations, or by the CDFW or the USFWS (these effects could be either direct or via habitat modification);
- Substantial adverse impacts to species designated by the CDFW as Species of Special Concern (SSC);
- Substantial adverse effects on riparian habitat or other sensitive habitat identified in local or regional plans, policies, or regulations or by CDFW and USFWS;
- Substantial adverse effects on federally protected wetlands defined under Section 404 of the CWA (these effects include direct removal, filling, or hydrologic interruption of marshes, vernal pools, coastal wetlands, or other wetland types);
- Substantial interference with movements of native resident or migratory fish or wildlife species population, or with use of native wildlife nursery sites;
- Conflicts with local policies or ordinances protecting biological resources (e.g., tree preservation policies); and;
- Conflict with provisions of an adopted HCP, Natural Community Conservation Plan (NCCP), or another approved local, regional, or state habitat conservation plan.

2.2.2 California Endangered Species Act

The California Endangered Species Act (CESA) prohibits the take of state-listed threatened and endangered species. Under CESA, state agencies are required to consult with CDFW when preparing CEQA documents. Under CESA, CDFW is responsible for maintaining a list of rare, threatened, and endangered species designated under state law (California Fish and Game Code [CFGC] § 2070-2079). CDFW also maintains lists of candidate species, SSC, and fully-protected species. Candidate species are those taxa that have been formally recognized by the CDFW and are under review for addition to the state threatened and endangered list. SSC are those taxa that are considered sensitive, and this list serves as a "watch list." The CDFW can authorize "take" if an incidental take permit is issued by the Secretary of the Interior or of Commerce in compliance with FESA, or if the director of the CDFW issues a permit under Section 2080 in those cases where it is demonstrated that the impacts are minimized and mitigated.

2.2.3 California Fish and Game Code

Section 1600 et seq. – Lake and Streambed Alteration Agreement. Section 1600 provides provisions for protecting riparian systems, including the bed, banks, and riparian habitat of lakes, seasonal and perennial streams, and rivers. This section requires an applicant to notify CDFW and obtain a Lake and Streambed Alteration Agreement (LSAA) if their project would divert or obstruct the natural flow of any river, stream, or lake; change the bed, channel, or bank of any river, stream, or lake; use material from any river, stream, or lake; or deposit or dispose of material into any river, stream, or lake.

Section 2050 et seq. – California Endangered Species Act. CESA establishes the policy of the state to conserve, protect, restore, and enhance threatened or endangered species and their habitats. CESA is administered by CDFW and prohibits the take of any species that the California Fish and Game Commission determines to be a threatened or endangered species. CESA also mandates that "state agencies should not approve projects as proposed which would jeopardize the continued existence of any endangered species or threatened species" if reasonable and prudent alternatives are available that would avoid jeopardy. CDFW administers CESA and authorizes take through CFGC Section 2081 Incidental Take Permits or through Section 2080.1. (For species also listed under FESA, consistency determination is with a USFWS Biological Opinion).

Section 3511 – Fully Protected Species. The legislature of the State of California designated certain species as "fully protected" prior to the creation of CESA. Section 3511 states that "fully protected" birds or parts thereof may not be taken or possessed at any time. Lists of fully protected species were initially developed to provide protection to those animals that were rare or faced possible extinction and included fish, mammals, amphibians and reptiles, and birds. Most fully protected species have since been listed as threatened or endangered under CESA and/or FESA.

Sections 3503, 3503.5, 3505, 3513 — Birds. These California Fish and Game Code sections protect all birds, including birds of prey, and nongame birds, as well as their eggs and nests, for species that are not already listed as fully protected and that occur naturally within the state. Sections 3503 and 3503.5 of the CFGC stipulate the following regarding eggs and nests: Section 3503 states that it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by CFGC or any regulation made pursuant thereto; and Section 3503.5 states that is it unlawful to take, possess, or destroy any birds in the orders Falconiformes or Strigiformes (birds-of-prey) or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by CFGC or any regulation adopted pursuant thereto. Section 3513 states that it is unlawful to take or possess any migratory nongame bird as designated in the MBTA or any part of such migratory nongame bird except as provided by rules and regulations adopted by the Secretary of the Interior under provisions of the MBTA.

2.2.4 California Native Plant Protection Act

The California Native Plant Protection Act of 1977 (CFGC § 1900-1913) affords the CDFW Commission the authority to designate native plants as endangered or rare and protect them from "take." The California Native Plant Society (CNPS) maintains a list of sensitive plant species native to California and assigns each a rank in the California Rare Plant Rank (CRPR) system defined below:

- List 1A: Plants presumed extirpated in California and either rare or extinct elsewhere;
- List 1B: Plants are rare, threatened, or endangered in California and elsewhere;

- List 2A: Plants presumed extirpated in California, but more common elsewhere;
- List 2B: Plant are rare, threatened, or endangered in California, but more common elsewhere;
- List 3: Plants about which more information is needed (on a review list);
- List 4: Plants of limited distribution (on a watch list).

This list is further defined as described below:

- 0.1: Seriously threatened in California, meaning there is a high degree (over 80% of occurrences) and immediacy of threat;
- 0.2: Moderately threatened in California, meaning there is a moderate degree (20-80% of occurrences) and immediacy of threat;
- 0.3: Not very threatened in California, meaning there is a low degree (less than 20% of occurrences) and immediacy of threat.

All plants on Lists 1 and 2 meet the standards for state listing under the CEQA Guidelines (14 CCR § 15380). CNPS recommends that plants on Lists 3 and 4 be evaluated for consideration under CEQA.

2.2.5 Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act of 1969 established the State Water Resources Control Board (SWRCB) and the nine Regional Water Quality Control Boards (RWQCB), collectively referred to as the Water Boards, and authorized them to provide oversight for water rights and water quality. It uses the National Pollutant Discharge Elimination System (NPDES) to monitor point source discharges into the waters of the State to prevent water quality degradation. It also protects wetlands, surface waters, and groundwater from both point and nonpoint sources of pollution.

2.2.6 State Wetland Definition and Procedures

The SWRCB adopted the State Wetland Definition and Procedures for Discharges or Fill Material to Waters of the State in 2019 and completed revisions to this set of procedures in 2021 (SWRCB 2021). Four major elements are included in these procedures as described below, in addition to procedures for the submittal, review and approval of CWA Section 401 permits not described in this report.

1. Wetland definition:

   An area is wetland if, under normal circumstances, (1) the area has continuous or recurrent saturation of the upper substrate caused by groundwater, or shallow surface water, or both; (2) the duration such saturation is sufficient to cause anaerobic conditions in the upper substrate; and 3) the area's vegetation is dominated by hydrophytes or the area lacks vegetation.

2. Framework for determining waters of the state:

   Waters of the state are broadly defined by the Porter-Cologne Water Quality Control Act as "any surface water or groundwater, including saline waters, within the boundaries of the state." The 2021 procedures expand upon this definition to clearly include natural wetlands, wetlands created by modification of a surface water of the state, and artificial wetlands meeting specific criteria.

The criteria for an artificial wetland include wetlands created for agency-approved compensatory mitigation; those identified in a water quality control plan; and those greater than or equal to one acre in size unless they are constructed and maintained for wastewater treatment or disposal, sediment settling, stormwater permitting program pollutant or runoff management, surface water treatment, agricultural crop irrigation or stock watering, fire suppression, industrial processing and cooling, active surface mining, log storage, recycled water management, maximizing groundwater recharge, or rice paddies.

3. Wetland delineation procedures:

   USACE-defined procedures for aquatic resources delineation (USACE 1987; USACE 2008, USACE 2010) used to assess the presence or absence of hydrophytic vegetation, hydric soils, and wetland hydrology are required by the SWRCB to delineate waters of the state, with one modification being that "the lack of vegetation does not preclude the determination of such an area that meets the definition of wetland."

2.3 Local Policies and Ordinances

The Project site is located in Sacramento County and is subject to the following local and regional regulations.

2.3.1 City of Sacramento 2035 General Plan

The City of Sacramento 2035 General Plan is a set of goals, objectives, policies, implementation measures, and maps that form a blueprint for physical development in the County. The General Plan contains numerous goals, policies, and strategies to protect and/or preserve biological resources.

Part 2 of the General Plan identifies the Citywide Goals and Policies as they relate to utilities with the goal of ensuring access to water, wastewater, stormwater drainage, solid waste, energy, and telecommunications systems as the city grows and develops.

The Project falls within the Central City Community plan which has no policies specific to utilities beyond the Utilities Element in Part 2 of the General Plan.

2.3.2 Sacramento County Code Chapter 19.12: Tree Preservation and Protection

Sacramento County has adopted a tree preservation and protection ordinance to prevent the loss of native oak trees. For the purposes of this ordinance, tree is defined as:

> *Any living native oak tree having at least one trunk of six inches or more in diameter measured four and one-half feet above the ground, or a multi-trunked native oak tree having an aggregate diameter of ten inches or more, measured four and one-half feet above the ground.*

The majority of the oak woodland in Sacramento County has been cleared for agricultural and development uses and constitutes a fraction of what existed prior to the arrival of Europeans to the region. The County Tree Preservation and Protection Ordinance states that "it shall be the policy of the County to preserve all trees possible through its development review process" (SCC 480 § 1, 1981). The intent of the policy is to enhance the natural beauty of the area, sustain potential property values associated with oak woodlands, and preserve the natural ecology of the region. Oak woodlands are important ecosystems in the Sacramento Valley which provide unique ecological services including topsoil retention and the mitigation of extreme temperatures and poor air quality.

3 Methods

This Assessment is informed by data from a desktop analysis of the literature and numerous resource databases, as well as field surveys. The methods used to complete these surveys and desktop analyses are described below.

3.1 Desktop Review

Prior to conducting field surveys, Bargas conducted an initial review of literature and data sources to characterize biological conditions and to compile records of sensitive biological resources that could potentially occur in the Biological Study Area. The methods used for this analysis are described below.

3.1.1 Biological Setting

The biological setting includes terrain, hydrology, soils, land uses, and other features that support or inhibit biological resources in an area. In order to better understand the biological setting of the project, the following resources were reviewed in detail:

- U.S. Fish and Wildlife Service's *National Wetlands Inventory* (USFWS 2023) to determine if surface waters and wetlands have been mapped on or adjacent to the Biological Study Area.
- U.S. Geological Survey's *National Hydrography Dataset* (USGS 2023 to determine if hydrological features have been mapped on or adjacent to the Biological Study Area.
- U.S. Department of Agriculture National Resource Conservation Service *Web Soil Survey* (NRCS 2023 to map and describe soil(s) within the Biological Study Area.
- Google Earth Pro aerial map images of the Biological Study Area, including historical aerial images.

3.1.2 Special Status Species & Habitats

It is important to create a well-defined list of habitats and species that could reasonably be expected to occur on the Project site in order to analyze potential Project effects on biological resources effectively. The following describes how the list of potentially occurring special status biological resources was assembled.

3.1.2.1 Data Sources

Species and habitat occurrences were queried from the following resources:

- U.S. Fish and Wildlife Service's *Information for Planning and Consultation* portal (IPaC) (USFWS 2023) for a list of federally listed species and designated critical habitat recommended for impact analysis consideration, based on an upload of the Biological Study Area limits.
- California Department of Fish and Wildlife's *California Natural Diversity Database* (CNDDB) (CDFW 2023) for special status species and habitat records within the Regional Study Area.
- California Native Plant Society's *Inventory of Rare and Endangered Plants* (CNPS 2023) for a list of special status plant species occurrences within the USGS 7.5-minute quadrangles that overlap the Regional Study Area.

3.1.2.2 Special Status Designations Considered

A variety of agencies and respected non-profit organizations assess the conservation status of plant and wildlife species; however, not all are applicable to this Assessment. The following special status designations were considered when determining special status species to be discussed in this Assessment:

- **Federal Status:** Species listed as **Endangered (FE)** or **Threatened (FT)**, as well as species **Proposed as Endangered (FPE)**, **Proposed as Threatened (FPT)**, **Proposed for Delisting (FPD)**, and **Candidates (FC)** for listing under the FESA.
- **California Status:** Species listed as **Endangered (CE)** or **Threatened (CT)**, as well as species that are **Candidates** for **Endangered (CCE)** status, **Threatened (CCT)** status, or **Delisting (CCD)** under the California Endangered Species Act. Also considered are species listed as **Fully Protected (FP)** and **Species of Special Concern (SSC)**.
- **CNPS Status:** All California Rare Plant Ranks (CRPR) maintained by the CNPS *Inventory of Rare and Endangered Plants*.
- **Vegetation Communities:** All vegetation communities mapped by the CNDDB.

3.1.3 Occurrence Potential

Following the desktop review, field surveys, and habitat analyses, Bargas assessed the potential for the occurrence of special status species in the Biological Study Area. Biological conditions (vegetation communities, wildlife habitats, disturbances, etc.) and the habitat and life cycle requirements of special status species identified for analysis in the desktop review were considered. “Recent” occurrences are defined as observed within the past 30 years. Based on these considerations, species were assigned to the following categories:

- **Present:** Species is known to occur in Biological Study Area based on recent surveys, CNDDB (within 30 years), or other records.
- **High**: Species with known recent recorded occurrences/populations near the Biological Study Area and highly suitable habitat occurs within the Biological Study Area. Highly suitable habitat includes all necessary elements to support the species (e.g., elevation, hydrology, soils, cover, habitat type, food resources).
- **Moderate.** Species with known recent recorded occurrences/populations near the Biological Study Area; however, habitat within the Biological Study Area has been moderately disturbed, fragmented, or is small in extent. Moderately suitable habitat includes several elements to support the species (e.g., elevation, hydrology, soils, cover, habitat type, food resources). Furthermore, moderately suitable habitat may also be located at the edge of the species’ range, or there are no reported occurrences nearby.
- **Low**. Species with few known recent recorded occurrences/populations near the Biological Study Area and habitat within the Biological Study Area is highly disturbed or extremely limited. A low potential is assigned to annual or perennial plant species that may have been detectable during a focused survey in the appropriate blooming period but was not found; however, small populations or scattered individuals are still considered to have a low potential to occur. Additionally, species for which poor-quality habitat may support the species within the Biological Study Area, but the reported extant range is far outside the Biological Study Area and/or any species observations would anticipate being migratory (i.e., not likely to reproduce within the Biological Study Area).

- **Presumed Absent/No Potential**. Focused surveys were conducted and the species was not detected, or the species was found in the desktop review but suitable habitat (soil, vegetation, elevational range) was not found in the BSA, or the BSA is not within the known geographic range of the species.

The potential for bird species were further distinguished into those that may: 1) nest within or near the Biological Study Area; 2) forage within or near the Biological Study Area; and/or 3) occur on or near the Biological Study Area only as transients during migratory flights or other dispersal events.

3.2 Field Surveys

Bargas biologists conducted one site visit on April 20, 2023, to assess/survey the existing conditions and biological resources in the Biological Study Area. These field surveys consisted of walking transects through the Project site and scanning adjacent areas within the Biological Study Area using binoculars. The entirety of the Project site and areas within the Biological Study Area accessible from public rights-of-way or visible from the Project site were evaluated for the presence of habitat components that could support special status plant and wildlife species identified during the literature and database review described above. The biological surveys conducted were comprehensive but do not equate to protocol-level surveys defined by regulating and/or resource protection agencies.

The surveys occurred within the typical nesting bird season (February 15 – August 31) and within the blooming period of all three special status plant species identified in the literature and database review.

3.3 Taxonomy and Nomenclature

Every effort was made to use naming standards that are recognized by the scientific community, with the understanding that – for many wildlife groups – scientists may not always agree on a standard source. Because of this, some common names used in this report may not be the same as those used by the underlying data sources for species records. Bargas maintains a yearly-updated reference species list which uses the following taxonomic sources:

- **Birds** – American Ornithological Society Check-list and Supplements (AOS 1998).
- **Mammals** – The reference list in the CDFW's California Wildlife Habitats Relationships Database (CDFW 2014), with updates based on the American Society of Mammologists Mammal Diversity Database (2020).
- **Reptiles and Amphibians** – The technical website californiaherps.com, which is regularly updated based on the latest taxonomic literature.
- **Fish** – Common and Scientific Names of Fishes from the United States, Canada, and Mexico, 7th edition (AFS 2013)
- **Invertebrates** – No naming standard was identified that was current and applicable to freshwater and terrestrial invertebrates. Names used by the underlying data sources when a species was first identified were retained.
- **Plants** – The Jepson eFlora (Jepson Flora Project 2021)

4 Existing Conditions

This section discusses in detail what is known about biological resources in the Biological Study Area based on information from field surveys, 17 CNDDB records, five CNPS records, and three IPaC records.

4.1 Biological Setting

Urban land comprises the majority of the Project footprint and surrounding area. Natural habitats are present along the eastern edge of the Project footprint and limited to non-native grassland areas and a mix of native and non-native trees in small numbers. There are no significant terrain features present in the Biological Study Area: elevations range from approximately 18 to 38 feet above mean sea level.

4.2 Habitats and Vegetation Communities

4.2.1 Extant Vegetation Communities

The following sections describe the vegetation communities and other landcover types found within the Biological Study Area. Plant community names follow *A Manual of California Vegetation: Second Edition* (CNPS 2023), where applicable. The majority of the Biological Study Area, including the Project site, is composed of semi-natural vegetation alliances. The forest/woodland communities described below contain an understory more typical of these semi-natural vegetation alliances. **Table 1** below provides a summary of the vegetation communities and land cover observed within the Biological Study Area.

Table 1. Vegetation Community Summary.

Common Name	Scientific Name	Acres (Approximate)
Perennial Rye Grass Fields	*Lolium perenne* Herbaceous Semi-Natural Alliance	0.30
Disturbed/Developed	Disturbed/Developed	9.38
Poison Hemlock or Fennel Patches	*Conium maculatum - Foeniculum vulgare* Herbaceous Semi-Natural Alliance	0.25
Upland Mustards or Star-thistle Fields	*Brassica nigra - Centaurea* (*solstitialis, melitensis*) Herbaceous Semi-Natural Alliance	0.10
Valley Oak Riparian Forest and Woodland	*Quercus lobata* Riparian Forest & Woodland Alliance	0.25
	Total	**10.28**

4.2.1.1 Perennial Rye Grass Fields

Perennial Rye Grass Fields (*Lolium perenne* [now *Festuca perennis*] Herbaceous Semi-Natural Alliance) can be found on 0.30 acres of the Biological Study Area. Historic aerial imagery and field observations suggest the vegetation in the yard storage area may not be regularly maintained for fire fuel abatement because it is located along the corners of the Project site. This vegetation community was observed within the yard storage behind the already established buildings. The dominant plant species observed in these areas was rye grass with smaller amounts of the following species also observed: perennial pepperweed (*Lepidium latifolium*), ripgut grass, little-seeded canary grass (*Phalaris minor*), and Johnson Grass (*Sorghum halepense*).

4.2.1.2 Upland Mustards or Star-thistle Fields

Upland Mustards or Star-thistle Fields (*Brassica nigra – Centaurea* [*solstitialis, melitensis*] Herbaceous Semi-Natural Alliance) can be found on 0.10 acres of the Biological Study Area. Historic aerial imagery and field observations suggest the vegetation in the yard storage area may not be regularly maintained for fire fuel abatement due to their locations along the corners of the Project site. This vegetation community was observed within the yard storage behind the already established buildings. The dominant plants species observed in these areas included black mustard (*Brassica nigra*), jointed charlock (*Raphanus raphinastrum*), little mallow (*Malva parviflora*), bristly ox-tongue (*Helminthotheca echioides*), and ripgut grass (*Bromus diandrus*).

4.2.1.3 Developed/Disturbed

Developed/disturbed land cover can be found on 9.38 acres of the Biological Study Area. Historic aerial imagery and field observations show there is a parking lot for the existing buildings. Additionally, the yard storage has been cleared of most vegetation and replaced with gravel for vehicle storage. The Project site is surrounded by industrial warehouses on the western, northern, and eastern site boundary. There are railroad tracks on the southern boundary of the Project site.

4.2.1.4 Poison Hemlock or Fennel Patches

Poison Hemlock or Fennel Patches (*Conium maculatum – Foeniculum vulgare* Herbaceous Semi-Natural Alliance) can be found on 0.25 acres of the Biological Study Area. Historic aerial imagery and field observations suggest the vegetation in the yard storage area may not be managed for fire fuel abatement due to their locations along the corners of the Project site. The dominant plant species observed in these areas include poison hemlock (*Conium maculatum*), fennel (*Foeniculum vulgare*), milk thistle (*Silybum marianum*), wild teasel (*Dipsacus fullonum*), little mallow (*Malva parviflora*), and ripgut grass.

4.2.1.5 Valley Oak Riparian Forest Woodland

Valley Oak Riparian Forest Woodland (*Quercus lobata* Riparian Forest and Woodland Alliance) can be found on 0.25 acres of the Biological Study Area. Aerial imagery and field observations show trees located along the edges of the yard storage area, as well as within the adjacent housing development to the east of the Project site, and along the railroad tracks. Trees within the biological study area are approximately 20 – 40 feet in height.

4.2.2 Sensitive Vegetation Communities

The Biological Study Area contains no vegetation community alliances identified by CDFW and CNPS as sensitive communities (CNPS 2023). A total of one sensitive vegetation community was mapped by the CNDDB within the Regional Study Area. These communities and their potential for occurrence are discussed below:

- **Elderberry Savana**

  The River District Specific Plan Area Habitat Type Map shows a strip of Elderberry Savana habitat in the area where the transmission line would cross from North 18th street east to connect to an existing line.

- **Great Valley Cottonwood Riparian Forest**
  One CNDDB record is within the Regional Study Area. Potential for Occurrence: None. Nearest CNDDB record is approximately 1.0 mile to the south along the Sacramento River. The community is not present on the Project site or Biological Study Area based on aerial photography and surveys.

4.3 Plants

4.3.1 Plant Diversity

A total of 28 plant taxa were detected during field surveys. A list of all plant taxa detected during field surveys is provided in **Appendix A**. Of the species detected, only six are native to California and 22 are considered non-native species. More than 90 per cent of the Biological Study Area is disturbed, consisting of paved and gravel parking lot or covered by existing structures. Plant communities present are composed of semi-natural vegetation alliances which are dominated by non-native species. The understory of the forest/woodland alliances described above are dominated by non-native species.

4.3.2 Special Status Plants

The desktop review determined that three plant taxa with special status had been documented as occurring within the Regional Study Area. These taxa and their occurrence potential are discussed below.

4.3.2.1 Taxa Confirmed Present

No special status plant taxa from desktop analysis were determined to be **Present** in the Biological Study Area.

4.3.2.2 Taxa With High Potential for Occurrence

No special status plant taxa from desktop analysis were determined to have **High** potential for occurrence in the Biological Study Area.

4.3.2.3 Taxa with Moderate Potential for Occurrence

No special status plant taxa from desktop analysis were determined to have **Moderate** potential for occurrence in the Biological Study Area.

4.3.2.4 Taxa with Low Potential for Occurrence

No special status plant taxa from desktop analysis were determined to have **Low** potential for occurrence in the Biological Study Area.

4.3.2.5 Taxa with No Potential for Occurrence

The following single special status plant taxa from desktop analysis was determined to have **No** potential for occurrence in the Biological Study Area.

Sanford's Arrowhead
Alismataceae > *Sagittaria sanfordii*
FESA: None, CESA: None, CRPR 1B.2

California Endemic:	True
Growth Habit:	Perennial rhizomatous herb (emergent) blooms May-Oct (Nov)
Habitat Requirements:	Marshes and swamps at elevations ranging from 0 to 2,135 feet.
Inclusion Source(s):	CNDDB, CNPS, HCP
CNDDB Records:	1
Nearest CNDDB Record:	> 3 Miles
Habitat Present:	None.
Soils Present:	Unknown

Determination Reason: Known to occur along roadside ditches and canals; however, no suitable habitat is present.

4.4 Wildlife

4.4.1 Wildlife Diversity

A total of five wildlife taxa were detected during field surveys including four bird species and one reptile species. A list of all wildlife taxa detected during field surveys is provided in **Appendix A**.

4.4.2 Special Status Wildlife

The desktop review determined that 13 wildlife taxa with special status had been documented as occurring within 1.5 miles of the Biological Study Area. These taxa and their occurrence potential are discussed below.

4.4.2.1 Taxa Confirmed Present

No special status wildlife taxa from desktop analysis were determined to be **Present** in the Biological Study Area.

4.4.2.2 Taxa With High Potential for Occurrence

No special status plant taxa from desktop analysis were determined to have **High** potential for occurrence in the Biological Study Area.

4.4.2.3 Taxa With Moderate Potential for Occurrence

No special status wildlife taxa from desktop analysis were determined to have **Moderate** potential for occurrence in the Biological Study Area.

4.4.2.4 Taxa With Low Potential for Occurrence

One special status wildlife taxa (valley elderberry longhorn beetle) from desktop analysis was determined to have **Low** potential for occurrence in the Biological Study Area.

Valley Elderberry Longhorn Beetle

Cerambycidae > *Desmocerus californicus dimorphus*

FESA: Threatened, CESA: None

Life History: Valley elderberry longhorn beetle (VELB) is a medium-sized beetle that is endemic to the Central Valley of California. The beetle is found only in association with its host plant, elderberry (*Sambucus* spp.), and originally occurred in elderberry thickets in moist valley oak woodland along the margins of the Sacramento and San Joaquin Rivers in the Central Valley of California. The habitat of this insect has now largely disappeared throughout much of its former range due to agricultural conversion, levee construction, and stream channelization. The clearing of undergrowth (including elderberry) and planting of lawns has resulted in further habitat degradation. *Source: https://ecos.fws.gov/ecp/species/7850*

Inclusion Source(s): CNDDB; IPaC

CNDDB Records: 8

Nearest CNDDB Record: > 1.0 Mile

Habitat Present: A small portion of the Study Area has been mapped as Elderberry Savana. Potential elderberry shrubs within the Project Area could provide low quality habitat for VELB.

Determination Reason: Numerous records along the American River to the north of the Project site. Elderberry shrubs are present on the adjacent property on the western edge of the Project site. These shrubs are isolated, not in a riparian area, and are not present in quantities that would support this species.

4.4.2.5 Taxa With No Potential for Occurrence

The following 13 special status wildlife taxa from desktop analysis were determined to have **No** potential for occurrence in the Biological Study Area.

- **Monarch - California Overwintering Population**

  Nymphalidae > *Danaus plexippus* pop. 1

  FESA: Candidate, CESA: None

  Life History: The iconic black and orange Monarch butterfly is known for its astonishing long-distance annual migration and reliance on milkweed as its obligate larval host plant. Though genetically similar, there are two subpopulations of Monarchs in North America, with the eastern population overwintering in Mexico and breeding in the midwestern states, and the western population overwintering in coastal California and fanning out across the west from Arizona to Idaho. Both North American migratory populations have declined over the past twenty years due to a suite of interrelated factors including habitat loss in breeding and overwintering sites, habitat degradation, disease, pesticide exposure, and climate change. Recently the western population has experienced dramatic swings, from a low of less than 2,000 in 2020-21 to over 200,000 in 2021-22. While it is unclear which of the many factors are driving these dynamics, insect populations commonly fluctuate from year to year. Though more research is needed, a stable population for western monarchs is likely closer to the historic averages in the 1980's, which are estimated to have ranged between one million to four million overwintering butterflies. *Source: https://wildlife.ca.gov/Conservation/Invertebrates/Monarch-Butterfly*

  Inclusion Source(s): IPaC

  CNDDB Records: None

  Nearest CNDDB Record: Unknown

  Habitat Present: Not Present

  Determination Reason: While Monarchs are widespread and likely occur as flyovers this sensitive status pertains to locations where they overwinter en masse. All known locations are coastal.

- **Swainson's Hawk**

  Accipitridae > *Buteo swainsoni*

  FESA: None, CESA: Threatened

Life History:	Uncommon breeding resident and migrant in the Central Valley, Klamath Basin, Northeastern Plateau, Lassen County, and Mojave Desert. Very limited breeding reported from Lanfair Valley, Owens Valley, Fish Lake Valley, and Antelope Valley. Breeds in stands with few trees in juniper-sage flats, riparian areas, and in oak savannah in the Central Valley. Forages in adjacent grasslands or suitable grain or alfalfa fields, or livestock pastures. In southern California, now mostly limited to a spring and fall transient. Formerly abundant in California with wider breeding range. Decline resulted in part from loss of nesting habitat. *Source: California Department of Fish and Wildlife. California Interagency Wildlife Task Group. 2014. CWHR version 9.0 personal computer program. Sacramento, CA.*
Inclusion Source(s):	CNDDB
CNDDB Records:	10
Nearest CNDDB Record:	> 1.0 Mile
Habitat Present:	Low Quality
Determination Reason:	The Project site is located within an urban area of Sacramento with few open spaces and trees to promote nesting behavior. There is potential for flyover occurrences, but nesting behavior within the Project site is unlikely.

Steelhead - Central Valley DPS

Salmonidae > *Oncorhynchus mykiss irideus* pop. 11

FESA: Threatened, CESA: None

Life History:	Steelhead and rainbow trout are the same species. In general, steelhead refers to the anadromous form of the species. Steelhead typically migrate to marine waters after spending two years in fresh water. They reside in marine waters for typically two or three years prior to returning to their natal stream to spawn as four- or five-year-olds. The Central Valley Distinct Population Segment, or DPS, includes naturally spawned anadromous O. mykiss (steelhead) originating below natural and manmade impassable barriers from the Sacramento and San Joaquin Rivers and their tributaries; excludes such fish originating from San Francisco and San Pablo Bays and their tributaries. Main threats to this DPS include habitat degradation and destruction, blockage of freshwater habitats, water allocation problems, the pervasive opportunity for genetic introgression resulting from widespread production of hatchery steelhead and the potential ecological interaction between introduced stocks and native stocks. *Source: https://www.fisheries.noaa.gov/west-coast/endangered-species-conservation/sacramento-river-winter-run-chinook-salmon*
Inclusion Source(s):	CNDDB
CNDDB Records:	2
Nearest CNDDB Record:	< 1.0 Mile

Habitat Present:	Not Present
Determination Reason:	Found in the Sacramento River 0.5 miles to the northwest. No riverine features exist on the Project site.

Longfin Smelt

Osmeridae > *Spirinchus thaleichthys*

FESA: Candidate, CESA: Threatened

Life History:	Longfin Smelt (*Spirinchus thaleichthys*) is a small fish in the family Osmeridae found along the Pacific Coast of the United States from Alaska to California. In California, Longfin Smelt is historically found in the San Francisco Estuary and the Sacramento/San Joaquin Delta (Bay-Delta), Humboldt Bay, and the estuaries of the Eel River and Klamath River. Spawning occurs from November through May, with a peak from February through April. The causes of decline from northern estuaries are not clearly known, but they are probably similar to those of the Bay-Delta, which include reduction in freshwater outflows, entrainment losses to water diversion, changes in food organisms, toxic substances, disease, competition, introduced species, and loss of genetic integrity. *Source: https://wildlife.ca.gov/Conservation/Fishes/Longfin-Smelt*
Inclusion Source(s):	CNDDB
CNDDB Records:	1
Nearest CNDDB Record:	> 1.0 Mile
Habitat Present:	Not Present
Determination Reason:	Occurs in the American River less than one mile west of the Project site. No appropriate riverine habitat is present on or near the Project site.

California Tiger Salamander

Ambystomatidae > *Ambystoma californiense*

FESA: Threatened, CESA: None

Life History:	Most commonly found in Annual Grassland habitat, but also occurs in the grassy understory of Valley-Foothill Hardwood habitats, and uncommonly along stream courses in Valley-Foothill Riparian habitats. The species occurs from near Petaluma, Sonoma County, east through the Central Valley to Yolo and Sacramento Counties, south to Tulare County, and from the vicinity of San Francisco Bay south to Santa Barbara County. They occur at elevations from 3.0 meters up to 1,054 meters (3,200 feet). *Source: California Department of Fish and Wildlife. California Interagency Wildlife Task Group. 2014. CWHR version 9.0 personal computer program. Sacramento, CA.*
Inclusion Source(s):	IPaC
CNDDB Records:	None

Nearest CNDDB Record:	Unknown
Habitat Present:	Not Present
Determination Reason:	The Project site does not contain suitable grassland or oak woodland habitat for this species.

Least Bell's Vireo

Vireonidae > *Vireo bellii pusillus*

FESA: Endangered, CESA: Endangered

Life History:	Formerly, a common and widespread summer resident below about 600 meters (2,000 feet) in western Sierra Nevada, throughout Sacramento and San Joaquin Valleys, and in the coastal valleys and foothills from Santa Clara County south. Also was common in coastal southern California from Santa Barbara County south, below about 1,200 meters (4,000 feet) east of the Sierra Nevada, in Owens and Benton Valleys, along Mojave River and other streams at the western edge of the southeastern deserts, and along the entire length of the Colorado River. Has declined drastically or vanished entirely throughout California range in recent decades, apparently from cowbird parasitism and habitat destruction and degradation. Now a rare, local, summer resident below about 600 meters (2,000 feet) in willows and other low, dense valley foothill riparian habitats and lower portions of canyons mostly in San Benito and Monterey Counties; in coastal southern California from Santa Barbara County south; and along the western edge of the deserts in desert riparian habitat.
Inclusion Source(s):	CNDDB
CNDDB Records:	1
Nearest CNDDB Record:	1.0 – 3.0 Miles
Habitat Present:	Not Present
Determination Reason:	Single CNDDB record is from 1877. There is no suitable habitat for this species on or near the Project site, and likely none within the Regional Study Area.

White-tailed Kite

Accipitridae > *Elanus leucurus*

FESA: None, CESA: Fully Protected

Life History:	Common to uncommon, yearlong resident in coastal and valley lowlands; rarely found away from agricultural areas. Inhabits herbaceous and open stages of most habitats mostly in cismontane California. Has extended range and increased numbers in recent decades. *Source: California Department of Fish and Wildlife. California Interagency Wildlife Task Group. 2014. CWHR version 9.0 personal computer program. Sacramento, CA.*
Inclusion Source(s):	CNDDB

CNDDB Records: 1

Nearest CNDDB Record: > 1.0 Mile

Habitat Present: Not Present

Determination Reason: No suitable habitat exists within the Project site to support foraging or nesting for this species.

Song Sparrow (Modesto Population)

Passerellidae > *Melospiza melodia*

FESA: None, CESA: Species of Special Concern

Life History: A common resident of most of California, but avoids higher mountains and occurs only locally in southern deserts. In winter, most leave montane habitats; more abundant and widespread then in lowlands and deserts. At all seasons, prefers riparian, fresh or saline emergent wetland, and wet meadow habitats. Breeds in riparian thickets of willows, other shrubs, vines, tall herbs, and in fresh or saline emergent vegetation. The Modesto Song Sparrow is endemic to California, where it resides only in the north-central portion of the Central Valley. Highest densities occur in the Butte Sink area of the Sacramento Valley and in the Sacramento–San Joaquin River Delta. *Source: https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=10461*

Inclusion Source(s): CNDDB

CNDDB Records: 1

Nearest CNDDB Record: Overlaps

Habitat Present: Not Present

Determination Reason: While populations have dropped by 90% from historical highs, this resident form of the Song Sparrow has been recorded in sparsely-vegetated margins of canals. No canals are present near the Project site. There is limited habitat to support nesting on the Project site.

Sacramento Splittail

Cyprinidae > *Pogonichthys macrolepidotus*

FESA: None, CESA: Species of Special Concern

Life History: Splittail are large cyprinids and are distinctive in having the upper lobe of the caudal fin larger than the lower lobe. The body shape is elongate with a blunt head. Small barbels may be present on either side of the subterminal mouth. Splittail depend both on brackish-water rearing habitats in the San Francisco Estuary and on floodplain and river-edge spawning habitats immediately above the estuary. Most migrate between these two habitat types on a near annual basis. The Sacramento splittail is endemic to California's Central Valley and was once distributed in lakes and rivers throughout the Central Valley. Threats include reduced outflow and estuary degradation due to damming, competition from invasive species,

	and habitat degradation from agricultural runoff. *Source: https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=104370*
Inclusion Source(s):	CNDDB
CNDDB Records:	1
Nearest CNDDB Record:	1.0 to 3.0 Miles
Habitat Present:	Not Present
Determination Reason:	Records mapped on the American River 1.0 mile west of the Project site. No appropriate riverine habitat is present on or near the Project site.

Purple Martin

Hirundinidae > *Progne subis*

FESA: None, CESA: Species of Special Concern

Life History:	An uncommon to rare, local summer resident in a variety of wooded, low-elevation habitats throughout the state; a rare migrant in spring and fall, absent in winter. Uses valley foothill and montane hardwood, valley foothill and montane hardwood-conifer, and riparian habitats. Also occurs in coniferous habitats, including closed-cone pine-cypress, ponderosa pine, Douglas-fir, and redwood. In the south, now only a rare and local breeder on the coast and in interior mountain ranges, with few breeding localities. Absent from higher desert regions except as a rare migrant. In the north, an uncommon to rare local breeder on the coast and inland to Modoc and Lassen Counties. Absent from higher slopes of the Sierra Nevada. Inhabits open forests, woodlands, and riparian areas in breeding season. Found in a variety of open habitats during migration, including grassland, wet meadow, and fresh emergent wetland, usually near water.
Inclusion Source(s):	CNDDB
CNDDB Records:	1
Nearest CNDDB Record:	> 1.0 Mile
Habitat Present:	Not Present
Determination Reason:	No suitable habitat exists on the Project site to support either foraging or nesting for this species.

Vernal Pool Fairy Shrimp

Branchinectidae > *Branchinecta lynchi*

FESA: Threatened, CESA: None

Life History:	The Vernal Pool Fairy Shrimp inhabits ephemeral pools with clear to tea-colored water. This species has been most commonly observed in grass- or mud-bottomed swales, earth sump, or basalt flow depression pools in unplowed grasslands. The Vernal Pool Fairy Shrimp has been collected from early December to early May. The water in pools inhabited by this species has a pH averaging 7.0; and

	low TDS, conductivity, alkalinity, and chloride. Although the Vernal Pool Fairy Shrimp is found at a number of sites, it is not abundant at any of them. It often occurs with other fairy shrimp species, but is never the numerically dominant one.
Inclusion Source(s):	IPaC
CNDDB Records:	None
Nearest CNDDB Record:	Unknown
Habitat Present:	Not Present
Determination Reason:	No suitable habitat is present on the Project site to support vernal pools.

Vernal Pool Tadpole Shrimp

Triopsidae > *Lepidurus packardi*

FESA: Endangered, CESA: None

Life History:	Vernal Pool Tadpole Shrimp inhabits vernal pools and swales containing clear to highly turbid water. The Vernal Pool Tadpole Shrimp is found at 14 vernal pool complexes in the Sacramento Valley from the Vina Plains in Butte County south of the Sacramento area in Sacramento County and west to the Jepson Prairie region of Salano County. The pools inhabited by the Vernal Pool Tadpole Shrimp range in size from five square meters (16.4 square feet) in the Mather Air Force Base area of Sacramento County to the 38 hectare (89 acre) Olcott Lake at Jepson Prairie. The pools at Jepson Prairie and Vina Plains have a neutral pH, and very low conductivity, TDS, and alkalinity. These pools are most commonly located in grass bottomed swales of unplowed grasslands in old alluvial soils underlain by hardpan, or in mud-bottomed pools containing highly turbid water. All pools known to be inhabited by this species are filled by winter and spring rains and may last until June.
Inclusion Source(s):	IPaC
CNDDB Records:	None
Nearest CNDDB Record:	Unknown
Habitat Present:	Not Present
Determination Reason:	No suitable habitat is present on the Project site to support vernal pools.

4.5 Other Considerations

4.5.1 Wildlife Movement

Effects on wildlife movement are an important consideration when assessing the potential anthropogenic effects of any project. At a small enough scale, any project or activity can potentially affect the movement of wildlife if any are present. In general, however, the term "wildlife movement corridor" means an area of habitat that is important for the movement of wildlife between larger habitat areas. Wildlife movement corridors are important for maintaining population levels and genetic diversity.

Wildlife require space to roam in search of food, shelter, mates, or for seasonal migration. Fragmentation of wildlife movement from human development can disrupt the normal flow of essential ecosystem functions. The extent of habitat movement requirements is dependent on the taxa and is crucial to the survival of many species. Overall wildlife movement has become restricted due to man-made barriers, such as roads, structures, development, walls or fencing, and even agricultural fields. It is particularly important to maintain habitat and landscape connectivity and wildlife movement between regional habitat blocks for wide-ranging and low-density mammalian carnivores that require a large home range for survival, including Bobcat (*Lynx rufus*), Coyote (*Canis latrans*), and Mountain Lion (*Puma concolor*).

The existing heavily disturbed land use is unlikely to provide a suitable wildlife movement corridor due to the extensive cover of paved/gravel parking lot within the Biological Study Area and the lack of connectivity to adjacent habitat. Photographs showing conditions within the Study Area during the field survey are provided in **Appendix B**. The Sacramento River riparian corridor is less than one mile from the site, but it is separated by extensive dense urban development.

4.5.2 Nesting Birds

Birds – including native species protected by the MBTA and CFGC – have the potential to nest in nearly any environment, including those heavily altered by anthropogenic activity. There is limited tree and shrub canopy along the edges of the Biological Study Area that may support nesting birds, though none were observed at the time of the survey.

5 CEQA Analysis: Effects and Minimization Measures

5.1 Types of Effects Analyzed

CEQA describes three types of potential project effects that are pertinent to biological resources and are analyzed in this Assessment:

- **Direct Effects:** Section 15064(d)(1) of the CEQA Guidelines describes a direct effect as "a physical change in the environment which is caused by and immediately related to the project." In the context of the proposed project described in this report, direct effects include adverse effects that would occur to plants, wildlife, and vegetation communities within or immediately adjacent to the proposed Project footprint and other work areas.
- **Indirect Effects:** Section 15064(d)(2) of the CEQA Guidelines describes an indirect effect as any "physical change in the environment, which is not immediately related to the project, but which is caused indirectly by the project. If a direct physical change in the environment, in turn, causes another change in the environment, then the other change is an indirect physical change in the environment." Indirect effects, also known as secondary effects, are reasonably foreseeable and caused by a project but occur at a different time or place. Examples of indirect effects pertinent to many development projects could include a change in drainage patterns that ultimately affect vegetation communities not otherwise affected by the project or a reduction in native wildlife species resulting from a decrease in habitat.

- **Cumulative Effects:** Section 15355 of the CEQA Guidelines describe a cumulative effect as "two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts." The CEQA Guidelines further state the following regarding cumulative effects:
    - The individual effects may be changes resulting from a single project or a number of separate projects.
    - The cumulative impact from several projects is the change in the environment which results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time.

  Section 15064 (h)(1) of CEQA Guidelines states that "the lead agency shall consider whether the cumulative impact is significant and whether the effects of the project are cumulatively considerable." 'Cumulatively considerable' means that the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, the effects of other current projects and the effects of probable future projects." Section 15064 (h)(2) states that "a lead agency may determine…that a project's contribution to a significant cumulative impact will be rendered less than cumulatively considerable and thus is not significant."

5.2 Thresholds of Significance

Appendix G of the CEQA Guidelines (as amended through January 2019) is frequently cited by public agencies to determine whether a project may have a significant impact on biological resources. Under Appendix G, a project may have a significant impact on biological resources if it would:

1. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations by the CDFW or USFWS.
2. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the CDFW or USFWS.
3. Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.
4. Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors or impede the use of native wildlife nursery sites.
5. Conflict with any local policies or ordinances protecting biological resources, such as tree preservation policy or ordinance.
6. Conflict with the provisions of an adopted HCP, NCCP, or other approved local, regional, or state habitat conservation plan.

5.3 Project Effects on Candidate, Sensitive, or Special Status Species

This section addresses the portion of the CEQA Guidelines requiring an assessment of whether the Project will *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 by the CDFW or USFWS.*

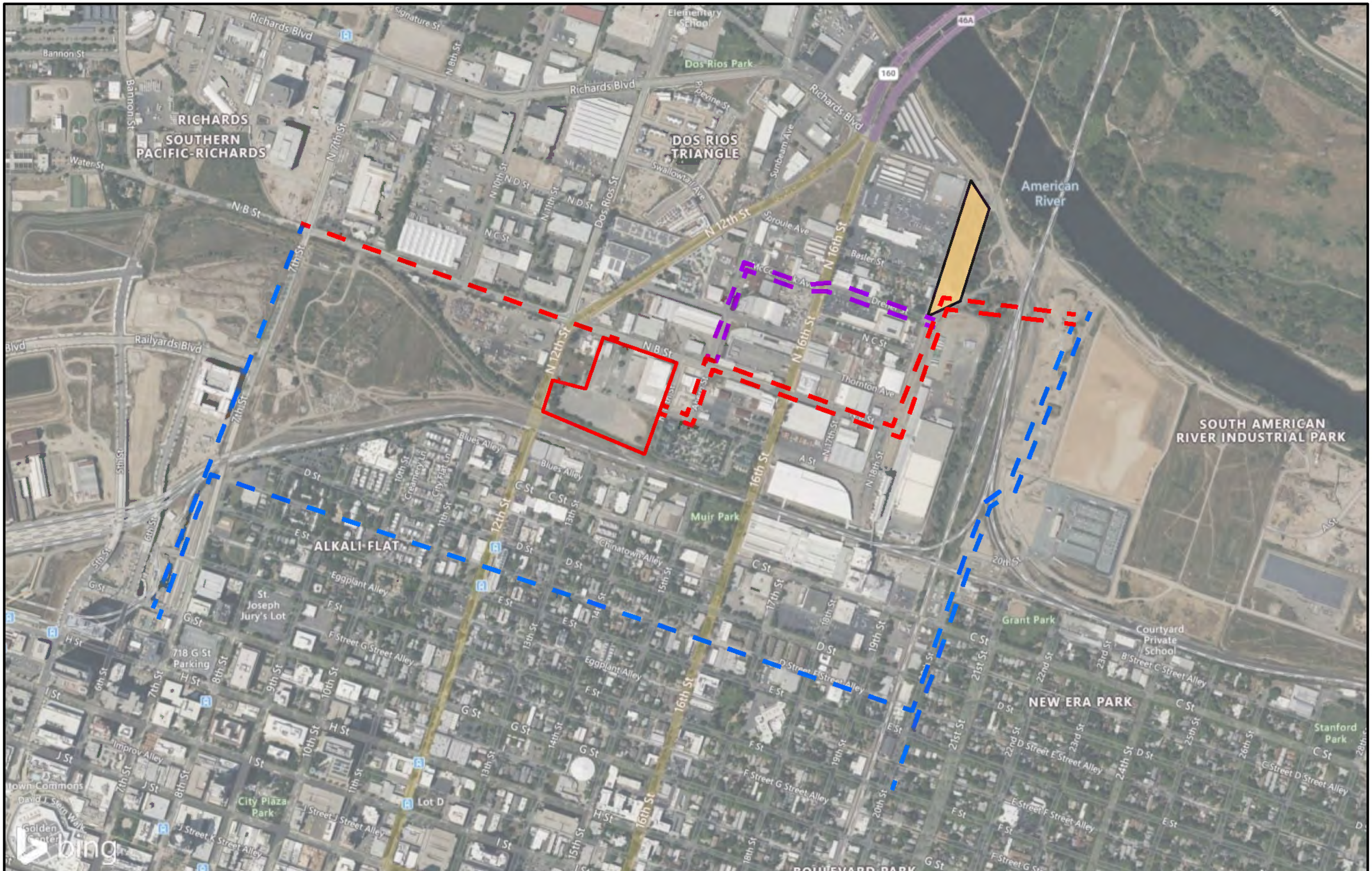
5.3.1 Summary Statement of Effects

Section 4 of this Assessment reviewed the potential for occurrence of one special status plant and 13 special status wildlife taxa:

- One special status plant and 12 special status wildlife taxa were determined to have no potential to occur in the Biological Study Area. Effects on these species due to Project implementation would not be expected.
- One special status species (VELB) was determined to have a low potential to occur in a small portion of the Biological Study Area.
- Implementation of the proposed Project would not result in effects to VELB if the Avoidance and Minimization Measures listed below are followed.

5.3.2 Detailed Discussion of Effects and Avoidance and Minimization Measures

The valley elderberry longhorn beetle has a low potential to occur in the Project area. The proposed Project crosses an area mapped as Elderberry Savana on the River District's Specific Plan Area Habitat Type Map (**Figure 3**). Elderberry shrubs within or adjacent to the Project area represent low quality potential habitat for VELB. The habitat is surrounded by disturbance on three sides. While the potential VELB habitat in the form of elderberry shrubs is adjacent to the river, it is in an urban setting and is isolated from other elderberry shrub habitats making it unlikely that VELB is occupying the Biological Study Area.



Source: Bing Maps Hybrid

0 500 1,000 Feet

1 inch = 1,000 feet

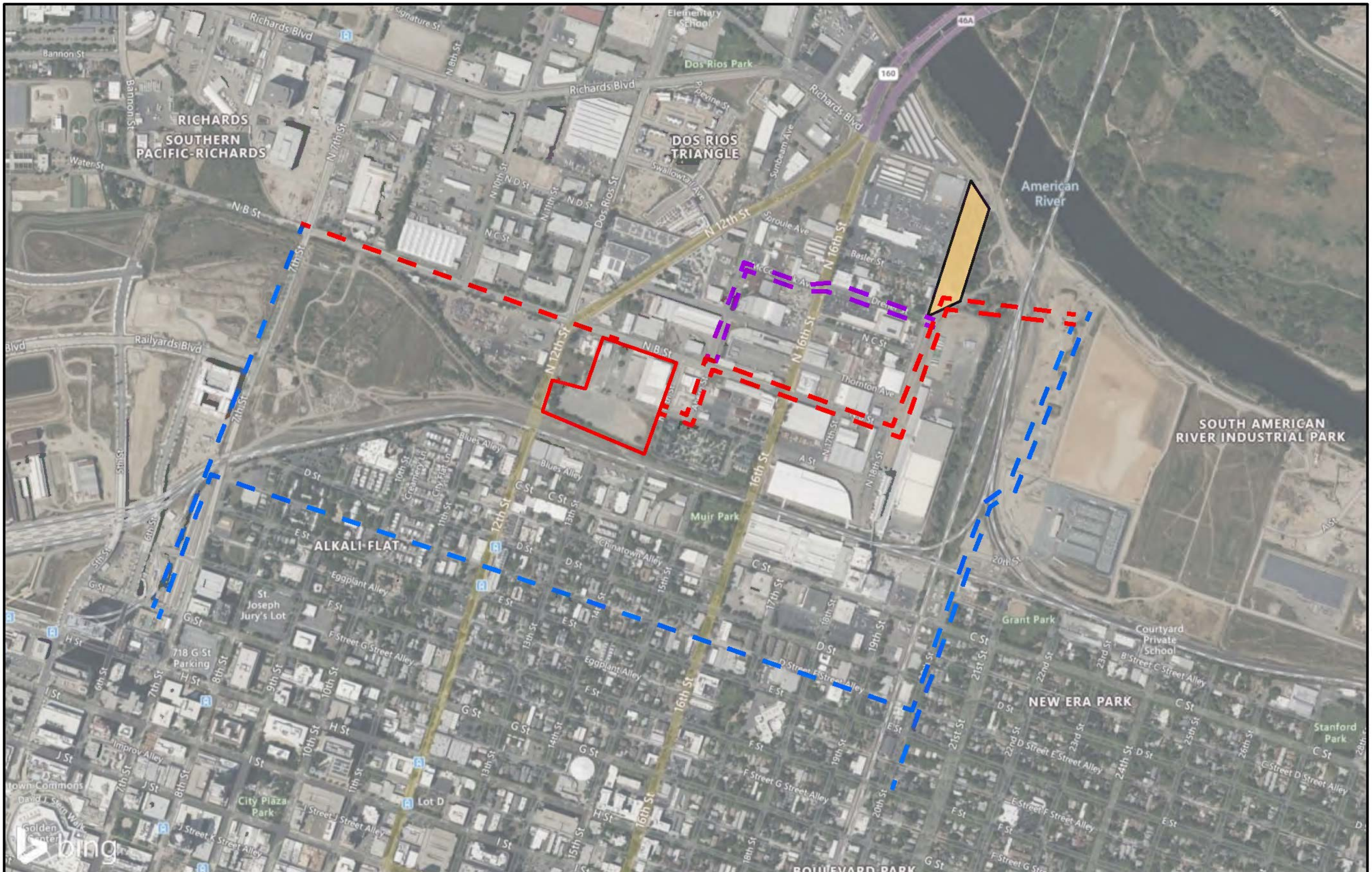
BARGAS Environmental Consulting

- Site
- Valley Elderberry Savannah
- Existing Transmission Line
- Alternate Transmission Line
- Proposed Transmission Line

Figure 3
Valley Elderberry Savannah

Airport South Industrial Project

Map Created: 8/18/2023, Created By: Dustin Baumbach, Map Revised: N/A, Bargas Project Number: 1216-19



Site

Valley Elderberry Savannah

Existing Transmission Line

Alternate Transmission Line

Proposed Transmission Line

BARGAS Environmental Consulting

Figure 3
Valley Elderberry Savannah

Airport South Industrial Project

Map Created: 8/18/2023, Created By: Dustin Baumbach, Map Revised: N/A, Bargas Project Number: 1216-19

5.3.3 Avoidance Measures

Elderberry shrubs within 150 feet of the Project area should be mapped and avoided to the extent possible. If it is not possible to avoid shrubs and follow the minimization measures, then compensation may be required.

5.3.4 Minimization Measures

If elderberry shrubs are found within or adjacent to the Project area, the following Minimization Measures should be implemented to reduce impacts to avoided shrubs:

- All avoided shrubs within 150 feet of the Project area should be identified and flagged by a qualified biologist.
- A 20-foot minimum avoidance buffer should be established from the dripline of each avoided shrub. No work should occur within the buffer area.
- High-visible construction fencing should be installed along the 20-foot avoidance buffer.
- If feasible, construction activities within 150-feet of an elderberry shrub should not occur during the VELB flight season (March through July).

5.4 Project Effects on Riparian Habitat or Other Sensitive Natural Community

This section addresses the portion of the CEQA Guidelines requiring an assessment of whether the Project will *have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the CDFW or USFWS*.

5.4.1 Summary Statement of Effects

A small portion of the Project site occurs in areas classified as Elderberry Savana in the River District Specific Plan Area Habitat Type Map. If Avoidance and Minimization Measures described in Section 5.3 are followed, effects of the proposed Project would be minimal. This area is currently disturbed by roads and tent encampments and provides limited habitat functions. There is no Great Valley Cottonwood Riparian Forest present and therefore will not be impacted by Project implementation.

5.4.2 Significance Statement

The Project will not have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the CDFW or USFWS.

5.5 Project Effects on Wildlife Movement and Nursery Sites

This section addresses the portion of the CEQA Guidelines requiring an assessment of whether the Project will *interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites*.

5.5.1 Summary Statement of Effects

The Project will not impact wildlife movement corridors. Proposed Mitigation Measures discussed below will avoid Project impacts to nesting birds.

5.5.2 Detailed Discussion of Effects and Avoidance and Minimization Measures

As discussed in **Section 4.5.1**, the Biological Study Area does not function as a wildlife corridor to terrestrial wildlife due to being bounded by physical barriers (i.e., roads and urban development). Although there are no barriers blocking the movement of birds into and out of the Biological Study Area, there are no habitats present that could provide sufficient shelter and other resources that are contiguous with similar habitats beyond the Biological Study Area to provide a high-quality wildlife movement corridor for birds. The Project site does contain minimal foraging habitat that could attract a variety of bird species to the Project site. The development of the Project may modify the habitats present and impact birds moving about the vicinity searching for foraging opportunities.

The Project could impact nesting birds protected by the federal MBTA. The following avoidance and minimization measures shall be implemented prior to site disturbance to avoid impacts to nesting raptors and other birds in the Project site or immediately adjacent properties.

- A nesting bird survey shall be conducted within the Project site (raptors and non-raptors) and a 500-foot buffer (required only for raptors) prior to commencing with earth-moving or construction work if this work would occur during the typical nesting season (between February 1 and August 31).
- If nesting birds are identified during the surveys, a qualified biologist will determine an appropriate disturbance-free buffer zone and clearly demarcate that buffer zone in the field for avoidance by construction activities.
- The size of an established buffer may be altered if a qualified biologist conducts behavioral observations and determines the nesting birds are well acclimated to disturbance. If this occurs, the biologist shall prescribe a modified buffer that allows sufficient room to prevent undue disturbance/harassment to the nesting birds. If the buffer is reduced, the qualified biologist shall remain on site to monitor the behavior of the nesting birds during construction in order to ensure that the reduced buffer does not result in take of eggs or nestlings.
- No construction or earth-moving activity shall occur within the established buffer until it is determined by a qualified biologist that the young have fledged (are no longer dependent on the nest or the adults for feeding) and have attained sufficient flight skills to avoid project construction zones. This typically occurs by August 31. This date may be earlier or later and shall be determined by a qualified biologist. If a qualified biologist is not hired to monitor the nesting raptors, then the full buffer(s) shall be maintained in place from February 1 through the month of August. The buffer may be removed, and work may proceed as otherwise planned within the buffer on September 1.

5.5.3 Significance Statement

The Project will not interfere substantially with the movement of any native resident or migratory fish or wildlife species, established native resident or migratory fish or wildlife species, established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.

5.6 Project Effects on the Provisions of an Adopted Habitat Conservation Plan

This section addresses the portion of the CEQA Guidelines requiring an assessment of whether the Project will *conflict with the provisions of an adopted HCP, NCCP, or other approved local, regional, or state habitat conservation plan.*

The Project does not fall within an adopted habitat conservation plan; therefore, no impacts are anticipated.

5.6.1 Summary Statement of Effects

The Project is not located within the boundaries of any sensitive plant or wildlife areas and the project is not likely to result in any impacts.

5.7 Project Effects on Local Policies or Ordinances Protecting Biological Resources

This section addresses the portion of the CEQA Guidelines requiring an assessment of whether the Project will *conflict with any local policies or ordinances protecting biological resources, such as tree preservation policy or ordinance*.

5.7.1 Summary Statement of Effects

Development of the Project will not conflict with any local ordinances or the City of Sacramento 2025 General plan.

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Appendix A. Floral & Faunal Compendia

Bargas has documented the presence of 53 plant taxa and 51 wildlife taxa. Taxa are presented in taxonomic order.

Plants

Common Name	Scientific Name	Family	Major Clade	Nativity
Bristly Ox-tongue	*Helminthotheca echioides*	Asteraceae	Eudicots	Naturalized
Hairy Hawkbit	*Leontodon saxatilis*	Asteraceae	Eudicots	Naturalized
Milk Thistle	*Silybum marianum*	Asteraceae	Eudicots	Naturalized
Black Mustard	*Brassica nigra*	Brassicaceae	Eudicots	Naturalized
Perennial Pepperweed	*Lepidium latifolium*	Brassicaceae	Eudicots	Naturalized
Bindweed, Orchard Morning-Glory	*Convolvulus arvensis*	Convolvulaceae	Eudicots	Naturalized
Doveweed, Turkey-Mullein	*Croton setiger*	Euphorbiaceae	Eudicots	Native
Fennel	*Foeniculum vulgare*	Apiaceae	Eudicots	Naturalized
Bird's Foot Trefoil	*Lotus corniculatus*	Fabaceae	Eudicots	Naturalized
California Burclover	*Medicago polymorpha*	Fabaceae	Eudicots	Naturalized
Hairy Vetch, Winter Vetch	*Vicia villosa*	Fabaceae	Eudicots	Naturalized
Valley Oak, Roble	*Quercus lobata*	Fagaceae	Eudicots	Native
Coast Live Oak	*Quercus agrifolia*	Fagaceae	Eudicots	Native
Broadleaf Filaree	*Erodium botrys*	Geraniaceae	Eudicots	Naturalized
Short-fruited Filaree	*Erodium brachycarpum*	Geraniaceae	Eudicots	Naturalized
Knotweed, Knotgrass	*Polygonum aviculare*	Polygonaceae	Eudicots	Naturalized
Curly Dock	*Rumex crispus*	Polygonaceae	Eudicots	Naturalized
Himalayan Blackberry	*Rubus armeniacus*	Rosaceae	Eudicots	Naturalized
Blue Elderberry	*Sambucus mexicana*	Viburnaceae	Eudicots	Native

Common Name	Scientific Name	Family	Major Clade	Nativity
Cultivated Grape	*Vitis vinifera*	Vitaceae	Eudicots	-
Italian Thistle	*Carduus pycnocephalus* subsp. *pycnocephalus*	Asteraceae	Eudicots	Naturalized
Yellow Star-thistle	*Centaurea solstitialis*	Asteraceae	Eudicots	Naturalized
Wild Oat	*Avena fatua*	Poaceae	Monocots	Naturalized
Ripgut Grass	*Bromus diandrus*	Poaceae	Monocots	Naturalized
Bermuda Grass	*Cynodon dactylon*	Poaceae	Monocots	Naturalized
Hairy Crab Grass	*Digitaria sanguinalis*	Poaceae	Monocots	Naturalized
Rye Grass	*Festuca perennis*	Poaceae	Monocots	Naturalized
Walnut species	*Juglans* sp.	Juglandaceae	Eudicots	—

Wildlife

Common Name	Scientific Name	Family	Introduced/Endemic
Western Fence Lizard	*Sceloporus occidentalis*	Phrynosomatidae (Zebra-tailed, Earless, Fringe-toed, Spiny, Tree, Side-blotched, and Horned Lizards)	—
Rock Pigeon	*Columba livia*	Columbidae (Pigeons and Doves)	Introduced
Turkey Vulture	*Cathartes aura*	Cathartidae (New World Vultures)	—
American Crow	*Corvus brachyrhynchos*	Corvidae (Crows and Jays)	—
Yellow-rumped Warbler	*Setophaga coronata*	Parulidae (Wood-Warblers)	—

Appendix B. Site Photographs

Photo 1. Representative photo of developed/paved area near the northern edge of the Project area.

Photo 2. Representative photo of loading dock structure and office building with Coast Live Oak on the right side of the image.

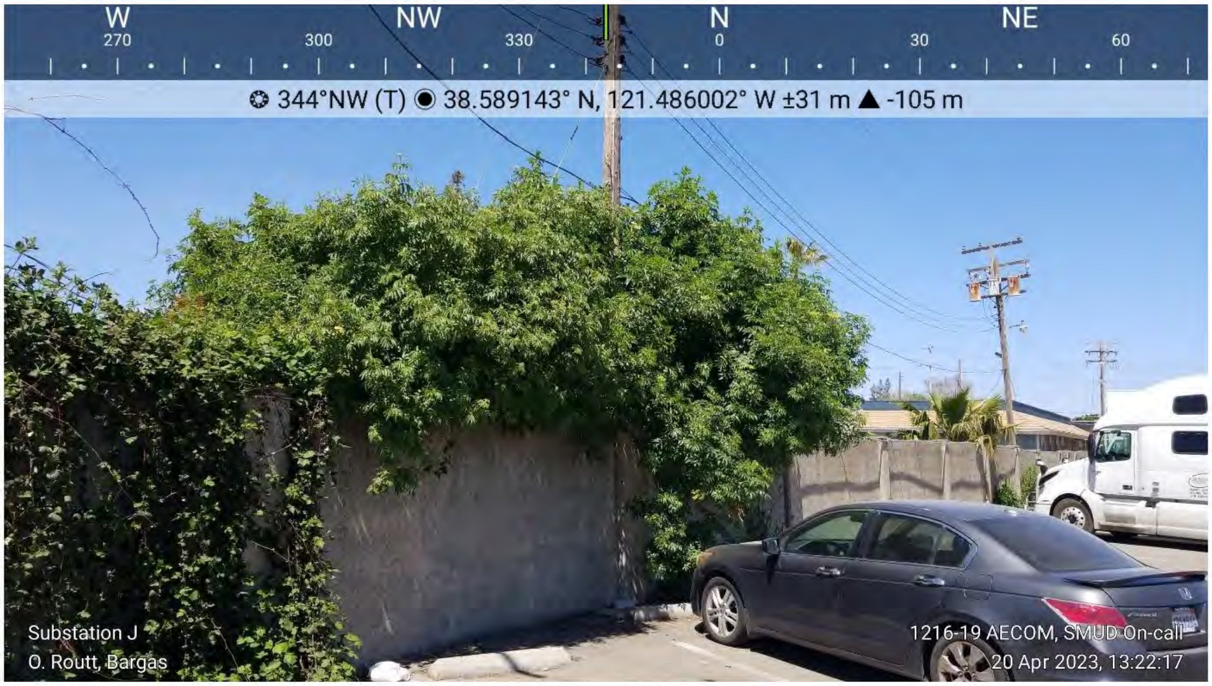

Photo 3. Blue Elderberry shrub located on adjacent property along the western edge of the Project area.

Photo 4. Alternate view of Blue Elderberry shrub along the western edge of the Project area.

Photo 5. Representative view of Valley Oak Riparian Forest and Woodland at the southwest corner of the Project area.

Photo 6. Representative photo of gravel parking lot that covers the southern half of the Project area.

Photo 7. View from the berm along the southwestern edge of the Project area facing towards the southern boundary.

Photo 8: View of the eastern Project area boundary taken from the southern boundary with Perennial Rye Grass Fields in the foreground.

Photo 9. Large area of Cultivated Grape planted along the fence line forming the southern boundary of the Project area.

Photo 10. View of gravel parking lot area taken from the eastern boundary of the site facing west

APPENDIX D
HISTORIC RESOURCES EVALUATION

Station J Bulk Substation Construction Project

Historical Resources Evaluation

Sacramento Municipal Utility District

October 24, 2024

Prepared for:

Sacramento Municipal Utility District
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Summary of Findings

This Historical Resources Evaluation (HRE) presents the results of a historical assessment completed by AECOM for the Sacramento Municipal Utility District (SMUD) Station J Bulk Substation Project (the "project") in compliance with the provisions of the California Environmental Quality Act (CEQA). CEQA requires public agencies to assess the impacts of their projects on historical resources.

As part of this HRE, AECOM conducted archival research and completed surveys to identify cultural resources within the project's study area. AECOM also conducted a cultural resources records search at the North Central Information Center of the California Historical Resources Information System (CHRIS), housed at California State University, Sacramento; and supplemental research with various organizations. SMUD is conducting Native American Assembly Bill (AB) 52 consultation and outreach.

On November 10, 2022, AECOM Archaeologist Diana Ewing and AECOM Architectural Historian Chandra Miller conducted a cultural resources survey of the project site that consists of 11 contiguous Assessor's Parcel Numbers (APN), currently containing two buildings, a single-story maintenance shop building built in 1962 at 1226-1270 North B Street and an approximately 66,000 square -foot single-story warehouse/distribution facility with loading docks and office initially constructed in 1964 at 1330 North B Street. These two identified historic-age properties were recorded on separate Department of Parks and Recreation (DPR) 523 series forms.

On December 14, 2022, AECOM Archaeologist Diana Ewing conducted an additional cultural resources survey of the Alternative Routes for the project which consisted of surface streets including North B Street between 7th Street and 18th Street and North A Street to Ahern Street to McCormack Ave where it meets 18th Street. These routes consist of paved streets and paths. No cultural material was observed on November 10 or December 14, 2022.

Based on background research, field survey, development of historical context, and evaluation, neither 1226-1270 North B Street or 1330 North B Street are recommended as eligible for listing in the CRHR and/or the Sacramento Register of Historic and Cultural Resources because of lack of historical significance. Neither of the properties are recommended as historical resources under CEQA.

A Sacred Lands File Search with the Native American Heritage Commission (NAHC) returned positive results with a recommendation to contact the Ione Band of Miwok Indians, the United Auburn Indian Community of the Auburn Rancheria, and the Wilton Rancheria.

Based on the results of the records search, additional background research, and the results of the cultural resources assessment, the project would not cause significant impacts to historical resources. However, although the project presumably would have no potential impacts on historical resources, the potential always would exist for the unanticipated discovery of potentially significant cultural resources during project implementation, potentially eligible for listing in the California Register of Historical Resources (CRHR). If prehistoric or historic-era materials are encountered either during subsequent field investigations or during project construction, all work in the vicinity would stop until a qualified archaeologist could evaluate the discovery and make recommendations, pursuant to 36 Code of Federal Regulations (CFR) 800.13(b). Prehistoric materials most likely would include obsidian and chert flaked-stone tools (e.g., projectile points, knives, choppers), tool-making debris, or milling equipment, such as mortars and pestles. Historic-era materials may include remains of agricultural implements; stone or concrete footings and walls; and deposits of metal, glass, and/or ceramic refuse.

Although an extremely low potential would exist, the possibility of encountering human remains cannot be discounted. Section 7050.5 of the California Health and Safety Code states that it is a misdemeanor to knowingly disturb a human burial. If human remains are encountered, project work would stop in the vicinity of the remains and, as required by law, the Sacramento County Coroner would be notified immediately. An archaeologist also would be contacted to evaluate the find. If the human remains were determined to be of Native American origin, the coroner would need to notify the NAHC within 24 hours of that determination. Pursuant to California Public Resources Code (PRC) 5097.98, the NAHC, in turn, would immediately contact a Most Likely Descendent (MLD). The MLD would have 48 hours to inspect the site and recommend treatment of the remains. The landowner would be obligated to work with the MLD in good faith, to find a respectful resolution to the situation and entertain all reasonable options regarding the descendants' preferences for treatment.

Preparers

This HRE has been prepared and reviewed by the following principal investigators, who meet the Secretary of the Interior's Professional Qualifications Standards (SOIPQS) (62 Federal Register 33708-33723):

- Chandra Miller was principal investigator for historic-age built environment, co-authored this report, and conducted field survey. She has a B.A. in History from Humboldt State University, a M.A. in Public History (with Cultural Resource Management emphasis) from California State University, Sacramento, and a Certificate in Historic Preservation and Restoration Technology from the College of the Redwoods. She has more than 14 years of experience conducting architectural investigations in California and she meets the SOIPQS for work in history and architectural history.

- Diana Ewing was principal investigator for archaeology and conducted the field survey. She has a B.A. in Anthropology (Archaeology) from the University of California, Davis; has an M.A. in Anthropology (Archaeology) from the University of Nevada, Las Vegas, (earned in California); and has more than 10 years of experience in northern and coastal California, the Alaskan Arctic, Arizona, and Nevada. She meets the SOIPQS for work in archaeology.

- Richard Deis, RPA (Register of Professional Archaeologists) provided senior guidance and input for this study. He has an M.A. in Anthropology from California State University, Sacramento and has more than 30 years of professional archaeological experience in California and Nevada. Mr. Deis has evaluated hundreds of archaeological and built environment resources and has drafted and implemented numerous historic property management and treatment plans. He meets the SOIPQS for work in archaeology.

Table of Contents

Tables

Figures

Photographs

Appendices

Acronyms and Abbreviations

AB	Assembly Bill
APN	Assessor Parcel Number
B.P.	Before Present
bgs	Below Ground Surface
C-4 – SPD	Heavy Commercial – Special Planning District
ca.	circa
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
CHRIS	California Historical Resources Information System
City	City of Sacramento
CRHR	California Register of Historical Resources
CVP	Central Valley Project
dBA	decibel A-weighting
DPR	Department of Parks and Recreation
EIR	Environmental Impact Report
GLO	General Land Office
HAER	Historic American Engineering Record
HRE	Historical Resources Evaluation
kV	Kilovolt(s)
MLD	Most Likely Descendent
MVA	Millivolt-Amperes
NAHC	Native American Heritage Commission
NCIC	North Central Information Center
NRHP	National Register of Historic Places
OHP	Office of Historic Preservation
PG&E	Pacific Gas and Electric Company
PRC	Public Resources Code
project	Station J Bulk Substation Project
REA	Rural Electrification Administration
Reclamation	U.S. Bureau of Reclamation
SMUD	Sacramento Municipal Utility District
SOIPQS	Secretary of the Interior's Professional Qualifications Standards
SPD	Special Planning District
SSBMI	Shingle Springs Band of Miwok Indians
TCRs	tribal cultural resources
THRIS	Tribal Historic Resource Information System
UAIC	United Auburn Indian Community
UPRR	Union Pacific Railroad

Project Description

Introduction

This section presents a detailed description of the Sacramento Municipal Utility District (SMUD) Station J Bulk Substation Project (project) located in Sacramento, California. It is SMUD's goal for the project to provide consistent and reliable electrical service to much of downtown Sacramento through the effective use of SMUD's existing assets. This section describes the project's location, background, and components.

The project would include the demolition of existing on-site structures and construction of new infrastructure to support up to six 40 megavolt-amperes (MVA) 115/21 kilovolt (kV) transformers for a total of up to 240 MVA, including up to 9 miles of overhead and underground 115kV and 21kV connections into the substation from nearby existing SMUD facilities and infrastructure.

Project Location and Setting

The project would be located on a 10.3-acre site at 1220 North B Street and within surrounding streets in a developed area of downtown Sacramento, as shown in Figures 1, 2, and 3. The proposed substation site is bordered by North B Street to the north, North 14th Street to the east, Union Pacific Railroad (UPRR) tracks to the south, and North 12th Street to the west (Figure 1)

The proposed substation site is relatively flat and sparsely vegetated with a number of trees. The site consists of 11 contiguous Assessor's parcels, currently containing two buildings, an approximately 5,580 square-foot single-story maintenance shop building and an approximately 66,000 square-foot single-story distribution warehouse with loading docks, and office space. Both buildings are situated towards the front of the property along North B Street. The rear of the property consists of approximately 3.9 acres of yard storage and is adjacent to UPRR to the south. The project site also includes surface streets located adjacent to the proposed substation site, such as North B Street, Ahern Street, Thornton Avenue, and 7th Street, which would be utilized to install transmission lines and connect to other SMUD facilities. There are several SMUD facilities nearby the project site including the Station E electrical substation located approximately 0.5 miles to the east and Station G electrical substation located approximately 0.7 miles to the southwest.

Project Background

The project site was originally owned and operated by General Produce and is within the City of Sacramento's River District Specific Plan area. The zoning designation of the property is C-4 – SPD, Heavy Commercial – Special Planning District. There is also currently an easement for North A Street that partially bisects the property.

In 2021, a Phase I Environmental Site Assessment was prepared for the property in preparation for property redevelopment to evaluate areas where past and/or current activities may have chemically impacted soil, soil gas, or groundwater. Based upon historical records, the site was initially developed between 1893 and 1902. Portions of the current buildings were constructed between 1957 and 1964.

Project Description

The proposed substation would include demolition of all existing on-site structures and construction of new infrastructure to include sizing for up to six 40 MVA 115/21kV transformers (240 MVA). Initial installation of up to three 40 MVA transformers is anticipated to occur by 2028. The project also includes up to 9 miles of overhead and underground 115kV and 21kV connections into the substation from nearby existing SMUD facilities and infrastructure. These project elements are depicted in Figures 2 and 3.

Figure 1. Project Vicinity Map

Figure 2. Station J Substation Site – CEQA Study Area

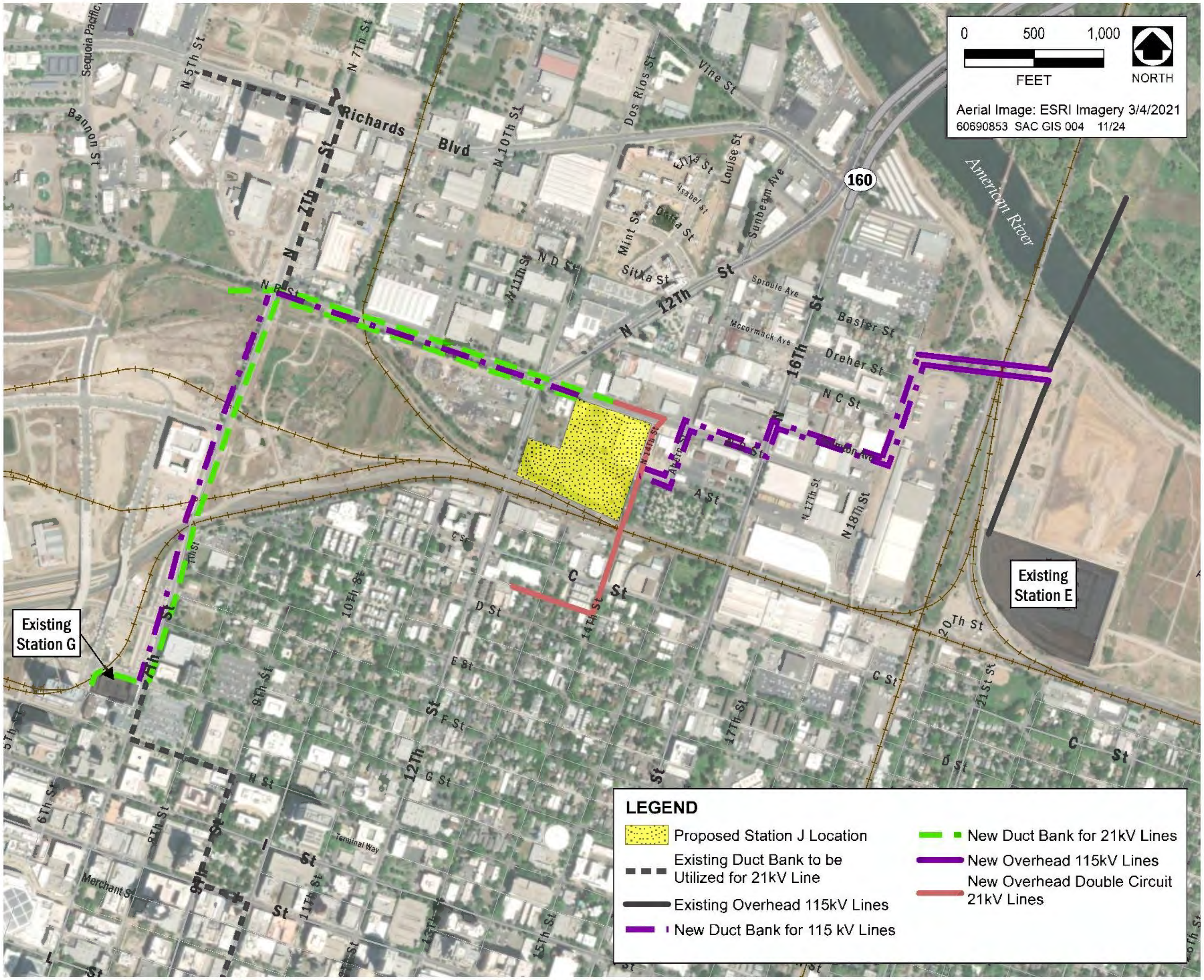

Figure 3. Proposed Project Transmission Lines– CEQA Study Area

The site includes space for expansion as future need is identified.

Project Construction

The proposed substation would house electrical equipment, including power transformers, gas-insulated equipment, switchgear, capacitors, instrument transformers, control and relay equipment, remote monitoring equipment, telecommunications equipment, batteries, steel structures, switches, underground conductor and cable, an electrical bus, and a control building. Station J would include up to six 40 MVA 115/21kV transformers to serve the SMUD network. Each power transformer would contain up to 10,000 gallons of insulating oil. Typically, mineral oil is used in the transformers. Each transformer would have a secondary containment system to collect and hold any oil leaks from the transformer. The maximum average sound level for each transformer would not exceed 80 decibel A-weighting (dBA) measured at a distance of 6 feet around the periphery of the transformer (Note that these measurements are usually made at one-third and at two-thirds height of the transformer tank).

Excavation associated with the construction of these new connections and installation of new equipment would reach a depth of 15 to 30 feet below ground surface (bgs), however, piles needed for seismic stability/support could reach a depth of approximately 55 feet bgs. Duct bank trenching would total approximately 5,500 linear feet to a depth of up to 6 feet and width of 4 feet.

Construction equipment and materials staging area would be located within the project site. During construction, access to the project site would be maintained, with the primary access point for construction equipment, deliveries, and workers located from North B Street or North 12th Street.

California Environmental Quality Act Study Area

The California Environmental Quality Act (CEQA) Study Area for the project is defined by the horizontal and vertical extent of the project. The horizontal study area consists of the footprints for Station J and the route of the proposed transmission lines, and the vertical study area extends up to 30 feet below the existing ground surface.

Environmental Setting

This section describes the prehistoric, ethnographic, and historic setting of the study area for the undertaking.

Prehistoric Context

In an attempt to unify the various hypothesized cultural periods in California, Fredrickson (1993) proposed an all-encompassing scheme for cultural development, while acknowledging that these general trends may manifest themselves differently and some variation may exist between subregions. These general cultural periods (i.e., Paleo-Indian, Early, Middle and Late Archaic, and Emergent periods) are used in this document in connection with the North-Central Sierra Nevada chronology because of their relevancy to the lower foothill region of the project area, in the vicinity of Folsom.

The Late Pleistocene pattern and period (greater than 10,000 years before present [B.P.]) is practically nonexistent in the foothill and eastern Sacramento Valley. Sites CA-SAC-370 and CA-SAC-379, located near Rancho Murieta, produced numerous bifaces, cores, and raw materials from gravel strata estimated to be between 12,000 and 18,000 years in age. Early Holocene pattern and period (circa [ca.] 10,000–7000 B.P.) was first defined by Bedwell (1970) as a human adaptation to lake, marsh, and grassland environments that were prevalent at this time. Appearing after 11,000 years B.P., the tradition slowly disappeared ca. 8000–7000 B.P.

During the Archaic pattern and period (ca. 7000–3200 B.P.), the climate in the valleys and foothills of Central California became warmer and dryer, and milling stones are found in abundance.

The Early and Middle Sierran pattern (ca. 3200–600 B.P.) evidences an expansion in use of obsidian, which is interpreted with reservation to indicate an increase in regional land use, and the regular use of certain locales. During this time, a much heavier reliance on acorns as a staple food was developed, supporting large, dense populations.

During the Late Sierran period (ca. 600–150 B.P.), archaeological village sites generally correspond to those identified in the ethnographic literature. Diagnostic artifacts include small contracting-stem points, clam shell disk beads, and trade beads that were introduced near the end of the period, marking the arrival of European groups (Beardsley 1954:77–79; Elsasser 1978:44; Fredrickson 1993).

Ethnographic Context

The project site is situated within the traditional territory of the Nisenan. The language of the Nisenan, which includes several dialects, is classified within the Maiduan family of the Penutian linguistic stock. Kroeber (1925) recognized three Nisenan dialects: Northern Hill, Southern Hill, and Valley. The Nisenan territory included the drainages of the Yuba, Bear, and American Rivers, and the lower drainages of the Feather River, extending from the crest of the Sierra Nevada to the banks of the Sacramento River. According to Bennyhoff (1961:204–209), the southern boundary with the Miwok was probably a few miles south of the American River, bordering a shared area used by both Miwok and Nisenan groups that extended to the Cosumnes River. It appears that the foothills Nisenan distrusted the valley peoples but had a mostly friendly relationship with the Washoe to the east. Elders recall intergroup marriage and trade, primarily involving the exchange of acorns for fish procured by the Washoe (Wilson 1972:33). The northern boundary has not been clearly established due to similarities in language with neighboring tribes (Wilson and Towne 1978:387–389).

Nisenan settlement locations depended primarily on elevation, exposure, and proximity to water and other resources. Permanent villages were usually located on low rises along major watercourses. Houses were domed structures measuring 10 to 15 feet in diameter and covered with earth and tule reeds or grass. Brush shelters were used in the summer and at temporary camps during food-gathering rounds. Larger villages often had semi-subterranean dance houses that were covered in earth and tule reeds or brush, with a central hole at the top to allow the escape of smoke, and an east-facing entrance. Another common village structure was the granary, which was used for storing acorns.

Several political divisions in the Nisenan territory, constituting tribelets, had headmen in the larger villages. However, the relative levels of influence in these larger population centers are unknown. All of these larger villages were located in the foothills. More substantial and permanent Nisenan villages generally were not established on the valley plain between the Sacramento River and the foothills, although this area was used as a rich hunting and gathering ground. One tribelet consisted of people occupying the territory between the Bear River and the Middle Fork American River (Wilson and Towne 1978). According to Kroeber (1925:831), the larger villages could have had populations exceeding 500 individuals, although small settlements consisting of 15 to 25 people and extended families were common.

The Nisenan occupied permanent settlements from which specific task groups set out to harvest the seasonal bounty of flora and fauna provided by the rich valley environment. The Valley Nisenan economy involved riparian resources, in contrast to the Hill Nisenan, whose resource base consisted primarily of acorn and game procurement. The only domestic plant was native tobacco (*Nicotiana* sp.), but many wild species were closely husbanded. The acorn crops from the blue oak (*Quercus douglasii*) and black oak (*Q. kelloggii*) were carefully managed resources. Acorns were stored in granaries in anticipation of winter. Deer, rabbit, and salmon were the chief sources of animal protein in the aboriginal diet, but many insect and other animal species were taken when available (Wilson and Towne 1978:389).

The decimation of the Nisenan culture in the nineteenth century as a result of European colonization, coupled with a reluctance to discuss Nisenan spiritual beliefs and practices, makes it difficult to describe these practices in any detail. However, historic records document a number of observances and dances, some of which are still performed today, that were important ceremonies in early historic times. The Kuksu Cult, the basic religious system noted throughout Central California, appeared among the Nisenan. Cult membership was restricted to those initiated in its spirit and deity-impersonating rites. However, the Kuksu Cult was only one of several levels of religious practice among the Nisenan. Various dances associated with mourning and the change of seasons were also important. One of the last major additions to Nisenan spiritual life occurred sometime shortly after 1872 with a revival of the Kuksu Cult as an adaptation to the Ghost Dance religion (Wilson and Towne 1978). Today, Nisenan descendants are reinvesting in their traditions and represent a growing and thriving community.

Following documentation by the Department of Interior for the existence of a separate, cohesive band of Maidu and Miwok Indians, occupying a village on the outskirts of the City of Auburn in Placer County, the United States acquired land in trust for the Auburn Band in 1917 near the City of Auburn and formally established a reservation, known as the Auburn Rancheria. Tribal members continued to live on the reservation as a community despite great adversity. (UAIC 2020)

However, in 1967, the United States terminated federal recognition of the Auburn Band, and, in 1970, President Nixon declared the policy of termination a failure. In 1976, both the United States Senate and House of Representatives expressly repudiated this policy in favor of a new federal policy entitled Indian Self-Determination. (UAIC 2020)

In 1991, surviving members of the Auburn Band reorganized their tribal government as the United Auburn Indian Community and requested that the United States formally restore their federal recognition. In 1994, Congress passed the Auburn Indian Restoration Act, which restored the Tribe’s federal recognition. The Act provided that the Tribe may acquire land in Placer County to establish a new reservation. (UAIC 2020).

Today, Nisenan descendants and other tribes are reinvesting in their traditions and represent a growing and thriving community that is actively involved in defining their role as stewards of their ancestor’s sites including the identification of tribal cultural resources (TCRs). TCRs provide the backdrop to religious understanding, traditional stories, knowledge of resources such as varying landscapes, bodies of water, animals and plants, and self-identity. Knowledge of place is central to the continuation and persistence of culture, even if former Nisenan and Miwok occupants live removed from their traditional homeland. Consulting tribes view these interconnected sites and places as living entities; their associations and feeling persist and connect with descendant communities. (UAIC 2020)

Contemporary Native American Setting

Archaeologists routinely focus on traditional Native American culture and ignore current and vibrant Native American culture. This approach is not sufficient to provide a context or set of values maintained by the current Native American community related to their history and the landscape. Tribes view themselves as contemporary stewards of their culture and the landscape, representing a continuum from the past to the present. They are resilient, vibrant, and active in the community. Tribes maintain their connection to their history and ongoing culture by practicing traditional ceremonies, engaging in traditional practices (e.g., basketry), and conducting public education and interpretation. The acknowledgement of Native American history and the persistence of Tribes cannot be overlooked and should be recognized. Indeed, the Native American community and their history are commemorated in the City of Sacramento (City), on the grounds of the Capitol, and at Sacramento City Hall (JCC 2020:6.7).

Known Ethnographic Villages Near Downtown Sacramento

Villages along the Sacramento and American rivers include *Pujune*, *Momol*, *Sahmah*, *Demba*, *Yamahepu*, and *Sa'cum*. *Pujune* is located on the north side of the American River, about one-quarter mile east of its confluence with the Sacramento River. *Momol* is located on the south side of the American River, opposite the village of *Pujune*. *Sahmah* is located the east side of the Sacramento River, south of its confluence with the American River. *Demba* is located on the south side of the Sacramento River about one-half mile east of the Interstate 80 bridge crossing over the river. *Yamahepu* is located on the north side of the American River near the Highway 160 bridge crossing over the river. *Sa'cum* is located at Cesar Chavez Park in Sacramento.

In addition, Tribes have identified lake *Wanoho Pakan* as culturally important. A lake, originally named *Wanoho Pakan* by Native American Tribes, formerly extended from 3rd Street to 5th Street and north of I Street; the area is now occupied by the Southern Pacific railroad depot. *Wanoho Pakan* was and continues to be a place of cultural significance and value to Tribes. Subsequent to Euroamerican settlement and development of Sacramento, *Wanoho Pakan* became known as Sutter Lake and later as China Slough (JCC 2020:4.4).

The presence and distribution of the six villages and *Wanoho Pakan* indicate that the area encompassed by modern Sacramento was a landscape occupied and successfully used by Native Americans. Indeed, beyond any physical presence (e.g., archaeological sites and artifacts) of Native American occupation, the landscape is part of the history of Native Americans in the Sacramento area. The development and change of the landscape over time tells a story important to and valued by the Native American community and also the history of Sacramento and the Central Valley (JCC 2020:6.5,6.7).

Historical Context

Development of the River District in Sacramento

The following historical context has been extracted and edited from the *River District Specific Plan Draft Environmental Impact Report* (City of Sacramento 2011).

This property is east of North 12th Street along North B Street which was historically within the northernmost boundary of the city of Sacramento. Sited at the confluence of the Sacramento and American rivers, this area is a low-lying tract of sedimentary earth where several seasonal lakes once formed. After 1853, the federal government typically declared river land in California "Swamp and Overflow" lands and granted the State permission and additional funding to administer "reclamation" activities as they saw fit. Until the late 19th century, the area was subject to intermittent flooding.

Into the late 19th century, the area was subject to intermittent flooding and by the early 20th century the swampy character of the area had limited its potential growth and consequent economic value. Several factors restricted the development of the River District for commercial and residential development, in addition to the area's geographical location with its potential for flooding and drainage problems. Bisected or bound by major levees and subject to flooding, the area remained physically segregated from the rest of the city to the south. Another historical limitation was the area's proximity to Sacramento's railyards. Since its development in the latter half of the 19th century, the railyards and the related railroad levee have created a physical barrier between the downtown and the River District area.

The lower land values and the area's proximity to transportation made the area attractive to a variety of industrial enterprises. In 1912, the Pacific, Gas & Electric Company (PG&E) commissioned River Station B, an oil-powered steam plant designed by Willis Polk. In the early 1920s, the City constructed a large new water intake and filtration plant near PG&E's River Station B. A major trucking firm located its central operations along North 16th Street. The Bercut-Richards Packing Company began operating a cannery during the 1930s. For many years, the 12th Street Road (part of Old Auburn Road) running diagonally through the eastern portion of the River District provided a primary route to the center of the city. Later, 16th Street joined 12th Street as a one-way corridor to the northeast. Both streets connected to Highway 160. The earlier 12th Street Road and its bridge across the American River accommodated early auto traffic to the northeast. Its presence encouraged the development of several small auto camps and roadside establishments in the River District.

Before long, auto camps sprang up along North 12th and North 16th streets to service travelers coming to and from Sacramento. Light manufacturing establishments, a number of oil, gas and petroleum distribution centers, food production factories, and warehouses were also important long-term tenants of the area. The Bercut-Richards Cannery formerly on Richards Boulevard (no longer extant), in the 1930s as an active and viable enterprise as a major economic force in the Sacramento region for many years, popularizing "Sacramento" brand tomato products. Another major agricultural concern, the California Almond Growers Exchange, continues to use a large area along North A and North B Streets near its' primary facilities to the east and on C Street, for both storage and production activities. Once the principal produce distribution center for the city, a produce distribution center on North 16th Street has diminished in activity due to the establishment of other such facilities elsewhere in the region. General warehousing and product distribution facilities were both common historically within the area.

The industrial character of the area, the rivers, and the area's rail lines and highways through it, attracted the homeless and impoverished, and transient agricultural workers. Transients and seasonal agricultural workers found inexpensive "lodging" sites along the American River—sometimes renting very small plots of land from a common landlord upon which they were left to create whatever dwelling they could manage. During the Great Depression, many such persons came to the area and formed settlements or camps that became known as "Hoovervilles." These settlements were characterized by small, makeshift shelters and substandard dwellings. Although economic stability returned after World War II, the area retained a substantial population of low-income and transient residents. The area's impoverished and destitute residents provided an impetus for organizations like the Salvation Army, Loaves and Fishes, Union Gospel Mission, and other aid groups to establish support facilities in the area, which still exist to the present day. In both healthy economic times and bad, homeless and impoverished persons have been a constant social feature of the area.

Project Area History

1330 North B Street – Development History

The large, extant warehouse at 1330 North B Street was initially constructed in 1964 for Bell Distributing, a beer distribution company as a 27,000-square-foot facility. Founded in 1942, the Bell Distributing company was a subsidiary of A. Levy & J. Zentner Company based in San Francisco. Before the construction of the warehouse on North B Street, Bell Distributing operated out of a warehouse at 1527 North C Street (still extant) from at least 1954 through 1964. In the late 1970s, Bell Distributing relocated its operation from 1330 North B Street to a new warehouse three times the size in an industrial park near Power Inn Road (Sacramento Bee 1954 July 7; City of Sacramento 1964; Sacramento Bee 1977 Nov 30).

The next owner/occupant of the 1964-constructed warehouse was Sacramento Prepak, a wholesale produce distribution company from 1980 to 1984 (Brown and Caldwell 2021:5-1). A loading dock addition valued at $184,000 was constructed in 1982, a new office building valued at $85,000 was constructed in 1982, and a warehouse addition valued at $60,000 was completed in 1984 (City of Sacramento Building Inspector Division 2022; Sacramento Bee 1982 Mar 28). Various additions over the years have resulted in the current 66,079 square feet facility. In the late 1990s, the Redevelopment Agency of the City of Sacramento sold the 5-acre parcel to the south of the warehouse building (APN 002-0041-083) to General Produce (also called C&J Warehouse, LLC) in an effort to retain the business within the city limits. At that time, General Produce had served the Sacramento region for 65 years and was the second largest employer in the area, after the Blue Diamond Almond Growers, with 20 full-time employees and an annual payroll of $9 million. The acquisition of the 5-acre parcel allowed the company to expand the warehouse at 1330 North B Street and for additional parking (City of Sacramento 1964; Sacramento County Assessor 2022; City of Sacramento 1998).

Architect Roy Olaf Swedin

Architect Roy Olaf Swedin designed the original 1964-constructed warehouse (City of Sacramento 1964). Born in Everett, Washington in 1929, Swedin worked as a draftsman for a series of architectural firms, including as Chief Draftsman for Ray Franceschi in Sacramento, who has been identified as a notable Sacramento modernism architect (GEI and Mead & Hunt 2017:3-4, 3-20). Between 1958 and 1962, Swedin was operating an architectural firm with Earl V. Carlson on Howe Avenue in Sacramento (U.S. City Directories 1822-1995). Swedin also practiced on his own between 1960 and 1966 until joining the Berkeley-based architecture firm of Cline, Zerkle, Agee & Swedin in 1966. In 1970, Swedin identified his principal works as the West Coast Formica Plant in Rocklin and a distribution center in Reno, Nevada (both built 1967), and two other distribution centers in Idaho and Oregon constructed in 1969 (AIA 1962; AIA 1970).

General Produce

General Produce was the third owner/occupant of the warehouse at 1330 North B Street from 1984 to 2020. General Produce & Fish Company was started in 1933 by Chinese immigrant Chan Tai Oy and his sons Eddie, Dan, and Tom. Two years later, the company focused on produce and dropped fish from its offerings. In 1950, Eddie, Dan, Tom and their cousin Davis Sun assumed control of the company and expanded the company with bananas and their primary product. Chan Tai Oy passed away in 1971, but the second generation continued the family business becoming the largest distributor of fresh fruits and vegetables in Northern California by 1980. In 1984, after 51 years at its 16th and North B streets warehouse location (still extant), the company relocated to 1330 North B Street within an expanded warehouse with land to allow for continued growth. Between 1990 and 2000, the third generation assumed management of the company and diversified into new markets exporting fresh produce to customers in the Pacific Rim region, providing organic, specialty and ethnic foods, dairy, eggs, frozen foods, prepared salads, juice and other items. In 2022, General Produce relocated their company operations from 1330 North B Street to a 107,000-square-foot warehouse and distribution facility at the Metro Airpark near the Sacramento International Airport (General Produce 2022). SMUD purchased the building and the 10-acre property at 1330 North B Street from General Produce in July 2021 (*Sacramento Business Journal* 2021).

North 16th Street Historic District

The property at 1330 North B Street is outside of the boundary of the North 16th Street Historic District, which was adopted as a City of Sacramento Historic District in 2011 (City of Sacramento 2019). The subsequent Sacramento Historic District Plan developed for the North 16th Street Historic District included a brief historical context and significance statement that identified the district as “a collection of buildings that are representative of Sacramento’s role as the main terminal and produce distribution point for the region’s agricultural industry from the early-to mid-twentieth century,” with a period of significance from 1905 to 1963, when agricultural shipping and distribution shifted away from North 16th Street to the Port of Stockton (City of Sacramento 2019: 274-275).

1226-1270 North B Street Development History

Before the construction of the metal-frame shop building in 1962, the property was developed with small single-family house constructed in 1936 (City of Sacramento Building Department 1936). Sited at the northernmost boundary of the city limits, by 1950 this area of North B Street east of 12th Street was a mixture of small residences, a junkyard, a lumber yard, auto services, and small railroad bunkhouses (Sanborn Map Company 1950). The original 3,200-square-foot metal warehouse was constructed in 1962 as a tire recapping plant. The building was constructed for Hazel Nielsen and was designed by Gordon Klippel. The contractor was Winston Steel Works (City of Sacramento 1961).

Hazel Nielsen was married to Albert Nielsen who owned several retail tire shops in Sacramento (US Census Bureau 1950). Nielsen started his first tire shop in 1928 at 1422 J Street and later moved to 1619 L Street and 1615 L Street. Just before World War II, Nielsen expanded his company into tire recapping, also called retreading, and he constructed the warehouse at 1226-1270 North B Street in 1962 as a recapping plant. From 1959-69, Nielsen also owned a tire store on Fulton Avenue. By 1972, after 45 years Al Nielsen Company was Sacramento’s oldest independent tire business grossing $1 million annually. Nielsen sold the property and business at 1615 L Street in 1972 (*Sacramento Bee* 1972).

Winston Steel Works

Winston Steel Works was established circa 1947 by James Winston as Winston Buildings that produced and erected prefabricated metal buildings, The company constructed a plant at 4600 West Capitol Avenue in West Sacramento in 1951. As of 1957, the company was the only manufacturer of prefabricated steel buildings in the Sacramento area and some of their buildings were shipped to foreign countries (*Sacramento Bee* 1951; 1957). The company designed and constructed the Land Park Bowl at 5850 Freeport Boulevard in 1960 (still extant) (*Sacramento Bee* 1960). In 1964 the company filed for bankruptcy (*Sacramento Bee* 1964).

Gordon Klippel

The tire recapping plant at 1226-1270 North B Street was designed by Gordon Klippel, a structural engineer based in Sacramento. Klippel attended University of California Berkeley and served in the Seabees during World War II. He was employed by the state division of architecture as a civil engineer in 1947 (*Sacramento Bee* 1947)

SMUD Corporate History

SMUD was formed in 1923. At that time, its service area encompassed an area of approximately 75 square miles. SMUD’s efforts to purchase PG&E local system sparked 23 years of lawsuits between the two entities and finally were settled in 1946, when the courts ruled against PG&E, forcing it to sell its distribution system to SMUD (Ward 1973:44–47).

The distribution system was antiquated and had not been well maintained by PG&E during the litigious years in the early 20th century. Within the first 10 years of operation, SMUD increased the number of substations and improved the voltage capacity on its lines so it could transmit more power longer distances (Ward 1973:49, 61). Despite the expansion and upgrades, the tremendous population boom in the Sacramento region after World War II strained SMUD’s system. SMUD found itself at the limits of its bonded capacity and did not want to risk a second bond election. One method of financing the system expansion involved applying for funds from the Rural Electrification Administration (REA), an agency created to provide funding to expand electrical systems into unincorporated areas of a state. Between 1948 and 1959, SMUD borrowed $23,239,000 in REA funds to expand electrical service into the agricultural, unincorporated communities of Sacramento County (Ward 1973:51–52).

As part of its expansion programs, SMUD entered into a contract with the U.S. Bureau of Reclamation (Reclamation) in 1954 to receive power from Reclamation’s Central Valley Project (CVP), a federal project that included Shasta Dam, for a maximum of 290,000 kilowatts for a period not to exceed 40 years. This power was delivered using PG&E lines until SMUD could provide its own direct lines to the CVP (Ward 1973:56–57). By the early 1960s, SMUD was serving 170,000 customers in Sacramento County (SMUD 2022). In 1969, it started construction on its first nuclear power plant, Rancho Seco, in southeastern

Sacramento County (Ward 1973:78–79). The plant became operational in 1974, but the plant suffered from continual problems, including a 27-month outage into the 1980s. In 1989, voters voted to close the plant. SMUD shut down the power plant on June 7, 1989 (SMUD 2022). In the 1990s, SMUD diversified its power sources and was serving more than 500,000 customers by the end of the 20th century (SMUD 2022). SMUD continues to enhance its services and explores new options for energy sources.

By the early 1960s, SMUD was serving 170,000 customers in Sacramento County. After a controversial and failed attempt at building a nuclear power plant (Rancho Seco), SMUD diversified its power sources in the 1990s. By the end of the twentieth century, it was serving more than 500,000 customers (SMUD 2022). SMUD continues to enhance its services and explore new options for energy sources for the greater Sacramento region.

Applicable Regulations

Federal Regulations

No federal regulations related to cultural resources are applicable to the proposed project.

State Regulations

California Environmental Quality Act Statute and Guidelines

CEQA provides a broad definition of what constitutes a cultural or historical resource. Cultural resources can include traces of prehistoric habitation and activities, historic-era sites and materials, and places used for traditional Native American observances or places with special cultural significance. In general, it is required to treat any trace of human activity more than 50 years in age as a potential cultural resource.

CEQA states that if a project would have significant impacts on important cultural resources, then alternative plans or mitigation measures must be considered. However, only significant cultural resources (termed "historical resources") need to be addressed. The CEQA Guidelines define a historical resource as a resource listed or eligible for listing on the California Register of Historical Resources (CRHR) (PRC Section 5024.1). A resource may be eligible for inclusion in the CRHR if it:

1. Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
2. Is associated with the lives of persons important in our past;
3. Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or
4. Has yielded, or may be likely to yield, information important in prehistory or history.

The CEQA Guidelines also require consideration of unique archaeological resources (Section 15064.5). As used in the PRC (Section 21083.2), the term "unique archaeological resource" means an archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:

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

In addition to meeting one or more of the above criteria, resources eligible for listing in the CRHR must retain enough of their historic character or appearance to be recognizable as historical resources and to convey the reasons for their significance. Integrity is evaluated with regard to the retention of location, design, setting, materials, workmanship, feeling, and association

Assembly Bill 52

Assembly Bill (AB) 52, passed in 2014, amends sections of CEQA relating to Native Americans. AB 52 established a new category of cultural resources, named TCRs (Tribal Cultural Resources), and states that a project that may cause a substantial adverse change in the significance of a TCR may have a significant effect on the environment. Section 21074 was added to the PRC to define TCRs, as follows:

(a) "TCRs" are either of the following:

(1) Sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are either of the following:

(A) Included or determined to be eligible for inclusion in the California Register of Historical Resources.

(B) Included in a local register of historical resources as defined in subdivision (k) of Section 5020.1.

(2) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Section 5024.1. In applying the criteria set forth in subdivision (c) of Section 5024.1 for the purposes of this paragraph, the lead agency shall consider the significance of the resource to a California Native American tribe.

(b) A cultural landscape that meets the criteria of subdivision (a) is a TCR to the extent that the landscape is geographically defined in terms of the size and scope of the landscape.

(c) A historical resource described in Section 21084.1, a unique archaeological resource as defined in subdivision (g) of Section 21083.2, or a "non-unique archaeological resource" as defined in subdivision (h) of Section 21083.2 may also be a tribal cultural resource if it conforms with the criteria of subdivision (a).

Per AB 52, the lead agency must begin consultation with any tribe that traditionally or culturally is affiliated with the geographic area. In addition, AB 52 includes time limits for certain responses regarding consultation, as follows:

- Within 14 days of determining that an application for a project is complete or a decision by a public agency to undertake a project, the lead agency shall provide formal notification to the designated contact of, or a tribal representative of, traditionally and culturally affiliated California Native American tribes that have requested notice;
- After provision of the formal notification by the public agency, the California Native American tribe has 30 days to request consultation; and
- The lead agency must begin consultation process within 30 days of receiving a California Native American tribe's request for consultation.

Local Regulations

City of Sacramento General Plan

The following policies are considered relevant to the project and cultural resources in the vicinity of the project:

- **Policy HCR 2.1.1: Identification.** The City shall identify historic and cultural resources, including individual properties, districts, and sites (e.g., archaeological sites), to ensure adequate protection of these resources.

- **Policy HCR 2.1.2: Applicable Laws and Regulations.** The City shall ensure compliance with City, State, and Federal historic preservation laws, regulations, and codes to protect and assist in the preservation of historic and archaeological resources, including the use of the California Historical Building Code as applicable. Unless listed in the Sacramento, California, or National registers, the City shall require discretionary projects involving resources 50 years and older to evaluate their eligibility for inclusion on the California or Sacramento registers for compliance with the California Environmental Quality Act.
- **Policy HCR 2.1.5: National, California, and Sacramento Registers.** The City shall support efforts to pursue eligibility and listing for qualified resources including historic districts and individual resources under the appropriate National, California, or Sacramento registers.
- **Policy HCR 2.1.10: Early Project Consultation.** The City shall minimize potential impacts to historic and cultural resources by consulting with property owners, land developers, and the building industry early in the development review process.
- **Policy HCR 2.1.11: Compatibility with Historic Context.** The City shall review proposed new development, alterations, and rehabilitation/remodels for compatibility with the surrounding historic context. The City shall pay special attention to the scale, massing, and relationship of proposed new development to surrounding historic resources.
- **Policy HCR 2.1.15: Demolition.** The City shall consider demolition of historic resources as a last resort, to be permitted only if rehabilitation of the resource is not feasible, demolition is necessary to protect the health, safety, and welfare of its residents, or the public benefits outweigh the loss of the historic resource.
- **Policy HCR 2.1.16: Archaeological & Cultural Resources.** The City shall develop or ensure compliance with protocols that protect or mitigate impacts to archaeological and cultural resources including prehistoric resources.
- **Policy HCR 2.1.14: Preservation Project Review.** The City shall review and evaluate proposed development projects to minimize impacts on identified historic and cultural resources, including projects on Landmark parcels and parcels within Historic Districts, based on applicable adopted criteria and standards.

Sacramento Planning and Development Code Chapter 17.604

Chapter 17.604 (Historic Preservation) of the City's Planning and Development Code includes provisions for the identification of significant historic, prehistoric and cultural resources, structures, districts, sites, landscapes, and properties within the City. This chapter also includes mechanisms and procedures to protect and encourage the preservation of the city's historic and cultural resources, as well as established the preservation commission and the responsibilities of the City's Preservation Director.

Sacramento Register of Historical and Cultural Resources

City Code section 17.604.210 contains the criteria and requirements for listing on, or deletion from, the Sacramento Register as a landmark, historic district or contributing resource are as follows:

A. Listing on the Sacramento register—Landmarks. A nominated resource shall be listed on the Sacramento register as a landmark if the city council finds, after holding the hearing required by this chapter, that all of the requirements set forth below are satisfied:

   1. Requirements.

      a. The nominated resource meets one or more of the following criteria:

         i. It is associated with events that have made a significant contribution to the broad patterns of the history of the city, the region, the state or the nation;

         ii. It is associated with the lives of persons significant in the city's past;

         iii. It embodies the distinctive characteristics of a type, period or method of construction;

iv. It represents the work of an important creative individual or master;

v. It possesses high artistic values; or

vi. It has yielded, or may be likely to yield, information important in the prehistory or history of the city, the region, the state or the nation;

b. The nominated resource has integrity of location, design, setting, materials, workmanship and association. Integrity shall be judged with reference to the particular criterion or criteria specified in subsection A.1.a of this section;

c. The nominated resource has significant historic or architectural worth, and its designation as a landmark is reasonable, appropriate and necessary to promote, protect and further the goals and purposes of this chapter.

2. Factors to be considered. In determining whether to list a nominated resource on the Sacramento register as a landmark, the factors below shall be considered.

a. A structure removed from its original location is eligible if it is significant primarily for its architectural value or it is the most important surviving structure associated with a historic person or event.

b. A birthplace or grave is eligible if it is that of a historical figure of outstanding importance and there is no other appropriate site or structure directly associated with his or her productive life.

c. A reconstructed building is eligible if the reconstruction is historically accurate, if the structure is presented in a dignified manner as part of a restoration master plan, and if no other original structure survives that has the same association.

d. Properties that are primarily commemorative in intent are eligible if design, age, tradition, or symbolic value invests such properties with their own historical significance.

e. Properties achieving significance within the past 50 years are eligible if such properties are of exceptional importance.

Literature Review

A cultural resources records search of the project site and vicinity was conducted by the North Central Information Center (NCIC) of the California Historical Resources Information System (or CHRIS) on November 1, 2022 (NCIC File No SAC-22-215) and on October 15, 2024 (NCIC File No 24-158) The records search was conducted to obtain background information regarding previous resources or studies that have been reported within and in the vicinity of the project site, and to obtain existing information that may contribute to the proposed project's cultural sensitivity assessment. Documentation of the cultural resources records search results are provided in Appendix A.

The search included the project site and a 0.25-mile radius. The results were used to determine whether known cultural resources have been recorded at or adjacent to the project site, and to assess the cultural sensitivity of the area. The records search included reviews of maps listing previously conducted cultural resource studies in the area, and historic General Land Office (or GLO) maps.

Site records and previous studies were accessed for the project site and a 0.25-mile radius. The location of previous studies is presented in Appendix B, and the location of previously documented resources are presented in Appendix C. The following references also were reviewed:

- National Register of Historic Places (NRHP)
- California Register of Historical Resources (CRHR)
- California State Historical Landmarks (OHP 1996)
- California Inventory of Historic Resources (California Department of Parks and Recreation 1976)
- California Points of Historical Interest (OHP 1992)

Previous Investigations

Three studies (003407, 010553, and 012473) have investigated portions of the proposed Substation J footprint (Table 1). Of those within the substation a literature review and windshield tour of the project area to assess the archaeological sensitivity was conducted for the Richards Boulevard Master Plan Environmental Impact Report (EIR) (Lindstrom 1991). The Richards Boulevard Area Architectural and Historical Property Survey, which included the project site within the 1,320-acre study area did not identify historic properties (Historic Environment Consultants 2000). The Historic Property Survey Report for the North 12th Complete Streets Project (Koenig 2017) was conducted along the northern project site boundary. None of the previous investigations consisted of an archaeological or built environment assessment within the footprint for the proposed Station J.

Table 1. Previous Cultural Resources Investigations within the Project Site

NCIC Report Number	Year	Author(s)	Report Title
003407	1991	Lindstrom, Susan	Preliminary Literature Review Prehistoric and Historic Archaeological Resources Environmental Impact Report City Of Sacramento
010553	2000	Historic Environment Consultants	Richards Boulevard Area Architectural and Historical Property Survey
012473	2017	Koenig, Heidi	Historic Property Survey Report for the North 12th Complete Streets Project, Sacramento, Sacramento County, California
Note: NCIC = North Central Information Center; All reports are on file at the North Central Information Center Source: North Central Information Center File No 22-215, data compiled by AECOM 2022			

An additional 13 studies included the entre rights-of-way for the proposed transmission lines are summarized in Table 2.

Table 2. Previous Cultural Resources Investigations within the Routes of Proposed Underground and Above Ground Transmission Lines

NCIC Report Number	Year	Author(s)	Report Title
002016	1988	Holman, Miley Paul	Richards Boulevard Extension Plan, Sacramento, Sacramento County, California Archaeological Study.
003335	1999	Praetzellis, Adrian and Mary Praetzellis	Southern Pacific Railyards Preliminary Issues and Findings: Archaeology
003389	1981	Boghosian, Paula	Non-Residential Building Survey Project Report
003404	1979	Kenneth W. Owens, Pamela McGuire, Susan Searcy, and Jim West	Alkali Flat Redevelopment Area Determination of Eligibilty for Inclusion in the National Register of Historic Places
003407	1991	Lindstrom, Susan	Preliminary Literature Review Prehistoric and Historic Archaeological Resources Environmental Impact Report City Of Sacramento
003440	1990	Lindstrom, Susan	A Preliminary Cultural Resource Evaluation of the Sacramento Regional Transit Systems Planning Study Downtown Sacramento/Natomas/Airport Route: EIR
003491	1999	Praetzellis, Adrian and Mary Praetzellis	Southern Pacific Railyards Preliminary Issues and Findings: Archaeology

NCIC Report Number	Year	Author(s)	Report Title
007449	1981	Boghosian, Paula	Non-Residential Building Survey Project Report
009066	1976	Charles Hall Page	Sacramento Old City Residential Building Survey
010553	2000	Historic Environment Consultants	Richards Boulevard Area Architectural and Historical Property Survey
011024	2012	Dougherty, John	Historic Properties Survey Report, 12th Street Corridor Project, City of Sacramento, Sacramento County, California
012473	2000	Gross, Charlane, M.A.	Cultural Resources Assessment of the Sacramento Rail Yard Soil Remediation Project
009066	1976	Page, Charles Hall	Sacramento Old City Residential Building Survey
Note: All reports are on file at the North Central Information Center Source: North Central Information Center 2022 and 2024, data compiled by AECOM 2024			

Another 36 cultural investigations have been conducted within 0.25 miles of the project site (3). These studies consisted of those for linear pipelines, fiber optics, road improvements, residential development and documentation and assessment of Central Pacific Transcontinental Railroad, Sacramento to Nevada State Line - Historic American Engineering Record (HAER) CA-196.

Table 3. Previous Cultural Resources Investigations within 0.25 Mile of the Project Site

NCIC Report Number	Year	Author(s)	Report Title
000616	2001	Hupp, Jill, Raymond Benson, and Kelly Heidecker	Addendum to the Revised Historical Resources Compliance Report for the Relinquishment of State Route 160 to the City of Sacramento; Negative Archaeological Survey Report
002012	1998	Derr, Eleanor	Pacific Bell Mobile Services: 1001 K Street, Sacramento, Sacramento County: Site # SA-005-08.
002690	2001	Baker, Cindy and John Dougherty	Cultural Resource Inventory of the Proposed Worldcom Fiberoptics Project, Sacramento
002935	1999	Jones and Stokes Associates, Inc.	Cultural Resources Inventory Report for Williams' Fiber Optic Cable System: Sacramento to California/Nevada State Border. Sacramento, Placer, and Nevada Counties, California
002936	2000	Jones and Stokes Associates, Inc.	Final Cultural Resources Inventory Report for the Proposed Fiber Optic Cable Routes between Point Arena and Robbins and Point Arena and Sacramento, CA.
003322	1998	Lewiston, Pamela	Dos Rios Construction Project Site Review (Par Ref No. 98-621)
003338	1981	Praetzellis, Adrian	Overview of Cultural Resources in the Central Business District, Sacramento
003359	1980	McGowan, Joseph	Environmental Impact Report on H-I-6-7 Block
003360	1991	Hider, Jennifer E. and Steve Mikesell	Cultural Resources Evaluation: Plaza Park, Sacramento
003400	1995	Derr, Eleanor	Blue Diamond Almond Growers Complex Upgrade; C Street Properties Redevelopment Extension Area
003443	1974	Peak, Ann S.	Archeological Assessment of the Sacramento City Filtration System Expansion
003443	1974	Peak, Ann S	Archeological Assessment of the Sacramento City Filtration System Expansion
003853	2000	Nelson, Wendy, Maureen Carpenter, and Kimberley L. Holanda	Cultural Resources Survey for the Level (3) Communications Long Haul Fiber Optics Project, Segment WP04: Sacramento to Redding
004409	2001	Stephens, Todd, Lauren Pflaum, and Patricia Harris	Section 106 Review of the Proposed American Tower Corporation Project "Dos Rios," 1101 North D Street, Sacramento, California

NCIC Report Number	Year	Author(s)	Report Title
006821	2005	Nelson, Wendy	Final Archaeological Investigations for the J & 9th Streets "Plaza Lofts" Project and Data Recovery Excavations for the Philadelphia House Hotel (CA-SAC-692H) Sacramento, CA
006944	2005	Jones, Kari	Collocation Submission Packet FCC Form 621 Project Name: City Hall Cell Site Project #: 70-05926.01
007565	2006	Tremaine, Kim	Final Report of the Archaeological Testing and Monitoring for the City of Sacramento's 7th Street Extension Project, Sacramento, California
007745	1987	McCarthy, Helen, Margaret Scully, and Clinton Blount	Cultural Resources Survey of the Proposed Sacramento to Roseville Pipeline Project Contract SPPL-1994
008619	2006	Cindy Arrington et al	Cultural Resources Final Report of Monitoring and Findings for the Qwest Network Construction Project, State of California
009164	2005	Wendy L. Tinsley	NRHP Evaluation & Proposed Cell Tower Finding of Effects Statement- Court Plaza Building, 901 H Street, Sacramento, CA 95814
009314	2008	Cindy Baker and Marshall Millet	Historic American Building Survey Bercut Richards Cannery, Sacramento County, California
009486	2008	Billat, Lorna	Washington Park/ SAC-432A
010434	1997	Snyder, John W.	Central Pacific Transcontinental Railroad, Sacramento to Nevada State Line - HAER CA-196
010812	2010	Kovak, Amy	Cultural Resources Inventory for the SMUD Station A Reconductor Project Sacramento County, California
011024	2012	Dougherty, John	Historic Properties Survey Report, 12th Street Corridor Project, City of Sacramento, Sacramento County, California
011024	2012	Dougherty, John	Late Discovery Plan, 12th Street Corridor Project, City of Sacramento, Sacramento County, California
011024	2015	Tremaine, Kim	Archaeological Monitoring Report for 12th Street Safety Improvement Project, City of Sacramento, Sacramento County, California
011237	2012	Wills, Carrie D.	Cultural Resources Records Search and Site Visit Results for T-Mobile West, LLC Candidate SC06971A (Hwy 160 & C St), 300 16th Street, Sacramento, Sacramento County, California
011312	2012	Johnson, Eric	CA-056 (Sacramento I)
012320	2017	Grady, Amber and Robin Hoffman	Cultural Resources Survey and Inventory Report for Twin Rivers Transit-Oriented Development and Light Rail Station Project
012395	2015	Mark Salopek	FCC Application for the Proposed Construction of 9 Monopole Towers
012872	2019	Robin Hoffman	SMUD Station A Substation Rebuild and Relocation Project, Archaeological Testing Results Report
012873	2019	Hoffman, Robin	Twin Rivers Transit-Oriented Development and Light Rail Station Project Unanticipated Archaeological Discovery Assessment and Evaluation
013012	2015	URS	Archaeological Resources Assessment, The Downtown/Riverfront Streetcar Project, Sacramento and Yolo Counties, California
013887	2005	Fritzsche, Leslie	Section 106 Consultation for the Rehabilitation of the Globe Mills, City of Sacramento, Sacramento County, California
014232	2018	Robin Hoffman	Cultural Resources Inventory Report, City of Sacramento Accelerated Water Meter Program Individual Meter Retrofits and Water Main Replacements Project Z14010093

Note: All reports are on file at the North Central Information Center
Source: North Central Information Center 2022 and 2024, data compiled by AECOM 2024
HAER = Historic American Engineering Record

Previously Documented Resources

No cultural resources have been previously documented within the Station J Substation project site; however, four have been documented within the proposed transmission line corridors (Table 3), and a total of 87 historic-age properties have been identified within 0.25 mile of the project site (4). The previously documented resources within the project site including transmission lines are provided in Appendix D.

Of the four resources within the project the Western Pacific Railway P-34-000491 (CA-SAC-000464H), bisects the proposed route of the transmission lines at one point. It has been evaluated as not significant under any criteria (National Register Criterion A (History); National Register Criterion B (People); National Register Criterion C (Design); National Register Criterion D (information potential); National Significance; and Integrity for the National Register of Historic Places.

The Central Pacific Railroad (CPRR) (P-34-000505, CA-SAC-000478H) was incorporated in 1861, and ground was broken on the First Transcontinental Railroad at Front Street and K Street in downtown Sacramento on January 8, 1863. Construction of the line progressed eastward, over the American River, to reach Roseville, California in 1864. The line reached Reno, Nevada in June 19, 1868. The final spike for the First Transcontinental Railroad was driven almost a year later on May 10, 1869, at Promontory Point, At this poimt the CPRR line connected with the eastern half of the transcontinental railroad built by the Union Pacific Railroad. The line linked the east and west, and encouraged settlement of the western U.S. In 1884, the Southern Pacific Railroad absorbed the CPRR, and operated the line until they merged with UPRR on September 11, 1996

Although the Central Pacific Railroad, First Transcontinental Railroad, has been extensively upgraded and rerouted since its original construction it is designated as California Historical Landmark (Number 780) and a Historical Point of Interest, and is listed in the CRHR. It bisects the proposed transmission lines at two locations. Installation of the underground utilities will be located beneath the existing right-of-way and will not impact the route of the Union Pacific Railroad.

The Northern Electric Railroad P-34-000746 (CA-SAC-000571H) bisects the transmission right-of-way south of the American River. Elsewhere the route has been determined not eligible for inclusion the NRHP/CRHR. There is no evidence of this railway within the proposed project.

P-34-5225, is described as a Precontact, Historic Cultural Landscape and identified by the Nisenan as *Hoyo Sayo/Tah Sayo* (United Auburn Indian Community) and the Plains Miwok as *Waka-ce/Waka-Ly* (Wilton Rancheria), and roughly encompassing the Lower Sacramento River environs, from the northern end of the Natomas Basin to the southern end of Sherman Island, an area that includes a portion of the project site. The primary character-defining elements of this landscape are its waterways, tule habitat, fisheries, and other wildlife. These natural resources once served as the lifeblood of the local inhabitants. Today, relics of historical habitat still survive, with the river supporting anadromous and resident fish populations, as well as shellfish, and waterfowl. The natural levees lining the riverbanks historically were covered with riparian forests. Behind the levee/forests were flood basins, filled with tidal and non-tidal freshwater emergent wetlands, hosting vast stands of tules and large backwater lakes. The upland margins behind these wetlands/lakes, vegetated with willow thickets, were dissected by distributary networks of creeks that emptied into the flood basin sinks. Although generally defined, no specific locations were identified. There are no remnant natural landscape features, as described above, within the project site, therefore, project implementation would not result in affects to this cultural landscape.

Other than an historic-era refuse deposits (P-34-001378, and P-34-002360) all of the 87 sites are built environment resources that consist of an isolated levee remnant and trestle, the Alkali Flat Historic District, and numerous commercial and residential properties.

Table 3. Previously Recorded Cultural Resources within the Transmission Line Corridors

Primary Number	Trinomial Number	Type	Age	Description	NRHP Eligibility
P-34-000491	CA-SAC-000464H	Structure, Site	Historic	Western Pacific Railroad	Eligible
P-34-000505	CA-SAC-000478H	Structure, Site	Historic	Central Pacific Railroad (Transcontinental Railroad)	Eligible
P-34-000746	CA-SAC-000571H	Structure, Site	Historic	Northern Electric Railroad	Not Eligible
P-34-005225		Prehistoric Landscape	Precont act	Sacramento River Tribal Cultural Landscape	Appears eligible/significant under Criterion A/1
Note: All reports are on file at the North Central Information Center Source: North Central Information Center 2022 and 2024, data compiled by AECOM 20242 NRHP = National Register of Historic Places					

Table 4. Previously Recorded Cultural Resources within 0.25 Mile of Project Site

Primary Number	Trinomial Number	Type	Age	Description	NRHP Eligibility
P-34-001378	CA-SAC-001266H	Site	Historic	Dos Rios Trash Deposit	Not Eligible
P-34-001561		Site	Historic	Historic Levee	Not Eligible
P-34-001562		Site	Historic	Isolated Trestle	Not Eligible
P-34-002324		District	Historic	NRHP Alkali Flat North Historic District, OHP PRN 5813-0969-9999	Eligible
P-34-002360		District Component	Historic	Gold Rush Era Trash Deposit	Eligible
P-34-002441		Building	Historic	OHP PRN 5813-0044-0000 (Single family property)	Appeared Eligible
P-34-002442		Building	Historic	OHP PRN 5813-0045-0000 (Single family property)	Appeared Eligible
P-34-002443		Building	Historic	OHP PRN 5813-0046-0000 (Single family property)	Appeared Eligible
P-34-002516		Building	Historic	OHP PRN 5813-0081-0000 (Single family property)	Appeared Eligible
P-34-002517		Building	Historic	OHP PRN 5813-0082-0000 (Multiple family property)	Appeared Eligible
P-34-002518		Building	Historic	OHP PRN 5813-0083-0000 (Single family property)	Appeared Eligible
P-34-002519		Building	Historic	OHP PRN 5813-0084-0000 (Single family property)	Appeared Eligible
P-34-002520		Building	Historic	OHP PRN 5813-0085-0000 (Single family property)	Appeared Eligible
P-34-002521		Building	Historic	OHP PRN 5813-0086-0000 (Single family property)	Appeared Eligible
P-34-002533		Building	Historic	OHP PRN 5813-0104-0000 (Single family property)	Appeared Eligible
P-34-002534		Building	Historic	OHP PRN 5813-0105-0000 (Single family property)	Appeared Eligible
P-34-002535		Building	Historic	OHP PRN 5813-0106-0000 (Single family property)	Appeared Eligible
P-34-002536		Building	Historic	OHP PRN 5813-0107-0000 (Single family property)	Appeared Eligible
P-34-002537		Building	Historic	OHP PRN 5813-0108-0000 (Single family property)	Appeared Eligible

Primary Number	Trinomial Number	Type	Age	Description	NRHP Eligibility
P-34-002538		Building	Historic	OHP PRN 5813-0109-0000 (Single family property)	Appeared Eligible
P-34-002539		Building	Historic	OHP PRN 5813-0110-0000 (Single family property)	Appeared Eligible
P-34-002549		Building	Historic	OHP PRN 5813-0120-0000 (Single family property)	Appeared Eligible
P-34-002550		Building	Historic	OHP PRN 5813-0121-0000 (Single family property)	Appeared Eligible
P-34-002551		Building	Historic	OHP PRN 5813-0122-0000 (Single family property)	Appeared Eligible
P-34-002726		Building	Historic	OHP PRN 5813-0305-0000 (Single family property)	Appeared Eligible
P-34-002727		Building	Historic	OHP PRN 5813-0306-0000 (Single family property)	Appeared Eligible
P-34-002728		Building	Historic	OHP PRN 5813-0307-0000 (Single family property)	Appeared Eligible
P-34-002729		Building	Historic	OHP PRN 5813-0308-0000 (Single family property)	Appeared Eligible
P-34-002730		Building	Historic	OHP PRN 5813-0309-0000 (Single family property)	Appeared Eligible
P-34-002731		Building	Historic	OHP PRN 5813-0310-0000 (Single family property)	Appeared Eligible
P-34-002732		Building	Historic	OHP PRN 5813-0311-0000 (Single family property)	Appeared Eligible
P-34-002733		Building	Historic	OHP PRN 5813-0313-0000 (Single family property)	Appeared Eligible
P-34-002734		Building	Historic	OHP PRN 5813-0314-0000 (Single family property)	Appeared Eligible
P-34-002735		Building	Historic	OHP PRN 5813-0315-0000 (Single family property)	Appeared Eligible
P-34-002736		Building	Historic	OHP PRN 5813-0316-0000 (Single family property)	Appeared Eligible
P-34-002737		Building	Historic	OHP PRN 5813-0317-0000 (Single family property)	Appeared Eligible
P-34-002738		Building	Historic	OHP PRN 5813-0318-0000 (Single family property)	Appeared Eligible
P-34-002739		Building	Historic	OHP PRN 5813-0319-0000 (Single family property)	Appeared Eligible
P-34-002746		Building	Historic	OHP PRN 5813-0337-0000 (Single family property)	Appeared Eligible
P-34-002747		Building	Historic	OHP PRN 5813-0338-0000 (Single family property)	Appeared Eligible
P-34-002748		Building	Historic	OHP PRN 5813-0339-0000 (Single family property)	Appeared Eligible
P-34-002749		Building	Historic	OHP PRN 5813-0340-0000 (Single family property)	Appeared Eligible
P-34-002751		Building	Historic	OHP PRN 5813-0342-0000 (Single family property)	Appeared Eligible
P-34-002752		Building	Historic	OHP PRN 5813-0343-0000 HP02 (Single family property)	Appeared Eligible
P-34-003181		Building	Historic	The White Company - Trucks OHP PRN 5813-0748-0000 (1-3 story commercial building)	Appeared Eligible

Primary Number	Trinomial Number	Type	Age	Description	NRHP Eligibility
P-34-003186		Building	Historic	Crystal Cream & Butter Company OHP PRN 5813-0754-0000 (1-3 story commercial building)	Unevaluated
P-34-003187		Building	Historic	Reed & Mckee Tires OHP PRN 5813-0755-0000 (1-3 story commercial building)	Unevaluated
P-34-003359		Building	Historic	Mabel's Rattan Shop OHP PRN 5813-0906-0000 (Single family property); HP06 (1-3 story commercial building)	Unevaluated
P-34-003371		Building	Historic	Specialized Clutch and Brake Shop OHP PRN 5813-0918-0000 (1-3 story commercial building) - auto shop	Unevaluated
P-34-003563		Building	Historic	Triangle Produce Building OHP PRN 5813-1154-0000 Polly Distributing	Unevaluated
P-34-003564		Building	Historic	Triangle Produce Co. OHP PRN 5813-1155-0000	Unevaluated
P-34-003565		Building	Historic	Japan Food Corporation OHP PRN 5813-1156-0000 Other Admail West	Unevaluated
P-34-003566		Building	Historic	Acme Beverage Co. OHP PRN 5813-1157-0000	Unevaluated
P-34-003567		Building	Historic	Sacramento Pipe Works	Unevaluated
P-34-003568		Building	Historic	A. Levy and J. Zentner Produce Company OHP PRN 5813-1159-0000	Unevaluated
P-34-003570		Building	Historic	McDonald's Food Equipment Co. OHP PRN 5813-1161-0000 Other Russell Brothers Co. Other Ruland's Office Furniture/	Unevaluated
P-34-003634		Building	Historic	Phoenix Milling Company OHP PRN 5813-0962-0000 Other Globe Mills	Unevaluated
P-34-003635		Building	Historic	Office Furnishing Center/ California Sunshine Company OHP PRN 5813-0963-0000	Unevaluated
P-34-003636		Building	Historic	OHP PRN 5813-0969-0001	Appeared Eligible
P-34-003637		Building	Historic	OHP PRN 5813-0969-0002	Appeared Eligible
P-34-003638		Building	Historic	OHP PRN 5813-0969-0003	Appeared Eligible
P-34-003639		Building	Historic	OHP PRN 5813-0969-0004	Appeared Eligible
P-34-003641		Building	Historic	OHP PRN 5813-0969-0007	Appeared Eligible
P-34-003642		Building	Historic	OHP PRN 5813-0969-0008	Appeared Eligible
P-34-003643		Building	Historic	OHP PRN 5813-0969-0009	Appeared Eligible

Primary Number	Trinomial Number	Type	Age	Description	NRHP Eligibility
P-34-003644		Building	Historic	OHP PRN 5813-0969-0010	Appeared Eligible
P-34-003645		Building	Historic	OHP PRN 5813-0969-0011	Appeared Eligible
P-34-003646		Building	Historic	OHP PRN 5813-0969-0012	Appeared Eligible
P-34-003647		Building	Historic	OHP PRN 5813-0969-0013 OHP PRN 5813-0048-0000	Appeared Eligible
P-34-003648		Building	Historic	OHP PRN 5813-0969-0014	Appeared Eligible
P-34-003665		Building	Historic	OHP PRN 5813-0312-0000	Appeared Eligible
P-34-004152		Building	Historic	Acme Cabinet Shop OHP PRN 5813-1180-0000 Other Machold Mill	Unevaluated
P-34-004155		Building	Historic	Fire Station #14 OHP PRN 5813-1184-0000	Unevaluated
P-34-004160		Building	Historic	Del Monte Cannery-Blue Diamond Growers Exchange OHP PRN 5813-1189-0000 Other Warehouse, Blue Diamond Complex	Unevaluated
P-34-004161		Building	Historic	Cardinal Scale Company OHP PRN 5813-1196-0000 Other L.R. Murphy Scale Co. Other Top Hot Potato Chip Factory HP08 (Industrial building)	Unevaluated
P-34-004162		Building	Historic	Blue Diamond Warehouse OHP PRN 5813-1198-0000	Unevaluated
P-34-004163		Building	Historic	W.A. Ward Seed Company OHP PRN 5813-1201-0000 Other Wood Bros. Carpet and Linoleum	Unevaluated
P-34-004164		Building	Historic	Western Body Co. OHP PRN 5813-1202-0000	Unevaluated
P-34-004165		Building	Historic	Twin Rivers Housing Project (Multiple family property)	Unevaluated
P-34-004166		Building	Historic	Loaves & Fishes-The Ceravantes Building	Unevaluated
P-34-5246		Other	Historic	--------	Unevaluated
P-34-5248		Other	Historic	--------	Unevaluated
P-34-5249		Other	Historic	--------	Unevaluated
P-34-5250		Other	Historic	--------	Unevaluated
P-34-5516		Building	Historic	--------	Unevaluated

Note: All reports are on file at the North Central Information Center
Source: North Central Information Center 2022 and 2024, data compiled by AECOM 2024
NRHP = National Register of Historic Places
OHP = Office of Historic Preservation

Native American Consultation

Native American Heritage Commission

The NAHC was contacted by AECOM via email on October 31, 2022, for a Sacred Lands File & Native American Contacts List Request. The NAHC responded via email on December 9, 2022, with positive results and attached a list of Native American tribes who may have knowledge of cultural resources in the study area. The NAHC communications are enclosed in Appendix E.

AB 52 Consultation

SMUD staff requested AB 52 consultation with United Auburn Indian Community, the Shingle Springs Band of Miwok Indians (SSBMI), and the Ione Band of Miwok Indians (Ione). Letters requesting consultation were sent to these groups on September 22, 2022, describing the project and served as notification and requesting a response within 30 days of the group would like to consult. No response was received from SSBMI or Ione.

In an email message dated September 30, 2022, Anna Starkey, United Auburn Indian Community (UAIC) Cultural Preservation Specialist, stated that UAIC reviewed the project location in their Tribal Historic Resource Information System (THRIS) database and determined that it is potentially sensitive for unrecorded tribal resources. Specifically, the project area is 20 feet west of an oral history burial site. Another oral history burial site is to the east but is a couple thousand feet away.

Further, UAIC indicated that pending the condition of the project site, a canine forensic survey may be warranted, and that a tribal monitor and an unanticipated discoveries and monitoring plan would be needed. SMUD continues to consult with UAIC.

Copies of this consultation are provided in Appendix F.

Interested Party Outreach

No additional interested parties were identified for further outreach.

Field Inventory and Findings

Archaeology Survey

AECOM Archaeologist Diana Ewing conducted a pedestrian survey of the proposed Station J footprint utilizing approximately 15-meter transects on November 10, 2022. The area consisted of a dirt lot with some grass/weed cover and some thick vine growth near fence lines (Photographs 1 and 2). Ground visibility was good with approximately eighty percent free of vegetation. No historic or Indigenous cultural material was observed. On December 14, 2022, additional survey of the transmission line rights-of-way for the Station J project was conducted by Ms. Ewing, AECOM Archaeologist. The paved and developed routes were walked including the dirt path by the Sacramento Northern Bikeway avoiding homeless encampments and private property. No cultural material, either historical or Indigenous, was observed.

Built Environment Survey

AECOM Architectural Historian Chandra Miller conducted a survey of the historic-age (45 years and older) built environment within the proposed SMUD Substation J project site on November 10, 2022. Ms. Miller identified two properties that resulted in the preparation of two separate Department of Parks and Recreation (DPR) 523 series forms: a warehouse at 1330 North B Street and a shop located at 1226-1270 North B Street. See the DPR 523 forms in Appendix G for full descriptions, historical context, and evaluation of each property described below.

Photograph 1: View of vacant lot, camera facing west, November 10, 2022.

Photograph 2: View of vine covered fence, camera facing east, November 10, 2022.

1330 North B Street

The property at 1330 North B Street is approximately 10-acres with a warehouse/distribution facility, initially developed in 1964 on APN 002-0041-086 and is partially paved, and 10-acre dirt/gravel parking lot on APN 002-0041-083. Along the northern boundary of the parcel is a one-story, rectangular plan flat-roof office building constructed in the 1980s. The north elevation is painted with a "We Are America's Farm to Fork Capital" mural. The soffit is clad with vertical groove plywood and has a wide fascia board. The south wall elevation of the office building is clad with stucco under large plate glass windows and doors in wide wood surrounds. Parallel to the office building is a single-wide prefabricated modular building with a low-sloped gable roof that was installed on the property between 1993-98 (Google Earth 2022). It is clad with vertical groove plywood siding with two metal entry doors with metal stairs and railings on the north elevation. The tall one-story vertical seamed metal-clad warehouse that comprises the majority of the building is along the east side of the parcel. There are 22 bays along the west elevation loading dock area (Photograph 3). At the west end is a shorter one-story metal-clad enclosed building segment on a poured concrete slab foundation, the middle is a taller one-story shed roof building with metal cladding on a poured concrete slab foundation, and the east end is a shed roof vertical metal seam clad building with a tall opening on the south elevation. South of the warehouse is a large parking lot area on APN 002-0041-083. The west portion of the lot is paved and the east side is a mixture of gravel and dirt.

Photograph 3: West elevation of warehouse with 22 bays along the loading dock with slanted pavement, camera facing northeast, November 10, 2022.

1226-1270 North B Street

The property at 1226-1270 North B Street has a 3,195-square-foot metal-frame shop building with a concrete block air compressor enclosure sited in a north-south orientation south along North B Street in the city of Sacramento (Photograph 4). Originally constructed in 1964, the one-story, low-sloped gable roof metal building has four roof-top vents. The building is clad with a mixture of vertical seamed and corrugated metal panels. A tall two-part sliding metal door is centrally located on the north elevation. The east elevation has three tall overhead metal roll-up doors. The shed roof metal-clad addition at the south end has one overhead metal roll-up door and an opening on the east elevation. The south end of the building has a metal-clad shed roof addition, and small concrete masonry block air compressor enclosure with a firewall along the west side, and a small metal shed-roof mechanical enclosure.

Photograph 4: 1226-1270 North B Street as viewed from North B Street, camera facing southwest, November 10, 2022

Findings and Recommendations

Archaeology

Background research, Native American and interested parties outreach, literature review, and field survey identified no archaeological resources within the footprint of the proposed substation and four previously documented cultural resources within the rights-of-way for the proposed above and underground transmission lines. The Western Pacific Railway (P-34-000491, CA-SAC-000464H), has been evaluated as not eligible/significant under any NRHP/CRHR. Regarding the route of the CPRR (P-34-000505, CA-SAC-000478H) underground utilities will be located beneath the existing right-of-way and will not impact the route. There is no evidence of the Northern Electric Railroad (P-34-000746, CA-SAC-000571H) within the transmission right-of-way south of the American River. Elsewhere this resource has been determined not eligible/significant. There are no remnant natural landscape features associated with P-34-5225 within the project area, therefore, project implementation would not result in affects to this cultural landscape. Therefore, project implementation would not result in impacts to previously identified cultural resources.

Built Environment

Based on background research, field survey, development of historical context, and evaluation, neither 1226-1270 North B Street nor 1330 North B Street are recommended as eligible for listing in the CRHR and/or the Sacramento Register of Historic and Cultural Resources because of lack of historical significance; therefore, these structures are not considered historical resources for the purposes of CEQA.

1226-1270 North B Street CRHR and Sacramento Register Criteria Evaluation

Under CRHR Criterion 1 and Sacramento Register Criterion i, the property at 1226-1270 North B Street does not have important associations with significant historic events or trends. Initially erected in 1962, this building was developed as a tire recapping plant and was part of the post-World War II auto-related and light-industrial activities sited near 12th Street at the northern boundary of the city. Today, the building serves as an automotive repair shop. Research did not reveal that the building itself played a distinct or important role in the economic development of this area of Sacramento. Therefore, this property is not eligible under these criteria.

Under CRHR Criterion 2 and Sacramento Register Criterion ii, the property at 1226-1270 North B Street has no direct important association with the lives of persons significant to history. Research did not reveal that any persons related to the development and use of the property made demonstrably important contributions to history at the local, state, or national levels. It does not appear that any of the known owners of the building or employees at the property at 1226-1270 North B Street gained individual significance within any context. While Albert Nielsen was a successful businessman specializing in tire sales, there is no indication that this former tire capping plant building is significant under this context. Therefore, this property is not eligible under these criteria.

Under CRHR Criterion 3 and Sacramento Register Criteria iii, iv, and v, the property at 1226-1270 North B Street is not significant for its type, period, or method of construction, high artistic value, or as the important work of a master. The building appears to be pre-fabricated and is a typical and unremarkable example reflecting the mid-twentieth-century trends of this building type. The building on this parcel also lacks the high artistic value that would merit listing in the CRHR or Sacramento Register. Therefore, this property is not eligible under these criteria. Research did not reveal that structural engineer Gordon Kippler raised to the level of a master architect/engineer during his professional career. Nor does it appear that Winston Steel Works was a master designer/contractor that developed any pioneering or innovative construction techniques during the time the company operated before going bankrupt.

Under CRHR Criterion 4 and Sacramento Register Criterion vi, the property at 1226-1270 North B Street is not significant as a source (or likely source) of important information regarding history. As a prefabricated metal building, it does not appear to have any likelihood of yielding important information about historic construction materials or technologies not otherwise known.

<u>1330 North B Street CRHR and Sacramento Register Criteria Evaluation</u>

Under CRHR Criterion 1 and Sacramento Register Criterion i, the property at 1330 North B Street does not have important associations with significant historic events or trends. Initially erected in 1964, this building was developed as a distribution warehouse and was part of the post-World War II light-industrial activities sited near 12th Street at the northern boundary of the city of Sacramento. The building was utilized by a beer distribution company from the 1960s to the early 1980s, and by two produce distribution companies from the 1980s to circa 2022. While the building was utilized for produce distribution for several decades, the property itself is not representative of Sacramento's role as the main terminal and produce distribution point for the region's agricultural industry from the early-to mid-twentieth century, which is conveyed through the nearby North 16th Street Historic District designated by the City of Sacramento with a period of significance from 1905 to 1963, when agricultural shipping and distribution shifted to the Port of Stockton. The property at 1330 North B Street does not appear to be individually significant within this context and also post-dates the period of significance of the North 16th Street Historic District. Research did not reveal that the building itself played a distinct or important role in the economic development of this area Sacramento. Therefore, this property is not eligible under these criteria.

Under CRHR Criterion 2 and Sacramento Register Criterion ii, the property at 1330 North B Street has no direct important association with the lives of persons significant to history. While members of the Chan Family have been associated with the property since circa 1984 to 2022, this was the second location of their multi-generational produce distribution business that has been in operation in the Sacramento region since 1933. The original location of General Produce company was a brick warehouse (still extant) that is within the City of Sacramento-designated North 16th Street Historic District. In addition, the warehouse/distribution center at 1330 North B Street was not constructed for the Chan Family's business, which were the third occupants since its original 1964 construction. While the Chan Family are three generations of successful produce distributors in the Sacramento region, their association with the property at 1330 North B Street is not significant under this context. Therefore, this property is not eligible under these criteria.

Under CRHR Criterion 3 and Sacramento Register Criteria iii, iv, and v, the property at 1330 North B Street is not significant for its type, period, or method of construction, high artistic value, or as the important work of a master. The early 1960s utilitarian warehouse building appears to be a typical and unremarkable example reflecting mid-twentieth-century trends of this building type. The building on this parcel also lacks the high artistic value that would merit listing in the CRHR or Sacramento Register. Nor do the subsequent additions and office constructed in the 1980s appear to be of architectural or engineering merit. In addition, research did not reveal that Sacramento-based architect Roy Olaf Swedin, who designed the original warehouse, rose to the level of a master architect during his professional career. Swedin did not identify the 1964 warehouse at 1330 North B Street as one of his principal works and instead indicated the West Coast Formica Plant in Rocklin and a distribution center in Reno, Nevada (both built 1967), and two other distribution centers in Idaho and Oregon constructed in 1969 as his primary works (AIA 1970). Nor does it appear that the F. Marsalla construction company was a master building contractor that developed any pioneering or innovative construction techniques associated with the original warehouse. Therefore, this property is not eligible under these criteria.

Under CRHR Criterion 4 and Sacramento Register Criterion vi, the property at 1330 North B Street is not significant as a source (or likely source) of important information regarding history. As a 1964 warehouse building with various additions in the 1980s, it does not appear to have any likelihood of yielding important information about historic construction materials or technologies not otherwise known.

Unanticipated Finds

Based on the results of the archival research and field survey, there is low to moderate potential that archaeological resources will be encountered during ground-disturbing activities for the proposed project.

During ground-disturbing activities necessary to implement the proposed project, if any prehistoric or historic subsurface archaeological resources are discovered, all work within 100 feet of the resources shall be halted and a qualified archaeologist shall be consulted within 24 hours to assess the significance of the find, according to CEQA Guidelines Section 15064.5, and implement, as applicable, CEQA Guidelines Sections 15064.5(d), (e), and (f).

If any find is determined to be a historic property per the NRHP or historical resource according to CEQA Guidelines Section 15064.5, representatives from SMUD and the qualified archaeologist will meet to determine the appropriate avoidance measures or other appropriate mitigation. Cultural resources shall be recorded on appropriate Department of Parks and Recreation forms, and all significant cultural materials recovered shall be, as necessary and at the discretion of the qualified archaeologist and in consultation with the local Native American community if the discovery is prehistoric in age, subject to scientific analysis, professional curation, and documentation according to professional standards. If it is determined that the proposed development or infrastructure project could damage a historical resource or a unique archaeological resource (as defined pursuant to the CEQA Guidelines), mitigation shall be implemented in accordance with Section 21083.2 of the California PRC and CEQA Guidelines Section 15126.4, with a preference for preservation in place. Work may proceed on other parts of the project site while mitigation for historical resources or unique archaeological resources is being carried out. Preservation in place may be accomplished by planning construction to avoid the resource; incorporating the resource within open space; capping and covering the resource; or deeding the site into a permanent conservation easement.

If avoidance is not feasible, the qualified archaeologist shall develop and oversee the execution of a treatment plan. The treatment plan shall include, but shall not be limited to, data recovery procedures based on location and type of archaeological resources discovered and a preparation and submittal of report of findings to the Northwest Information Center of the CHRIS. Data recovery shall be designed to recover the significant information the archaeological resource is expected to contain, based on the scientific/historical research questions that are applicable to the resource, what data classes the resource is expected to possess, and how the expected data classes would address the applicable resource questions. Data recovery, in general, should be limited to the portions of the historical property that could be adversely affected by project proponents' actions. Destructive data recovery methods shall not be applied to portions of the archaeological resources if nondestructive methods are practical.

Although a low potential would exist, the possibility of encountering human remains cannot be discounted. Section 7050.5 of the California Health and Safety Code states that it is a misdemeanor to knowingly disturb a human burial. If human remains are encountered, project work would stop in the vicinity of the remains and, as required by law, the Sacramento County Coroner would be notified immediately. An archaeologist also would be contacted to evaluate the find. If the human remains were determined of Native American origin, the coroner would need to notify the NAHC within 24 hours of that determination. Pursuant to PRC 5097.98, the NAHC, in turn, would immediately contact a Most Likely Descendent (MLD). The MLD would have 48 hours to inspect the site and recommend treatment of the remains. The landowner would be obligated to work with the MLD in good faith, to find a respectful resolution to the situation and entertain all reasonable options regarding the descendants' preferences for treatment.

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Appendix A Records Search Results Summary Letters

California Historical Resources Information System

NORTH CENTRAL INFORMATION CENTER

AMADOR
EL DORADO
NEVADA
PLACER
SACRAMENTO
YUBA

California State University, Sacramento
6000 J Street, Folsom Hall, Suite 2042
Sacramento, California 95819-6100
phone: (916) 278-6217
fax: (916) 278-5162
email: ncic@csus.edu

11/1/2022

NCIC File No.: SAC-22-215

Diana Ewing
AECOM
2020 L Street, Suite 300
Sacramento, CA 95811

Re: SMUD Station J / Project Number 60690853

The North Central Information Center (NCIC) received your records search request for the project area referenced above, located on the Sacramento East USGS 7.5' quad. The following reflects the results of the records search for the project area and a ¼-mi radius.

As indicated on the data request form, the locations of resources and reports are provided in the following format: ☒ custom GIS maps ☐ GIS data

Recorded resources within project area:	None
Recorded resources outside project area, within radius:	See list below
Known reports within project area:	3407 10553 12473
Known reports outside project area, within radius:	See list below

Resource Database Printout (list):	☐ enclosed	☒ not requested	☐ nothing listed/NA
Resource Database Printout (details):	☒ enclosed	☐ not requested	☐ nothing listed/NA
Resource Digital Database Records:	☐ enclosed	☒ not requested	☐ nothing listed/NA
Report Database Printout (list):	☐ enclosed	☒ not requested	☐ nothing listed/NA
Report Database Printout (details):	☒ enclosed	☐ not requested	☐ nothing listed/NA
Report Digital Database Records:	☐ enclosed	☒ not requested	☐ nothing listed/NA
Resource Record Copies:	☐ enclosed	☒ not requested	☐ nothing listed/NA
Report Copies:	☒ enclosed	☐ not requested	☐ nothing listed/NA
Built Environment Resources Directory:	☒ enclosed	☐ not requested	☐ nothing listed/NA
Archaeological Determinations of Eligibility:	☒ enclosed	☐ not requested	☐ nothing listed/NA
CA Inventory of Historic Resources (1976):	☐ enclosed	☐ not requested	☒ nothing listed/NA

Caltrans Bridge Survey:	☐ enclosed	☒ not requested	☐ nothing listed/NA
Ethnographic Information:	☐ enclosed	☒ not requested	☐ nothing listed/NA
Historical Literature:	☐ enclosed	☒ not requested	☐ nothing listed/NA
Historical Maps:	☐ enclosed	☒ not requested	☐ nothing listed/NA
Local Inventories:	☐ enclosed	☒ not requested	☐ nothing listed/NA
GLO and/or Rancho Plat Maps:	☐ enclosed	☒ not requested	☐ nothing listed/NA
Shipwreck Inventory:	☐ enclosed	☒ not requested	☐ nothing listed/NA
Soil Survey Maps:	☐ enclosed	☒ not requested	☐ nothing listed/NA

Please forward a copy of any resulting reports and resource records from this project to NCIC as soon as possible. The lead agency/authority and cultural resources consultant should coordinate sending documentation to NCIC. Digital materials are preferred and can be sent to our office via our file transfer system. Please contact NCIC for instructions. Due to the sensitive nature of archaeological site location data, we ask that you do not include resource location maps and resource location descriptions in your report if the report is for public distribution. If you have any questions regarding the results presented herein, please contact the office at the phone number listed above.

The provision of CHRIS Data via this records search response does not in any way constitute public disclosure of records otherwise exempt from disclosure under the California Public Records Act or any other law, including, but not limited to, records related to archeological site information maintained by or on behalf of, or in the possession of, the State of California, Department of Parks and Recreation, State Historic Preservation Officer, Office of Historic Preservation, or the State Historical Resources Commission.

Due to processing delays and other factors, it is possible that not all of the historical resource reports and resource records that have been submitted to the Office of Historic Preservation are available via this records search. Additional information may be available through the federal, state, and local agencies that produced or paid for historical resource management work in the search area. Additionally, Native American tribes have historical resource information not in the California Historical Resources Information System (CHRIS) Inventory, and you should contact the California Native American Heritage Commission for information on local/regional tribal contacts.

Should you require any additional information for the above referenced project, reference the records search number listed above when making inquiries. Requests made after initial invoicing will result in the preparation of a separate invoice.

Sincerely,

Paul Rendes, Coordinator
North Central Information Center

Recorded resources outside project area, within radius:

P-34-000505
P-34-000746
P-34-001378
P-34-002324
P-34-002441
P-34-002442
P-34-002443
P-34-002516
P-34-002517
P-34-002518
P-34-002519
P-34-002520
P-34-002521
P-34-002533
P-34-002534
P-34-002535
P-34-002536
P-34-002537
P-34-002538
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P-34-002549
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P-34-002730
P-34-002731
P-34-002732
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P-34-002735
P-34-002736
P-34-002737
P-34-002738
P-34-002739
P-34-002746
P-34-002747
P-34-002748
P-34-002749
P-34-002751
P-34-002752
P-34-003181
P-34-003186
P-34-003187
P-34-003359
P-34-003371
P-34-003563

P-34-003564
P-34-003565
P-34-003566
P-34-003567
P-34-003568
P-34-003570
P-34-003634
P-34-003635
P-34-003636
P-34-003637
P-34-003638
P-34-003639
P-34-003641
P-34-003642
P-34-003643
P-34-003644
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P-34-003646
P-34-003647
P-34-003648
P-34-003665
P-34-004152
P-34-004155
P-34-004160
P-34-004161
P-34-004162
P-34-004163
P-34-004164
P-34-005165
P-34-005166

Known reports outside project area, within radius:

000616
002690
002935
002935
002935
002935
002935
002935
002935
002936
003322
003335
003335
003389
003400
003404
004409
007449

007449
007449
007745
008619
009066
009486
010434
011024
011024
011024
011024
011237
011312
012320
012873
013887
013887
013887
013887
013887
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013887
013887
013887

California Historical Resources Information System

NORTH CENTRAL INFORMATION CENTER

AMADOR
EL DORADO
NEVADA
PLACER
SACRAMENTO
YUBA

California State University, Sacramento
6000 J Street, Folsom Hall, Suite 2042
Sacramento, California 95819-6100
phone: (916) 278-6217
fax: (916) 278-5162
email: ncic@csus.edu

10/15/2024

NCIC File No.: SAC-24-158

Richard Deis
AECOM
2020 L Street, Suite 300
Sacramento, CA 95811

Re: SMUD Station J

The North Central Information Center (NCIC) received your records search request for the project area referenced above, located on the Sacramento East USGS 7.5' quad. The following reflects the results of the records search for the project area and a 100 ft radius.

As indicated on the data request form, the locations of resources and reports are provided in the following format: ☒ custom GIS maps ☐ GIS data

Recorded archaeological resources within project area:	P-34-65 P-34-491 P-34-505 P-34-746 P-34-2358 P-34-2359 P-34-5346 P-34-5225
Recorded archaeological resources outside project area, within radius:	See list below
Reports within project area:	See list below
Reports outside project area, within radius:	See list below

Resource Database Printout (list): ☒ enclosed ☐ not requested ☐ nothing listed/NA

Resource Database Printout (details): ☐ enclosed ☒ not requested ☐ nothing listed/NA

Resource Digital Database Records: ☐ enclosed ☒ not requested ☐ nothing listed/NA

Report Database Printout (list): ☐ enclosed ☒ not requested ☐ nothing listed/NA

Report Database Printout (details): ☐ enclosed ☒ not requested ☐ nothing listed/NA

Report Digital Database Records: ☒ enclosed ☐ not requested ☐ nothing listed/NA

Resource Record Copies: ☐ enclosed ☒ not requested ☐ nothing listed/NA

Report Copies: ☐ enclosed ☒ not requested ☐ nothing listed/NA

Built Environment Resources Directory: ☐ enclosed ☒ not requested ☐ nothing listed/NA

Archaeological Resources Directory: ☒ enclosed ☐ not requested ☐ nothing listed/NA

CA Inventory of Historic Resources (1976):	☐ enclosed	☒ not requested	☐ nothing listed/NA
Caltrans Bridge Survey:	☐ enclosed	☒ not requested	☐ nothing listed/NA
Ethnographic Information:	☐ enclosed	☒ not requested	☐ nothing listed/NA
Historical Literature:	☐ enclosed	☒ not requested	☐ nothing listed/NA
Historical Maps:	☐ enclosed	☒ not requested	☐ nothing listed/NA
Local Inventories:	☐ enclosed	☒ not requested	☐ nothing listed/NA
GLO and/or Rancho Plat Maps:	☐ enclosed	☒ not requested	☐ nothing listed/NA
Shipwreck Inventory:	☐ enclosed	☒ not requested	☐ nothing listed/NA
Soil Survey Maps:	☐ enclosed	☒ not requested	☐ nothing listed/NA

Please forward a copy of any resulting reports and resource records from this project to NCIC as soon as possible. The lead agency/authority and cultural resources consultant should coordinate sending documentation to NCIC. Digital materials are preferred and can be sent to our office via our file transfer system. Please contact NCIC for instructions. Due to the sensitive nature of archaeological site location data, we ask that you do not include resource location maps and resource location descriptions in your report if the report is for public distribution. If you have any questions regarding the results presented herein, please contact the office at the phone number listed above.

The provision of CHRIS Data via this records search response does not in any way constitute public disclosure of records otherwise exempt from disclosure under the California Public Records Act or any other law, including, but not limited to, records related to archeological site information maintained by or on behalf of, or in the possession of, the State of California, Department of Parks and Recreation, State Historic Preservation Officer, Office of Historic Preservation, or the State Historical Resources Commission.

Due to processing delays and other factors, it is possible that not all of the historical resource reports and resource records that have been submitted to the Office of Historic Preservation are available via this records search. Additional information may be available through the federal, state, and local agencies that produced or paid for historical resource management work in the search area. Additionally, Native American tribes have historical resource information not in the California Historical Resources Information System (CHRIS) Inventory, and you should contact the California Native American Heritage Commission for information on local/regional tribal contacts.

Should you require any additional information for the above referenced project, reference the records search number listed above when making inquiries. Requests made after initial invoicing will result in the preparation of a separate invoice.

Sincerely,

Paul Rendes, Coordinator
North Central Information Center

Recorded archaeological resources outside project area, within radius:

PrimCo	PrimNo
34	000892
34	001561
34	001562
34	002360
34	005246
34	005248
34	005249
34	005250
34	005516

Reports within project area:

DocNo
000127
002016
002761
003335
003338
003389
003400
003404
003407
003440
003491
007449
009066
010553
010562
011024
012473
013012

Reports outside project area, within radius:

DocNo
000087
000616
002012

002690
002935
002936
003359
003360
003443
003468
003490
003853
004425
006821
006944
007565
007745
008619
009164
009314
009755
010014
010121
010434
010770
010812
010822
011140
011312
012395
012872
014232

Appendix B Previous Investigations (Confidential)

Appendix C Previously Documented Sites (Confidential)

Appendix D Previously Documented Sites DPR Forms (Confidential)

Appendix E Native American Heritage Commission Consultation

NATIVE AMERICAN HERITAGE COMMISSION

NAHC HEADQUARTERS
1550 Harbor Boulevard
Suite 100
West Sacramento, California 95691
(916) 373-3710
nahc@nahc.ca.gov
NAHC.ca.gov

March 8, 2023

Diana Ewing
AECOM

Via Email to: diana.r.ewing@aecom.com

Re: SMUD Station J Project, Sacramento County

Dear Ms. Ewing:

A record search of the Native American Heritage Commission (NAHC) Sacred Lands File (SLF) was completed for the information submitted for the above referenced project. The results were positive. Please contact the Ione Band of Miwok Indians, the United Auburn Indian Community of the Auburn Rancheria, and the Wilton Rancheria on the attached list for information. Please note that tribes do not always record their sacred sites in the SLF, nor are they required to do so. A SLF search is not a substitute for consultation with tribes that are traditionally and culturally affiliated with a project's geographic area. Other sources of cultural resources should also be contacted for information regarding known and recorded sites, such as the appropriate regional California Historical Research Information System (CHRIS) archaeological Information Center for the presence of recorded archaeological sites.

Attached is a list of Native American tribes who may also have knowledge of cultural resources in the project area. This list should provide a starting place in locating areas of potential adverse impact within the proposed project area. Please contact all of those listed; if they cannot supply information, they may recommend others with specific knowledge. By contacting all those listed, your organization will be better able to respond to claims of failure to consult with the appropriate tribe. If a response has not been received within two weeks of notification, the Commission requests that you follow-up with a telephone call or email to ensure that the project information has been received.

If you receive notification of change of addresses and phone numbers from tribes, please notify the NAHC. With your assistance, we can assure that our lists contain current information.

If you have any questions or need additional information, please contact me at my email address: Cody.Campagne@nahc.ca.gov.

Sincerely,

Cody Campagne

Cody Campagne
Cultural Resources Analyst

Attachment

Appendix F AB 52 Consultation

SMUD®

September 22, 2022

Ms. Sara Dutshke Setshwaelo
Chairperson
Ione Band of Miwok Indians
9252 Bush Street
Plymouth, CA 95679

Subject: AB52 Notification – SMUD Station J Bulk Transmission Substation Construction Project

Ms. Dutschke Setshwaelo,

In accordance with California Public Resources Code Section 21080.3.1 (AB 52) and the Ione Band of Miwok Indian's (IBMI) June 24, 2016, letter requesting formal notification of and information regarding SMUD-led projects within IBMI's geographic area of traditional and cultural affiliation, this letter serves as notification that the Sacramento Municipal Utility District (SMUD) has begun the CEQA process for the Station J Bulk Transmission Substation Construction Project.

SMUD is proposing to construct and operate a new bulk transmission substation on a 10.3-acre site at 1220 North B Street in Downtown Sacramento, as shown on Figure 1. The site, which consists of 11 contiguous Assessor's parcels, currently contains two buildings, an approximately 5,580 square foot single story maintenance shop building and an approximately 66,000 square foot single story distribution warehouse with loading docks, and office space. Both buildings are situated towards the front of the property along North B Street. The rear of the property consists of approximately 3.9 acres of yard storage and is adjacent to railroad tracks. The project site is within the City of Sacramento's River District Specific Plan area. The zoning designation of the property is C-4 – SPD, Heavy Commercial – Special Planning District. There is currently an easement for North A Street that partially bisects the property. The property is sparsely vegetated with a small number of trees. The project would construct new infrastructure to support up to five 40 MVA 115/21kV transformers for a total of up to 200 MVA. Initial installation of two 40 MVA transformers is anticipated to occur by 2030. Timing is based on anticipated load growth and the 2030 City of Sacramento Water Treatment Plant expansion which is projected to include approximately 17 MW demand based upon current load factors. The site also includes space for expansion as future needs are identified. The project may include up to 8 miles of overhead and or underground 115kV and 21kV connections into the substation from nearby existing SMUD facilities and infrastructure. The proposed project would require demolition of all on-site structures. In addition, because of past development activities on the site that may have deposited asbestos containing materials (ACM) and or lead-based paint (LBP), excavation of soil and remediation of volatile organic carbon (VOC) soil gas may be required prior to construction. In 2021, a Phase I Environmental

Site Assessment was prepared for the property in preparation for property redevelopment to evaluate areas where past and/or current activities may have chemically impacted soil, soil gas, or groundwater. The Phase I ESA concluded that the potential exists that these materials are still present and are therefore considered an environmental concern. Project construction will also take place within or directly adjacent to existing rights-of-way, and affected roads and sidewalks would be restored upon completion. Understanding the extent to which Tribal and cultural resources have been documented in this area, SMUD recognizes the need to ensure that these resources are protected to the greatest extent feasible.

If IBMI would like to consult with SMUD on this project under AB 52, please notify us in writing or via email within 30 calendar days of receipt of this letter. If IBMI would like more information about the project to help determine whether to engage in consultation, please contact me personally. If you decide to consult on the project, I will contact you within 30 calendar days to begin the coordination process. Tribal Preservation staff is cc'd on this letter.

SMUD is committed to working with IBMI to identify, and minimize or avoid impacts to, Tribal Cultural Resources (as defined under California Public Resources Code Section 21074) important to the Tribe. Your assistance in identifying such potential resources will help SMUD avoid and protect them. We understand that the locations of these resources are sensitive, and SMUD will have appropriate staff and consultants available to work with IBMI during consultation to ensure confidentiality and awareness. Resource locations will not be disclosed in public documents and will be kept confidential as provided for under California Government Code 6254.10.

If you have any questions, please feel free to contact me by telephone at (916) 732-6676 or via e-mail at rob.ferrera@smud.org

Sincerely,

Rob Ferrera
Environmental Specialist

cc: Cultural Committee, Ione Band of Miwok Indians
Ellias van Ekelenburg, SMUD
Emily Bacchini, SMUD
Ammon Rice, SMUD
Joe Schofield, SMUD

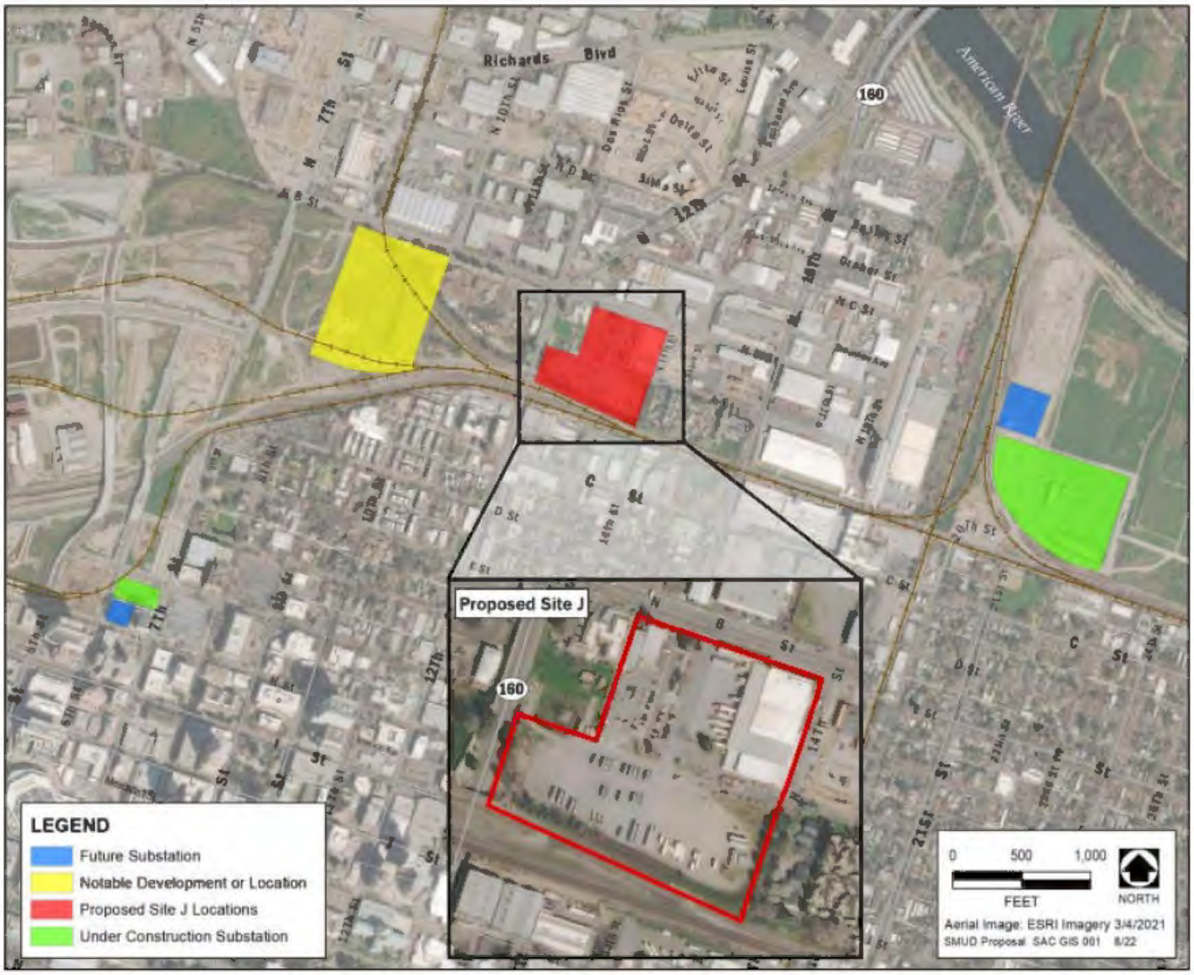

Proposed Site J
LEGEND
Future Substation
Notable Development or Location
Proposed Site J Locations
Under Construction Substation
0 500 1,000
FEET
NORTH
Aerial Image: ESRI Imagery 3/4/2021
Richards Blvd
American River

Figure 1

September 22, 2022

Shingle Springs Band of Miwok Indians
Regina Cuellar, Chairwoman
5281 Honpie Road,
Placerville, CA 95667

Subject: AB52 Notification – SMUD Station J Bulk Transmission Substation Construction Project

Chairperson Cuellar,

In accordance with California Public Resources Code Section 21080.3.1 (AB 52) and the Shingle Springs Band of Miwok Indians' (SSBMI) request for formal notification of and information regarding SMUD-led projects within Shingle Springs Band of Miwok Indians' geographic area of traditional and cultural affiliation, this letter serves as notification that the Sacramento Municipal Utility District (SMUD) has begun the CEQA process for the Station J Bulk Transmission Substation Construction Project.

SMUD is proposing to construct and operate a new bulk transmission substation on a 10.3-acre site at 1220 North B Street in Downtown Sacramento, as shown on Figure 1. The site, which consists of 11 contiguous Assessor's parcels, currently contains two buildings, an approximately 5,580 square foot single story maintenance shop building and an approximately 66,000 square foot single story distribution warehouse with loading docks, and office space. Both buildings are situated towards the front of the property along North B Street. The rear of the property consists of approximately 3.9 acres of yard storage and is adjacent to railroad tracks. The project site is within the City of Sacramento's River District Specific Plan area. The zoning designation of the property is C-4 – SPD, Heavy Commercial – Special Planning District. There is currently an easement for North A Street that partially bisects the property. The property is sparsely vegetated with a small number of trees. The project would construct new infrastructure to support up to five 40 MVA 115/21kV transformers for a total of up to 200 MVA. Initial installation of two 40 MVA transformers is anticipated to occur by 2030. Timing is based on anticipated load growth and the 2030 City of Sacramento Water Treatment Plant expansion which is projected to include approximately 17 MW demand based upon current load factors. The site also includes space for expansion as future needs are identified. The project may include up to 8 miles of overhead and or underground 115kV and 21kV connections into the substation from nearby existing SMUD facilities and infrastructure. The proposed project would require demolition of all on-site structures. In addition, because of past development activities on the site that may have deposited asbestos containing materials (ACM) and or lead-based paint (LBP), excavation of soil and remediation of volatile organic carbon (VOC) soil gas may be required prior to construction. In 2021, a Phase I Environmental Site Assessment was prepared for the property in preparation for property redevelopment to evaluate areas where past and/or current activities may have chemically impacted soil, soil gas, or groundwater. The Phase I ESA concluded that the potential exists that these materials are still present and are therefore considered an environmental concern. Project construction will take place within or directly adjacent to existing rights-of-way, and affected roads and sidewalks would be restored upon completion. CEQA will be completed before all necessary construction studies are started. Understanding the extent to which Tribal and cultural resources have been documented in this area, SMUD recognizes the need to ensure that these resources are protected to the greatest extent feasible.

If SSBMI would like to consult with SMUD on this project under AB 52, please notify us in writing or via email within 30 calendar days of when you receive this letter. If SSBMI would like more information about the project to help determine whether to engage in consultation, please feel free to contact me personally. If SSBMI decides to consult with on the project, I will contact you within 30 calendar days to begin the coordination process. Cultural Resource Division staff is cc'd on this letter.

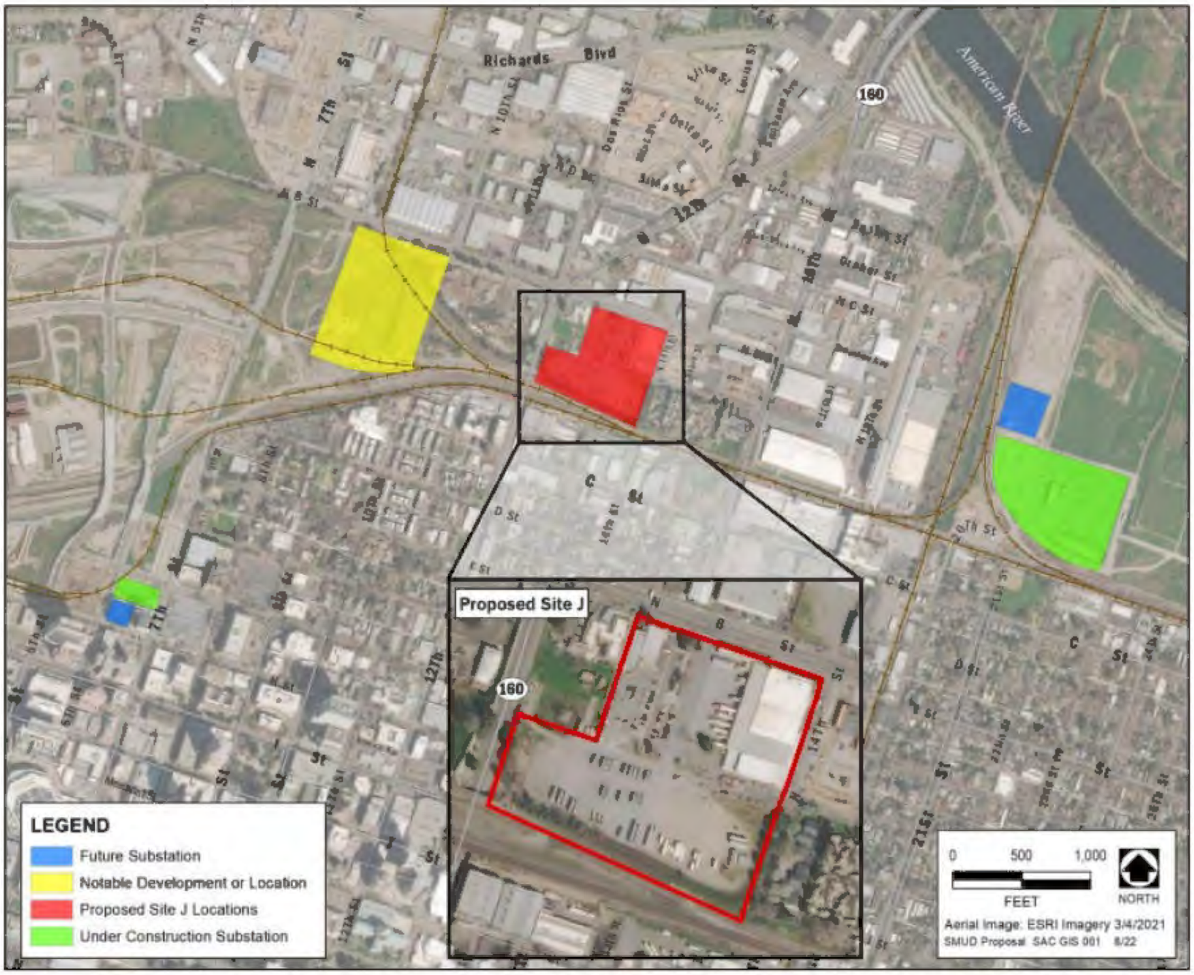
SMUD is committed to working with you to identify, and minimize or avoid impacts to, Tribal Cultural Resources (as defined under California Public Resources Code Section 21074) important to Shingle Springs Band of Miwok Indians. Your assistance in identifying such potential resources will help SMUD avoid and protect them. We understand that the locations of these resources are sensitive, and SMUD will have appropriate staff and consultants available to work with you during consultation to ensure confidentiality and awareness. Resource locations will not be disclosed in public documents and will be kept confidential as provided for under California Government Code 6254.10.

If you have any questions, please feel free to contact me by telephone at (916) 732-6676 or via e-mail at rob.ferrera@smud.org

Sincerely,

Rob Ferrera
Environmental Specialist

cc: Cultural Resources Division, Shingle Springs Band of Miwok Indians
Ellias van Ekelenburg, SMUD
Emily Bacchini, SMUD
Ammon Rice, SMUD
Joe Schofield, SMUD



Proposed Site J
LEGEND
Future Substation
Notable Development or Location
Proposed Site J Locations
Under Construction Substation
0 500 1,000
FEET
NORTH
Aerial Image: ESRI Imagery 3/4/2021
American River
Richards Blvd

Figure 1

From:	Rob Ferrera
To:	Thomas, Jeff
Subject:	FW: Station J Bulk Transmission Substation Construction Project
Date:	Monday, October 3, 2022 10:47:28 AM

Morning Jeff,

UAIC will be consulting. Good to see that we're on the same page as far as canine forensic surveys go.

Talk soon,

Rob

Rob Ferrera
(he/him/his – what's this?)
Environmental Specialist
Environmental Services
SMUD | Powering forward. Together.
m: 916.769.8241

From: Rob Ferrera
Sent: Monday, October 3, 2022 10:43 AM
To: 'Anna Starkey' <astarkey@auburnrancheria.com>
Subject: RE: [EXTERNAL] Station J Bulk Transmission Substation Construction Project

Hi Anna,

Thank you for responding and confirming that UAIC would like to consult on the Station J project. Our consultant on the CEQA is AECOM and we'll be working with Petra Unger, Jeff Thomas, and Emily Biro as their project leads.

The site is almost entirely paved and or built upon so I shared with the team that given the site's proximity to the river and other known resources in the area that we will very likely be arranging for a canine forensic survey and that the Tribes would be interested in consulting. I'll schedule a meeting for us to discuss further later this month.

Looking forward to working with you all again!

Talk soon,

Rob

Rob Ferrera
(he/him/his – what's this?)
Environmental Specialist
Environmental Services
SMUD | Powering forward. Together.
m: 916.769.8241

From: Anna Starkey <astarkey@auburnrancheria.com>
Sent: Friday, September 30, 2022 1:53 PM
To: Rob Ferrera <Rob.Ferrera@smud.org>
Subject: [EXTERNAL] Station J Bulk Transmission Substation Construction Project

Dear Mr. Ferrera,
On behalf of the United Auburn Indian Community, Tribal Historic Preservation Department, thank you for the notification and opportunity to consult on the Station J Project. UAIC would like to consult with you on this project.

We've reviewed the project location in our THRIS database and determined that it is potentially sensitive for unrecorded tribal resources. Specifically, we show the project area is 20 ft West of an oral history burial site. Another oral history burial site is to the east but is a couple thousand feet away.

Depending on the condition of the project site, a canine forensic survey may be warranted. Based on aerial images, it appears that it is paved with a building present. Therefore, a pedestrian survey to identify tribal cultural resources would not be productive. My initial thoughts are that a tribal monitor and a unanticipated discoveries and monitoring plan would be needed.

Can you please tell me the CEQA and construction timeline for this project and who the consultant will be?
Thank you again for considering these matters and for involving the UAIC in the planning process.

Sincerely,
Anna

Anna M. Starkey, M.A., RPA
Cultural Regulatory Specialist
Tribal Historic Preservation Department| UAIC
10720 Indian Hill Road
Auburn, CA 95603
Direct Line: (916) 251-1565 | Cell: (530) 863-6503
astarkey@auburnrancheria.com |www.auburnrancheria.com

Appendix G Newly Documented Sites DPR Forms (Confidential)

APPENDIX E
NOISE MODEL RESULTS

LT-01-Ldn

Long-Term 24 Hour Continuous Noise Monitoring

Model Input Sheet

Project: 60690853 - SMUD281-TA44 Station J

Date: Existi **Wednesday, July 5, 2023** **Thursday, July 6, 2023**

Site: LT-01

Hour	Leq	Lmax	L50	L90
15:00	50.1	66.2	47.4	48.8
16:00	58.9	76.6	46.4	49.9
17:00	52.4	77.2	49.0	50.0
18:00	53.4	77.9	48.8	50.8
19:00	52.2	74.0	49.0	50.5
20:00	54.8	67.2	48.1	53.0
21:00	52.0	78.1	48.0	49.7
22:00	53.2	70.2	48.0	50.4
23:00	56.5	86.1	48.4	51.3
0:00	53.1	75.0	46.0	47.4
1:00	54.1	69.9	49.9	50.6
2:00	56.0	74.5	49.1	50.8
3:00	53.7	84.0	50.2	50.7
4:00	55.0	71.7	51.9	53.4
5:00	53.1	63.3	52.3	52.8
6:00	55.0	73.1	52.2	53.7
7:00	60.4	73.2	52.6	58.7
8:00	53.6	65.7	50.1	52.3
9:00	53.0	67.1	50.7	52.0
10:00	56.8	71.3	50.3	55.6
11:00	50.5	67.8	46.6	49.1
12:00	53.7	74.4	46.9	50.4
13:00	52.5	69.6	48.5	50.5
14:00	52.6	76.1	47.9	50.6

Averages

	Leq	Lmax	L50	L90
Daytime (7 a.m. - 10 p.m.)	54.9	72.2	48.7	51.5
Nighttime (10 p.m. - 7 a.m.)	54.6	74.2	49.8	51.2

Uppermost-Level

	Leq	Lmax	L50	L90
Daytime (7 a.m. - 10 p.m.)	60.4	78.1	52.6	58.7
Nighttime (10 p.m. - 7 a.m.)	56.5	86.1	52.3	53.7

Percentage of Energy

Daytime	64%
Nighttime	36%

Calculated L_{dn}, dBA

61.0

LT-02-Ldn

Long-Term 24 Hour Continuous Noise Monitoring

Model Input Sheet

AECOM

Project: 60690853 - SMUD281-TA44 Station J

Date: Existi **Wednesday, July 5, 2023** **Thursday, July 6, 2023**

Site: LT-02

Hour	Leq	Lmax	L50	L90
15:15	58.2	82.8	50.6	54.4
16:15	59.3	76.9	50.6	56.0
17:15	58.2	82.2	50.5	54.3
18:15	58.6	80.6	47.9	52.6
19:15	57.6	78.8	48.1	52.3
20:15	55.2	74.7	48.4	52.3
21:15	55.5	82.4	48.1	51.3
22:15	55.5	75.1	48.0	51.9
23:15	52.3	73.0	46.8	48.8
0:15	52.8	68.2	45.6	47.6
1:15	49.2	64.2	46.1	47.6
2:15	53.2	77.7	46.8	48.5
3:15	51.9	67.7	47.8	48.6
4:15	58.5	84.8	48.8	51.5
5:15	57.5	74.5	50.6	53.7
6:15	58.4	76.5	50.8	55.3
7:15	58.5	73.5	50.4	56.8
8:15	58.2	75.4	50.6	56.1
9:15	57.4	75.2	51.6	55.2
10:15	58.6	84.1	51.2	55.1
11:15	56.8	71.2	50.2	54.4
12:15	57.7	74.2	50.7	55.5
13:15	57.9	70.9	51.6	55.7
14:15	58.5	74.8	51.4	56.1

Averages

	Leq	Lmax	L50	L90
Daytime (7 a.m. - 10 p.m.)	57.7	76.8	50.3	54.8
Nighttime (10 p.m. - 7 a.m.)	55.9	74.4	47.9	50.5

Uppermost-Level

	Leq	Lmax	L50	L90
Daytime (7 a.m. - 10 p.m.)	59.3	84.1	51.6	56.8
Nighttime (10 p.m. - 7 a.m.)	58.5	84.8	50.8	55.3

Percentage of Energy

Daytime	72%
Nighttime	28%

Calculated L_{dn}, dBA

62.6

C:\LARDAV\SLMUTIL\ 05JUL_13.bin Interval Data

Site Location	Date	Time	Duration (Second)	Leq	SEL	Lmax	Lmin	Peak	Uwpk	L(2)	L(8)	L(25)	L(50)	L(90)	L(95)
------------------	--------	---------	---------	------	------	------	------	------	------	------	------	------	------	------	------
ST-01	7/6/2023	15:30:00	900	55.3	84.8	76.5	42.9	92.6	97.9	62.9	59	51.3	47.8	45.1	44.5
ST-02	7/6/2023	16:00:00	900	59.1	88.7	73.4	49.6	94.8	99.9	67.6	62.9	58.6	55.3	51.6	51

SLM & RTA Summary		
Translated:	24-May-24	14:20:24
File Translated:	C:\Data\Projects\SMUD Station J\Field2\ST_001.slmdl	
Model Number:	824	
Serial Number:	A2624	
Firmware Rev:	4.29	
Software Version:	3.12	
Name:	AECOM	
Descr1:	2020 L St	
Descr2:	Sacramento, CA	
Setup:	SLM&RTA.ssa	
Setup Descr:	SLM & Real-Time Analyzer	
Location:		
Note 1:		
Note 2:		

Overall Any Data		
Start Time:	23-May-24	9:51:18
Elapsed Time:	20:00.5	

	A Weight	C Weight	Flat
Leq:	63.9 dBA	73.3 dBC	74.2 dBF
SEL:	94.7 dBA	104.1 dBC	105.0 dBF
Peak:	94.5 dBA	100.9 dBC	101.1 dBF
	5/23/2024 9:57	5/23/2024 10:01	5/23/2024 10:01
Lmax (slow):	80.0 dBA	92.1 dBC	92.4 dBF
	5/23/2024 9:54	5/23/2024 10:01	5/23/2024 10:01
Lmin (slow):	50.0 dBA	64.1 dBC	65.8 dBF
	5/23/2024 10:06	5/23/2024 9:57	5/23/2024 9:57
Lmax (fast):	82.6 dBA	94.2 dBC	94.4 dBF
	5/23/2024 10:02	5/23/2024 10:01	5/23/2024 10:01
Lmin (fast):	49.3 dBA	62.0 dBC	63.9 dBF
	5/23/2024 10:06	5/23/2024 9:58	5/23/2024 9:58
Lmax (impulse):	83.7 dBA	95.0 dBC	95.2 dBF
	5/23/2024 10:02	5/23/2024 10:01	5/23/2024 10:01
Lmin (impulse):	50.0 dBA	64.9 dBC	66.8 dBF
	5/23/2024 10:06	5/23/2024 9:56	5/23/2024 9:56

Spectra

Start Time: 23-May-24 9:51:18 Run Time: 20:00.5

Freq Hz	Leq 1/3 Oct	Leq 1/1 Oct	Max 1/3 Oct	Max 1/1 Oct	Min 1/3 Oct	Min 1/1 Oct
12.5	56.8		63.1		36	
16	60.1	64.4	69.8	75.5	42	46
20	60.9		73.8		43	
25	60.5		76.3		45	
31.5	63.3	68.9	72.6	79.3	48.5	52.1
40	66.5		73.7		47.7	
50	62.3		74.3		46.8	
63	63.2	68.8	81.1	85.1	48.9	52
80	65.8		82.2		45.2	
100	66.9		81.2		44.3	
125	60.8	68.4	79.9	84.3	45	49.3
160	59.1		76		44.4	
200	57.5		75.7		40.7	
250	57.2	61.5	74	80.1	39.8	44.3
315	55		75.9		37.7	
400	54.2		73.3		37.6	
500	53.9	59.2	70.4	78.7	39.2	43.5
630	55.2		76.2		39.1	
800	54.1		73.1		39.2	
1000	55.2	59.3	72.6	76.6	38.5	43.1
1250	54.2		68.6		36.9	
1600	51.5		64.8		36.1	
2000	52.4	57.2	66	71.1	32.8	38.6
2500	53.3		67.6		31.1	
3150	48.3		62.6		29.2	
4000	46.1	51.2	58.8	64.8	25.1	31.3
5000	43.7		56.6		22.6	
6300	41.8		57.3		20.6	
8000	40.3	44.6	56.7	61.1	19.6	24.6
10000	35		54.5		19	
12500	29.6		51		18.9	
16000	31	34.2	44.8	52.1	20.1	25.1
20000	26.9		37.4		21.6	

Ln Start Level:	15 dB			
L 2.00		73.6	dBA	
L 8.00		68	dBA	
L 25.00		61.6	dBA	
L 50.00		57.1	dBA	
L 90.00		52.9	dBA	
L 95.00		52	dBA	
Detector:	Slow			
Weighting:	A			
SPL Exceedance Level 1:	65.0 dB		Exceeded:	17 times
SPL Exceedance level 2:	80 dB		Exceeded:	0 times
Peak-1 Exceedance Level:	100 dB		Exceeded:	2 times
Peak-2 Exceedance Level:	120 dB		Exceeded:	0 times
Hysteresis:		3		
Overloaded:	0 time(s)			
Paused:	0 times for 00:00:00.0			
Current Any Data				
Start Time:		23-May-24	9:51:18	
Elapsed Time:		20:00.5		
	A Weight		C Weight	Flat
Leq:	63.9 dBA		73.3 dBC	74.2 dBF
SEL:	94.7 dBA		104.1 dBC	105.0 dBF
Peak:	94.5 dBA		100.9 dBC	101.1 dBF
		5/23/2024 9:57	5/23/2024 10:01	5/23/2024 10:01
Lmax (slow):	80.0 dBA		92.1 dBC	92.4 dBF
		5/23/2024 9:54	5/23/2024 10:01	5/23/2024 10:01
Lmin (slow):	50.0 dBA		64.1 dBC	65.8 dBF
		5/23/2024 10:06	5/23/2024 9:57	5/23/2024 9:57
Lmax (fast):	82.6 dBA		94.2 dBC	94.4 dBF
		5/23/2024 10:02	5/23/2024 10:01	5/23/2024 10:01
Lmin (fast):	49.3 dBA		62.0 dBC	63.9 dBF
		5/23/2024 10:06	5/23/2024 9:58	5/23/2024 9:58
Lmax (impulse):	83.7 dBA		95.0 dBC	95.2 dBF
		5/23/2024 10:02	5/23/2024 10:01	5/23/2024 10:01
Lmin (impulse):	50.0 dBA		64.9 dBC	66.8 dBF
		5/23/2024 10:06	5/23/2024 9:56	5/23/2024 9:56
Calibrated:		1/1/2000 2:45	Offset: -46.3 dB	
Checked:		5/23/2024 9:44	Level: 114.0 dB	
Calibrator		597860	Level: 114.0 dB	
Cal Records Count:		0		
Interval Records:	Enabled		Number Interval Records:	21
History Records:	Enabled		Number History Records:	4804
Run/Stop Records:			Number Run/Stop Records:	2

SLM & RTA Summary

Translated:		24-May-24		14:20:34
File Translated:	C:\Data\Projects\SMUD Station J\Field2\ST_002.slmdl			
Model Number:		824		
Serial Number:	A2624			
Firmware Rev:		4.29		
Software Version:		3.12		
Name:	AECOM			
Descr1:	2020 L St			
Descr2:	Sacramento, CA			
Setup:	SLM&RTA.ssa			
Setup Descr:	SLM & Real-Time Analyzer			
Location:				
Note 1:				
Note 2:				

Overall Any Data

Start Time:		23-May-24	10:13:15
Elapsed Time:		20:00.5	

	A Weight		C Weight		Flat
Leq:	59.4 dBA		70.6 dBC		72.3 dBF
SEL:	90.2 dBA		101.4 dBC		103.1 dBF
Peak:	89.0 dBA		97.0 dBC		97.6 dBF
		5/23/2024 10:24		5/23/2024 10:30	5/23/2024 10:23
Lmax (slow):	72.9 dBA		87.4 dBC		88.0 dBF
		5/23/2024 10:23		5/23/2024 10:30	5/23/2024 10:30
Lmin (slow):	48.6 dBA		59.5 dBC		61.5 dBF
		5/23/2024 10:19		5/23/2024 10:32	5/23/2024 10:32
Lmax (fast):	74.4 dBA		89.1 dBC		89.9 dBF
		5/23/2024 10:14		5/23/2024 10:30	5/23/2024 10:30
Lmin (fast):	48.1 dBA		58.2 dBC		59.9 dBF
		5/23/2024 10:19		5/23/2024 10:33	5/23/2024 10:33
Lmax (impulse):	76.1 dBA		90.5 dBC		91.4 dBF
		5/23/2024 10:14		5/23/2024 10:30	5/23/2024 10:13
Lmin (impulse):	48.5 dBA		60.2 dBC		62.8 dBF
		5/23/2024 10:19		5/23/2024 10:32	5/23/2024 10:26

Spectra

Start Time: 23-May-24 10:13:15 Run Time: 20:00.5

Freq Hz	Leq 1/3 Oct	Leq 1/1 Oct	Max 1/3 Oct	Max 1/1 Oct	Min 1/3 Oct	Min 1/1 Oct
12.5	62.7		71.7		36.2	
16	62.9	66.8	70.9	76.3	38.3	42.8
20	59.9		72		39.2	
25	58		73.4		40.6	
31.5	58.9	65.4	74.4	80.3	41.4	47.1
40	63.2		77.6		44.1	
50	60.5		77.3		43.6	
63	62.8	67.4	84	87.4	42.8	47.5
80	64		83.8		41.4	
100	63.3		82.1		39.4	
125	59	64.9	75.3	83	39.3	43.4
160	51.1		62.5		36.7	
200	49.9		60.3		36.9	
250	50.6	55	60.9	65.2	37.6	41.9
315	50.2		60.2		36.8	
400	49.1		57.1		38.7	
500	49	53.8	59.2	62.6	37.9	43.3
630	48.9		56.8		38.9	
800	50.2		58.2		40	
1000	50.7	54.8	60.7	64.4	38.8	43.2
1250	49		59.5		35	
1600	48.4		63.5		31.4	
2000	47.8	52.3	64.9	69.4	27.8	33.7
2500	46.2		65.3		25.6	
3150	45.9		64.5		24.2	
4000	44.4	49.3	61.1	66.8	22.2	27.4
5000	42.5		58		20.9	
6300	40.4		55.7		20.1	
8000	38.1	43	53.8	58.9	19.8	24.5
10000	33.7		52.1		19.3	
12500	28.4		33.4		18.9	
16000	24.8	30.9	25.7	34.5	20.1	25.2
20000	23.5		23.6		21.7	

Ln Start Level:	15 dB			
L 2.00		68.9	dBA	
L 8.00		61.9	dBA	
L 25.00		59.1	dBA	
L 50.00		55.9	dBA	
L 90.00		50.7	dBA	
L 95.00		49.9	dBA	

Detector:	Slow			
Weighting:	A			
SPL Exceedance Level 1:	65.0 dB		Exceeded:	6 times
SPL Exceedance level 2:	80 dB		Exceeded:	0 times
Peak-1 Exceedance Level:	100 dB		Exceeded:	0 times
Peak-2 Exceedance Level:	120 dB		Exceeded:	0 times
Hysteresis:		3		
Overloaded:	0 time(s)			
Paused:	0 times for 00:00:00.0			

Current Any Data			
Start Time:	23-May-24	10:13:15	
Elapsed Time:	20:00.5		

	A Weight		C Weight		Flat
Leq:	59.4 dBA		70.6 dBC		72.3 dBF
SEL:	90.2 dBA		101.4 dBC		103.1 dBF
Peak:	89.0 dBA		97.0 dBC		97.6 dBF
		5/23/2024 10:24		5/23/2024 10:30	5/23/2024 10:23
Lmax (slow):	72.9 dBA		87.4 dBC		88.0 dBF
		5/23/2024 10:23		5/23/2024 10:30	5/23/2024 10:30
Lmin (slow):	48.6 dBA		59.5 dBC		61.5 dBF
		5/23/2024 10:19		5/23/2024 10:32	5/23/2024 10:32
Lmax (fast):	74.4 dBA		89.1 dBC		89.9 dBF
		5/23/2024 10:14		5/23/2024 10:30	5/23/2024 10:30
Lmin (fast):	48.1 dBA		58.2 dBC		59.9 dBF
		5/23/2024 10:19		5/23/2024 10:33	5/23/2024 10:33
Lmax (impulse):	76.1 dBA		90.5 dBC		91.4 dBF
		5/23/2024 10:14		5/23/2024 10:30	5/23/2024 10:13
Lmin (impulse):	48.5 dBA		60.2 dBC		62.8 dBF
		5/23/2024 10:19		5/23/2024 10:32	5/23/2024 10:26

Calibrated:	1/1/2000 2:45	Offset: -46.3 dB
Checked:	5/23/2024 9:44	Level: 114.0 dB
Calibrator	597860	Level: 114.0 dB
Cal Records Count:	0	

Interval Records:	Enabled	Number Interval Records:	21
History Records:	Enabled	Number History Records:	4804
Run/Stop Records:		Number Run/Stop Records:	2

SLM & RTA Summary				
Translated:		24-May-24	14:20:45	
File Translated:	C:\Data\Projects\SMUD Station J\Field2\ST_003.slmdl			
Model Number:		824		
Serial Number:	A2624			
Firmware Rev:		4.29		
Software Version:		3.12		
Name:	AECOM			
Descr1:	2020 L St			
Descr2:	Sacramento, CA			
Setup:	SLM&RTA.ssa			
Setup Descr:	SLM & Real-Time Analyzer			
Location:				
Note 1:				
Note 2:				

Overall Any Data					
Start Time:		23-May-24		10:43:20	
Elapsed Time:		20:00.3			
	A Weight		C Weight		Flat
Leq:	59.7 dBA		71.1 dBC		73.7 dBF
SEL:	90.5 dBA		101.9 dBC		104.5 dBF
Peak:	89.3 dBA		98.6 dBC		99.4 dBF
		5/23/2024 10:53		5/23/2024 11:03	5/23/2024 11:03
Lmax (slow):	75.4 dBA		89.5 dBC		90.4 dBF
		5/23/2024 10:53		5/23/2024 11:03	5/23/2024 11:03
Lmin (slow):	53.0 dBA		64.9 dBC		66.3 dBF
		5/23/2024 10:44		5/23/2024 10:59	5/23/2024 10:54
Lmax (fast):	78.0 dBA		92.6 dBC		93.4 dBF
		5/23/2024 10:53		5/23/2024 11:03	5/23/2024 11:03
Lmin (fast):	52.5 dBA		63.8 dBC		64.9 dBF
		5/23/2024 10:44		5/23/2024 10:59	5/23/2024 10:55
Lmax (impulse):	78.7 dBA		93.3 dBC		94.2 dBF
		5/23/2024 10:53		5/23/2024 11:03	5/23/2024 11:03
Lmin (impulse):	52.9 dBA		65.3 dBC		66.1 dBF
		5/23/2024 10:44		5/23/2024 10:56	5/23/2024 10:56

Spectra

Start Time:	23-May-24	10:43:20 Run Time:	20:00.3			
Freq Hz	Leq 1/3 Oct	Leq 1/1 Oct	Max 1/3 Oct	Max 1/1 Oct	Min 1/3 Oct	Min 1/1 Oct
12.5	65.5		56.5		40.6	
16	63.7	68.7	61.4	64.6	42	45.7
20	61.9		60.3		39.9	
25	61.9		67.1		45	
31.5	61.5	66.2	61.9	69.9	44.9	50.3
40	60.9		64.9		46.4	
50	64.9		71		46.2	
63	62.9	68	74.3	77.3	48	51.6
80	60.9		71.6		46	
100	60.4		68.2		50	
125	57.9	64.3	67.4	71.4	48.3	55.8
160	59.9		62.5		53.3	
200	56.9		59		48.8	
250	52.5	59.2	55.6	61.4	41.2	50.7
315	52.4		53.4		44.4	
400	51.8		53.2		44	
500	50	55.5	51.8	58.3	40.5	46.6
630	50.1		55		39.7	
800	51.2		65.8		41.9	
1000	51	55.3	68.4	70.9	40.2	45
1250	49.2		62		37.4	
1600	47.8		65.2		36.7	
2000	47.2	52	69.2	74	36.7	40.8
2500	46.6		71.3		34.4	
3150	41.9		62.4		32.6	
4000	40.2	44.8	49.3	62.6	32.9	36.3
5000	36.1		38.1		26.7	
6300	33.7		37.7		21.8	
8000	31.6	37.8	35.9	40.9	19.9	25.2
10000	33.4		34.2		19	
12500	30.8		29.6		19.1	
16000	22.8	32	24.1	31.6	20.3	25.4
20000	22.9		24.5		21.9	

Ln Start Level:	15 dB			
L 2.00		66.4	dBA	
L 8.00		62	dBA	
L 25.00		59.2	dBA	
L 50.00		56.4	dBA	
L 90.00		54.3	dBA	
L 95.00		54	dBA	

Detector:	Slow			
Weighting:	A			
SPL Exceedance Level 1:	65.0 dB		Exceeded:	7 times
SPL Exceedance level 2:	80 dB		Exceeded:	0 times
Peak-1 Exceedance Level:	100 dB		Exceeded:	0 times
Peak-2 Exceedance Level:	120 dB		Exceeded:	0 times
Hysteresis:		3		
Overloaded:	0 time(s)			
Paused:	0 times for 00:00:00.0			

Current Any Data			
Start Time:	23-May-24		10:43:20
Elapsed Time:	20:00.3		

	A Weight		C Weight		Flat
Leq:	59.7 dBA		71.1 dBC		73.7 dBF
SEL:	90.5 dBA		101.9 dBC		104.5 dBF
Peak:	89.3 dBA		98.6 dBC		99.4 dBF
		5/23/2024 10:53		5/23/2024 11:03	5/23/2024 11:03
Lmax (slow):	75.4 dBA		89.5 dBC		90.4 dBF
		5/23/2024 10:53		5/23/2024 11:03	5/23/2024 11:03
Lmin (slow):	53.0 dBA		64.9 dBC		66.3 dBF
		5/23/2024 10:44		5/23/2024 10:59	5/23/2024 10:54
Lmax (fast):	78.0 dBA		92.6 dBC		93.4 dBF
		5/23/2024 10:53		5/23/2024 11:03	5/23/2024 11:03
Lmin (fast):	52.5 dBA		63.8 dBC		64.9 dBF
		5/23/2024 10:44		5/23/2024 10:59	5/23/2024 10:55
Lmax (impulse):	78.7 dBA		93.3 dBC		94.2 dBF
		5/23/2024 10:53		5/23/2024 11:03	5/23/2024 11:03
Lmin (impulse):	52.9 dBA		65.3 dBC		66.1 dBF
		5/23/2024 10:44		5/23/2024 10:56	5/23/2024 10:56

Calibrated:	1/1/2000 2:45	Offset: -46.3 dB
Checked:	5/23/2024 9:44	Level: 114.0 dB
Calibrator	597860	Level: 114.0 dB
Cal Records Count:	0	

Interval Records:	Enabled	Number Interval Records:	21
History Records:	Enabled	Number History Records:	4803
Run/Stop Records:		Number Run/Stop Records:	2

ST-06

SLM & RTA Summary		
Translated:	24-May-24	14:20:56
File Translated:	C:\Data\Projects\SMUD Station J\Field2\ST_004.slmdl	
Model Number:	824	
Serial Number:	A2624	
Firmware Rev:	4.29	
Software Version:	3.12	
Name:	AECOM	
Descr1:	2020 L St	
Descr2:	Sacramento, CA	
Setup:	SLM&RTA.ssa	
Setup Descr:	SLM & Real-Time Analyzer	
Location:		
Note 1:		
Note 2:		

Overall Any Data		
Start Time:	23-May-24	11:15:16
Elapsed Time:	20:00.6	

	A Weight		C Weight		Flat
Leq:	66.7 dBA		72.9 dBC		74.4 dBF
SEL:	97.5 dBA		103.7 dBC		105.2 dBF
Peak:	95.4 dBA		103.5 dBC		104.5 dBF
		5/23/2024 11:20		5/23/2024 11:20	5/23/2024 11:20
Lmax (slow):	81.6 dBA		90.9 dBC		91.6 dBF
		5/23/2024 11:26		5/23/2024 11:20	5/23/2024 11:20
Lmin (slow):	46.7 dBA		60.6 dBC		62.7 dBF
		5/23/2024 11:21		5/23/2024 11:35	5/23/2024 11:35
Lmax (fast):	83.5 dBA		95.0 dBC		95.8 dBF
		5/23/2024 11:26		5/23/2024 11:20	5/23/2024 11:20
Lmin (fast):	45.9 dBA		58.5 dBC		60.3 dBF
		5/23/2024 11:34		5/23/2024 11:34	5/23/2024 11:34
Lmax (impulse):	84.0 dBA		97.0 dBC		97.9 dBF
		5/23/2024 11:26		5/23/2024 11:20	5/23/2024 11:20
Lmin (impulse):	46.6 dBA		61.1 dBC		64.3 dBF
		5/23/2024 11:21		5/23/2024 11:35	5/23/2024 11:35

Spectra

Start Time: 23-May-24 11:15:16 Run Time: 20:00.6

Freq Hz	Leq 1/3 Oct	Leq 1/1 Oct	Max 1/3 Oct	Max 1/1 Oct	Min 1/3 Oct	Min 1/1 Oct
12.5	63.9		71.7		41.3	
16	62.9	67.7	73.5	77.4	42.7	47.2
20	61.9		72.4		43.2	
25	60.4		70.8		42.5	
31.5	62	67.5	77.3	79	44.3	48.3
40	64.6		71.1		43.5	
50	64.3		67.1		45.2	
63	65.5	68.7	80	81	44.6	49.2
80	60.5		73.1		43.3	
100	61.5		76.8		42.1	
125	60.4	65.1	72.7	79	43.8	47.2
160	58.7		71.3		41	
200	57.9		73		39.2	
250	56.6	61.6	73.6	78.3	37.8	42.7
315	55.7		74		36.3	
400	55.7		72		35.4	
500	56.8	61.5	76.2	79.7	36	40.9
630	57.6		75.5		36.8	
800	59.2		76.3		37	
1000	59.8	63.9	73.6	79	36.2	40.6
1250	58.1		71.3		33.8	
1600	56.5		69.6		29.3	
2000	53.8	59.1	67.1	72.7	25.5	31.5
2500	51.2		66.4		23.2	
3150	49.1		65.1		20.9	
4000	46.5	51.8	64.8	69.2	19.5	24.6
5000	44.1		63.3		18.8	
6300	41.8		58.4		18.4	
8000	40.4	47.5	54.3	60.4	19	23.6
10000	44.8		51.5		19	
12500	34.2		47.9		19.4	
16000	27.8	35.5	39.8	48.7	20.5	25.6
20000	24.9		33.3		22.1	

Ln Start Level:	15 dB			
L 2.00		74.6	dBA	
L 8.00		71.6	dBA	
L 25.00		67.4	dBA	
L 50.00		59.7	dBA	
L 90.00		49.8	dBA	
L 95.00		48.6	dBA	

Detector:	Slow			
Weighting:	A			
SPL Exceedance Level 1:	65.0 dB		Exceeded:	54 times
SPL Exceedance level 2:	80 dB		Exceeded:	2 times
Peak-1 Exceedance Level:	100 dB		Exceeded:	3 times
Peak-2 Exceedance Level:	120 dB		Exceeded:	0 times
Hysteresis:		3		
Overloaded:	0 time(s)			
Paused:	0 times for 00:00:00.0			

Current Any Data			
Start Time:	23-May-24		11:15:16
Elapsed Time:	20:00.6		

	A Weight		C Weight		Flat
Leq:	66.7 dBA		72.9 dBC		74.4 dBF
SEL:	97.5 dBA		103.7 dBC		105.2 dBF
Peak:	95.4 dBA		103.5 dBC		104.5 dBF
		5/23/2024 11:20		5/23/2024 11:20	5/23/2024 11:20
Lmax (slow):	81.6 dBA		90.9 dBC		91.6 dBF
		5/23/2024 11:26		5/23/2024 11:20	5/23/2024 11:20
Lmin (slow):	46.7 dBA		60.6 dBC		62.7 dBF
		5/23/2024 11:21		5/23/2024 11:35	5/23/2024 11:35
Lmax (fast):	83.5 dBA		95.0 dBC		95.8 dBF
		5/23/2024 11:26		5/23/2024 11:20	5/23/2024 11:20
Lmin (fast):	45.9 dBA		58.5 dBC		60.3 dBF
		5/23/2024 11:34		5/23/2024 11:34	5/23/2024 11:34
Lmax (impulse):	84.0 dBA		97.0 dBC		97.9 dBF
		5/23/2024 11:26		5/23/2024 11:20	5/23/2024 11:20
Lmin (impulse):	46.6 dBA		61.1 dBC		64.3 dBF
		5/23/2024 11:21		5/23/2024 11:35	5/23/2024 11:35

Calibrated:	1/1/2000 2:45	Offset: -46.3 dB
Checked:	5/23/2024 9:44	Level: 114.0 dB
Calibrator	597860	Level: 114.0 dB
Cal Records Count:	0	

Interval Records:	Enabled	Number Interval Records:	21
History Records:	Enabled	Number History Records:	4804
Run/Stop Records:		Number Run/Stop Records:	2

SLM & RTA Summary

Translated:	24-May-24	14:21:07
File Translated:	C:\Data\Projects\SMUD Station J\Field2\ST_005.slmdl	
Model Number:	824	
Serial Number:	A2624	
Firmware Rev:	4.29	
Software Version:	3.12	
Name:	AECOM	
Descr1:	2020 L St	
Descr2:	Sacramento, CA	
Setup:	SLM&RTA.ssa	
Setup Descr:	SLM & Real-Time Analyzer	
Location:		
Note 1:		
Note 2:		

Overall Any Data

Start Time:	23-May-24	14:30:47
Elapsed Time:	20:00.6	

	A Weight	C Weight	Flat
Leq:	61.7 dBA	70.9 dBC	74.1 dBF
SEL:	92.5 dBA	101.7 dBC	104.9 dBF
Peak:	96.0 dBA	104.5 dBC	108.7 dBF
	5/23/2024 14:35	5/23/2024 14:34	5/23/2024 14:34
Lmax (slow):	77.0 dBA	85.4 dBC	89.7 dBF
	5/23/2024 14:31	5/23/2024 14:34	5/23/2024 14:34
Lmin (slow):	50.0 dBA	63.2 dBC	64.9 dBF
	5/23/2024 14:44	5/23/2024 14:48	5/23/2024 14:48
Lmax (fast):	79.9 dBA	93.5 dBC	97.7 dBF
	5/23/2024 14:36	5/23/2024 14:34	5/23/2024 14:34
Lmin (fast):	49.2 dBA	61.4 dBC	63.3 dBF
	5/23/2024 14:48	5/23/2024 14:46	5/23/2024 14:48
Lmax (impulse):	81.6 dBA	97.5 dBC	101.2 dBF
	5/23/2024 14:36	5/23/2024 14:34	5/23/2024 14:34
Lmin (impulse):	49.6 dBA	64.1 dBC	65.8 dBF
	5/23/2024 14:48	5/23/2024 14:48	5/23/2024 14:48

Spectra

Start Time: 23-May-24 14:30:47 Run Time: 20:00.6

Freq Hz	Leq 1/3 Oct	Leq 1/1 Oct	Max 1/3 Oct	Max 1/1 Oct	Min 1/3 Oct	Min 1/1 Oct
12.5	67.6		69.8		42	
16	65.4	70.6	68.6	75.2	41	47
20	63.3		72.2		43.3	
25	62.7		64		45.5	
31.5	62.2	67	69.7	75.1	42.3	49.6
40	61.7		73.1		45.8	
50	60.7		73.4		47.9	
63	60.3	65.9	81.2	83.9	47.1	51.7
80	62.1		79.6		45.6	
100	59.3		71		44.9	
125	59.2	63.4	70.2	74.7	44.7	49.4
160	56.9		68.3		44.4	
200	54.1		68.9		40.8	
250	54.6	58.5	71.5	74.5	40.2	44.9
315	52.2		67.8		39.1	
400	51.6		66.2		38.9	
500	51.2	56.4	64.8	71.3	39.1	43.9
630	52		68.1		39.3	
800	53.2		66		39.9	
1000	54.3	58.1	71.8	73.6	38.6	43.4
1250	52.2		65.8		36.7	
1600	50.7		66.8		35	
2000	48.9	54.2	64.2	70.4	32.1	37.6
2500	48.3		65.6		29.8	
3150	45.3		57.1		27.2	
4000	43.2	48.3	52.9	59	25	30.1
5000	41.3		48.9		22.8	
6300	45.7		46		20.1	
8000	44.3	48.2	44.5	49.1	19.9	24.6
10000	34.2		41.1		19.3	
12500	29.9		36.8		19.1	
16000	29.8	33.4	31.6	38.3	20.5	25.5
20000	24.3		27.2		22	

Ln Start Level:	15 dB			
L 2.00		70.2	dBA	
L 8.00		65.9	dBA	
L 25.00		61.4	dBA	
L 50.00		56.9	dBA	
L 90.00		52.8	dBA	
L 95.00		52.2	dBA	

Detector:	Slow			
Weighting:	A			
SPL Exceedance Level 1:	65.0 dB		Exceeded:	25 times
SPL Exceedance level 2:	80 dB		Exceeded:	0 times
Peak-1 Exceedance Level:	100 dB		Exceeded:	2 times
Peak-2 Exceedance Level:	120 dB		Exceeded:	0 times
Hysteresis:		3		
Overloaded:	0 time(s)			
Paused:	0 times for 00:00:00.0			

Current Any Data			
Start Time:	23-May-24	14:30:47	
Elapsed Time:	20:00.6		

	A Weight		C Weight		Flat
Leq:	61.7 dBA		70.9 dBC		74.1 dBF
SEL:	92.5 dBA		101.7 dBC		104.9 dBF
Peak:	96.0 dBA		104.5 dBC		108.7 dBF
		5/23/2024 14:35		5/23/2024 14:34	5/23/2024 14:34
Lmax (slow):	77.0 dBA		85.4 dBC		89.7 dBF
		5/23/2024 14:31		5/23/2024 14:34	5/23/2024 14:34
Lmin (slow):	50.0 dBA		63.2 dBC		64.9 dBF
		5/23/2024 14:44		5/23/2024 14:48	5/23/2024 14:48
Lmax (fast):	79.9 dBA		93.5 dBC		97.7 dBF
		5/23/2024 14:36		5/23/2024 14:34	5/23/2024 14:34
Lmin (fast):	49.2 dBA		61.4 dBC		63.3 dBF
		5/23/2024 14:48		5/23/2024 14:46	5/23/2024 14:48
Lmax (impulse):	81.6 dBA		97.5 dBC		101.2 dBF
		5/23/2024 14:36		5/23/2024 14:34	5/23/2024 14:34
Lmin (impulse):	49.6 dBA		64.1 dBC		65.8 dBF
		5/23/2024 14:48		5/23/2024 14:48	5/23/2024 14:48

Calibrated:	1/1/2000 2:45	Offset: -46.3 dB
Checked:	5/23/2024 9:44	Level: 114.0 dB
Calibrator	597860	Level: 114.0 dB
Cal Records Count:	0	

Interval Records:	Enabled	Number Interval Records:	21
History Records:	Enabled	Number History Records:	4804
Run/Stop Records:		Number Run/Stop Records:	2

SLM & RTA Summary

Translated:		24-May-24	14:21:19	
File Translated:	C:\Data\Projects\SMUD Station J\Field2\ST_006.slmdl			
Model Number:		824		
Serial Number:	A2624			
Firmware Rev:		4.29		
Software Version:		3.12		
Name:	AECOM			
Descr1:	2020 L St			
Descr2:	Sacramento, CA			
Setup:	SLM&RTA.ssa			
Setup Descr:	SLM & Real-Time Analyzer			
Location:				
Note 1:				
Note 2:				

Overall Any Data

Start Time:		23-May-24	15:03:54
Elapsed Time:		20:00.6	

	A Weight		C Weight		Flat
Leq:	60.2 dBA		72.8 dBC		74.7 dBF
SEL:	91.1 dBA		103.6 dBC		105.5 dBF
Peak:	91.7 dBA		100.7 dBC		100.4 dBF
		5/23/2024 15:21		5/23/2024 15:21	5/23/2024 15:21
Lmax (slow):	77.5 dBA		92.1 dBC		92.6 dBF
		5/23/2024 15:21		5/23/2024 15:17	5/23/2024 15:17
Lmin (slow):	53.1 dBA		65.1 dBC		65.9 dBF
		5/23/2024 15:14		5/23/2024 15:14	5/23/2024 15:14
Lmax (fast):	80.1 dBA		94.4 dBC		94.9 dBF
		5/23/2024 15:21		5/23/2024 15:17	5/23/2024 15:17
Lmin (fast):	52.4 dBA		63.8 dBC		64.8 dBF
		5/23/2024 15:14		5/23/2024 15:14	5/23/2024 15:14
Lmax (impulse):	81.0 dBA		94.7 dBC		95.2 dBF
		5/23/2024 15:21		5/23/2024 15:17	5/23/2024 15:17
Lmin (impulse):	53.1 dBA		65.5 dBC		66.1 dBF
		5/23/2024 15:14		5/23/2024 15:14	5/23/2024 15:14

Spectra

Start Time:		23-May-24		15:03:54	Run Time:	20:00.6	
Freq Hz	Leq 1/3 Oct		Leq 1/1 Oct		Max 1/3 Oct	Max 1/1 Oct	Min 1/3 Oct	Min 1/1 Oct

Freq Hz	Leq 1/3 Oct	Leq 1/1 Oct	Max 1/3 Oct	Max 1/1 Oct	Min 1/3 Oct	Min 1/1 Oct
12.5	65.1		68.8		37.8	
16	63.5	68.5	63.9	70.9	36.7	44.1
20	62		63.7		41.8	
25	61.1		65.5		42.5	
31.5	61.1	66.7	66.1	72.4	46.4	50.9
40	63.2		69.9		47.9	
50	61.9		77.5		45.5	
63	63.5	69.1	76.3	82.7	47.1	51.6
80	66.3		79.5		47.5	
100	65		86.3		50.4	
125	62.4	67.7	84.8	89	50.4	56.2
160	60		78.5		53	
200	58.9		77.6		50.4	
250	58.2	62.3	84.1	85.5	45.1	52.3
315	54.1		76.1		44.2	
400	51.5		71.5		43.1	
500	49.8	55.4	63.7	72.5	41.1	46.5
630	50.4		60.6		40.5	
800	51.1		63.1		41	
1000	51.1	55.4	59.4	65.9	40.5	44.6
1250	49.4		59.9		37.1	
1600	47.9		58.1		36.6	
2000	45.8	50.9	56.1	61.6	37.1	40.8
2500	43.7		56.1		33.9	
3150	42.1		54.9		33.3	
4000	40.4	44.9	54	58.6	32.2	36.4
5000	36		52.2		27.5	
6300	33		49.5		22.9	
8000	30.2	35.4	47.5	52.2	19.8	25.7
10000	26.4		43.4		19.2	
12500	23		37.5		19.2	
16000	21.9	27.4	30.3	38.5	20.5	25.5
20000	23		25.6		22.1	

Ln Start Level:	15 dB			
L 2.00		67	dBA	
L 8.00		62.5	dBA	
L 25.00		59.8	dBA	
L 50.00		57.6	dBA	
L 90.00		55.3	dBA	
L 95.00		54.8	dBA	

Detector:	Slow			
Weighting:	A			
SPL Exceedance Level 1:	65.0 dB		Exceeded:	11 times
SPL Exceedance level 2:	80 dB		Exceeded:	0 times
Peak-1 Exceedance Level:	100 dB		Exceeded:	1 times
Peak-2 Exceedance Level:	120 dB		Exceeded:	0 times
Hysteresis:		3		
Overloaded:	0 time(s)			
Paused:	0 times for 00:00:00.0			

Current Any Data		
Start Time:	23-May-24	15:03:54
Elapsed Time:	20:00.6	

	A Weight		C Weight		Flat
Leq:	60.2 dBA		72.8 dBC		74.7 dBF
SEL:	91.1 dBA		103.6 dBC		105.5 dBF
Peak:	91.7 dBA		100.7 dBC		100.4 dBF
		5/23/2024 15:21		5/23/2024 15:21	5/23/2024 15:21
Lmax (slow):	77.5 dBA		92.1 dBC		92.6 dBF
		5/23/2024 15:21		5/23/2024 15:17	5/23/2024 15:17
Lmin (slow):	53.1 dBA		65.1 dBC		65.9 dBF
		5/23/2024 15:14		5/23/2024 15:14	5/23/2024 15:14
Lmax (fast):	80.1 dBA		94.4 dBC		94.9 dBF
		5/23/2024 15:21		5/23/2024 15:17	5/23/2024 15:17
Lmin (fast):	52.4 dBA		63.8 dBC		64.8 dBF
		5/23/2024 15:14		5/23/2024 15:14	5/23/2024 15:14
Lmax (impulse):	81.0 dBA		94.7 dBC		95.2 dBF
		5/23/2024 15:21		5/23/2024 15:17	5/23/2024 15:17
Lmin (impulse):	53.1 dBA		65.5 dBC		66.1 dBF
		5/23/2024 15:14		5/23/2024 15:14	5/23/2024 15:14

Calibrated:	1/1/2000 2:45	Offset: -46.3 dB
Checked:	5/23/2024 9:44	Level: 114.0 dB
Calibrator	597860	Level: 114.0 dB
Cal Records Count:	0	

Interval Records:	Enabled	Number Interval Records:	21
History Records:	Enabled	Number History Records:	4804
Run/Stop Records:		Number Run/Stop Records:	2

SLM & RTA Summary

Translated:	24-May-24	14:21:30
File Translated:	C:\Data\Projects\SMUD Station J\Field2\ST_007.slmdl	
Model Number:	824	
Serial Number:	A2624	
Firmware Rev:	4.29	
Software Version:	3.12	
Name:	AECOM	
Descr1:	2020 L St	
Descr2:	Sacramento, CA	
Setup:	SLM&RTA.ssa	
Setup Descr:	SLM & Real-Time Analyzer	
Location:		
Note 1:		
Note 2:		

Overall Any Data

Start Time:	23-May-24	20:23:31
Elapsed Time:	20:01.3	

	A Weight	C Weight	Flat
Leq:	63.5 dBA	74.4 dBC	75.1 dBF
SEL:	94.3 dBA	105.2 dBC	105.9 dBF
Peak:	105.4 dBA	109.9 dBC	110.0 dBF
	5/23/2024 20:35	5/23/2024 20:35	5/23/2024 20:35
Lmax (slow):	85.7 dBA	96.1 dBC	96.3 dBF
	5/23/2024 20:35	5/23/2024 20:35	5/23/2024 20:35
Lmin (slow):	48.0 dBA	61.3 dBC	63.5 dBF
	5/23/2024 20:29	5/23/2024 20:25	5/23/2024 20:40
Lmax (fast):	87.5 dBA	98.3 dBC	98.5 dBF
	5/23/2024 20:35	5/23/2024 20:35	5/23/2024 20:35
Lmin (fast):	47.4 dBA	59.3 dBC	61.3 dBF
	5/23/2024 20:29	5/23/2024 20:25	5/23/2024 20:25
Lmax (impulse):	88.6 dBA	99.2 dBC	99.4 dBF
	5/23/2024 20:35	5/23/2024 20:35	5/23/2024 20:35
Lmin (impulse):	47.8 dBA	61.8 dBC	64.4 dBF
	5/23/2024 20:29	5/23/2024 20:25	5/23/2024 20:25

Spectra

Start Time: 23-May-24 20:23:31 Run Time: 20:01.3

Freq Hz	Leq 1/3 Oct	Leq 1/1 Oct	Max 1/3 Oct	Max 1/1 Oct	Min 1/3 Oct	Min 1/1 Oct
12.5	59		60.9		33.1	
16	60.9	64.1	66.8	71.6	45.4	47.1
20	57.4		69.2		41.5	
25	58		72.1		41.4	
31.5	59.8	65	66.3	81.1	43.2	47.9
40	61.9		80.4		44.4	
50	63.3		86.4		46.6	
63	64.6	70.1	83.8	93.5	44.1	50.2
80	67.1		92		45.3	
100	65.9		90.5		43.3	
125	68.5	71.1	92.1	95.2	43.7	47.7
160	62.7		87.8		41.4	
200	61.4		90		40.6	
250	59.3	64.2	87.3	92.4	38.8	43.9
315	55.9		82.8		37.4	
400	54.8		82.7		36.7	
500	53.8	58.9	75.8	84.6	37.3	42.5
630	53.7		78		38.9	
800	53.9		77		39.7	
1000	53.6	58	75.7	81.3	39.3	43.4
1250	52		76.8		36.1	
1600	51.3		75.7		33.2	
2000	50.7	56	73.7	79.3	29.1	35.1
2500	51.5		73.9		25.4	
3150	45.5		68.4		22.8	
4000	42.5	47.9	63.9	70.3	21.8	26.8
5000	39.5		61		21.2	
6300	37.7		56.5		20	
8000	35.4	40.3	53.9	58.7	19.8	24.5
10000	31.5		47		19.4	
12500	26.9		41.7		19.2	
16000	23.2	29.5	31.3	42.2	20.3	25.3
20000	22.9		25.8		21.8	

ST-09

Ln Start Level:	15 dB				
L 2.00		72.3	dBA		
L 8.00		64	dBA		
L 25.00		57	dBA		
L 50.00		53	dBA		
L 90.00		50	dBA		
L 95.00		49.7	dBA		
Detector:	Slow				
Weighting:	A				
SPL Exceedance Level 1:	65.0 dB		Exceeded:		15 times
SPL Exceedance level 2:	80 dB		Exceeded:		1 times
Peak-1 Exceedance Level:	100 dB		Exceeded:		2 times
Peak-2 Exceedance Level:	120 dB		Exceeded:		0 times
Hysteresis:		3			
Overloaded:	0 time(s)				
Paused:	0 times for 00:00:00.0				
Current Any Data					
Start Time:		23-May-24		20:23:31	
Elapsed Time:		20:01.3			
	A Weight		C Weight		Flat
Leq:	63.5 dBA		74.4 dBC		75.1 dBF
SEL:	94.3 dBA		105.2 dBC		105.9 dBF
Peak:	105.4 dBA		109.9 dBC		110.0 dBF
		5/23/2024 20:35		5/23/2024 20:35	5/23/2024 20:35
Lmax (slow):	85.7 dBA		96.1 dBC		96.3 dBF
		5/23/2024 20:35		5/23/2024 20:35	5/23/2024 20:35
Lmin (slow):	48.0 dBA		61.3 dBC		63.5 dBF
		5/23/2024 20:29		5/23/2024 20:25	5/23/2024 20:40
Lmax (fast):	87.5 dBA		98.3 dBC		98.5 dBF
		5/23/2024 20:35		5/23/2024 20:35	5/23/2024 20:35
Lmin (fast):	47.4 dBA		59.3 dBC		61.3 dBF
		5/23/2024 20:29		5/23/2024 20:25	5/23/2024 20:25
Lmax (impulse):	88.6 dBA		99.2 dBC		99.4 dBF
		5/23/2024 20:35		5/23/2024 20:35	5/23/2024 20:35
Lmin (impulse):	47.8 dBA		61.8 dBC		64.4 dBF
		5/23/2024 20:29		5/23/2024 20:25	5/23/2024 20:25
Calibrated:		1/1/2000 2:45	Offset: -46.3 dB		
Checked:		5/23/2024 9:44	Level: 114.0 dB		
Calibrator		597860	Level: 114.0 dB		
Cal Records Count:		0			
Interval Records:	Enabled		Number Interval Records:		21
History Records:	Enabled		Number History Records:		4807
Run/Stop Records:			Number Run/Stop Records:		2

SLM & RTA Summary

Translated:	24-May-24	14:21:48	
File Translated:	C:\Data\Projects\SMUD Station J\Field2\ST_008.slmdl		
Model Number:	824		
Serial Number:	A2624		
Firmware Rev:	4.29		
Software Version:	3.12		
Name:	AECOM		
Descr1:	2020 L St		
Descr2:	Sacramento, CA		
Setup:	SLM&RTA.ssa		
Setup Descr:	SLM & Real-Time Analyzer		
Location:			
Note 1:			
Note 2:			

Overall Any Data

Start Time:	23-May-24	21:07:43
Elapsed Time:	20:00.6	

	A Weight	C Weight	Flat
Leq:	56.7 dBA	68.8 dBC	71.9 dBF
SEL:	87.5 dBA	99.6 dBC	102.7 dBF
Peak:	84.6 dBA	90.8 dBC	95.7 dBF
	5/23/2024 21:23	5/23/2024 21:19	5/23/2024 21:23
Lmax (slow):	67.0 dBA	79.5 dBC	84.0 dBF
	5/23/2024 21:21	5/23/2024 21:21	5/23/2024 21:22
Lmin (slow):	53.8 dBA	65.3 dBC	66.4 dBF
	5/23/2024 21:09	5/23/2024 21:09	5/23/2024 21:09
Lmax (fast):	69.0 dBA	81.2 dBC	88.4 dBF
	5/23/2024 21:21	5/23/2024 21:19	5/23/2024 21:22
Lmin (fast):	53.4 dBA	64.2 dBC	65.4 dBF
	5/23/2024 21:09	5/23/2024 21:09	5/23/2024 21:09
Lmax (impulse):	69.4 dBA	83.9 dBC	91.1 dBF
	5/23/2024 21:21	5/23/2024 21:19	5/23/2024 21:23
Lmin (impulse):	53.8 dBA	65.7 dBC	67.2 dBF
	5/23/2024 21:15	5/23/2024 21:09	5/23/2024 21:23

Spectra

Start Time: 23-May-24 21:07:43 Run Time: 20:00.6

Freq Hz	Leq 1/3 Oct	Leq 1/1 Oct	Max 1/3 Oct	Max 1/1 Oct	Min 1/3 Oct	Min 1/1 Oct
12.5	64.9		59.6		39.5	
16	63	68.2	60.1	63.8	43.5	46.8
20	61.9		56.6		42.2	
25	60.8		58.9		44.8	
31.5	59.6	64.7	60.1	64.4	46.2	50.6
40	59.2		59.7		46.4	
50	58.8		69.1		47	
63	58.7	63.3	67.6	74.1	49.1	52.8
80	57.9		70.7		47.8	
100	59.6		71.1		50.4	
125	57.5	63.6	77.2	79.3	49.7	56.5
160	59		72.9		53.9	
200	55.8		76		49.9	
250	50.2	57.5	61.2	76.4	42.3	51.2
315	49.1		64.1		42.5	
400	48.5		62.2		42.6	
500	47.8	52.5	52.8	63.9	42.4	46.9
630	46.7		57.9		41.1	
800	47.6		56.9		42.4	
1000	47.9	52	50.6	58.2	41.8	46.2
1250	46		47.5		39.4	
1600	45.2		47.6		39.4	
2000	42.8	48	45.6	50.4	37	42.3
2500	40.1		42.3		35.1	
3150	38.6		40.6		34.5	
4000	39	42.7	40.9	44.7	35.4	38.9
5000	35.3		37.5		31.7	
6300	29.7		33.5		25.2	
8000	27.7	32.8	31.2	36.2	21.3	27.4
10000	25.8		28		19.4	
12500	21.9		23.9		19	
16000	21.3	26.7	22.2	27.8	20	25.1
20000	22.4		22.9		21.6	

Ln Start Level:	15 dB			
L 2.00		61.6	dBA	
L 8.00		59.1	dBA	
L 25.00		56.8	dBA	
L 50.00		55.4	dBA	
L 90.00		54.5	dBA	
L 95.00		54.3	dBA	

Detector:	Slow			
Weighting:	A			
SPL Exceedance Level 1:	65.0 dB		Exceeded:	2 times
SPL Exceedance level 2:	80 dB		Exceeded:	0 times
Peak-1 Exceedance Level:	100 dB		Exceeded:	0 times
Peak-2 Exceedance Level:	120 dB		Exceeded:	0 times
Hysteresis:		3		
Overloaded:	0 time(s)			
Paused:	0 times for 00:00:00.0			

Current Any Data			
Start Time:	23-May-24		21:07:43
Elapsed Time:	20:00.6		

	A Weight		C Weight		Flat
Leq:	56.7 dBA		68.8 dBC		71.9 dBF
SEL:	87.5 dBA		99.6 dBC		102.7 dBF
Peak:	84.6 dBA		90.8 dBC		95.7 dBF
		5/23/2024 21:23		5/23/2024 21:19	5/23/2024 21:23
Lmax (slow):	67.0 dBA		79.5 dBC		84.0 dBF
		5/23/2024 21:21		5/23/2024 21:21	5/23/2024 21:22
Lmin (slow):	53.8 dBA		65.3 dBC		66.4 dBF
		5/23/2024 21:09		5/23/2024 21:09	5/23/2024 21:09
Lmax (fast):	69.0 dBA		81.2 dBC		88.4 dBF
		5/23/2024 21:21		5/23/2024 21:19	5/23/2024 21:22
Lmin (fast):	53.4 dBA		64.2 dBC		65.4 dBF
		5/23/2024 21:09		5/23/2024 21:09	5/23/2024 21:09
Lmax (impulse):	69.4 dBA		83.9 dBC		91.1 dBF
		5/23/2024 21:21		5/23/2024 21:19	5/23/2024 21:23
Lmin (impulse):	53.8 dBA		65.7 dBC		67.2 dBF
		5/23/2024 21:15		5/23/2024 21:09	5/23/2024 21:23

Calibrated:	1/1/2000 2:45	Offset: -46.3 dB
Checked:	5/23/2024 9:44	Level: 114.0 dB
Calibrator	597860	Level: 114.0 dB
Cal Records Count:	0	

Interval Records:	Enabled	Number Interval Records:	21
History Records:	Enabled	Number History Records:	4804
Run/Stop Records:		Number Run/Stop Records:	2

SLM & RTA Summary				
Translated:		24-May-24	14:22:00	
File Translated:	C:\Data\Projects\SMUD Station J\Field2\ST_009.slmdl			
Model Number:		824		
Serial Number:	A2624			
Firmware Rev:		4.29		
Software Version:		3.12		
Name:	AECOM			
Descr1:	2020 L St			
Descr2:	Sacramento, CA			
Setup:	SLM&RTA.ssa			
Setup Descr:	SLM & Real-Time Analyzer			
Location:				
Note 1:				
Note 2:				
Overall Any Data				
Start Time:		23-May-24	23:04:20	
Elapsed Time:		20:01.2		

	A Weight		C Weight		Flat
Leq:	60.2 dBA		71.9 dBC		73.1 dBF
SEL:	91.1 dBA		102.8 dBC		103.9 dBF
Peak:	96.1 dBA		99.0 dBC		99.5 dBF
		5/23/2024 23:22		5/23/2024 23:08	5/23/2024 23:08
Lmax (slow):	82.8 dBA		91.6 dBC		91.9 dBF
		5/23/2024 23:22		5/23/2024 23:08	5/23/2024 23:08
Lmin (slow):	51.4 dBA		62.9 dBC		64.5 dBF
		5/23/2024 23:12		5/23/2024 23:12	5/23/2024 23:12
Lmax (fast):	87.1 dBA		93.9 dBC		94.1 dBF
		5/23/2024 23:22		5/23/2024 23:08	5/23/2024 23:08
Lmin (fast):	50.8 dBA		61.4 dBC		62.6 dBF
		5/23/2024 23:12		5/23/2024 23:12	5/23/2024 23:12
Lmax (impulse):	88.9 dBA		94.3 dBC		94.6 dBF
		5/23/2024 23:22		5/23/2024 23:08	5/23/2024 23:08
Lmin (impulse):	51.0 dBA		63.4 dBC		65.1 dBF
		5/23/2024 23:12		5/23/2024 23:12	5/23/2024 23:22

Spectra

Start Time:		23-May-24	23:04:20 Run Time:	20:01.2		
Freq Hz	Leq 1/3 Oct	Leq 1/1 Oct	Max 1/3 Oct	Max 1/1 Oct	Min 1/3 Oct	Min 1/1 Oct
12.5	59.8		63.2		39	
16	62.9	65.9	66.6	69.6	48.3	49.3
20	59.8		64		39.6	
25	59.5		72.8		43.2	
31.5	60.1	65.2	70.8	76	44	49.3
40	61.4		69.4		45.9	
50	60.1		68.8		47.8	
63	65.5	69.1	68.8	76	47.8	52.2
80	65.5		73.9		46.5	
100	66.7		79		46.5	
125	57	67.4	77.6	82	45.5	50
160	54.6		73.4		42.8	
200	53.4		72.7		42.5	
250	51	56.1	70	75.6	41.7	46.3
315	48.1		68.9		40.1	
400	47.6		68.5		40.6	
500	47.8	52.6	69.4	73.9	40.8	45.7
630	48.2		69.4		41.4	
800	51.3		75.8		43.3	
1000	49.7	56.5	71.7	84.3	42.3	46.8
1250	53.4		83.4		39.6	
1600	51.3		82.4		36.1	
2000	46.7	53.4	66	82.5	32.3	38.3
2500	45.5		61.7		29.6	
3150	44.8		64.5		27.6	
4000	42.1	47.4	64.7	68.6	25.5	30.7
5000	39.1		61.7		23.7	
6300	36.2		60.3		22.6	
8000	34.3	39.3	59.6	63.8	21.4	26.3
10000	32.4		56		20.1	
12500	26.6		54.3		19.3	
16000	35.8	36.9	49.9	56.2	20.2	25.2
20000	27.8		47.3		21.6	

Ln Start Level:	15 dB			
L 2.00		65.8	dBA	
L 8.00		62.1	dBA	
L 25.00		57.5	dBA	
L 50.00		54	dBA	
L 90.00		52.6	dBA	
L 95.00		52.3	dBA	

Detector:	Slow			
Weighting:	A			
SPL Exceedance Level 1:	65.0 dB		Exceeded:	6 times
SPL Exceedance level 2:	80 dB		Exceeded:	1 times
Peak-1 Exceedance Level:	100 dB		Exceeded:	0 times
Peak-2 Exceedance Level:	120 dB		Exceeded:	0 times
Hysteresis:		3		
Overloaded:	0 time(s)			
Paused:	0 times for 00:00:00.0			

Current Any Data			
Start Time:	23-May-24	23:04:20	
Elapsed Time:	20:01.2		

	A Weight		C Weight		Flat
Leq:	60.2 dBA		71.9 dBC		73.1 dBF
SEL:	91.1 dBA		102.8 dBC		103.9 dBF
Peak:	96.1 dBA		99.0 dBC		99.5 dBF
		5/23/2024 23:22		5/23/2024 23:08	5/23/2024 23:08
Lmax (slow):	82.8 dBA		91.6 dBC		91.9 dBF
		5/23/2024 23:22		5/23/2024 23:08	5/23/2024 23:08
Lmin (slow):	51.4 dBA		62.9 dBC		64.5 dBF
		5/23/2024 23:12		5/23/2024 23:12	5/23/2024 23:12
Lmax (fast):	87.1 dBA		93.9 dBC		94.1 dBF
		5/23/2024 23:22		5/23/2024 23:08	5/23/2024 23:08
Lmin (fast):	50.8 dBA		61.4 dBC		62.6 dBF
		5/23/2024 23:12		5/23/2024 23:12	5/23/2024 23:12
Lmax (impulse):	88.9 dBA		94.3 dBC		94.6 dBF
		5/23/2024 23:22		5/23/2024 23:08	5/23/2024 23:08
Lmin (impulse):	51.0 dBA		63.4 dBC		65.1 dBF
		5/23/2024 23:12		5/23/2024 23:12	5/23/2024 23:22

Calibrated:	1/1/2000 2:45	Offset: -46.3 dB
Checked:	5/23/2024 9:44	Level: 114.0 dB
Calibrator	597860	Level: 114.0 dB
Cal Records Count:	0	

Interval Records:	Enabled	Number Interval Records:	21
History Records:	Enabled	Number History Records:	4807
Run/Stop Records:		Number Run/Stop Records:	2

SLM & RTA Summary

Translated:	24-May-24	14:22:37
File Translated:	C:\Data\Projects\SMUD Station J\Field2\ST_010.slmdl	
Model Number:	824	
Serial Number:	A2624	
Firmware Rev:	4.29	
Software Version:	3.12	
Name:	AECOM	
Descr1:	2020 L St	
Descr2:	Sacramento, CA	
Setup:	SLM&RTA.ssa	
Setup Descr:	SLM & Real-Time Analyzer	
Location:		
Note 1:		
Note 2:		

Overall Any Data

Start Time:	23-May-24	23:30:55
Elapsed Time:	20:00.6	

	A Weight	C Weight	Flat
Leq:	56.4 dBA	70.0 dBC	74.9 dBF
SEL:	87.2 dBA	100.8 dBC	105.7 dBF
Peak:	85.5 dBA	95.5 dBC	99.8 dBF
	5/23/2024 23:31	5/23/2024 23:37	5/23/2024 23:37
Lmax (slow):	66.7 dBA	81.0 dBC	87.6 dBF
	5/23/2024 23:34	5/23/2024 23:37	5/23/2024 23:37
Lmin (slow):	53.7 dBA	65.4 dBC	66.9 dBF
	5/23/2024 23:37	5/23/2024 23:42	5/23/2024 23:42
Lmax (fast):	69.5 dBA	85.9 dBC	91.3 dBF
	5/23/2024 23:43	5/23/2024 23:37	5/23/2024 23:37
Lmin (fast):	53.3 dBA	64.3 dBC	65.6 dBF
	5/23/2024 23:37	5/23/2024 23:41	5/23/2024 23:41
Lmax (impulse):	70.6 dBA	88.6 dBC	93.9 dBF
	5/23/2024 23:43	5/23/2024 23:37	5/23/2024 23:43
Lmin (impulse):	53.7 dBA	65.7 dBC	67.6 dBF
	5/23/2024 23:37	5/23/2024 23:42	5/23/2024 23:42

Spectra

Start Time: 23-May-24 23:30:55 Run Time: 20:00.6

Freq Hz	Leq 1/3 Oct	Leq 1/1 Oct	Max 1/3 Oct	Max 1/1 Oct	Min 1/3 Oct	Min 1/1 Oct
12.5	69.7		74.6		33.9	
16	67.2	72.5	78.7	81.5	42.7	46.9
20	65.3		75.8		44.5	
25	63.6		68.2		46.8	
31.5	62	67	67.1	71.9	48.1	52.5
40	60.4		65.9		48.1	
50	58.5		62.4		47.9	
63	58.8	63	66.4	69.9	47.3	52.6
80	57.4		65.6		48.3	
100	58.6		65.1		50.9	
125	56	62.3	67.9	71.3	48.6	55.7
160	57.7		66.2		52.4	
200	54.7		68.3		48.5	
250	48.6	56.3	61.6	69.8	41.8	50.1
315	48		61.5		42.4	
400	47.8		61.1		42.9	
500	48.1	52.4	60.5	64.7	43.2	47.2
630	46.8		57.4		41	
800	47.9		56.8		43.1	
1000	47.9	52.1	58.7	62.5	42.1	46.7
1250	45.7		57.5		39.9	
1600	44.5		53.7		38.2	
2000	43	47.8	58.8	60.4	36.7	41.7
2500	40.7		50.6		35.6	
3150	38.8		51.2		34.6	
4000	39.3	42.8	46.3	53.1	35.1	38.6
5000	34.7		44.4		30.7	
6300	31.3		46.1		26	
8000	28.4	33.8	41.5	47.8	22.3	28.2
10000	25.2		36.8		19.8	
12500	22.7		31.4		19	
16000	22	27.3	24.7	32.8	20.1	25.2
20000	22.7		23.5		21.7	

Ln Start Level:	15 dB			
L 2.00		61.5	dBA	
L 8.00		58.6	dBA	
L 25.00		56.1	dBA	
L 50.00		55.2	dBA	
L 90.00		54.6	dBA	
L 95.00		54.4	dBA	

Detector:	Slow			
Weighting:	A			
SPL Exceedance Level 1:	65.0 dB		Exceeded:	2 times
SPL Exceedance level 2:	80 dB		Exceeded:	0 times
Peak-1 Exceedance Level:	100 dB		Exceeded:	0 times
Peak-2 Exceedance Level:	120 dB		Exceeded:	0 times
Hysteresis:		3		
Overloaded:	0 time(s)			
Paused:	0 times for 00:00:00.0			

Current Any Data		
Start Time:	23-May-24	23:30:55
Elapsed Time:	20:00.6	

	A Weight		C Weight		Flat
Leq:	56.4 dBA		70.0 dBC		74.9 dBF
SEL:	87.2 dBA		100.8 dBC		105.7 dBF
Peak:	85.5 dBA		95.5 dBC		99.8 dBF
		5/23/2024 23:31		5/23/2024 23:37	5/23/2024 23:37
Lmax (slow):	66.7 dBA		81.0 dBC		87.6 dBF
		5/23/2024 23:34		5/23/2024 23:37	5/23/2024 23:37
Lmin (slow):	53.7 dBA		65.4 dBC		66.9 dBF
		5/23/2024 23:37		5/23/2024 23:42	5/23/2024 23:42
Lmax (fast):	69.5 dBA		85.9 dBC		91.3 dBF
		5/23/2024 23:43		5/23/2024 23:37	5/23/2024 23:37
Lmin (fast):	53.3 dBA		64.3 dBC		65.6 dBF
		5/23/2024 23:37		5/23/2024 23:41	5/23/2024 23:41
Lmax (impulse):	70.6 dBA		88.6 dBC		93.9 dBF
		5/23/2024 23:43		5/23/2024 23:37	5/23/2024 23:43
Lmin (impulse):	53.7 dBA		65.7 dBC		67.6 dBF
		5/23/2024 23:37		5/23/2024 23:42	5/23/2024 23:42

Calibrated:	1/1/2000 2:45	Offset: -46.3 dB
Checked:	5/23/2024 9:44	Level: 114.0 dB
Calibrator	597860	Level: 114.0 dB
Cal Records Count:	0	

Interval Records:	Enabled	Number Interval Records:	21
History Records:	Enabled	Number History Records:	4804
Run/Stop Records:		Number Run/Stop Records:	2

SLM & RTA Summary

Translated:		9-Oct-24	13:05:00
File Translated:	C:\Data\Projects\SMUD Station J\Field3\STs\ST_001.slmdl		
Model Number:		824	
Serial Number:	A2624		
Firmware Rev:		4.29	
Software Version:		3.12	
Name:	AECOM		
Descr1:	2020 L St		
Descr2:	Sacramento, CA		
Setup:	SLM&RTA.ssa		
Setup Descr:	SLM & Real-Time Analyzer		
Location:			
Note 1:			
Note 2:			

Overall Any Data

Start Time:		8-Oct-24	14:15:16
Elapsed Time:		30:00.8	

	A Weight		C Weight		Flat
Leq:	55.1 dBA		66.2 dBC		67.5 dBF
SEL:	87.6 dBA		98.7 dBC		100.1 dBF
Peak:	91.0 dBA		93.6 dBC		94.1 dBF
		10/8/2024 14:44		10/8/2024 14:38	10/8/2024 14:38
Lmax (slow):	75.1 dBA		83.8 dBC		84.5 dBF
		10/8/2024 14:41		10/8/2024 14:38	10/8/2024 14:38
Lmin (slow):	43.3 dBA		56.7 dBC		58.3 dBF
		10/8/2024 14:22		10/8/2024 14:30	10/8/2024 14:30
Lmax (fast):	77.0 dBA		86.1 dBC		86.8 dBF
		10/8/2024 14:41		10/8/2024 14:38	10/8/2024 14:38
Lmin (fast):	42.9 dBA		54.8 dBC		56.7 dBF
		10/8/2024 14:22		10/8/2024 14:42	10/8/2024 14:42
Lmax (impulse):	77.3 dBA		86.8 dBC		87.6 dBF
		10/8/2024 14:41		10/8/2024 14:38	10/8/2024 14:41
Lmin (impulse):	43.3 dBA		57.3 dBC		58.8 dBF
		10/8/2024 14:22		10/8/2024 14:30	10/8/2024 14:30

Spectra

Start Time:		8-Oct-24		14:15:16	Run Time:	30:00.8	
Freq Hz	Leq 1/3 Oct		Leq 1/1 Oct		Max 1/3 Oct	Max 1/1 Oct	Min 1/3 Oct	Min 1/1 Oct

Freq Hz	Leq 1/3 Oct	Leq 1/1 Oct	Max 1/3 Oct	Max 1/1 Oct	Min 1/3 Oct	Min 1/1 Oct
12.5	56.8		71.7		33.1	
16	57.2	61.4	68.2	76.3	36.4	39.4
20	55.8		73.2		33.6	
25	58.5		71		38	
31.5	56.9	62.8	73.4	79.3	37.6	43.2
40	58.4		77.1		39.4	
50	58.1		78.4		40.6	
63	59.3	62.6	69.8	79.3	41.8	46
80	55.1		67.8		41.3	
100	55.4		69.4		40.7	
125	55.8	59.8	76.8	79.2	37.2	43.3
160	53.7		74.2		36.4	
200	51.2		69.4		34.3	
250	50	54.6	73.4	75.7	37.5	40.1
315	47.6		67.9		32.8	
400	46.3		63.4		32.6	
500	45.3	50.5	63.7	69.6	30.9	37
630	45.4		66.6		32.9	
800	45.2		63.9		33	
1000	45	49.9	63.4	68.5	31.9	36.6
1250	45.2		63.8		30.3	
1600	43.5		62.3		28.8	
2000	42.1	47.1	62.4	67.1	26.6	32
2500	41		62.2		25.7	
3150	39.8		61.6		23.8	
4000	38.8	43.4	60.5	65.2	21.8	26.9
5000	36.8		58.5		20	
6300	35.8		57.5		19.3	
8000	40.2	41.9	55	60	19.2	24
10000	30.9		51.1		19.2	
12500	28		50.9		19.2	
16000	24.1	30.4	43.6	51.8	20.3	25.4
20000	23.3		36.6		22	

Ln Start Level:	15 dB			
L 2.00		63.3	dBA	
L 8.00		58.8	dBA	
L 25.00		54	dBA	
L 50.00		50.6	dBA	
L 90.00		45.8	dBA	
L 95.00		45.2	dBA	

Detector:	Slow			
Weighting:	A			
SPL Exceedance Level 1:	65.0 dB		Exceeded:	8 times
SPL Exceedance level 2:	80 dB		Exceeded:	0 times
Peak-1 Exceedance Level:	100 dB		Exceeded:	0 times
Peak-2 Exceedance Level:	120 dB		Exceeded:	0 times
Hysteresis:		3		
Overloaded:	0 time(s)			
Paused:	0 times for 00:00:00.0			

Current Any Data

Start Time:	8-Oct-24	14:15:16	
Elapsed Time:	30:00.8		

	A Weight		C Weight		Flat
Leq:	55.1 dBA		66.2 dBC		67.5 dBF
SEL:	87.6 dBA		98.7 dBC		100.1 dBF
Peak:	91.0 dBA		93.6 dBC		94.1 dBF
		10/8/2024 14:44		10/8/2024 14:38	10/8/2024 14:38
Lmax (slow):	75.1 dBA		83.8 dBC		84.5 dBF
		10/8/2024 14:41		10/8/2024 14:38	10/8/2024 14:38
Lmin (slow):	43.3 dBA		56.7 dBC		58.3 dBF
		10/8/2024 14:22		10/8/2024 14:30	10/8/2024 14:30
Lmax (fast):	77.0 dBA		86.1 dBC		86.8 dBF
		10/8/2024 14:41		10/8/2024 14:38	10/8/2024 14:38
Lmin (fast):	42.9 dBA		54.8 dBC		56.7 dBF
		10/8/2024 14:22		10/8/2024 14:42	10/8/2024 14:42
Lmax (impulse):	77.3 dBA		86.8 dBC		87.6 dBF
		10/8/2024 14:41		10/8/2024 14:38	10/8/2024 14:41
Lmin (impulse):	43.3 dBA		57.3 dBC		58.8 dBF
		10/8/2024 14:22		10/8/2024 14:30	10/8/2024 14:30

Calibrated:	1/1/2000 2:45	Offset: -46.3 dB
Checked:	10/8/2024 16:38	Level: 113.9 dB
Calibrator	597860	Level: 114.0 dB
Cal Records Count:	0	

Interval Records:	Enabled	Number Interval Records:	31
History Records:	Enabled	Number History Records:	7205
Run/Stop Records:		Number Run/Stop Records:	2

SLM & RTA Summary

Translated:		9-Oct-24		13:05:31			
File Translated:	C:\Data\Projects\SMUD Station J\Field3\STs\ST_002.slmdl						
Model Number:		824					
Serial Number:	A2624						
Firmware Rev:		4.29					
Software Version:		3.12					
Name:	AECOM						
Descr1:	2020 L St						
Descr2:	Sacramento, CA						
Setup:	SLM&RTA.ssa						
Setup Descr:	SLM & Real-Time Analyzer						
Location:							
Note 1:							
Note 2:							

Overall Any Data

Start Time:		8-Oct-24		14:46:49	
Elapsed Time:		30:00.6			
	A Weight		C Weight		Flat
Leq:	51.2 dBA		63.9 dBC		65.1 dBF
SEL:	83.8 dBA		96.5 dBC		97.7 dBF
Peak:	88.1 dBA		92.8 dBC		93.4 dBF
		10/8/2024 14:47		10/8/2024 15:05	10/8/2024 15:05
Lmax (slow):	66.3 dBA		82.7 dBC		83.2 dBF
		10/8/2024 15:00		10/8/2024 15:05	10/8/2024 15:05
Lmin (slow):	44.5 dBA		58.2 dBC		59.7 dBF
		10/8/2024 15:08		10/8/2024 14:47	10/8/2024 14:47
Lmax (fast):	67.8 dBA		84.6 dBC		85.0 dBF
		10/8/2024 15:00		10/8/2024 15:05	10/8/2024 15:05
Lmin (fast):	43.9 dBA		55.8 dBC		56.9 dBF
		10/8/2024 15:08		10/8/2024 14:48	10/8/2024 14:48
Lmax (impulse):	70.5 dBA		86.0 dBC		86.5 dBF
		10/8/2024 14:47		10/8/2024 15:05	10/8/2024 15:05
Lmin (impulse):	44.2 dBA		59.0 dBC		60.7 dBF
		10/8/2024 15:08		10/8/2024 14:48	10/8/2024 14:47

Spectra

Start Time: 8-Oct-24 14:46:49 Run Time: 30:00.6

Freq Hz	Leq 1/3 Oct	Leq 1/1 Oct	Max 1/3 Oct	Max 1/1 Oct	Min 1/3 Oct	Min 1/1 Oct
12.5	50.8		56.6		31.8	
16	50.8	55.8	56.1	61	33	39
20	51.4		56		36.5	
25	55		61.2		40.7	
31.5	57.3	61	59	64.7	42	46.4
40	56		59.1		42	
50	56.2		57.4		41.6	
63	58.1	61.5	59.8	62.5	41.8	45.9
80	55.3		54.4		39.6	
100	52.9		51.5		39.1	
125	50.2	56	47.4	55.7	39.9	44.1
160	49.8		52.5		39	
200	46.8		49.9		36.3	
250	44.8	49.9	52.3	57.6	36	40.1
315	43.1		54.9		32.8	
400	42.9		59.6		32.6	
500	46.5	49.5	68	69.4	33.1	37.8
630	43.8		61.5		33.4	
800	41.3		56.1		32.7	
1000	40.7	45.7	54.3	60	32.6	37.2
1250	40.8		55.2		32	
1600	38.3		49.5		29.8	
2000	36.6	41.7	46	52.7	27.5	32.9
2500	35.4		47.5		26.3	
3150	33.4		46.2		23.7	
4000	31	36.3	42.3	48.3	21	26.5
5000	29.3		39.2		19.3	
6300	28.3		35.1		18.5	
8000	27.8	32.3	29.5	36.3	18.7	23.5
10000	26.3		22.6		19.1	
12500	24.1		20.6		19.2	
16000	22.7	28.1	21.4	26.5	20.5	25.5
20000	23.1		22.9		22	

Ln Start Level:	15 dB			
L 2.00		59.2	dBA	
L 8.00		52.5	dBA	
L 25.00		50.2	dBA	
L 50.00		48.3	dBA	
L 90.00		46.1	dBA	
L 95.00		45.8	dBA	

Detector:	Slow			
Weighting:	A			
SPL Exceedance Level 1:	65.0 dB		Exceeded:	2 times
SPL Exceedance level 2:	80 dB		Exceeded:	0 times
Peak-1 Exceedance Level:	100 dB		Exceeded:	0 times
Peak-2 Exceedance Level:	120 dB		Exceeded:	0 times
Hysteresis:		3		
Overloaded:	0 time(s)			
Paused:	0 times for 00:00:00.0			

Current Any Data				
Start Time:		8-Oct-24	14:46:49	
Elapsed Time:		30:00.6		

	A Weight		C Weight		Flat
Leq:	51.2 dBA		63.9 dBC		65.1 dBF
SEL:	83.8 dBA		96.5 dBC		97.7 dBF
Peak:	88.1 dBA		92.8 dBC		93.4 dBF
		10/8/2024 14:47		10/8/2024 15:05	10/8/2024 15:05
Lmax (slow):	66.3 dBA		82.7 dBC		83.2 dBF
		10/8/2024 15:00		10/8/2024 15:05	10/8/2024 15:05
Lmin (slow):	44.5 dBA		58.2 dBC		59.7 dBF
		10/8/2024 15:08		10/8/2024 14:47	10/8/2024 14:47
Lmax (fast):	67.8 dBA		84.6 dBC		85.0 dBF
		10/8/2024 15:00		10/8/2024 15:05	10/8/2024 15:05
Lmin (fast):	43.9 dBA		55.8 dBC		56.9 dBF
		10/8/2024 15:08		10/8/2024 14:48	10/8/2024 14:48
Lmax (impulse):	70.5 dBA		86.0 dBC		86.5 dBF
		10/8/2024 14:47		10/8/2024 15:05	10/8/2024 15:05
Lmin (impulse):	44.2 dBA		59.0 dBC		60.7 dBF
		10/8/2024 15:08		10/8/2024 14:48	10/8/2024 14:47

Calibrated:	1/1/2000 2:45	Offset:	-46.3 dB
Checked:	10/8/2024 16:38	Level:	113.9 dB
Calibrator	597860	Level:	114.0 dB
Cal Records Count:	0		

Interval Records:	Enabled	Number Interval Records:	31
History Records:	Enabled	Number History Records:	7204
Run/Stop Records:		Number Run/Stop Records:	2

ST-15

SLM & RTA Summary

Translated:	9-Oct-24	13:05:45
File Translated:	C:\Data\Projects\SMUD Station J\Field3\STs\ST_003.slmdl	
Model Number:	824	
Serial Number:	A2624	
Firmware Rev:	4.29	
Software Version:	3.12	
Name:	AECOM	
Descr1:	2020 L St	
Descr2:	Sacramento, CA	
Setup:	SLM&RTA.ssa	
Setup Descr:	SLM & Real-Time Analyzer	
Location:		
Note 1:		
Note 2:		

Overall Any Data

Start Time:	8-Oct-24	15:18:19
Elapsed Time:	30:45.1	

	A Weight		C Weight		Flat
Leq:	49.4 dBA		63.2 dBC		64.9 dBF
SEL:	82.1 dBA		95.9 dBC		97.6 dBF
Peak:	80.4 dBA		87.7 dBC		91.2 dBF
		10/8/2024 15:19		10/8/2024 15:25	10/8/2024 15:25
Lmax (slow):	65.1 dBA		78.9 dBC		81.4 dBF
		10/8/2024 15:37		10/8/2024 15:43	10/8/2024 15:43
Lmin (slow):	43.8 dBA		56.5 dBC		58.1 dBF
		10/8/2024 15:47		10/8/2024 15:46	10/8/2024 15:46
Lmax (fast):	67.4 dBA		81.2 dBC		83.6 dBF
		10/8/2024 15:37		10/8/2024 15:43	10/8/2024 15:43
Lmin (fast):	43.4 dBA		55.1 dBC		56.7 dBF
		10/8/2024 15:47		10/8/2024 15:46	10/8/2024 15:46
Lmax (impulse):	68.4 dBA		82.0 dBC		84.8 dBF
		10/8/2024 15:37		10/8/2024 15:43	10/8/2024 15:25
Lmin (impulse):	43.7 dBA		57.1 dBC		59.0 dBF
		10/8/2024 15:47		10/8/2024 15:46	10/8/2024 15:46

Spectra

Start Time: 8-Oct-24 15:18:19 Run Time: 30:45.1

Freq Hz	Leq 1/3 Oct	Leq 1/1 Oct	Max 1/3 Oct	Max 1/1 Oct	Min 1/3 Oct	Min 1/1 Oct
12.5	53.9		66.9		31.1	
16	54.1	58.5	64	71.4	34.4	37.5
20	53		68.1		32.1	
25	56.8		72.2		37.9	
31.5	60.9	63	67.1	73.7	40.2	44.2
40	54.6		62.9		39.8	
50	54.3		69.2		41.6	
63	54.7	58.5	67.4	72.7	42.9	46.1
80	51.4		66.9		38.6	
100	50.4		62.8		38.4	
125	51.1	54.5	61.5	67.6	39.8	42.9
160	46.4		63.8		34.9	
200	44.3		63.6		32.9	
250	43.6	48	60.6	66	34.1	37.5
315	41.3		57.3		30.6	
400	41.8		63		31.2	
500	41.7	46.5	63.7	68	31.5	36.2
630	41.7		62.9		31.7	
800	41		59.6		32.2	
1000	40.6	45.1	56.7	62	32.6	36.6
1250	39.2		52.8		30.5	
1600	36.7		48.3		29.1	
2000	34.7	40.2	40.4	49.3	27.5	33.7
2500	34.5		37.9		29.9	
3150	32.3		34.2		26.6	
4000	28.7	34.6	34	37.5	21.1	28.3
5000	26.6		27.1		19.6	
6300	24.9		23.2		18.6	
8000	24	28.7	21.9	26.9	18.7	23.6
10000	22.4		21.1		19.1	
12500	21.3		20.3		19.2	
16000	21.6	26.7	21.6	26.6	20.5	25.5
20000	22.8		23.1		22.1	

Ln Start Level:	15 dB			
L 2.00		56.7	dBA	
L 8.00		52	dBA	
L 25.00		48.7	dBA	
L 50.00		47.2	dBA	
L 90.00		45.2	dBA	
L 95.00		44.7	dBA	

Detector:	Slow			
Weighting:	A			
SPL Exceedance Level 1:	65.0 dB		Exceeded:	1 times
SPL Exceedance level 2:	80 dB		Exceeded:	0 times
Peak-1 Exceedance Level:	100 dB		Exceeded:	0 times
Peak-2 Exceedance Level:	120 dB		Exceeded:	0 times
Hysteresis:		3		
Overloaded:	0 time(s)			
Paused:	0 times for 00:00:00.0			

Current Any Data				
Start Time:		8-Oct-24	15:18:19	
Elapsed Time:		30:45.1		

	A Weight		C Weight		Flat
Leq:	49.4 dBA		63.2 dBC		64.9 dBF
SEL:	82.1 dBA		95.9 dBC		97.6 dBF
Peak:	80.4 dBA		87.7 dBC		91.2 dBF
		10/8/2024 15:19		10/8/2024 15:25	10/8/2024 15:25
Lmax (slow):	65.1 dBA		78.9 dBC		81.4 dBF
		10/8/2024 15:37		10/8/2024 15:43	10/8/2024 15:43
Lmin (slow):	43.8 dBA		56.5 dBC		58.1 dBF
		10/8/2024 15:47		10/8/2024 15:46	10/8/2024 15:46
Lmax (fast):	67.4 dBA		81.2 dBC		83.6 dBF
		10/8/2024 15:37		10/8/2024 15:43	10/8/2024 15:43
Lmin (fast):	43.4 dBA		55.1 dBC		56.7 dBF
		10/8/2024 15:47		10/8/2024 15:46	10/8/2024 15:46
Lmax (impulse):	68.4 dBA		82.0 dBC		84.8 dBF
		10/8/2024 15:37		10/8/2024 15:43	10/8/2024 15:25
Lmin (impulse):	43.7 dBA		57.1 dBC		59.0 dBF
		10/8/2024 15:47		10/8/2024 15:46	10/8/2024 15:46

Calibrated:	1/1/2000 2:45	Offset: -46.3 dB
Checked:	10/8/2024 16:38	Level: 113.9 dB
Calibrator	597860	Level: 114.0 dB
Cal Records Count:	0	

Interval Records:	Enabled	Number Interval Records:	32
History Records:	Enabled	Number History Records:	7382
Run/Stop Records:		Number Run/Stop Records:	2

SLM & RTA Summary

Translated:		9-Oct-24	13:05:57
File Translated:	C:\Data\Projects\SMUD Station J\Field3\STs\ST_004.slmdl		
Model Number:		824	
Serial Number:	A2624		
Firmware Rev:		4.29	
Software Version:		3.12	
Name:	AECOM		
Descr1:	2020 L St		
Descr2:	Sacramento, CA		
Setup:	SLM&RTA.ssa		
Setup Descr:	SLM & Real-Time Analyzer		
Location:			
Note 1:			
Note 2:			

Overall Any Data

Start Time:		8-Oct-24	16:04:32
Elapsed Time:		15:00.8	

	A Weight		C Weight		Flat
Leq:	58.4 dBA		73.3 dBC		74.7 dBF
SEL:	88.0 dBA		102.9 dBC		104.2 dBF
Peak:	85.2 dBA		92.3 dBC		92.7 dBF
		10/8/2024 16:19		10/8/2024 16:16	10/8/2024 16:16
Lmax (slow):	68.1 dBA		81.9 dBC		82.7 dBF
		10/8/2024 16:16		10/8/2024 16:16	10/8/2024 16:16
Lmin (slow):	55.3 dBA		68.8 dBC		70.3 dBF
		10/8/2024 16:09		10/8/2024 16:04	10/8/2024 16:04
Lmax (fast):	73.6 dBA		84.8 dBC		85.5 dBF
		10/8/2024 16:19		10/8/2024 16:16	10/8/2024 16:16
Lmin (fast):	54.8 dBA		67.2 dBC		68.6 dBF
		10/8/2024 16:09		10/8/2024 16:04	10/8/2024 16:04
Lmax (impulse):	76.7 dBA		85.9 dBC		86.6 dBF
		10/8/2024 16:19		10/8/2024 16:16	10/8/2024 16:16
Lmin (impulse):	55.0 dBA		69.1 dBC		70.3 dBF
		10/8/2024 16:09		10/8/2024 16:04	10/8/2024 16:04

Spectra

Start Time: 8-Oct-24 16:04:32 Run Time: 15:00.8

Freq Hz	Leq 1/3 Oct	Leq 1/1 Oct	Max 1/3 Oct	Max 1/1 Oct	Min 1/3 Oct	Min 1/1 Oct
12.5	58.2		61.6		38.4	
16	59.7	64.6	61.8	69.7	43.1	48.3
20	61.1		68.1		46.1	
25	68.3		71		52.7	
31.5	66.8	72	69.3	74.4	52.5	57.4
40	66.3		68.2		52.7	
50	67.1		80		53.6	
63	65.3	70.4	74.7	81.4	53.6	57.6
80	63.9		69.6		50.6	
100	62.4		62.7		51.4	
125	59.7	65.2	62.6	75.3	50.3	55
160	58.2		74.8		48.7	
200	54.9		61.4		47.1	
250	53.1	58.4	57.3	66.4	46.5	51.7
315	52.4		63.8		47.1	
400	52.6		60.6		47.4	
500	51	56	68.1	69.7	46	50.9
630	49.4		62.1		44.6	
800	48.8		55		43.8	
1000	48.3	52.9	58.2	60.4	43.8	48.2
1250	47.2		51.1		42.7	
1600	45.8		49.8		41.4	
2000	44.4	49.3	47.7	52.7	39.7	44.7
2500	42.7		45.1		38	
3150	40.8		41.6		35.9	
4000	38	43.3	39.3	44.2	33.3	38.5
5000	35		35		30.3	
6300	31.8		31.9		27	
8000	29.1	34.7	32.3	35.4	23.5	29.3
10000	28.1		24.1		20.9	
12500	23.5		21.1		19.8	
16000	22.3	27.8	21.6	26.8	20.8	25.8
20000	23.1		23.1		22.1	

Ln Start Level:	15 dB			
L 2.00		62.5	dBA	
L 8.00		60.1	dBA	
L 25.00		58.7	dBA	
L 50.00		57.7	dBA	
L 90.00		56.4	dBA	
L 95.00		56.1	dBA	

Detector:	Slow			
Weighting:	A			
SPL Exceedance Level 1:	65.0 dB		Exceeded:	2 times
SPL Exceedance level 2:	80 dB		Exceeded:	0 times
Peak-1 Exceedance Level:	100 dB		Exceeded:	0 times
Peak-2 Exceedance Level:	120 dB		Exceeded:	0 times
Hysteresis:		3		
Overloaded:	0 time(s)			
Paused:	0 times for 00:00:00.0			

Current Any Data

Start Time:	8-Oct-24	16:04:32	
Elapsed Time:	15:00.8		

	A Weight		C Weight		Flat
Leq:	58.4 dBA		73.3 dBC		74.7 dBF
SEL:	88.0 dBA		102.9 dBC		104.2 dBF
Peak:	85.2 dBA		92.3 dBC		92.7 dBF
		10/8/2024 16:19		10/8/2024 16:16	10/8/2024 16:16
Lmax (slow):	68.1 dBA		81.9 dBC		82.7 dBF
		10/8/2024 16:16		10/8/2024 16:16	10/8/2024 16:16
Lmin (slow):	55.3 dBA		68.8 dBC		70.3 dBF
		10/8/2024 16:09		10/8/2024 16:04	10/8/2024 16:04
Lmax (fast):	73.6 dBA		84.8 dBC		85.5 dBF
		10/8/2024 16:19		10/8/2024 16:16	10/8/2024 16:16
Lmin (fast):	54.8 dBA		67.2 dBC		68.6 dBF
		10/8/2024 16:09		10/8/2024 16:04	10/8/2024 16:04
Lmax (impulse):	76.7 dBA		85.9 dBC		86.6 dBF
		10/8/2024 16:19		10/8/2024 16:16	10/8/2024 16:16
Lmin (impulse):	55.0 dBA		69.1 dBC		70.3 dBF
		10/8/2024 16:09		10/8/2024 16:04	10/8/2024 16:04

Calibrated:	1/1/2000 2:45	Offset: -46.3 dB
Checked:	10/8/2024 16:38	Level: 113.9 dB
Calibrator	597860	Level: 114.0 dB
Cal Records Count:	0	

Interval Records:	Enabled	Number Interval Records:	16
History Records:	Enabled	Number History Records:	3605
Run/Stop Records:		Number Run/Stop Records:	2

SLM & RTA Summary

Translated:		9-Oct-24		13:06:10
File Translated:	C:\Data\Projects\SMUD Station J\Field3\STs\ST_005.slmdl			
Model Number:		824		
Serial Number:	A2624			
Firmware Rev:		4.29		
Software Version:		3.12		
Name:	AECOM			
Descr1:	2020 L St			
Descr2:	Sacramento, CA			
Setup:	SLM&RTA.ssa			
Setup Descr:	SLM & Real-Time Analyzer			
Location:				
Note 1:				
Note 2:				

Overall Any Data

Start Time:	8-Oct-24	16:21:47	
Elapsed Time:	15:00.3		

	A Weight		C Weight		Flat
Leq:	61.5 dBA		73.9 dBC		74.8 dBF
SEL:	91.1 dBA		103.4 dBC		104.4 dBF
Peak:	89.2 dBA		99.6 dBC		100.0 dBF
		10/8/2024 16:23		10/8/2024 16:23	10/8/2024 16:23
Lmax (slow):	75.3 dBA		87.0 dBC		87.2 dBF
		10/8/2024 16:23		10/8/2024 16:23	10/8/2024 16:23
Lmin (slow):	53.4 dBA		68.1 dBC		69.5 dBF
		10/8/2024 16:34		10/8/2024 16:34	10/8/2024 16:34
Lmax (fast):	76.7 dBA		89.9 dBC		90.3 dBF
		10/8/2024 16:23		10/8/2024 16:23	10/8/2024 16:23
Lmin (fast):	52.8 dBA		66.5 dBC		67.8 dBF
		10/8/2024 16:34		10/8/2024 16:28	10/8/2024 16:28
Lmax (impulse):	77.1 dBA		91.7 dBC		92.0 dBF
		10/8/2024 16:23		10/8/2024 16:23	10/8/2024 16:23
Lmin (impulse):	53.2 dBA		68.7 dBC		70.0 dBF
		10/8/2024 16:34		10/8/2024 16:34	10/8/2024 16:34

Spectra

Start Time: 8-Oct-24 16:21:47 Run Time: 15:00.3

Freq Hz	Leq 1/3 Oct	Leq 1/1 Oct	Max 1/3 Oct	Max 1/1 Oct	Min 1/3 Oct	Min 1/1 Oct
12.5	59		62.4		40.7	
16	60.7	65	60.7	67.5	44.4	48.2
20	60.7		64.4		44.4	
25	65.6		71.1		52.7	
31.5	65.1	70	70.8	75.6	52.6	57.8
40	64.8		70.5		53.6	
50	64.8		70.1		53	
63	65.5	70.2	80.1	85.3	54.3	57.9
80	66		83.6		51.8	
100	66		70.9		50.6	
125	63.4	68.9	70.6	86.7	50.5	54.8
160	62.2		86.5		48.6	
200	59.1		70.8		46.4	
250	56.5	61.8	70.9	76	45.1	50.1
315	54.2		71.9		44.2	
400	53.1		69.5		43.7	
500	52.1	57.2	70.1	73.8	43	48.1
630	52		66.9		43.3	
800	52.4		66.4		42.4	
1000	52.4	56.8	66.4	70.2	42.1	46.7
1250	51		62.4		41.1	
1600	49.8		61		39.3	
2000	47.9	53	57.2	63.2	37.4	42.3
2500	46.5		54.8		34.6	
3150	43.9		54.4		31.5	
4000	41.1	46.5	51	56.4	28.5	33.8
5000	38.7		45.1		24.6	
6300	37.6		41.7		22	
8000	34.4	39.7	33.9	42.7	20.5	25.5
10000	29.4		30.7		19.3	
12500	24.9		27.5		19.6	
16000	22.7	28.4	22.3	29.8	20.7	25.8
20000	23.1		23.5		22.3	

Ln Start Level:	15 dB		
L 2.00		67 dBA	
L 8.00		64.5 dBA	
L 25.00		62.1 dBA	
L 50.00		60 dBA	
L 90.00		56.3 dBA	
L 95.00		55.4 dBA	

Detector:	Slow		
Weighting:	A		
SPL Exceedance Level 1:	65.0 dB	Exceeded:	15 times
SPL Exceedance level 2:	80 dB	Exceeded:	0 times
Peak-1 Exceedance Level:	100 dB	Exceeded:	0 times
Peak-2 Exceedance Level:	120 dB	Exceeded:	0 times
Hysteresis:	3		
Overloaded:	0 time(s)		
Paused:	0 times for 00:00:00.0		

Current Any Data		
Start Time:	8-Oct-24	16:21:47
Elapsed Time:	15:00.3	

	A Weight		C Weight		Flat
Leq:	61.5 dBA		73.9 dBC		74.8 dBF
SEL:	91.1 dBA		103.4 dBC		104.4 dBF
Peak:	89.2 dBA		99.6 dBC		100.0 dBF
		10/8/2024 16:23		10/8/2024 16:23	10/8/2024 16:23
Lmax (slow):	75.3 dBA		87.0 dBC		87.2 dBF
		10/8/2024 16:23		10/8/2024 16:23	10/8/2024 16:23
Lmin (slow):	53.4 dBA		68.1 dBC		69.5 dBF
		10/8/2024 16:34		10/8/2024 16:34	10/8/2024 16:34
Lmax (fast):	76.7 dBA		89.9 dBC		90.3 dBF
		10/8/2024 16:23		10/8/2024 16:23	10/8/2024 16:23
Lmin (fast):	52.8 dBA		66.5 dBC		67.8 dBF
		10/8/2024 16:34		10/8/2024 16:28	10/8/2024 16:28
Lmax (impulse):	77.1 dBA		91.7 dBC		92.0 dBF
		10/8/2024 16:23		10/8/2024 16:23	10/8/2024 16:23
Lmin (impulse):	53.2 dBA		68.7 dBC		70.0 dBF
		10/8/2024 16:34		10/8/2024 16:34	10/8/2024 16:34

Calibrated:	1/1/2000 2:45	Offset: -46.3 dB
Checked:	10/8/2024 16:38	Level: 113.9 dB
Calibrator	597860	Level: 114.0 dB
Cal Records Count:	0	

Interval Records:	Enabled	Number Interval Records:	16
History Records:	Enabled	Number History Records:	3603
Run/Stop Records:		Number Run/Stop Records:	2

Project-Generated Construction Source Noise Prediction Model

60690853 - SMUD281-TA44 Station J

Location	Distance to Nearest Receiver in feet	Combined Predicted Noise Level (L_{eq} dBA)
Threshold*	1,008	60
	50	86
LT-01	100	80
LT-02	100	80

Assumptions:	Reference Emission Noise Levels (L_{max}) at 50 feet[1]	Usage Factor[1]
Excavator	81	0.4
Crane	81	0.16
Front End Loader	79	0.4
Pavement Scarafier	90	0.2
Compressor (air)	78	0.4
Generator	81	0.5
Vacuum Street Sweeper	82	0.1

Ground Type	Hard
Ground Factor	0.00

Predicted Noise Level [2]	L_{eq} dBA at 50 feet[2]
Excavator	77.0
Crane	73.0
Front End Loader	75.0
Pavement Scarafier	83.0
Compressor (air)	74.0
Generator	78.0
Vacuum Street Sweeper	72.0

Combined Predicted Noise Level (L_{eq} dBA at 50 feet)
86.1

Sources:

[1] Obtained from the FHWA Roadway Construction Noise Model, Ja

[2] Based on the following from the Federal Transit Noise and Vibrati

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; and

D = Distance from source to receiver.

*Project specific threshold

Project-Generated Construction Source Noise Prediction Model

60690853 - SMUD281-TA44 Station J

Location	Distance to Nearest Receiver in feet	Combined Predicted Noise Level (L_{eq} dBA)
Threshold*	1,039	60
	50	86
LT-01	100	80
LT-02	100	80

Assumptions:	Reference Emission Noise Levels (L_{max}) at 50 feet[1]	Usage Factor[1]
Grader	85	0.4
Scraper	84	0.4
Compactor (ground)	83	0.2
Auger Drill Rig	84	0.2
Front End Loader	79	0.4
Crane	81	0.16
Generator	81	0.5

Ground Type	Hard
Ground Factor	0.00

Predicted Noise Level [2]	L_{eq} dBA at 50 feet[2]
Grader	81.0
Scraper	80.0
Compactor (ground)	76.0
Auger Drill Rig	77.0
Front End Loader	75.0
Crane	73.0
Generator	78.0

Combined Predicted Noise Level (L_{eq} dBA at 50 feet)
86.4

Sources:

[1] Obtained from the FHWA Roadway Construction Noise Model, Ja

[2] Based on the following from the Federal Transit Noise and Vibrati

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; and

D = Distance from source to receiver.

*Project specific threshold

Project-Generated Construction Source Noise Prediction Model

60690853 - SMUD281-TA44 Station J

Location	Distance to Nearest Receiver in feet	Combined Predicted Noise Level (L_{eq} dBA)	Assumptions:	Reference Emission Noise Levels (L_{max}) at 50 feet[1]	Usage Factor[1]
Threshold*	648	60	**Front End Loader**	79	0.4
	50	82	**Tractor**	84	0.4
LT-01	100	76	**Roller**	80	0.2
LT-02	100	76	**Vacuum Street Sweeper**	82	0.1

Ground Type	Hard
Ground Factor	0.00

Predicted Noise Level [2]	L_{eq} dBA at 50 feet[2]
Front End Loader	75.0
Tractor	80.0
Roller	73.0
Vacuum Street Sweeper	72.0

Combined Predicted Noise Level (L_{eq} dBA at 50 feet)
82.3

Sources:

[1] Obtained from the FHWA Roadway Construction Noise Model, Ja

[2] Based on the following from the Federal Transit Noise and Vibrati

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; and

D = Distance from source to receiver.

*Project specific threshold

Project-Generated Construction Source Noise Prediction Model

60690853 - SMUD281-TA44 Station J

Location	Distance to Nearest Receiver in feet	Combined Predicted Noise Level (L_{eq} dBA)
Threshold*	624	60
	50	82
LT-01	100	76
LT-02	100	76

Assumptions:	Reference Emission Noise Levels (L_{max}) at 50 feet[1]	Usage Factor[1]
Auger Drill Rig	84	0.2
Backhoe	78	0.4
Welder / Torch	74	0.05
Generator	81	0.5
Vacuum Street Sweeper	82	0.1

Ground Type	Hard
Ground Factor	0.00

Predicted Noise Level [2]	L_{eq} dBA at 50 feet[2]
Auger Drill Rig	77.0
Backhoe	74.0
Welder / Torch	61.0
Generator	78.0
Vacuum Street Sweeper	72.0

Combined Predicted Noise Level (L_{eq} dBA at 50 feet)
81.9

Sources:

[1] Obtained from the FHWA Roadway Construction Noise Model, Ja

[2] Based on the following from the Federal Transit Noise and Vibrati

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; and

D = Distance from source to receiver.

*Project specific threshold

Project-Generated Construction Source Noise Prediction Model

60690853 - SMUD281-TA44 Station J

Location	Distance to Nearest Receiver in feet	Combined Predicted Noise Level (L_{eq} dBA)
Threshold*	411	60
	50	78
LT-01	100	72
LT-02	100	72

Assumptions:	Reference Emission Noise Levels (L_{max}) at 50 feet[1]	Usage Factor[1]
Roller	80	0.2
Vacuum Street Sweeper	82	0.1
Front End Loader	79	0.4

Ground Type	Hard
Ground Factor	0.00

Predicted Noise Level [2]	L_{eq} dBA at 50 feet[2]
Roller	73.0
Vacuum Street Sweeper	72.0
Front End Loader	75.0

Combined Predicted Noise Level (L_{eq} dBA at 50 feet)
78.3

Sources:

[1] Obtained from the FHWA Roadway Construction Noise Model, Ja

[2] Based on the following from the Federal Transit Noise and Vibrati

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; and

D = Distance from source to receiver.

*Project specific threshold

Project-Generated Construction Source Noise Prediction Model

60690853 - SMUD281-TA44 Station J

Location	Distance to Nearest Receiver in feet	Combined Predicted Noise Level (L_{eq} dBA)
Threshold*	531	60
	50	81
LT-01	100	75
LT-02	100	75

Assumptions:	Reference Emission Noise Levels (L_{max}) at 50 feet[1]	Usage Factor[1]
Crane	81	0.16
Man Lift	75	0.2
Man Lift	75	0.2
Welder / Torch	74	0.05
Generator	81	0.5
Vacuum Street Sweeper	82	0.1

Ground Type	Hard
Ground Factor	0.00

Predicted Noise Level [2]	L_{eq} dBA at 50 feet[2]
Crane	73.0
Man Lift	68.0
Man Lift	68.0
Welder / Torch	61.0
Generator	78.0
Vacuum Street Sweeper	72.0

Combined Predicted Noise Level (L_{eq} dBA at 50 feet)
80.5

Sources:

[1] Obtained from the FHWA Roadway Construction Noise Model, Ja

[2] Based on the following from the Federal Transit Noise and Vibrati

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; and

D = Distance from source to receiver.

*Project specific threshold

Project-Generated Construction Source Noise Prediction Model

60690853 - SMUD281-TA44 Station J

Location	Distance to Nearest Receiver in feet	Combined Predicted Noise Level (L_{eq} dBA)
Threshold*	497	60
	50	80
LT-01	100	74
LT-02	100	74

Assumptions:	Reference Emission Noise Levels (L_{max}) at 50 feet[1]	Usage Factor[1]
Crane	81	0.16
Generator	81	0.5
Vacuum Street Sweeper	82	0.1

Ground Type	Hard
Ground Factor	0.00

Predicted Noise Level [2]	L_{eq} dBA at 50 feet[2]
Crane	73.0
Generator	78.0
Vacuum Street Sweeper	72.0

Combined Predicted Noise Level (L_{eq} dBA at 50 feet)
80.0

Sources:

[1] Obtained from the FHWA Roadway Construction Noise Model, Ja

[2] Based on the following from the Federal Transit Noise and Vibrati

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; and

D = Distance from source to receiver.

*Project specific threshold

~~Traffic Noise Prediction Model~~, (FHWA RD-77-108)

Model Input Sheet

Project Name : 60690853 - SMUD281-TA44 Station J
Project Number : 60690853
Modeling Condition : Existing
Ground Type : Hard
K Factor : NA
Metric (L_{eq}, L_{dn}, CNEL) : Leq
Traffic Desc. (Peak or ADT) : Peak

Segment	Roadway	Segment From	Segment To	Traffic Vol.	Speed (Mph)	Distance to CL	% Autos	%MT	% HT	Day %	Eve %	Night %	Offset (dB)
1	Interstate 5	North of Richards Boulevard	0	15700	65	100	88.4	2	9.6	72	0	28	
2	Interstate 5	South of Richards Boulevard	0	14800	65	100	88.4	2	9.6	72	0	28	
3	Richards Boulevard	I-5	North 12th Street	1000	35	100	95	2	3	72	0	28	
4	North 12th Street	Richards Boulevard	Project Site	1000	35	100	95	2	3	72	0	28	
5	North A Street	Project Site	16th Street	50	25	100	95	2	3	72	0	28	
6	16 Street	North A Street	Richards Boulevard	2000	35	100	95	2	3	72	0	28	

0

Traffic Noise Prediction Model, (FHWA RD-77-108)

Predicted Noise Levels

Project Name : 60690853 - SMUD281-TA44 Station J
Project Number : 60690853
Modeling Condition : Existing
Metric (Leq, Ldn, CNEL) : Leq

		Segment		Noise Levels, dB Leq				Distance to Traffic Noise Contours, Feet				
Segment	Roadway	From	To	Auto	MT	HT	Total	70 dB	65 dB	60 dB	55 dB	50 dB
1	Interstate 5	North of Richards		80.4	70.1	80.4	83.6	2313	7315	23133	73153	231330
2	Interstate 5	South of Richards		80.2	69.9	80.2	83.4	2181	6896	21807	68959	218069
3	Richards Boulevard	I-5	North 12th Street	61.1	54.0	60.9	64.4	28	87	277	875	2767
4	North 12th Street	Richards Bouleva	Project Site	61.1	54.0	60.9	64.4	28	87	277	875	2767
5	North A Street	Project Site	16th Street	43.8	38.7	48.1	49.8	1	3	10	30	96
6	16 Street	North A Street	Richards Bouleva	64.1	57.0	63.9	67.4	55	175	553	1750	5533

Traffic Noise Prediction Model, (FHWA RD-77-108)

Model Input Sheet

AECOM

Project Name : 60690853 - SMUD281-TA44 Station J
Project Number : 60690853
Modeling Condition : Existing + Construction Traffic
Ground Type : Hard
K Factor : NA
Metric (L_{eq}, L_{dn}, CNEL) **:** Leq
Traffic Desc. (Peak or ADT) **:** Peak

Segment	Roadway	Segment From	Segment To	Traffic Vol.	Speed (Mph)	Distance to CL	% Autos	%MT	% HT	Day %	Eve %	Night %	Offset (dB)
1	Interstate 5	North of Richards Boulevard	0	60	65	100	50	0	50	72	0	28	
2	Interstate 5	South of Richards Boulevard	0	60	65	100	50	0	50	72	0	28	
3	Richards Boulevard	I-5	North 12th Street	60	35	100	50	0	50	72	0	28	
4	North 12th Street	Richards Boulevard	Project Site	60	35	100	50	0	50	72	0	28	
5	North A Street	Project Site	16th Street	60	25	100	50	0	50	72	0	28	
6	16 Street	North A Street	Richards Boulevard	60	35	100	50	0	50	72	0	28	

0

Traffic Noise Prediction Model, (FHWA RD-77-108)

Predicted Noise Levels

Project Name : 60690853 - SMUD281-TA44 Station J
Project Number : 60690853
Modeling Condition : Existing + Construction Traffic
Metric (Leq, Ldn, CNEL) : Leq

Segment	Roadway	Segment From	To	Noise Levels, dB Leq Auto	MT	HT	Total	Distance to Traffic Noise Contours, Feet 70 dB	65 dB	60 dB	55 dB	50 dB
1	Interstate 5	North of Richards		53.8	0.0	63.4	63.9	24	77	244	770	2436
2	Interstate 5	South of Richards		53.8	0.0	63.4	63.9	24	77	244	770	2436
3	Richards Boulevard	I-5	North 12th Street	46.1	0.0	60.9	61.1	13	41	128	406	1283
4	North 12th Street	Richards Bouleva	Project Site	46.1	0.0	60.9	61.1	13	41	128	406	1283
5	North A Street	Project Site	16th Street	41.8	0.0	61.1	61.1	13	41	130	412	1303
6	16 Street	North A Street	Richards Bouleva	46.1	0.0	60.9	61.1	13	41	128	406	1283