Final Initial Study/
Mitigated Negative Declaration

ROSAMOND SWITCHING STATION

Los Angeles Department of Water and Power
Environmental Affairs
111 North Hope Street, Room 1044
Los Angeles, CA 90012

June 2020

CEQA Final Initial Study and Mitigated Negative Declaration

Rosamond Switching Station Project

June 2020

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ACRONYMS AND ABBREVIATIONS

AB	Assembly Bill
APN	Assessor Parcel Number
BESS	Battery Energy Storage System
bgs	below ground surface
BMP	Best Management Practice
Board	Board of Water and Power Commissioners
BR-HC	Barren Ridge – Haskell Canyon
CalEEMod	California Emissions Estimator Model
CAL FIRE	California Department of Forestry and Fire Protection
Caltrans	California Department of Transportation
CARB	California Air Resources Board
CBC	California Building Code
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CH_4	Methane
Clean GridLA	Clean Grid Los Angeles
CNDDB	California Natural Diversity Database
CO	carbon monoxide
CO_2	carbon dioxide
CO_2e	carbon dioxide equivalent
CPUC	California Public Utilities Commission
CREC	Controlled Recognized Environmental Concern
dB	decibels
dBA	A-weighted decibels
DOC	California Department of Conservation
EKAPCD	Eastern Kern Air Pollution Control District
EDR	Environmental Data Resources, Inc.
EIR	Environmental Impact Report
FACTS	Flexible Alternating Current Transmission System
FEMA	Federal Emergency Management Agency
FMMP	Farmland Mapping and Monitoring Program
GHG	greenhouse gas
GIS	geographic information system
HFC	hydrofluorocarbon
HREC	Historical Recognized Environmental Condition
HVAC	heating, ventilating, and cooling
I-5	Interstate 5
KCFD	Kern County Fire Department
Sheriff's Department	Kern County Sheriff's Department
kV	kilovolt
LA100	LADWP 100% Renewable Energy Study
LADWP	Los Angeles Department of Water and Power
L_{eq}	Equivalent Noise Level
LOS	level of service
MLD	Most Likely Descendant
MMs	mitigation measures
MND	Mitigated Negative Declaration
mph	miles per hour
MRZ	Mineral Resource Zones

NAHC	Native American Heritage Commission
N_2O	nitrous oxide
NO_2	nitrogen dioxide
NO_X	nitrogen oxides
NPDES	National Pollutant Discharge Elimination System
O_3	ozone
OTC	once through cooling
PCE	Passenger Car Equivalency
PFC	perfluorocarbon
PM_{10}	particulate matter up to 10 microns
$PM_{2.5}$	particulate matter up to 2.5 microns
POWER	POWER Engineers, Inc.
PRC	California Public Resources Code
Project	Rosamond Switching Station
RECs	Recognized Environmental Conditions
ROW	right-of-way
RPS	Renewable Portfolio Standard
RTP	Regional Transportation Plan
RWQCB	Regional Water Quality Control Board
SB	Senate Bill
SCADA	Supervisory Control and Data Acquisition
SCE	Southern California Edison
SF_6	sulfur hexafluoride
Sheriff's Department	Kern County Sheriff's Department
SO_2	Sulfur dioxide
SOx	Sulfur oxides
SPCC	Spill Prevention, Control, and Countermeasure
SR	State Route
SSJVIC	Southern San Joaquin Valley Information Center
STATCOM	Static Synchronous Compensator
STP	shovel test pit
Study Area	Biological Study Area
SWPPP	Stormwater Pollution Prevention Plan
SWRCB	State Water Resources Control Board
SVC	Static Var Compensator
TRTP	Tehachapi Renewable Transmission Project
USACE	United States Army Corps of Engineers
USEPA	United States Environmental Protection Agency
VMT	Vehicle miles traveled
VOC	volatile organic compounds
WEAP	Workers Environmental Awareness Program
WMHCP	West Mojave Habitat Conservation Plan

1.0 INTRODUCTION

1.1 Overview of the Proposed Project

The Los Angeles Department of Water and Power (LADWP) proposes to construct and operate a new 230 kilovolt (kV) Rosamond Switching Station (Project) on approximately 120 acres. The Project would be constructed adjacent to the LADWP right-of-way (ROW) for the Barren Ridge – Haskell Canyon (BR-HC) 230 kV Transmission Lines 1, 2, and 3, approximately 30 miles south of the Barren Ridge Switching Station.

The Project would be constructed in phases with the first phase (Phase I) consisting of the construction of the switching station and associated facilities. The Project also includes two additional phases (Phase II and Phase III) within the approximate 120-acre site. Phase II construction would install a Battery Energy Storage System (BESS) and Phase III construction would add a Flexible Alternating Current Transmission System (FACTS).

The Project would allow LADWP greater control managing renewable energy transfer along the existing high voltage transmission lines, increase flexibility and reliability, and provide for flexible energy storage. The Project would also accommodate the interconnection process for planned renewable energy projects in the Project vicinity and would support LADWP's Renewable Portfolio Standard (RPS), Clean Grid Los Angeles (Clean GridLA) Initiative, and LADWP's 100% Renewable Energy Study (LA100) goals. The Project supports the RPS and LA100 goals as it would incorporate additional renewable resources into LADWP's electric portfolio and allows it to achieve a 100 percent renewable energy supply. The Clean GridLA initiative is also supported as the Project would allow additional sources of energy to be connected to the power grid to replace the loss of the once through cooling (OTC) generating units located within the Los Angeles basin.

1.2 California Environmental Quality Act

The California Environmental Quality Act (CEQA) applies to projects initiated by, funded by, or requiring discretionary approvals from state or local government agencies. The proposed Project constitutes a project as defined by CEQA (California Public Resources Code [PRC] Section 21000 et seq.). CEQA Guidelines Section 15367 states that a "Lead Agency" is "the public agency which has the principal responsibility for carrying out or approving a project." LADWP, as a municipal utility, will fund, implement, and operate the proposed Project and will therefore act as the lead agency responsible for compliance with CEQA.

LADWP, as lead agency for the proposed Project, must complete an environmental review to determine if implementation of the Project would result in significant adverse environmental impacts. To fulfill the purpose of CEQA, an Initial Study was prepared to assist in making that determination.

Based on the nature and scope of the proposed Project, and the evaluation contained in the Initial Study environmental checklist (contained herein), LADWP concluded that a Mitigated Negative Declaration (MND) is the proper level of environmental documentation for this Project. The Initial Study shows that potential impacts caused by the proposed Project would be either *less than significant*, or *less than significant with incorporation of appropriate mitigation measures*, as defined herein. This conclusion is supported by CEQA Guidelines Section 15070, which states that an MND can be prepared when "(a) the initial study shows that there is not substantial evidence, in light of the whole record before the agency, that the Project may have a significant effect on the environment, or (b) the initial study identifies potentially significant effects, but (1) revisions in the Project plans or proposals made by, or agreed to by the applicant, before a proposed mitigated negative declaration and initial study are released for public review would avoid the effects or mitigate the effects to a point where clearly no significant effects would

occur; and (2) there is no substantial evidence, in light of the whole record before the agency, that the Project as revised may have a significant effect on the environment."

1.3 Project Purpose and Need

1.3.1 Regulatory Background

California advanced a series of substantive and far-reaching legislative initiatives in the last decade, focused on increasing the generation of electricity via renewable energy sources and promoting a shift from fossil or carbon-based fuels as a key strategy to reduce greenhouse gas (GHG) emissions, air pollution, and water use associated with the energy sector. In response, the California Legislature passed Senate Bill (SB) 1078 (2002), which implemented an RPS program for the state. California's stated RPS goal is to serve 33 percent of its electric load with renewable energy by 2020, 50 percent by 2026, and 60 percent by 2030. On June 29, 2005, the LADWP Board of Water and Power Commissioners (Board) approved an RPS, which established the goal of increasing the amount of energy LADWP generates from renewable power sources to 20 percent of its energy sales to retail customers by 2017, with an interim goal of 13 percent by 2010.

In 2006, the California Global Warming Solutions Act, Assembly Bill (AB) 32 was passed by the Legislature, establishing a statewide goal of reducing GHG to 1990 levels by the year 2020 and to 80 percent below 1990 levels by 2050. On April 11, 2007, the Board amended the LADWP RPS Policy by accelerating the goal of requiring that 20 percent of energy sales to retail customers be generated from renewable resources by December 31, 2010. The Board subsequently approved an RPS Policy, as amended in April 2008, which included an additional RPS goal of requiring that 35 percent of energy sales to retail customers be generated from renewable resources by December 31, 2020. In 2010, LADWP generated 20 percent of energy sales to retail customers from renewable power resources (LADWP 2013).

On April 12, 2011, California's Governor signed into law the California Renewable Energy Resources Act (SB 2 [1X]). This Act set RPS procurement targets, renewable resource eligibility definitions, and new reporting requirements applicable to publicly-owned utilities. SB 2 (1X) required each publicly-owned utility to attain a minimum of 25 percent RPS by 2016 and 33 percent RPS by 2020, and report on reasonable progress for each intervening year. LADWP's RPS and Policy and Enforcement Program (RPS Policy), as amended, represents the continued commitment by the LADWP to renewable energy resources. The RPS was amended and adopted in December 2011 to address SB 2 (1 X) and its requirement for the governing boards of local publicly-owned electric utilities to adopt "a program for the enforcement of this article" on or before January 1, 2012.

In addition to LADWP's RPS goals, the LA100 goals would incorporate additional renewable resources into LADWP's electric portfolio allow LADWP to achieve a 100 percent renewable energy supply. The Clean GridLA initiative would allow additional sources of energy to be connected to the power grid to replace the loss of the OTC generating units located within the Los Angeles basin.

Project Need

Renewable Energy is energy derived from naturally replenished resources such as wind, sunlight, geothermal heat, and biomass. Kern County, as well as the immediate Project area, has a number of renewable energy projects in various phases of development, from application submittal, certified Environmental Impact Reports, projects currently under construction, to projects currently in operation.

The Project is needed to facilitate LADWP's control in managing renewable energy transfer along the existing high voltage transmission lines and increase overall reliability. The Project would support LADWP's RPS goals and provide LADWP with a more reliable and robust transmission system

configuration in the region, as well as facilitate the interconnection process for existing and planned renewable developers in the Project area.

Project Objectives

The overall purpose of the Project is to provide a new 230 kV switching station, BESS for flexible transmission and energy storage, and FACTS, to help meet broader goals related to increasing the use of sustainable renewable energy sources while decreasing the production of GHG and air pollutant emissions. The proposed Project would advance California's and LADWP's RPS and GHG reduction policy objectives, accommodate the interconnection process for planned and existing renewable energy projects in the Project vicinity, and provide flexible transmission and energy storage. Specific objectives related to this purpose include:

- Enhance grid reliability and operational flexibility by constructing a new 230 kV switching station adjacent to the LADWP ROW for the BR-HC 230 kV Transmission Lines 1, 2, and 3.
- Provide LADWP greater control in managing renewable energy transfer along the existing high voltage transmission lines.
- Facilitate the interconnection process for existing and planned renewable energy facilities.
- Provide flexible energy storage during times of over-generation from renewable energy sources (i.e., wind and solar) and deliver it back to the grid when needed.
- Support LADWP's ambitious RPS and GHG reduction goals.

1.4 Environmental Document Format and Content

This Initial Study evaluates the proposed Project's effects on the following resource topics:

- Aesthetics
- Agriculture and forestry resources
- Air quality
- Biological resources
- Cultural resources
- Energy
- Geology and soils
- Greenhouse gas emissions
- Hazards and hazardous materials
- Hydrology and water quality
- Land use and planning
- Mineral resources
- Noise
- Population and housing
- Public services
- Recreation
- Transportation
- Tribal cultural resources
- Utilities and service systems
- Wildfire
- Mandatory findings of significance

1.5 Impact Terminology

The following terminology is used to describe the level of significance of impacts:

- A finding of *no impact* is appropriate if the analysis concludes that the project would not affect the particular topic area in any way.
- An impact is considered *less than significant* if the analysis concludes that the project would cause no substantial adverse change to the environment and requires no mitigation.
- An impact is considered *less than significant with mitigation incorporated* if the analysis concludes that the project would cause no substantial adverse change to the environment with the inclusion of environmental commitments or other enforceable measures that have been agreed to by the applicant.
- An impact is considered *potentially significant* if the analysis concludes that the project could have a substantial adverse effect on the environment. For the proposed Project, no impacts were determined to be potentially significant.

1.6 Initial Study Organization and Contents

This Initial Study is organized into five separate sections that are identified as follows:

Section 1.0 - Introduction – Introduces the Project, its purpose and statutory basis for the document.

Section 2.0 - Project Description – Describes the location, objectives, and principal elements of the Project.

Section 3.0 - Initial Study Checklist and Environmental Evaluation – Contains analyses and evidence employed by the Lead Agency to arrive at the determination required in the CEQA Environmental Checklist.

Section 4.0 - List of Preparers and Contributors – A list of persons who contributed to the preparation of the Initial Study.

Section 5.0 - References – A list of references utilized for the preparation of the Initial Study.

2.0 PROJECT DESCRIPTION

2.1 Project Location

2.1.1 Existing Conditions and Surrounding Land Uses

The Project site is located on approximately 120 acres in unincorporated Kern County, California. It is approximately eight miles west of the community of Rosamond in the western portion of Antelope Valley. The site is in the northwestern portion of the Mojave Desert, approximately three miles north of the Los Angeles County border. Regional access to the Project site includes State Route (SR) 14 located approximately eight miles to the east, SR-138 located approximately 5.5 miles to the south, and Interstate I-5 (I-5) located approximately 30 miles to the west of the Project site (refer to Figure, 2-1 Regional Location).

Edwards Air Force Base is located approximately 25 miles east of the site. The community of Mojave is located approximately 15 miles northeast of the site. Los Angeles County communities of Lancaster and Palmdale are located approximately 15 and 20 miles, respectively, southeast of the Project site.

Local access to the site is via Rosamond Boulevard, which abuts the Project site on its northern boundary. The existing LADWP ROW and associated BR-HC transmission lines traverse the western portion of site diagonally from southwest to northeast. Existing Southern California Edison (SCE) easement and associated transmission lines also cross the western side of site diagonally from southwest to northeast (refer to Figure 2-2, Site Vicinity).

The Project site and surrounding area is vegetated with native and non-native plant species typical of desert vegetation. Land uses in the site vicinity include undeveloped land, industrial/renewable energy generation (i.e., wind and solar), agriculture, and rural residential.

The Project site is comprised of 20 separate Assessor Parcel Numbers (APN), as shown in Table 2-1. Of the 20 parcels, only APN 359-051-22 is LADWP-owned.

For the approximately 120 acres of private property where the Rosamond Switching Station Project is proposed, LADWP would seek to purchase the property required for the Project. As soon as a property has been identified through the final design planning and after the completion of the environmental review and approval process, the property owner would be notified of LADWP's interest in acquiring the property. After the appraisal and inspection process, a written offer may be presented to the property owner. If an agreement cannot be reached after LADWP has exhausted all its opportunities to reach a settlement with a property owner and if the property is needed for the Rosamond Switching Station Project, LADWP may choose to exercise its power of eminent domain to acquire the property interests necessary for the Project.

TABLE 2-1 PROJECT SITE ASSESSOR PARCEL NUMBERS

359-051-11	359-051-13	359-051-14	359-051-17
359-051-18	359-051-19	359-051-20	359-051-21
359-051-22*	359-051-24	359-051-25	359-051-26
359-051-27	359-051-28	359-051-29	359-051-31
359-051-37	359-051-43	359-051-47	359-051-49
*LADWP-owned parcel.			

2.1.2 Existing General Plan and Zoning

Land use and development within the Project area is governed by the Kern County General Plan and Zoning. Specifically, the Project site is located within the Willow Spring Specific Plan boundary. As shown on Figure 2-3, the zoning designation for the Project site is RS (2.5-Acres Residential Suburban Combining). Zoning designations within the immediate Project area include: RS (1-Acres Residential Suburban Combining), RS (2.5-Acres Residential Suburban Combining), RS (5-Acres Residential Suburban Combining), and A (Exclusive Agriculture).

2.2 Existing Regional Electrical and Transmission System

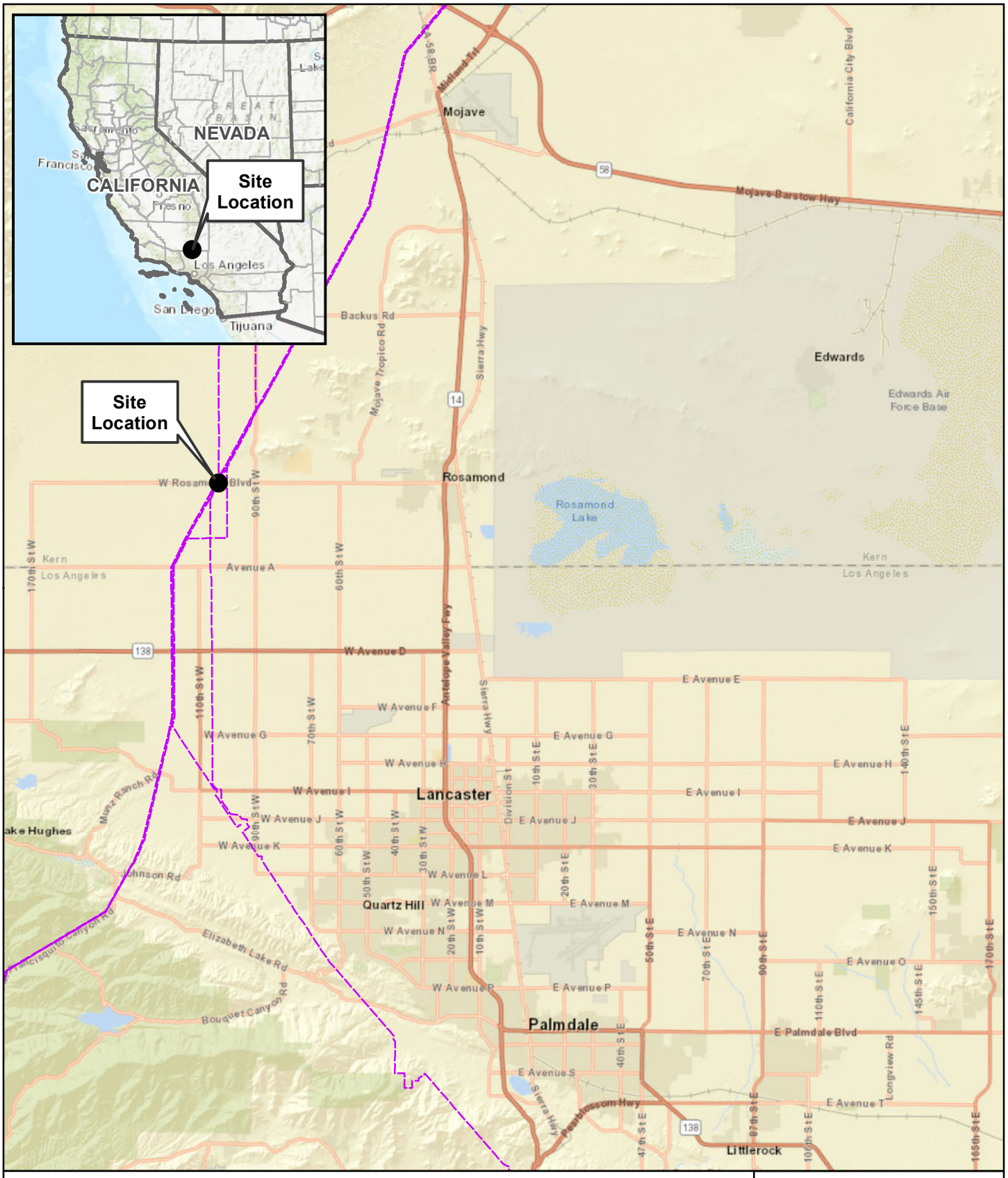
Several existing transmission lines cross the western half of the site. The existing LADWP easement and associated BR-HC 230 kV and 500 kV transmission lines traverse the site diagonally, from southwest to northeast. Existing SCE easement and associated 115 kV transmission lines also cross the site diagonally from southwest to northeast.

SCE's Tehachapi Renewable Transmission Project (TRTP) is located farther to the west of the Project site. It includes new and expanded electricity transmission corridors, substations, and other features. The closest TRTP facilities include the Whirlwind Substation and a major SCE transmission corridor containing 500 kV and 220 kV lines with lattice towers, located approximately three miles west of the Project site.

2.3 Proposed Project

Rosamond Switching Station would be constructed in three phases. Phase I is construction of the switching station and associated facilities, and interconnecting existing and planned electrical power lines. Phase II construction would install a BESS and Phase III construction would install a FACTS. The timing of implementation of each phase would be determined by LADWP.

- Phase I – construction of the switching station and associated facilities, and interconnecting existing and planned electrical power lines.
- Phase II – construction of a BESS.
- Phase III – construction of a FACTS.



Site Location

Existing Transmission Line (115 kV to 500 kV)

Rosamond Switching Station

Figure 2-1
Regional Location

0 2 4 6
Miles

N

Sources: ESRI, HERE, Garmin, USGS, OpenStreetMap contributors, 2019.

POWER ENGINEERS

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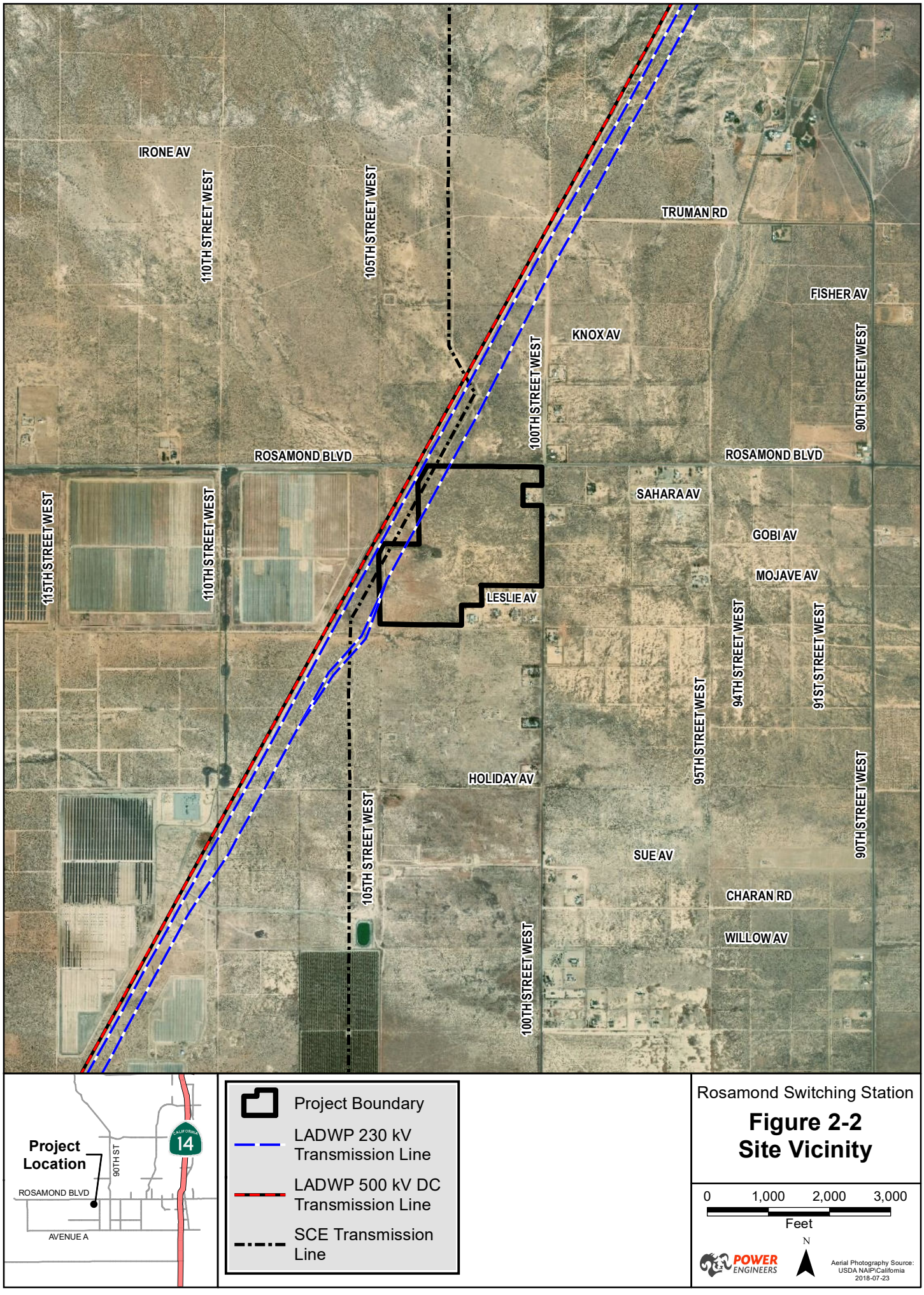
IRONE AV
110TH STREET WEST
105TH STREET WEST
TRUMAN RD
FISHER AV
KNOX AV
100TH STREET WEST
90TH STREET WEST
ROSAMOND BLVD
ROSAMOND BLVD
115TH STREET WEST
110TH STREET WEST
SAHARA AV
GOBI AV
MOJAVE AV
LESLIE AV
94TH STREET WEST
91ST STREET WEST
95TH STREET WEST
HOLIDAY AV
105TH STREET WEST
90TH STREET WEST
SUE AV
CHARAN RD
WILLOW AV
100TH STREET WEST
Project Location
90TH ST
14
ROSAMOND BLVD
AVENUE A
Project Boundary
LADWP 230 kV Transmission Line
LADWP 500 kV DC Transmission Line
SCE Transmission Line
Rosamond Switching Station
Figure 2-2
Site Vicinity
0
1,000
2,000
3,000
Feet
N
POWER ENGINEERS
Aerial Photography Source: USDA NAIP\California 2018-07-23

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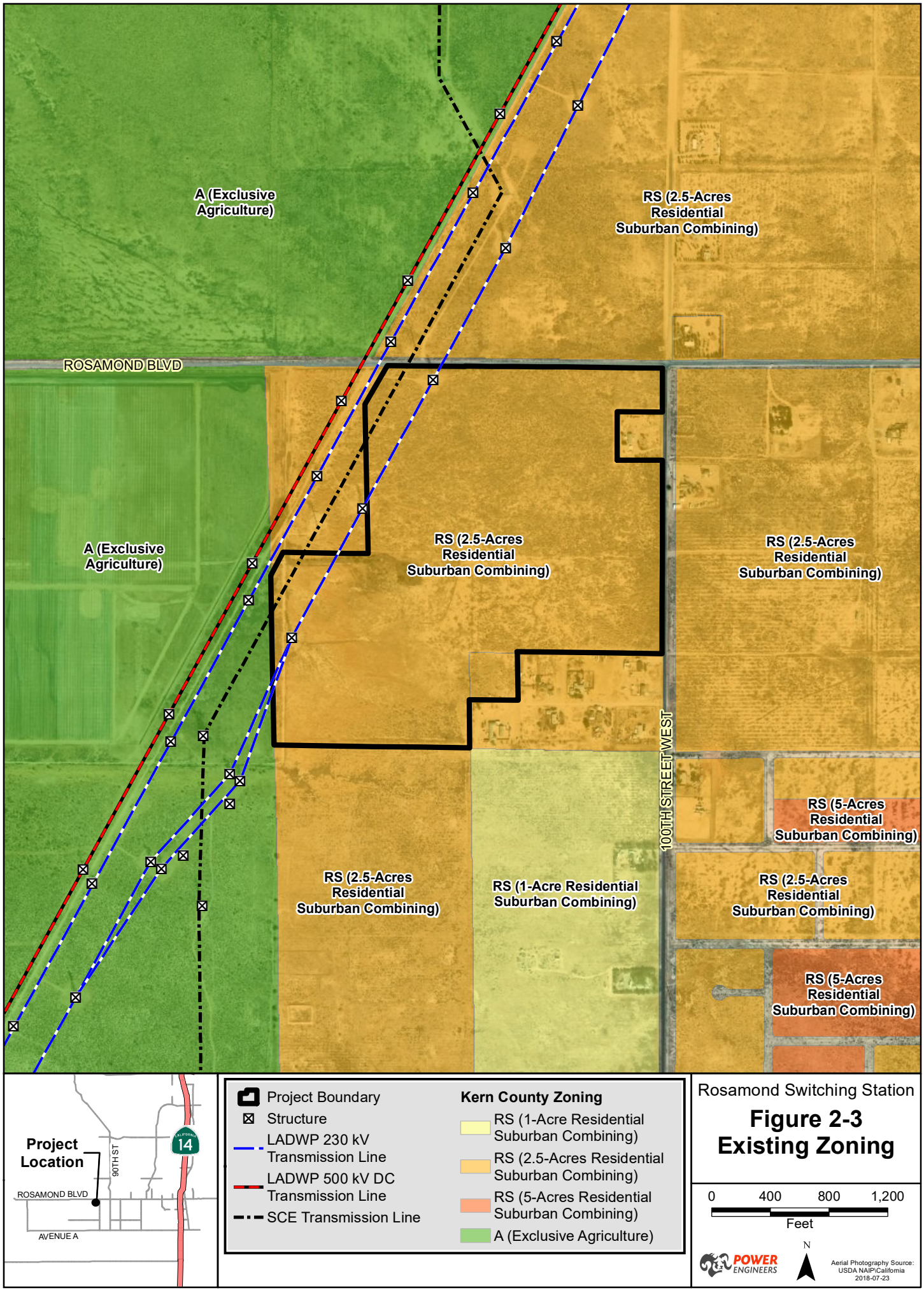
A (Exclusive Agriculture)
RS (2.5-Acres Residential Suburban Combining)
ROSAMOND BLVD
A (Exclusive Agriculture)
RS (2.5-Acres Residential Suburban Combining)
RS (2.5-Acres Residential Suburban Combining)
100TH STREET WEST
RS (5-Acres Residential Suburban Combining)
RS (2.5-Acres Residential Suburban Combining)
RS (1-Acre Residential Suburban Combining)
RS (2.5-Acres Residential Suburban Combining)
RS (5-Acres Residential Suburban Combining)
Project Location
90TH ST
14
ROSAMOND BLVD
AVENUE A
Project Boundary
Structure
LADWP 230 kV Transmission Line
LADWP 500 kV DC Transmission Line
SCE Transmission Line
Kern County Zoning
RS (1-Acre Residential Suburban Combining)
RS (2.5-Acres Residential Suburban Combining)
RS (5-Acres Residential Suburban Combining)
A (Exclusive Agriculture)
Rosamond Switching Station
Figure 2-3
Existing Zoning
0
400
800
1,200
Feet
N
POWER ENGINEERS
Aerial Photography Source: USDA NAIP\California 2018-07-23

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2.3.1 Project Components

Switching Station

The proposed switching station, approximately 1,200 feet long and 800 feet wide, would be constructed within the Project boundary on approximately 15 acres (refer to Figure 2-4, Conceptual Site Plan). The switching station footprint would accommodate the necessary circuit positions, including steel support structures, circuit breakers, and disconnect switches. Figure 2-5 illustrates a typical switching station layout.

A control house with parking for Project personnel would be constructed. The control house would provide space for necessary operational controls. These include a communication room; battery room with battery storage racks; an operator area; restroom facilities; a closet room containing control and protective relaying equipment; and heating, ventilation and cooling (HVAC) units. The switching station yard would include paved internal access roads and gravel parking area. In addition, the switching station yard would be covered with crushed-rock aggregate.

In order to bring electricity into the switching station facilities, approximately 10 to 20 new distribution poles would be constructed along Rosamond Avenue and 100th Street West (heights would range from approximately 35 to 45 feet). It is anticipated that LAWDP would coordinate with SCE to obtain electricity for the site and tie into the existing electrical distribution system.

Transmission Line

The Project would "cut-in" the BR-HC Transmission Lines 1, 2, and 3, bringing these circuits into the switching station. Tower modifications or new towers are necessary to direct the existing 230 kV circuits into and out of the new Rosamond switching station. It is anticipated that six new lattice steel towers would be installed and four to six existing towers would be removed, depending on final design, to reconfigure transmission lines through the Rosamond switching station. New towers would be constructed within the Project boundary adjacent to the switching station (refer to Figure 2-4).

Access Roads

Site access from the regional transportation network is provided via SR-14, SR-138, I-5, and Rosamond Boulevard which abuts the Project site on its northern boundary. These roadways would provide access for both construction and operation of the proposed Project.

Paved internal roads would provide access to site facilities. Primary site access during construction and operation would be from Rosamond Boulevard. A secondary access road would also be constructed off 100th Street West. Entrance widths at these locations would range from 20 to 25 feet, with internal road widths ranging from 18 to 20 feet. The internal access road network may be expanded during construction of the planned BESS and FACTS.

Fencing and Security Features

Security fencing would be installed around the perimeter of the Project site, as well as around the switching station and other areas requiring controlled access. Fencing would restrict public access during both construction and operation of the Project. Security fencing would meet the National Electric and Safety Code requirements for protective arrangements in electric supply stations. The fence would be approximately seven to eight feet high.

The unmanned switching station would have automated features and remote control capabilities. Additional security may be provided through closed-circuit video surveillance cameras. Signage would be installed at intervals along the perimeter fence and switching station fence, and would include language required to warn the public of hazardous voltage within the switching station.

The Project's lighting system would be designed and installed to provide the minimum illumination necessary for safety, security, and operations. The lighting system may include motion-activated security lighting installed at access gates and around the perimeter of on-site facilities. All lighting would be directed on-site and downwards as necessary to minimize illumination of the night sky or potential impacts to surrounding areas.

Battery Energy Storage System

The schedule for implementing Phase II of the Project is currently undetermined by LADWP. The BESS, about 850 feet by 850 feet, would be constructed on approximately 10 acres within the 120-acre Project boundary. Refer to Figure 2-4 for the anticipated location of the BESS. Figure 2-6 illustrates the typical BESS layout.

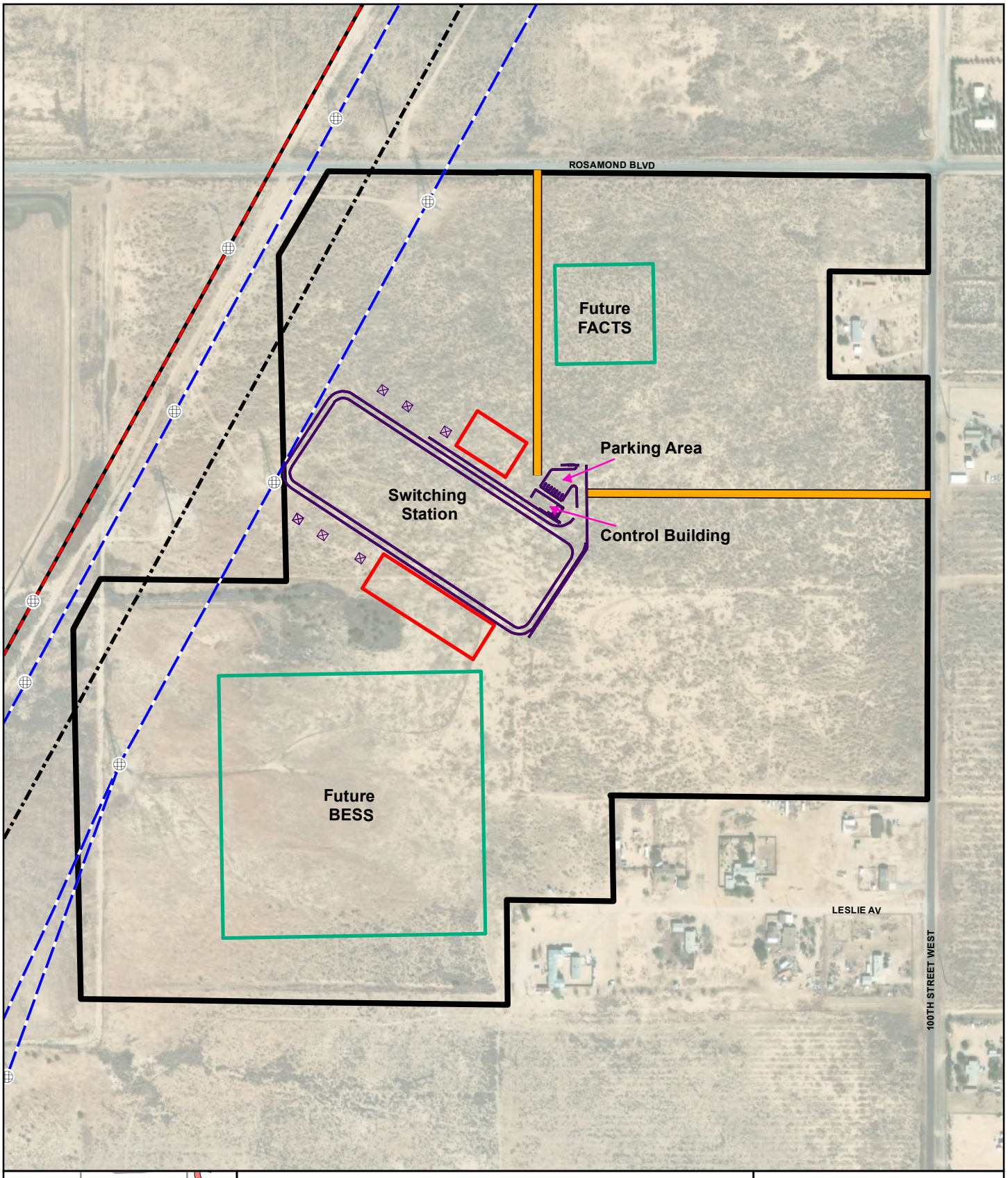
The purpose of BESS is to store excess energy during peak renewable energy production and deliver it back to the grid when needed. BESS would provide LADWP with flexibility to manage peak loads, provide a fast response to power shortages or brownouts, and enhance grid stability and reliability.

LADWP would determine storage capacity of the BESS during the preliminary design phase and engineering design planning. It is anticipated that the proposed BESS would consist of fully enclosed metal battery storage containers, concrete enclosures, or a building. The containers are typically made from converted shipping containers, and would measure approximately 24 feet long, 8.0 feet wide, and 10.5 feet in height. The BESS and associated infrastructure (e.g., battery storage racks, inverters, switches, and transformers) would be serviced on an "as needed" basis by qualified technicians.

Battery Modules, Lithium-Ion Battery Technology, and Fire Protection

Each battery module rack would be located within an individual storage container. Metal or concrete storage containers would be constructed or retrofitted with insulation, air-conditioning, and fire suppression with separate enclosures for the electronic controls, inverters, and rectifiers. The primary storage components would consist of self-contained electrochemical battery systems (e.g., lithium-ion) using conventional storage technologies with proven safety and performance records. Battery storage enclosures are designed to facilitate periodic maintenance and replacement of underperforming battery components easily, on an as-needed basis without replacing the entire module.

Due to the positive pressure required within each storage container to ensure functionality of the fire suppression system, battery storage containers would not be vented. Each battery storage container would utilize a supply and return air conditioning system; this system has a fresh air closed loop system. This type of air conditioning system is compatible with a positive pressure environment and does not require venting.



Project Boundary
Switching Station
Future Project Facilities
New Tower Structure
Existing Tower Structure
Interconnection Area
Access Road
LADWP 230 kV Transmission Line
LADWP 500 kV DC Transmission Line
SCE Transmission Line

Rosamond Switching Station

Figure 2-4 Conceptual Site Plan

0 200 400 600

Feet

N

POWER ENGINEERS

Aerial Photography Source: USDA NAIP\California 2018-07-23

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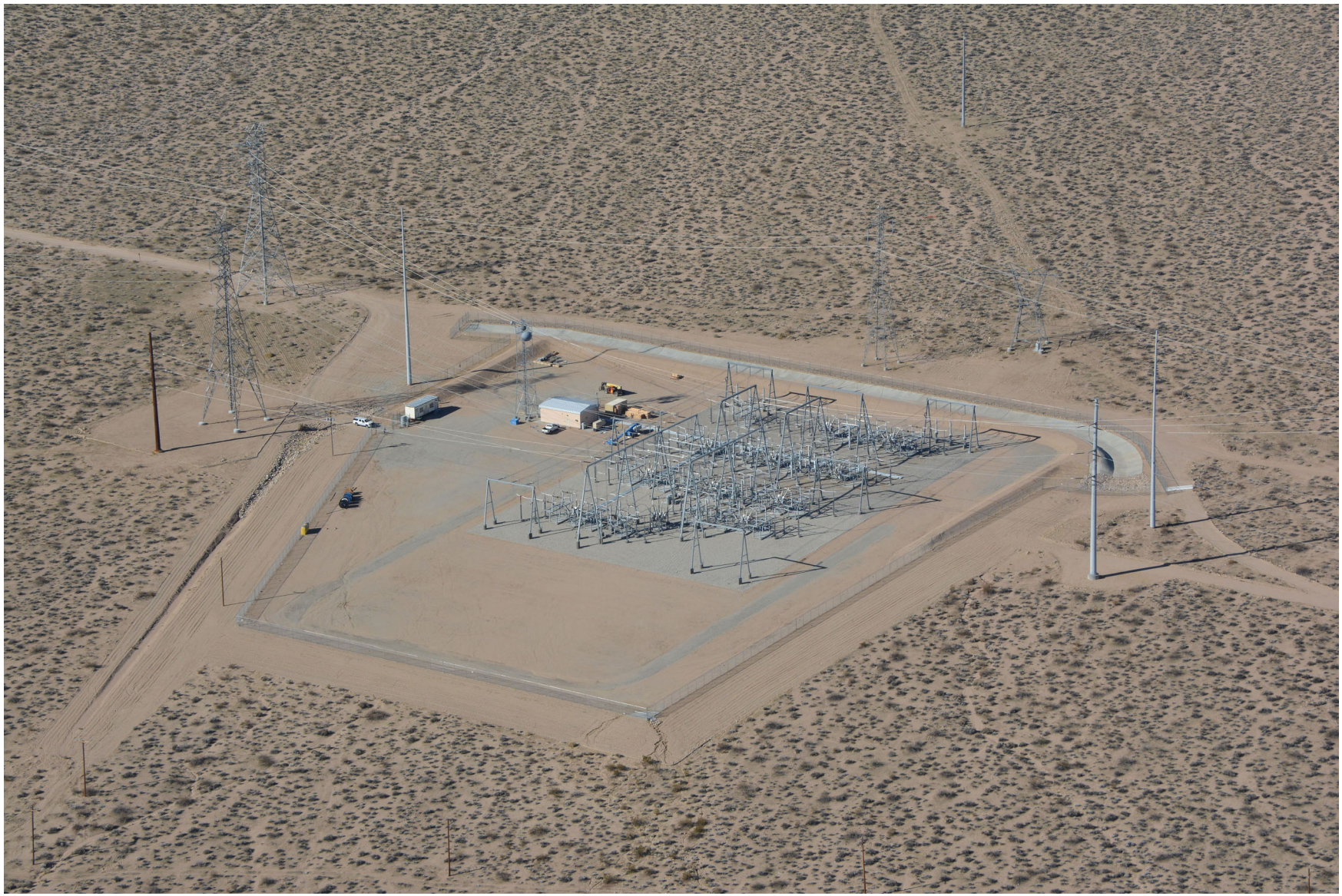

Rosamond Switching Station

Figure 2-5
Typical Switching Station Layout

POWER ENGINEERS

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Rosamond Switching Station

Figure 2-6
Typical
BESS Layout

POWER ENGINEERS

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Lithium-ion batteries are high energy-density battery and rechargeable. With this high energy density, along with their charge and discharge profiles, these batteries are ideal for a project of this size, addressing both space constraints and commercial viability. These batteries would allow a safe and effective installation in a shipping container (or similar structures) and perform well under rigorous demand to provide grid stability. Storage containers would include a built-in fire protection system, utilizing suppression through cooling, isolation, and containment. Each battery storage container would likely include a gaseous fire suppressant agent and an automatic fire extinguishing system with sound and light alarms.

The system would be designed in accordance with National Fire Protection Association safety standards, including an automatic shut-down system for fans that keep the container sealed when the fire extinguishing system is activated. The fire suppressant agent is deployed by a releasing panel that uses an aspirating smoke detection system. In addition, each container would also have a manual release. A disable switch would be provided for maintenance to prevent accidental discharge while the system is being serviced.

The BESS would have a Supervisory Control and Data Acquisition (SCADA) system that would allow remote monitoring and control of inverters and other system components. Using SCADA, LADWP would be able to monitor BESS output and availability, and to run diagnostics on the equipment.

Because the Project site is in the Mojave Desert, where weather conditions are extreme, the BESS would be designed with special considerations for the unique temperature extremes. This includes an on-site backup generator that would power the HVAC and monitoring systems for up to seven days, to ensure battery temperature conditions stay within manufacturer requirements.

Flexible Alternating Current Transmission System

The schedule for implementing Phase III of the Project is currently undetermined by LADWP. The FACTS facilities, consisting of a switchyard (approximately 189 feet long, 180 feet wide, and 58 feet in height) and a control house (approximately 35 feet long, 86 feet wide, and 13 feet in height), would be constructed on about two acres within the 120-acre Project boundary. Refer to Figure 2-4 for the anticipated location of the FACTS. Figure 2-7 illustrates the typical layout of FACTS facilities.

Transmission systems supply power, from a wide range of power sources including wind and solar, to meet complex electrical load demands. The FACTS technology can reliably respond to the dynamic variations in the electric power arising from changes in load, or amount and quality of power generated. This technology helps to improve the power quality, while increasing system flexibility and reliability. LADWP would use a Static Var Compensator (SVC) or Static Synchronous Compensator (STATCOM), both of which are FACTS devices, to quickly and reliably control line voltages.

An SVC or STATCOM would typically regulate and control voltage to the required set point, under both normal steady state and contingency conditions, thereby providing dynamic, fast response reactive power following system contingencies (e.g., network short circuits, line and generator disconnections).

2.4 Project Construction

Phased construction of the proposed switching station, BESS, FACTS, and associated infrastructure, is proposed with construction of the switching station occurring first; construction of the BESS and FACTS would occur within the 120-acre Project boundary on a schedule to be determined by LADWP. Construction of Project facilities would consist of several tasks, including clearing and site grading, drainage control, installing concrete foundations and steel support structures, installing below- and above-ground electrical conduits for equipment power and control, installing below- and above-grade grounding

conductors, constructing the switching station, BESS, FACTS, and installing new control and relay houses.

While these tasks are generally sequential, with some preceding others at a given location, a certain amount of overlap would likely occur in different locations within the Project site as construction proceeds. Project construction would begin with site mobilization, including personnel and equipment, as well as installing trailers, and creating laydown and material storage areas.

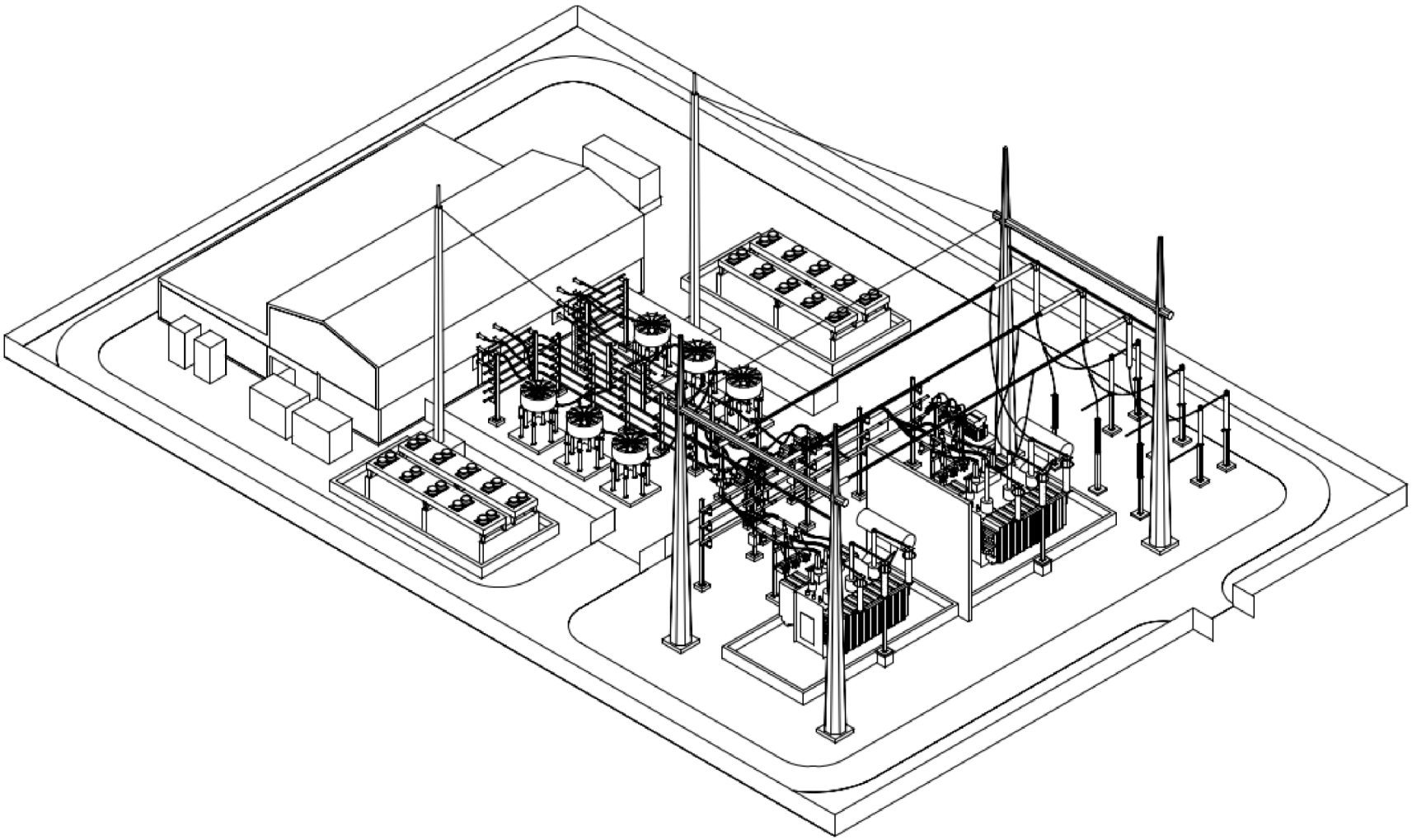
Temporary facilities would be developed on-site to facilitate the construction process. These facilities may include, but would not be limited to, construction trailers, portable toilets, parking areas, material receiving/storage areas, recycling/waste handling areas, communications equipment, workshops, and temporary lighting. Construction staging and material laydown areas would occur within the 120-acre Project boundary and would be near the area(s) of active construction. Construction staging area(s) would be stabilized with crushed-rock aggregate.

Site preparation work for the Project includes clearing and grubbing, excavation, placement and compaction of engineered fill to provide stabilized subgrade for switching station facilities. Temporary silt fence and other stormwater pollution prevention Best Management Practices (BMPs) would be implemented, in accordance to the Stormwater Pollution Prevention Plan (SWPPP). A new perimeter fence would be installed. The Project site will be graded to maintain current drainage patterns to the greatest extent possible. Following site grading, reinforced concrete foundations would be installed to support the steel structures, electrical equipment, and control facilities.

During construction, a variety of equipment and vehicles would be operating on the site at any given time. Vehicles and equipment used in the construction of the proposed Project would include, but may not be limited to, graders and excavators, backhoes, drill rigs, water trucks, scrapers, sheep's foot compactors, front end loaders, concrete trucks, dump trucks, trash trucks, and flatbed trailers. Cranes, man-lifts, portable welding units, line trucks, and mechanic trucks may also be required.

Construction equipment would be used at various times during Project construction. Various pieces of equipment would operate at different times during the day and at different durations, as needed, to complete Project construction. Temporary construction fencing would be placed around the Project boundary or extended area of construction, if necessary. Native vegetation would be re-established where possible outside the switching station, BESS and FACTS in accordance with fire prevention vegetation control.

Construction of Phase I of the proposed Project and associated infrastructure is anticipated begin mid-2021 with active construction spanning approximately 38 months. It is assumed that construction activities would be limited to Monday through Friday, from 7:00 a.m. to dusk. No nighttime, weekend or holiday work is anticipated. The work schedule may be modified throughout the year based on electrical system conditions and to account for the changing weather conditions (e.g., starting or ending the workday earlier in summer months to avoid work during the hottest part of the day for health and safety reasons). It is anticipated that during the peak of construction activity, up to 70 workers may be present on-site on a given day. The construction workforce would consist of, but would not be limited to, civil personnel, laborers, equipment operators, electrical craft workers, supervisory personnel, and construction management personnel.



Rosamond Switching Station

Figure 2-7
Typical FACTS Device Layout

POWER ENGINEERS

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2.5 Project Operations and Maintenance

The switching station, BESS and FACTS would be unmanned with automated features and remote control capabilities. No full-time, permanent personnel would be required at the Project site. LADWP would conduct routine maintenance and inspections. It is anticipated that LADWP Operations would visit the site weekly, with maintenance at the site anticipated to occur approximately once a month.

Routine maintenance is expected to occur during daytime hours only. Maintenance activities would consist of the following activities, but would not be limited to: regular inspection of equipment and electrical lines, support systems, and control systems; weed abatement; and responding to issues detected by remote monitoring. Maintenance equipment is expected to consist of light- to heavy-duty pickup trucks.

2.6 Permits and Approvals

The proposed Project may require subsequent oversight, approvals, or permits from other public agencies in order to be implemented. Other such agencies are referred to as "responsible agencies" and "trustee agencies." Pursuant to Sections 15381 and 15386 of the CEQA Guidelines, as amended, responsible agencies and trustee agencies are defined as follows:

- **Responsible agency** is a public agency that proposes to carry out or approve a project, for which a lead agency is preparing or has prepared an Environmental Impact Report or Negative Declaration. For the purposes of CEQA, the term "responsible agency" includes all public agencies other than the lead agency that have discretionary approval power over the project (Section 15381).
- **Trustee agency** is a state agency having jurisdiction by law over natural resources affected by a project that are held in trust for the people of the state of California (Section 15386).

The various public agencies and jurisdictions with a particular interest in the Project may include, but are not limited to, the following:

Federal Agencies

- United States Fish and Wildlife Service

State Agencies

- California Department of Fish and Wildlife (CDFW)
- California Native American Heritage Commission (NAHC)
- California Department of Transportation (Caltrans), District 6

Regional Agencies

- Regional Water Quality Control Board (RWQCB), Lahontan – Region 6
- Eastern Kern Air Pollution Control District (EKAPCD)
- Kern Council of Governments

City of Los Angeles Department of Water and Power

- Adoption of the MND by the Board
- Approval of the proposed Project by the Board

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3.0 INITIAL STUDY CHECKLIST AND ENVIRONMENTAL EVALUATION

CEQA Environmental Checklist Form

The following analysis of potential Project impacts is based on the CEQA Environmental Checklist and available information, including conceptual design plans. A brief explanation for each question in the Environmental Checklist is provided to adequately support each impact determination. The answers take into account the whole of the action involved, including off-site as well as on-site, indirect as well as direct, and construction as well as operational, impacts. Where determined that an impact is potentially significant, mitigation measures have been incorporated to reduce the impacts to less than significant levels. The environmental resources potentially affected by the proposed Project are presented below.

1. Project Title:

Rosamond Switching Station Project

2. Lead Agency Name and Address:

Los Angeles Department of Water and Power
Environmental Planning and Assessment
111 North Hope Street, Room 1044
Los Angeles, California 90012

3. Contact Person and Phone Number:

Aiden Leong
Environmental Project Manager
Los Angeles Department of Water and Power
(213) 367-0706

4. Project Location:

The Project site is in unincorporated Kern County, approximately eight miles west of the unincorporated community of Rosamond. It is in the southwestern portion of Antelope Valley, in the northwestern portion of the Mojave Desert. Regional access includes SR-14, a four-lane highway, located approximately eight miles east of the Project site; SR-138, a two-lane roadway, located approximately 5.5 miles south of the Project site; and I-5 located approximately 30 miles west of the Project site. Local access to the site is via Rosamond Boulevard, which abuts the Project site on its northern boundary.

5. Project Sponsor's Name and Address:

Same as Lead Agency

6. General Plan Designation:

Willow Springs Specific Plan

7. Zoning:

RS (2.5 Residential Suburban Combining)

8. Description of Project:

LADWP proposes to construct and operate a new 230 kV Rosamond Switching Station on approximately 120 acres. The Project would be constructed adjacent to the LADWP ROW for the BR-HC 230 kV Transmission Lines 1, 2, and 3 and would be located approximately 30 miles south of the Barren Ridge Switching Station. The Project would be constructed in three phases with Phase I consisting of the construction of the switching station and associated facilities. The Project also includes Phase II and Phase III within the approximate 120-acre site. Phase II would consist of the construction of a BESS and Phase III would consist of the construction of a FACTS.

9. Surrounding Land Uses and Setting:

Land uses in the vicinity of the site include undeveloped land, industrial uses (solar and wind generation), agriculture, and rural residential.

10. Other Public Agencies Whose Approval is Required (e.g., permits, financing approval, or participation agreement.):

CEQA Lead Agency

Los Angeles Department of Water and Power

Responsible/Trustee Agencies

United States Fish and Wildlife Service
California Department of Fish and Wildlife
Regional Water Quality Control Board, Lahontan – Region 6
Eastern Kern Air Pollution Control District
Kern Council of Governments
California Native American Heritage Commission
California Department of Transportation, District 6

11. Have California Native American tribes traditionally and culturally affiliated with the project area requested consultation pursuant to Public Resources Code section 21080.3.1? If so, has consultation begun?

Yes, Native American consultation has begun.

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

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.

Signature Date

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3.1 Aesthetics

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Except as provided in Public Resources Code Section 21099, would the Project:				
a) Have a substantial adverse effect on a scenic vista?	☐	☐	☐	☒
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☐	☒
c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from 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?	☐	☐	☒	☐
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	☒	☐

3.1.1 Affected Environment

The Project site is in unincorporated Kern County, approximately eight miles west of the unincorporated community of Rosamond. It is in the southwestern portion of Antelope Valley, in the northwestern portion of the Mojave Desert. Regional access includes SR-14, a four-lane highway, located approximately eight miles east of the Project site; SR-138, a two-lane roadway, located approximately 5.5 miles south of the Project site; and I-5 located approximately 30 miles west of the Project site. Local access to the site is via Rosamond Boulevard, which abuts the Project site on its northern boundary.

Edwards Air Force Base is located approximately 25 miles east of the site. The City of Bakersfield is located approximately 50 miles to the north. Los Angeles County communities of Lancaster and Palmdale are located approximately 15 and 20 miles, respectively, southeast of the Project site.

The site is relatively flat with a gentle east-southeast slope, approximately 2,475 feet above mean sea level. Topographic characteristics of the site and surrounding area allow for open, expansive views of hills to the north and the Tehachapi Mountains located farther northwest. The Project site and surrounding area is vegetated with native and non-native plant species typical of desert vegetation.

Land uses in the Project vicinity include undeveloped land, industrial uses (solar and wind generation), agriculture, and rural residential. Existing LADWP and SCE easements, along with associated transmission lines, traverse the site diagonally from northeast-to-southwest. Numerous steel lattice structures, approximately 100 to 150 feet in height, are visible from the Project site (refer to Figure 3-1, Site Photos).

3.1.2 Impact Assessment

Would the Project:

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

No Impact. Scenic vistas typically consist of far reaching views, such as a panoramic view of a skyline or ridgeline, and provide an aesthetic public benefit (i.e., available to the general public). There are no scenic vistas on-site, nor are there any designated scenic vistas off-site that would offer views of the Project. The proposed Project is not located adjacent to or near any officially-designated scenic vistas or identified as having a scenic vista; therefore, no impacts to a scenic vista would occur and no mitigation is required.

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

No Impact. Based on review of the Caltrans website, there are no state-designated scenic highways within Kern County (Caltrans 2019). The Project site is not located within or near the viewshed of any eligible scenic highways. The nearest eligible scenic highways are SR-58 and SR-14, both located approximately 15 miles northeast of the Project area. As a result of this distance from the Project site, the Project would not impact scenic resources within a state scenic highway. In addition, there are no unique or scenic resources, including trees and rock outcroppings, within or adjacent to the Project site. Therefore, no impacts would occur relative to designated scenic resources, including, trees, rock outcroppings, and historic buildings within a state scenic highway, and no mitigation is required.

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 point). 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 visual quality of the Project site and surrounding area generally consists of active and inactive agricultural lands, disturbed lands, industrial uses, rural residential uses, and open space with desert vegetation. Expansive views of hills to the north and west are visible from much of the area, although these views are partially obstructed from some viewpoints by the presence of major electricity transmission corridors and lower voltage power lines.

The proposed Project includes construction and operation of a new 230 kV switching station, along with development of a BESS and a FACTS, as shown on the conceptual site plan (refer to Figure 2-4). The anticipated BESS would appear similar to LADWP's BESS facility at the Beacon Solar Facility in the northwestern Mojave Desert, Kern County (refer to Figure 2-6). Project facilities would be visible to the residences located in the immediate Project vicinity and motorists traveling along Rosamond Boulevard and would alter the existing views of the Project site. However, Project support structures would be a lower profile than the existing transmission lines and would not extend above existing transmission lines. Proposed Project facilities would not deviate substantially from the lattice structures and electrical infrastructure currently on-site.

View of the transmission line towers directly west of the Project site.

View of the transmission line corridor in the Project vicinity.

View of the Project site looking east.

View of the transmission line corridor in the Project vicinity.

View of the Project site looking northwest.

View of the Project site looking northeast.
Wind farm is located in the farther northwest.

Rosamond Switching Station

Figure 3-1
Site
Photographs

POWER ENGINEERS

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While the Project site is situated in a sparsely populated and generally rural area, the region, as well as the immediate Project area, has experienced significant growth of man-made structures in recent years, including electrical transmission facilities and renewable energy projects. As stated above, LADWP and SCE transmission corridors are located in the Project area and traverse the Project site. Several operating, approved, or proposed large-scale industrial solar facilities are located in the Project vicinity. These solar facilities include Rosamond Solar, Willow Springs Solar, Rosamond Solar, RE Astoria Solar, and Antelope Valley Solar. In addition, several operating, approved, or proposed commercial wind projects are in the Project vicinity, including Pacific Wind, Catalina, Avalon, and Morgan Hills (Kern County 2019a). Although the proposed Project would be well-sited, the addition of industrial facilities would change the existing visual character of the site and its surroundings. However, as stated above, no designated scenic resources are within the Project area. The existing visual character of the landscape is already influenced by existing transmission lines, and renewable energy facilities. Although the Project would change the existing visual character of the site from vacant land to a switching station and associated facilities it would not alter the site in a manner that would substantially degrade its existing visual character or quality of public views of the site and its surroundings. Because the proposed Project is in a sparsely populated area with no unique or outstanding visual features, the Project would not degrade the existing visual character or quality of the site. Impacts would be less than significant and no mitigation would be required.

During construction, a variety of equipment and vehicles would be operating on the site at any given time. All equipment, material, and supplies would be stored on-site in a designated staging area within the 120-acre Project boundary. While views of construction-related activities would be visible to the general public (motorist traveling in the area and residences adjacent to the Project site) construction-related activities would be relatively short-term and would cease upon Project completion. Therefore, potential visual impacts during construction would be less than significant and no mitigation is required.

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

Less Than Significant Impact. The Project's lighting system would be designed and installed to provide the minimum illumination necessary where it is required for safety, security, and operations. The facility may include motion-activated security lighting installed at access gates and around the switching station perimeter and BESS and FACTS facilities. This lighting would be activated infrequently during periods of nighttime activity or as a result of security issues at the Project facility. All lighting would conform to applicable Kern County Dark Sky Ordinance requirements.[1] Wherever feasible and consistent with safety and security, lighting would be kept off when not in use. Therefore, the proposed Project would not create a new source of substantial light which would adversely affect nighttime views in the area. Impacts would be considered less than significant with adherence to the County's Dark Sky Ordinance requirements.

The reflection of sunlight off glass or shiny metal surfaces would be the primary potential producer of glare from operation of the proposed Project. There is a potential for Project facilities to result in glare to the surrounding area. Project facilities would have similar finishes and surface coatings as the existing the lattice structures and electrical infrastructure currently on-site. In addition, using a non-reflective finish on all switching station equipment, BESS and FACTS, would reduce impacts associated with glare to a less than significant level.

Project construction is anticipated to occur during daytime hours. No nighttime construction is anticipated. In the event that nighttime construction becomes necessary, construction crews would use

[1] Section 19.81 of the Kern County Zoning Ordinance is intended to reduce unnecessary night lighting and to minimize lighting impacts on surrounding properties to help protect Kern County's rural characteristic of access to a natural dark sky environment and to avoid public nuisances (Kern County 2019b).

minimal illumination in order to perform the work safely, and to provide security for equipment and Project components. All such lighting would be directed downward and shielded to focus on the desired areas only and to minimize light spillage off-site.

Project construction would occur during daytime hours; construction equipment could temporarily increase glare condition at the Project site. All construction staging and material laydown areas would occur within the 120-acre Project boundary and would be near the area(s) of active construction. Construction activities would occur in focused areas where Project facilities are being constructed; sources of glare would not be stationary for long periods of time. Sources of glare relative to construction equipment would be temporary and would not result in substantial glare that would affect daytime views in the area; therefore, impacts would be less than significant.

3.1.3 Mitigation Measures

No mitigation measures are proposed.

3.2 Agricultural and Forest Resources

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
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:				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	☒
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	☐	☐	☐	☒
d) Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	☐	☐	☐	☒

3.2.1 Affected Environment

The Project vicinity is predominantly surrounded by undeveloped land, industrial uses (solar and wind generation), agriculture, and rural residential. The Project site and surrounding areas are located in the County's Willow Springs Specific Plan boundary. As shown on Figure 2-3, the zoning designation for the Project site is RS (2.5-Acres Residential Suburban Combining). Zoning designations within the immediate Project area include: RS (1-Acres Residential Suburban Combining), RS (2.5-Acres

Residential Suburban Combining), RS (5-Acres Residential Suburban Combining), and A (Exclusive Agriculture). The Project site is undeveloped and dominated by native desert vegetation. Topography across the Project site is relatively flat.

The California Department of Conservation's (DOC's) Farmland Mapping and Monitoring Program (FMMP) produces maps and statistical data used for analyzing impacts on California's agricultural resources on a continuing basis (DOC 2019). The following provides a comprehensive description of the categories mapped by the DOC. For environmental review purposes under CEQA, the categories of Prime Farmland, Farmland of Statewide Importance, Unique Farmland, Farmland of Local Importance, and Grazing Land constitute "agricultural land" (PRC Section 21060.1). The remaining categories are used for reporting changes in land use as required for FMMP's biennial farmland conversion report.

Prime Farmland. Farmland that has the best combination of physical and chemical features able to sustain long-term agricultural production. This land has the soil quality, growing season, and moisture supply needed to produce sustained high yields. Land must have been used for irrigated agricultural production at some time during the four years prior to the mapping date.

Farmland of Statewide Importance. Farmland similar to Prime Farmland but with minor shortcomings, such as greater slopes or less ability to store soil moisture. Land must have been used for irrigated agricultural production at some time during the four years prior to the mapping date.

Unique Farmland. Farmland of lesser quality soils used for the production of the State's leading agricultural crops. This land is usually irrigated, but may include non-irrigated orchards or vineyards as found in some climatic zones in California. Land must have been cropped at some time during the four years prior to the mapping date.

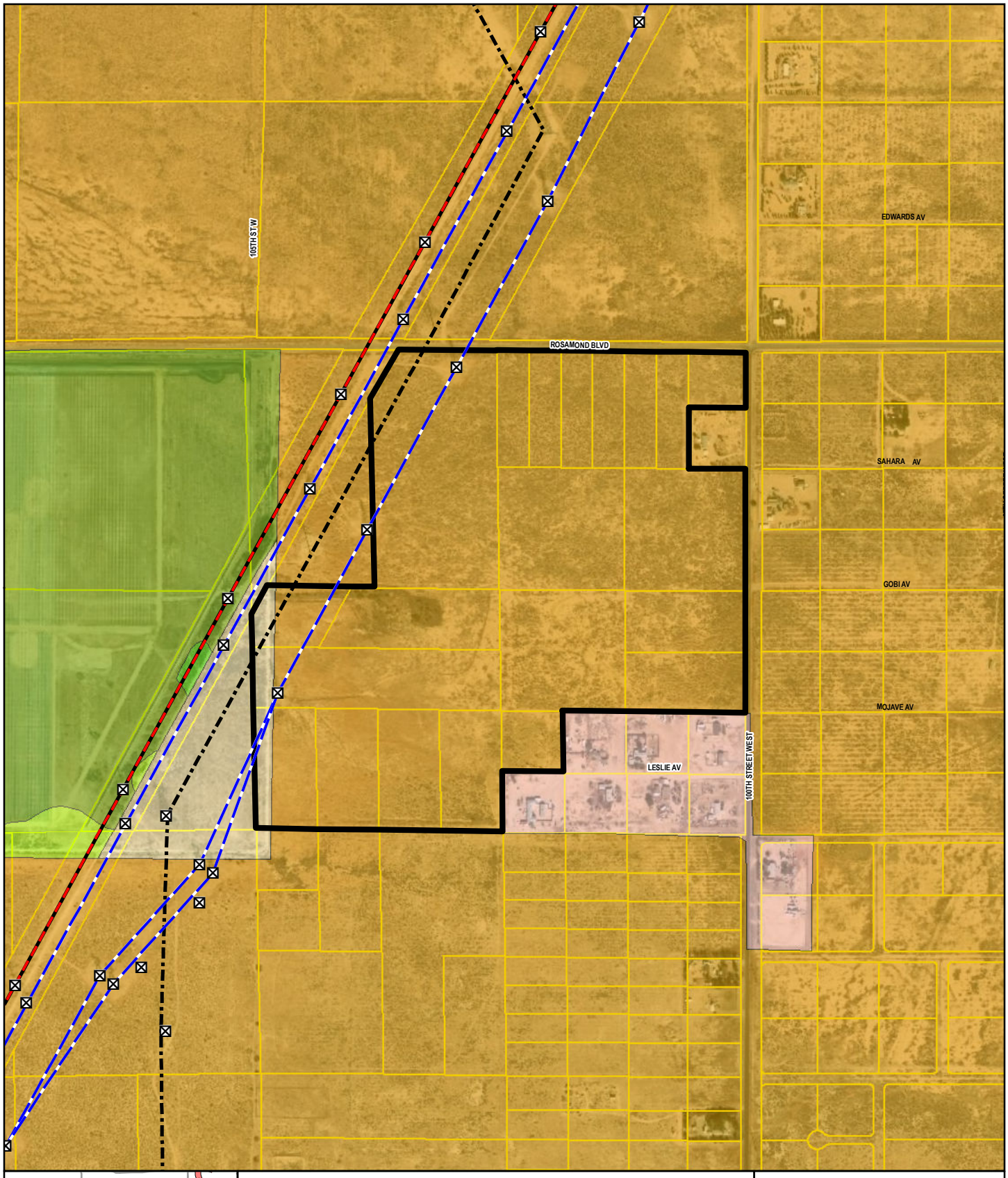
Farmland of Local Importance. Land of importance to the local agricultural economy as determined by each county's board of supervisors and a local advisory committee.

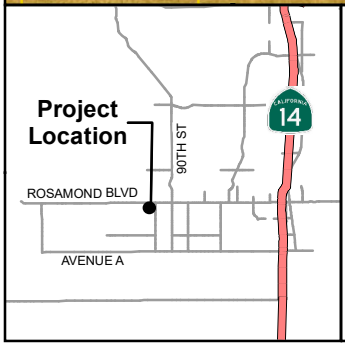
Grazing Land. Land on which the existing vegetation is suited to the grazing of livestock. This category was developed in cooperation with the California Cattlemen's Association, University of California Cooperative Extension, and other groups interested in the extent of grazing activities. The minimum mapping unit for Grazing Land is 40 acres.

Urban and Built-up Land. Land occupied by structures with a building density of at least one unit to 1.5 acres, or approximately six structures to a 10-acre parcel. This land is used for residential, industrial, commercial, institutional, public administrative purposes, railroad and other transportation yards, cemeteries, airports, golf courses, sanitary landfills, sewage treatment, water control structures, and other developed purposes.

Other Land. Land not included in any other mapping category. Common examples include low density rural developments; brush, timber, wetland, and riparian areas not suitable for livestock grazing; confined livestock, poultry or aquaculture facilities; strip mines, borrow pits; and water bodies smaller than forty acres. Vacant and nonagricultural land surrounded on all sides by urban development and greater than 40 acres is mapped as Other Land.

According to the 2016 FMMP, the Project boundary does not contain any designated Prime Farmland or Farmland of Statewide Importance (refer to Figure 3-2).





Project Boundary
Parcel
Structure
LADWP 230 kV Transmission Line
LADWP 500 kV DC Transmission Line
SCE Transmission Line

FMMP Land Type

- Nonagricultural or Natural Vegetation (nv)
- Prime Farmland (P)
- Rural Residential Land (R)
- Farmland of Statewide Importance (S)
- Unique Farmland (U)
- Grazing Land (G)

Rosamond Switching Station

Figure 3-2
Farmland Mapping and Monitoring Program

0 300 600 900
Feet

N

POWER ENGINEERS

Aerial Photography Source: USDA NAIP\California 2018-07-23

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3.2.2 Impact Assessment

Would the Project:

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

No Impact. As illustrated on Figure 3-2, there are no areas classified as Prime Farmland, Unique Farmland, Farmland of Statewide Importance, or Farmland of Local Importance within the Project site. No impact would occur and no mitigation is required.

b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?

No Impact. There are no agricultural land uses or property under Williamson Act contract on or adjacent to the Project site. The proposed Project would not conflict with existing zoning for agricultural use of a Williamson Contract. No impacts would occur and no mitigation is required.

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 Impact. The Project site does not contain designated forest land or timberland as defined in the PCR (Sections 12220[g] and 4526, respectively) and would not result in the loss of forest land or the conversion of forest land to non-forest use. Therefore, no impacts to forest land or timberland would occur and no mitigation is required.

d) Result in the loss of forest land or conversion of forest land to non-forest use?

No Impact. The Project site is currently undeveloped and surrounded by undeveloped land, industrial uses (solar and wind generation), agriculture, and rural residential. There are no areas zoned as forest land or timberland within or adjacent to the proposed Project boundaries. The proposed Project would not conflict with existing zoning for forest land or timberland; therefore, no impact would occur.

e) Involve other changes in the existing environment which, due to their location or nature, could result in the conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use?

No Impact. The DOC has mapped a portion of the Project study area as Grazing Land. As illustrated in Figure 3-2, grazing land is located within an existing utility corridor within the Project boundary. However, Project facilities would not be constructed within the utility ROW; therefore, no impact would occur relative to designated grazing land. There are no forest lands or timberland on the Project site or in the vicinity of the proposed Project. The Project site is not currently being used for agriculture. As such, the proposed Project would not result in the conversion of farmland to a non-agricultural use. No impact would occur and no mitigation is required.

3.2.3 Mitigation Measures

No mitigation measures are proposed.

3.3 Air Quality

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
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:				
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?	☐	☐	☒	☐

Information in this section is based on the *Rosamond Switching Station Project – Air Quality and Greenhouse Gas Emissions Impacts Assessment* prepared by Terry A. Hayes Associates, Inc. ([TAHA] 2019a) provided in Appendix A.

3.3.1 Affected Environment and Regulatory Framework

The Project site is located within the jurisdiction of the EKAPCD. The EKAPCD is a local government agency whose mission is to attain and maintain ambient air quality standards and protect the public and environment of eastern Kern County from significant adverse effects of air pollution. Endeavors undertaken by EKAPCD to accomplish its goals include adoption of rules that limit pollution, issuance of permits to ensure compliance, and inspection of pollution sources. Additionally, EKAPCD is tasked with preparing clean air plans to identify existing air quality conditions, assess air pollution sources and transport within the region, and determine how to control pollution sources most effectively. EKAPCD also functions in a regulatory oversight role in assessing the air quality impacts associated with new businesses and land development projects.

The United States Environmental Protection Agency (USEPA) and California Air Resources Board (CARB) have established federal and State standards for criteria pollutants. Criteria pollutants relevant to the proposed Project include ground-level ozone (O_3), nitrogen dioxide (NO_2), carbon monoxide (CO), particulate matter up to 10 microns (PM_{10}), and particulate matter up to 2.5 microns ($PM_{2.5}$). Extensive regional monitoring of sulfur dioxide (SO_2) and lead concentrations have demonstrated sustained atmospheric levels substantially below applicable air quality standards, and proposed Project emissions would be of negligible magnitude, therefore these pollutants are excluded from the analyses contained herein.

USEPA and CARB designate areas as attainment, maintenance, or nonattainment depending on air quality conditions. EKAPCD jurisdiction is designated as serious nonattainment for the federal 8-hour O_3 and PM_{10} standards and nonattainment areas for State O_3 and PM_{10} standards.

EKAPCD Rule 401 and Rule 402 limit the emissions of visible particulate matter and wind erosion or fugitive dust from material handling and hauling, bulk storage, earthmoving, construction, and demolition. These rules prohibit any emissions of fugitive dust from construction, demolition, or other operations that remain visible in the atmosphere beyond the property line of the site of the source, except along roadways. Rule 419 prevents public nuisances.

EKAPCD published its 2017 Ozone Attainment Plan for the 2008 Federal 75 parts per billion 8-Hour Ozone Standard, which was adopted July 27, 2017. The Plan contained a discussion of contingency measure requirements and how these requirements are met for Eastern Kern County by emission reductions from continued implementation of CARB's Mobile Source Program, including fleet turnover between the attainment year (2020) and the year following (2021). CARB is amending the Eastern Kern Ozone Plan to include emission inventories for reactive organic gases and nitrogen oxides (NO_X) for the 2011 baseline year, 2017 milestone year, and 2020 attainment year.

EKAPCD has adopted quantitative mass thresholds to guide the assessment of the potential for air quality impacts in accordance with CEQA.[2] A project would have a significant air quality impact on the environment, if it would generate daily or annual emissions exceeding any of the following threshold values shown in Table 3-1.

TABLE 3-1 EKAPCD AIR QUALITY SIGNIFICANCE THRESHOLDS

SOURCE AND AVERAGING PERIOD	POLLUTANT			
	VOC[1]	**NO_X**	**SO_X**[2]	**PM_{10}**
Annual Emissions, All Sources (tons/year)	25	25	27	15
Daily Emissions, Mobile Sources (pounds/day)	137	137	-	-
[1]volatile organic compounds (VOC). [2]sulfur oxides (SOx). Note: EKAPCD has not established annual thresholds for CO or $PM_{2.5}$, therefore those emissions are not presented in Table 3-1.				

Source: TAHA 2019a.

Additionally, a project may have a significance impact on air quality if it would:

- Cause or contribute to an exceedance of any California Ambient Air Quality Standards;
- Exceed the EKAPCD health risk public notification thresholds; or
- Be inconsistent with adopted federal and state Air Quality Attainment Plans.

[2] EKAPCD, *Kern County CEQA Implementation Document*, June 2004.

3.3.2 Impact Assessment

Would the Project:

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

Less Than Significant Impact.

Construction

Construction of the proposed Project is anticipated to begin in Spring 2020 and continue for a total of approximately 38 months with operational commissioning near the end of 2023. Graders, scrapers, and dozers would generate fugitive dust emissions during material displacement and site leveling activities. Water trucks employed on the Project site would be used to suppress dust during the ground disturbance activities. Based on controlled dust suppression studies, application of water to disturbed areas at least twice daily would reduce fugitive dust (PM_{10} emissions) by approximately 55 percent.[3]

Construction activities would be conducted in accordance with EKAPCD rules and regulations to prevent the occurrence of unwarranted fugitive dust emissions and public nuisances. All air pollutant emissions associated with construction activities would cease upon completion of the Project, and its implementation would not introduce a long-term source of air pollutant emissions to the Project area. As shown in Table 3-2 and Table 3-3, under Checklist Response 3.3.2 (b), construction of the proposed Project would not exceed applicable annual or daily EKAPCD significance thresholds, respectively. Therefore, the proposed Project would result in a less than significant impact related to construction and would not conflict with or obstruct implementation of air quality plans and no mitigation measures would be required.

Operations

The proposed Project is a passive land use that would not generate regular or substantial daily emissions. Maintenance activities would be intermittent and include limited vehicle trips for inspection and repair of Project components. In addition, the proposed Project would accommodate the interconnection process for planned renewable energy projects in the Project vicinity and would support LADWP's RPS goals. The conversion of nonrenewable to renewable energy generation is a key component of local and statewide efforts to reduce air pollution. Therefore, the proposed Project would result in a less than significant impact related to operation of the Project and would not conflict with or obstruct implementation of air quality plans. No mitigation measures would be required.

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

Less Than Significant Impact.

Construction

The Project area is currently designated nonattainment for O_3 and PM_{10} standards. By its very nature, air pollution is largely a cumulative impact. No single project is sufficient in size to, by itself, result in nonattainment of ambient air quality standards. Instead, a project's individual emissions contribute to existing cumulatively significant adverse air quality impacts. If a project exceeds the identified significance thresholds, its emissions may be cumulatively considerable, potentially resulting in significant adverse air quality impacts to the region's existing air quality conditions. In that case, additional analysis to assess cumulative impacts would be necessary.

[3]South Coast Air Quality Management District, *Fugitive Dust Mitigation Measure Table XI-A: Construction & Demolition*, revised 2007.

EKAPCD significance thresholds presented in Table 3-1 are the reference metric for this analysis. Construction activities involved with implementation of the proposed Project would employ the following best management practices to comply with EKAPCD Rule 402 Fugitive Dust[4]:

- All soil excavated or graded should be sufficiently watered to prevent excessive dust. Watering should occur as needed with complete coverage of disturbed soil areas. Watering should be a minimum of twice daily on unpaved/untreated roads and on disturbed soil areas with active operations.
- All clearing, grading, earth moving, and excavation activities should cease:
  a) During periods of winds greater than 20 miles per hour (mph) (averaged over one hour), if disturbed material is easily windblown, or
  b) When dust plumes of 20 percent or greater opacity impact public roads, occupied structures, or neighboring property.
- All fine material transported off-site should be either sufficiently watered or securely covered to prevent excessive dust.
- If more than 5,000 cubic yards of fill material will be imported or exported from the site, then all haul trucks should be required to exit the site via an access point where a gravel pad or grizzly has been installed.
- Areas disturbed by clearing, earth moving, or excavation activities should be minimized at all times.
- Stockpiles of soil or other fine loose material shall be stabilized by watering or other appropriate method to prevent wind-blown fugitive dust.
- Once initial leveling has ceased all inactive soil areas within the construction site should be watered twice daily until soil has sufficiently crusted to prevent fugitive dust emissions.
- All active disturbed soil areas should be sufficiently watered to prevent excessive dust, but no less than twice a day.
- On-site vehicle speed should be limited to 15 miles per hour.
- All areas with vehicle traffic should be paved, treated with dust palliatives, or watered a minimum of twice daily.
- Streets adjacent to the project site should be kept clean and accumulated silt removed.
- Access to the site should be by means of an apron into the project from adjoining surfaced roadways. The apron should be surfaced or treated with dust palliatives.
- Properly maintain and tune all internal combustion engine powered equipment.
- Require employees and subcontractors to comply with California's idling restrictions for compression ignition engines.

The application of water to disturbed areas and material stockpiles twice daily would reduce fugitive dust emissions by approximately 55 percent. Maximum daily air pollutant emissions during construction activities were quantified using off-road equipment emission factors and calculation methodologies contained in documentation for the California Emissions Estimator Model (CalEEMod, Version

[4] EKAPCD, *Suggested Air Pollutant Mitigation Measures for Construction Sites for Eastern Kern APCD*, 2006.

2016.3.2). The CalEEMod software is the preferred tool for estimating air pollutant emissions associated with land use development projects under CEQA. All calculation sheets can be found in the Appendix files.

Construction of the Project would generally occur in three phases, Site Preparation, Site Construction, and Site Finalization. According to the preliminary schedule, Site Preparation activities would take place in 2020 through 2022, Site Construction activities would take place in 2020 through 2023, and Site Finalization activities would occur in 2022 and 2023. To analyze air pollutant emissions associated with construction activities, air pollutant emissions were compared to the EKAPCD significance thresholds presented in Table 3-1, above. Table 3-2 presents the annual emissions of volatile organic compounds (VOC), NO_X, sulfur oxides (SO_X), and PM_{10} that would be generated by construction of the proposed Project and compares them to the applicable EKAPCD significance thresholds. EKAPCD has not established annual thresholds for CO or $PM_{2.5}$, therefore those emissions are not presented. Maximum annual emissions would not exceed the applicable EKAPCD thresholds in any year.

TABLE 3-2 CONSTRUCTION EMISSIONS ASSESSMENT – ANNUAL EMISSIONS

YEAR	ACTIVITY	POLLUTANT EMISSIONS			
		VOC	NO_X	SO_X	PM_{10}
2020	Site Preparation	0.62	6.45	0.01	1.43
2020	Site Construction	0.34	3.41	0.01	0.37
2020	Total Annual	0.96	9.86	0.02	1.80
2021	Site Construction	1.28	12.61	0.03	1.45
2021	Total Annual	1.28	12.61	0.03	1.45
2022	Site Preparation	0.25	2.42	0.01	0.68
2022	Site Construction	1.24	11.36	0.04	1.39
2022	Site Finalization	0.21	1.92	0.01	0.29
2022	Total Annual	1.70	15.71	0.05	2.36
2023	Site Construction	0.88	7.70	0.03	0.98
2023	Site Finalization	0.16	1.44	0.01	0.23
2023	Total Annual	1.05	9.14	0.03	1.21
All	Maximum Annual	1.70	15.71	0.05	2.36
EKAPCD Annual Threshold (tons/year)		25	25	27	15
Exceed Threshold?		No	No	No	No

Source: TAHA 2019a.

Table 3-3 presents the daily mobile source air pollutant emissions that would be generated by construction of the Project. The emissions presented conservatively assume the possibility of overlap between activities in each given year.

TABLE 3-3 CONSTRUCTION EMISSIONS ASSESSMENT – DAILY MOBILE SOURCE EMISSIONS

YEAR	ACTIVITY	DAILY POLLUTANT EMISSIONS	
		VOC (pounds/day)	NO_X (pounds/day)
2020	Site Preparation	0.7	4.53
2020	Site Construction	1.07	7.35
2020	*Maximum Daily Overlap*	*1.79*	*11.88*
2021	Site Construction	0.92	6.19
2021	*Site Construction*	*0.92*	*6.19*
2022	Site Preparation	0.52	3.40
2022	Site Construction	0.74	4.6
2022	Site Final	0.49	1.47
2022	*Maximum Daily Overlap*	*1.75*	*9.52*
2023	Site Construction	0.74	4.64
2023	Site Final	0.49	1.47
2023	*Maximum Daily Overlap*	*1.23*	*6.11*
	Maximum Daily Emissions	1.79	11.88
EKAPCD Daily Mobile Threshold (pounds/day)		137	137
Exceed Threshold?		No	No

Source: TAHA 2019a.

Operation

The proposed Project is a passive land use that would not generate regular or substantial daily emissions. Maintenance activities would be intermittent, including limited vehicle trips for inspection and repair of Project components. Operations would not introduce any new source of air pollutant emissions to the Project area and therefore does not have the potential to contribute to a cumulative effect. This impact would be less than significant. No mitigation measures would be required.

c) Expose sensitive receptors to substantial pollutant concentration?

Less Than Significant Impact.

Construction

The greatest potential for toxic air contaminant exposure during construction would be associated with diesel particulate matter emissions from heavy equipment exhaust. The dose to which receptors are exposed is the primary factor used to determine health risk. Dose is a function of the concentration of a substance or substances in the environment and the duration of exposure to the substance. Dose is positively correlated with time, meaning that a longer exposure period would result in a higher exposure level for the maximally exposed individual. The risks estimated for a maximally exposed individual are higher if a fixed exposure occurs over a longer period of time. Local exposure would range from weeks to months depending on the construction phase and location.

Scattered rural single-family residences are located near the Project site, with the nearest located 150 feet from the Project site on Leslie Avenue. Construction equipment, vehicle, and material movement activities would occur throughout the Project site, with most of the activity generally in the western portion of the site, where the switching station and ancillary infrastructure will be at least 1,000 feet from residences. In addition, the Project would be subject to the regulations and laws relating to toxic air containments at the regional, State, and federal level that would protect sensitive receptors from

substantial concentrations. This impact would be less than significant and no mitigation would be required.

Operation

The proposed Project is a passive land use that would not generate regular or substantial daily emissions. Maintenance activities would be intermittent and would include limited vehicle trips for inspection and repair of Project components. Operations would not introduce any new substantial source of air pollutant emissions to the Project area and therefore does not have the potential to generate substantial pollutant concentrations. This impact would be less than significant and no mitigation would be required.

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

Less Than Significant Impact.

Construction

Equipment exhaust would be the primary sources of odors during construction activities. Odors would be localized and generally confined to the immediate area surrounding the Project site. Construction would employ best management practices (e.g., inspections and maintenance of diesel-fueled heavy-duty equipment) to prevent the occurrence of a nuisance odor in accordance with EKAPCD Rule 419, and the odors would be typical of most construction sites and temporary and would dissipate rapidly from the source with an increase in distance. There are no schools, public parks, or other sensitive land uses in proximity to the Project site that would be especially sensitive to odors emanating from these sources. Additionally, the construction of the proposed Project would adhere to all requirements set forth in the EKAPCD Rules and Regulations. Therefore, impacts would be less than significant and no mitigation would be required.

Operation

Operational activities involve routine maintenance and would not introduce any new sources of odors to the Project area. There is no potential the proposed Project to result in a permanent impact related to odors.

3.3.3 Mitigation Measures

No mitigation measures are proposed.

3.4 Biological Resources

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or 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, regulations or by the California Department of Fish and Game or US 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?	☐	☐	☐	☒

Information in this section is based on the *Rosamond Switching Station Project – Biological Resources Habitat Assessment* prepared by POWER Engineers, Inc. ([POWER] 2019a) provided in Appendix B.

3.4.1 Affected Environment

Preliminary investigation included review of information obtained from literature searches, examinations of habitat as discernible from aerial photographs, and database searches including California Native Plant Society and the California Natural Diversity Database (CNDDB) records. To identify the existing and potential biological resources present in the vicinity of the proposed Project, a geographic information system search was performed. This consisted of mapping baseline biological resource data (vegetation mapping and CNDDB records).

Reconnaissance-level biological resource surveys were conducted by POWER biologist, Ken McDonald. An initial survey was conducted on October 5, 2017, and a second survey of an updated and increased

study area was conducted on August 29, 2019. The Project site consists of 120 acres of undeveloped land. The field survey was conducted within the whole of the Project area with additional and immediately adjacent areas surveyed (approximately 149 acres) due to the potential need for relocation of existing transmission line towers as part of the Project (refer to Figure 3-3 for the boundary of the biological study area). Site elevation is approximately 2,475 feet above mean sea level. The area is vegetated with native and non-native plant species, and portions of the area have been mechanically disturbed by human activities. Land uses in the Project vicinity include undeveloped land, industrial uses (solar and wind generation), agriculture, and rural residential.

The biological study area (study area) survey included vegetation mapping as well as botanical and wildlife inventories within the Project study area. It was conducted by walking throughout the study area and recording detected species. Vegetation communities were classified according to Holland (1986). The botanical inventory of the site was floristic in nature, meaning that all plants observed were identified to the taxonomic level needed to determine whether they were special-status plant species. Wildlife species were detected either by observation, by vocalization, or by sign (e.g., tracks, burrows, scat).

3.4.2 Impact Assessment

Would the project:

a) Have a substantial adverse effect, either directly or indirectly 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 Game or U.S. Fish and Wildlife Service?

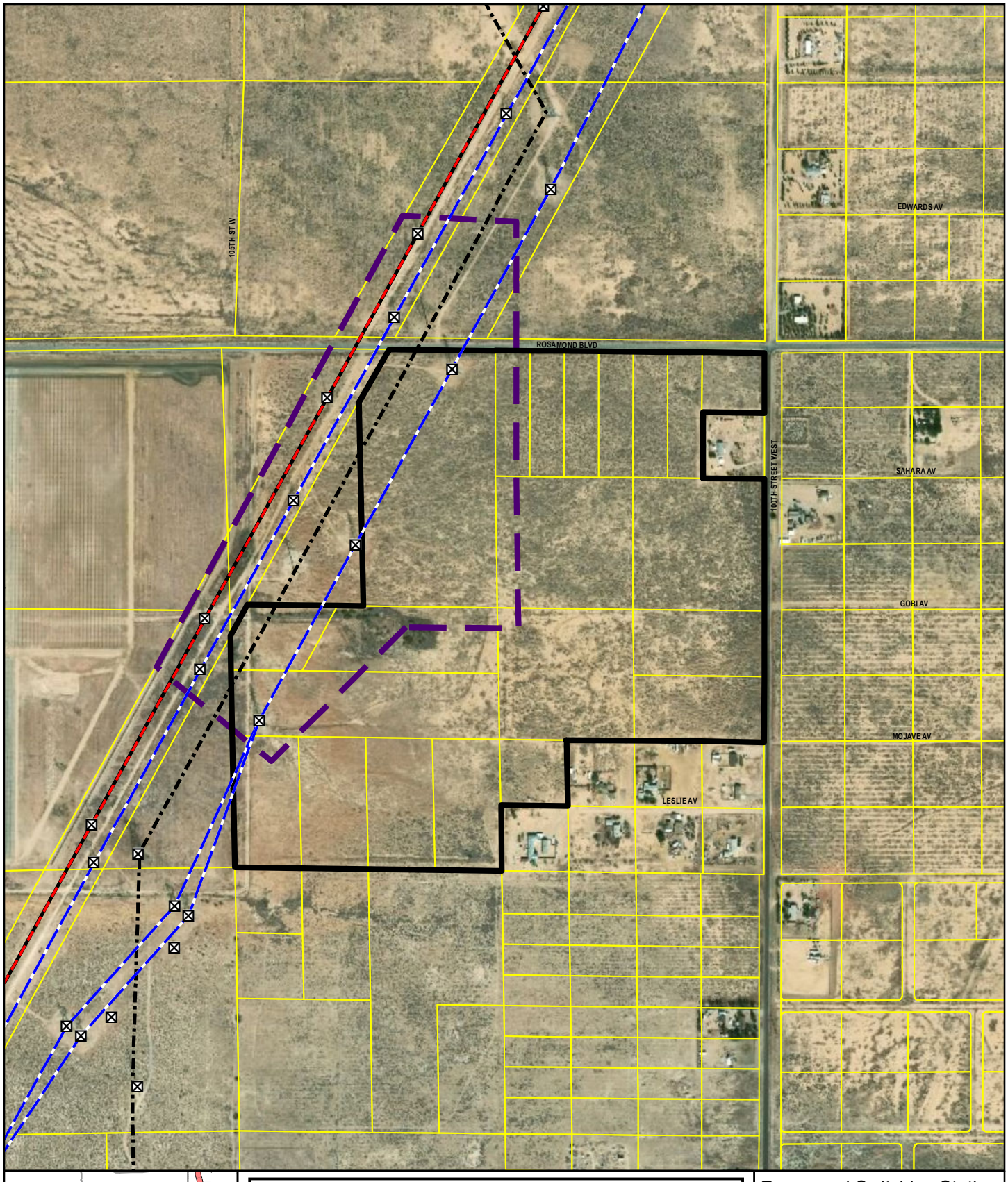
Less Than Significant Impact With Mitigation.

Vegetation Communities

The study area consists of several different desert scrub vegetation communities typical of the surrounding area. Vegetation communities and land cover types identified in the reconnaissance-level survey include: saltbrush scrub, which comprises the majority of the study area; rabbitbrush scrub, observed in the eastern portion of the study area; non-native grassland, this community was observed in the southwestern portion of the study area but components of the community occur throughout all vegetation communities observed within the study area; ruderal, observed in the western portion of the study area; and disturbed/developed (refer to Figure 3-4, Vegetation Communities). No special-status plant species or vegetation communities were observed during the field survey. Appendix A of the *Biological Resources Habitat Assessment* (Appendix B of this Initial Study/MND) provides a list of plant species observed during the field surveys in the study area. Table 3-4 provides the approximate vegetation community acreages identified within the study area during the 2017 and 2019 field surveys.

TABLE 3-4 VEGETATION COMMUNITIES WITHIN THE PROJECT AREA

VEGETATION COMMUNITY	ACRES
Saltbush Scrub	102.8
Rabbitbrush Scrub	9.4
Ruderal	6.9
Non-native Grassland	21.1
Tamarisk	2.2
Disturbed/Developed	7.0
Total Acres	149.4



Project Boundary / 2019 Survey Boundary

2017 Survey Boundary

Parcel

Structure

LADWP 230 kV Transmission Line

LADWP 500 kV DC Transmission Line

SCE Transmission Line

Rosamond Switching Station

Figure 3-3 Biological Survey Boundary

0 300 600 900

Feet

N

POWER ENGINEERS

Aerial Photography Source: USDA NAIP\California 2018-07-23

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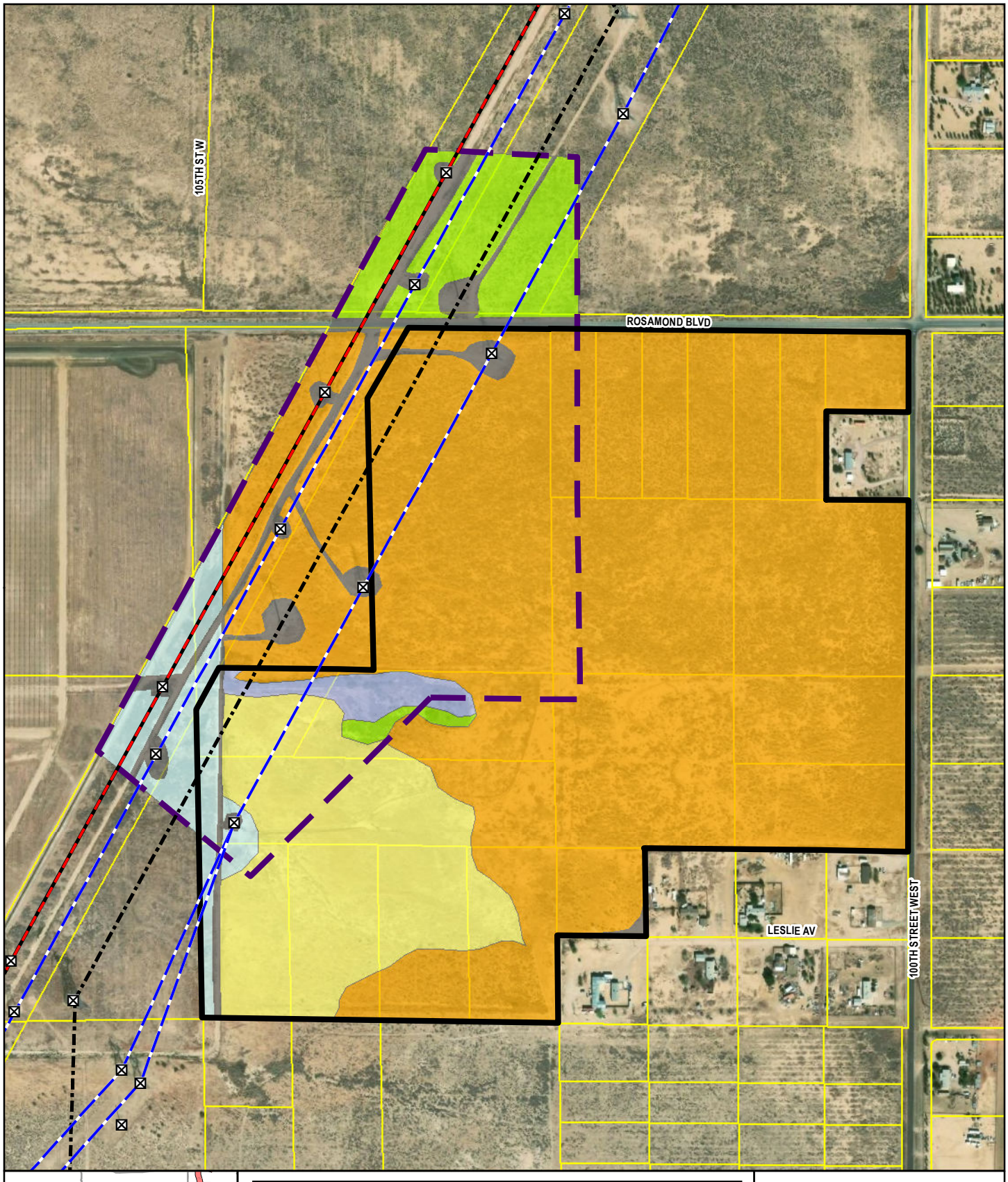

Project Boundary / 2019 Survey Boundary
2017 Survey Boundary
Parcel
LADWP 230 kV Transmission Line
LADWP 500 kV DC Transmission Line
SCE Transmission Line
Structure

Vegetation Communities

- Saltbush Scrub
- Non-native Grassland
- Tamarisk
- Ruderal
- Rabbitbrush Scrub
- Disturbed/Developed

Rosamond Switching Station

Figure 3-4 Vegetation Communities

0 200 400 600

Feet

N

POWER ENGINEERS

Aerial Photography Source: USDA NAIP\California 2018-07-23

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Special-Status Plant Species

Based on a review of existing data including California Native Plant Society's Rare Plant Inventory and the CNDDB, two special-status plant species have the potential to occur within the Project site.

- **Horn's Milk-vetch** – Suitable habitat for this species does not occur within the study area and, therefore, the species is considered to be absent.
- **Alkali Mariposa Lily** – Suitable habitat for this species occurs on-site, with recent occurrences observed within one mile of the study area; therefore, this species has a moderate potential to occur within the study area. Because the habitat assessments were conducted outside of the appropriate blooming period, it could not be identified as present.

No special-status plant species were observed during field surveys, because the reconnaissance-level surveys were not conducted during an optimum time of year to detect presence of all special-status plant species with potential to occur. Due to suitable habitat on-site, there is a potential that special-status plant species could occur.

Construction of the proposed Project has the potential to impact special-status plant species during site preparation and construction activities, if these species are present, resulting in a significant impact. As a result, a pre-construction focused floral survey within the study area would be conducted to determine presence/absence of special-status plant species determined to have a potential to occur on-site, with focus on the alkali mariposa lily, as described in Mitigation Measure (MM) BIO-1. Impacts as a result of Project construction can be avoided or reduced to a less than significant level through mitigation measures requiring pre-construction surveys and other measures, as described in MMs BIO-2 through BIO-5. Impacts to special-status plant species would be mitigated to a less than significant level with implementation of these mitigation measures.

Wildlife Species

No special-status wildlife species were detected during the field surveys. A few wildlife species were observed during the field surveys within the study area; however, wildlife sign was observed more frequently. Burrows of varying sizes were present intermittently throughout the study area, primarily small rodent burrows. Appendix B of the Biological Resources Habitat Assessment (Appendix B of this Initial Study/MND) provides a list of animal species observed during the field surveys in the study area.

Special-Status Wildlife Species

Based on literature review a total of nine special-status wildlife species were determined to potentially occur within the study area. Of the nine wildlife species with a potential to occur within the vicinity, two were determined to have a high potential for occurrence within the study area (burrowing owl and Swainson's hawk), one had a moderate potential, and the rest were determined to have a low potential for occurrence. Their habitat description, status, and potential for occurrence within the study area are provided in Table 3-5. While special-status wildlife species were not observed during field surveys, suitable habitat does exist on-site and the Project could result in significant impacts if a special-status wildlife species were to occupy the site prior to construction and during construction activities.

Suitable burrowing/nesting and foraging habitat for the burrowing owl is found within the desert scrub and grassland habitats on and adjacent to the study area. Construction activity on the Project site could have the potential to result in significant impacts to burrowing owl through mortality or injury. However, potential impacts to burrowing owls would be mitigated to a less than significant level through implementation of mitigation measures requiring pre-construction surveys and other measures, as

described in MM BIO-6. With implementation of MM BIO-6, impacts to the burrowing owl would be mitigated to a less than significant level.

All raptors species, and their nests and eggs, are protected under CDFW Code Section 3503.5 and by the federal Migratory Bird Treaty Act, which prohibits destruction of active nests and interference with nesting activities. The study area and surrounding areas provide suitable nesting and foraging habitat for the state threatened Swainson's hawk and other raptors. Suitable foraging habitat for these species includes grassland, open desert scrub communities, and agricultural fields present on and adjacent to the study area. Although no individual Swainson's hawks or nests were detected within the study area during the field surveys, due to suitable habitat present on-site and in the surrounding area, the Project could have the potential to impact Swainson's hawk through mortality or injury. Loss of individual Swainson's hawks, other raptors, and their nests would be avoided through pre-construction surveys, as described in MM BIO-7. With implementation MM BIO-7, impacts would be less than significant.

Small terrestrial animals (e.g., squirrels, lizards, snakes) may also utilize the study area for foraging. During construction, open pits or holes that are dug to place equipment could trap these species. This could lead to potentially significant impacts. However, MM BIO-8 provides preventive actions to be taken to prevent terrestrial animals from getting trapped in excavations and structures during construction. Mitigation measure BIO-9 addresses training workers to understand and avoid actions that could adversely affect wildlife. With implementation of mitigation measures impacts would be less than significant.

Construction of the proposed Project has the potential to indirectly impact special-status wildlife, with the introduction or increasing of the presence of non-native plant species and noxious weeds; implementation of MM BIO-5 and MM BIO-10 would reduce this potential impact to less than significant. Poor housekeeping during construction, such as food-related trash not disposed of properly, could increase the presence of predators such as common ravens, domestic dogs, and coyotes. Implementation of MMs BIO-11 and MM BIO-12 would reduce these impacts to less than significant.

b) Have 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 Game or U.S. Fish and Wildlife Service?

No Impact. As determined through Project surveys and CNDDB records, there is no riparian habitat or other sensitive habitat types present within the study area. No impact would occur.

TABLE 3-5 SPECIAL-STATUS WILDLIFE SPECIES AND THEIR POTENTIAL TO OCCUR WITHIN THE BIOLOGICAL STUDY AREA

SPECIES	STATUS	HABITAT	POTENTIAL FOR OCCURRENCE
Athene cunicularia burrowing owl	Fed: None State: SSC BLM: S	Occurs in open, dry annual or perennial grasslands, deserts, and scrublands with low-growing vegetation. This includes a wide variety of vegetation communities, including coastal prairies, coastal scrub, Great Basin grassland, Great Basin scrub, Mojavean desert scrub, Sonoran desert scrub, and valley and foothill grasslands. Depends on fossorial mammals for burrows.	High. Suitable habitat available for this species within the study area and in the area immediately surrounding the Project, with records of this species less than 0.5 mile from the study area.
Buteo swainsoni Swainson's hawk	Fed: None State: THR BLM: S	Breeds in grasslands with scattered trees, juniper-sage flats, riparian areas, savannahs, agricultural areas, and ranches. Requires adjacent suitable foraging areas such as grasslands, or alfalfa or grain fields supporting rodent populations.	High. Suitable habitat available for this species within the study area and in the area immediately surrounding the Project, with records of this species within one mile from the study area.
Charadrius montanus mountain plover	Fed: None State: SSC BLM: S	Occurs in chenopod scrub, short grasslands, freshly-plowed fields, newly-sprouting grain fields, and occasionally sod farms. Needs a mixture of short vegetation and bare ground, along with flat topography. Prefers grazed areas and areas with fossorial rodents.	Moderate. Some suitable habitat to support for this species at this site and in the area immediately surrounding the Project, with records of this species within two miles from the study area.
Anniella pulchra northern California legless lizard	Fed: None State: SSC BLM: None	Occurs in sandy or loose loamy soils under sparse vegetation. Soils with high moisture content are required.	Low. Marginal suitable habitat to support this species occurs within the study area.
Aquila chrysaetos golden eagle	Fed: None State: THR BLM: S	Nests in cliffs or large trees, typically in mountainous regions and in the vicinity of open grassland or oak savanna habitat. Forages in areas of open habitat.	Low. Marginal suitable foraging habitat to support this species occurs within the study area, with records of this species within one mile of the study area. There is no nesting habitat within the study area.
Buteo regalis ferruginous hawk	Fed: None State: WL BLM: None	Occurs in Great Basin grassland, Great Basin scrub, pinon and juniper woodlands, and valley and foothill grassland.	Low. Marginal suitable habitat to support this species occurs within the study area.
Lanius ludovicianus loggerhead shrike	Fed: None State: SSC BLM: None	Open space with patchy shrubs and trees, including desert scrub, agricultural areas, pastoral habitat, and suburban areas.	Low. Marginal suitable habitat to support this species occurs within the study area, with records of observation within four miles.

SPECIES	STATUS	HABITAT	POTENTIAL FOR OCCURRENCE
Taxidea taxus American badger	Fed: None State: SSC BLM: None CA: fur-bearing mammal	Occurs in a wide variety of habitats and vegetation communities but is most abundant in drier, open stages of most shrub, forest, and herbaceous habitats in areas with friable soils. Requires open, uncultivated ground.	Low. Marginal suitable habitat to support this species occurs within the study area, with records of observation within 1.5 miles.
Toxostoma lecontei Le Conte's thrasher	Fed: None State: SSC BLM: None	Occurs primarily in open desert wash, desert scrub, alkali desert scrub, and desert succulent scrub habitats. Commonly nests in dense, spiny shrubs or densely-branched cacti.	Low. Suitable foraging habitat for this species occurs within the study area, with records of observation within four miles, although not recent. There is no nesting habitat within the study area.

Low: Species or sign not observed on the site, but conditions marginal for occurrence.
Moderate: Species or sign not observed on the site, but conditions suitable for occurrence and/or an historical record exists in the vicinity.
High: Species or sign not observed on the site, but reasonably certain to occur on the site based on conditions, species ranges, and recent records.

State status
THR = listed as Threatened under the California Endangered Species Act
SSC = designated as a Species of Concern
WL = Watch List
BLM status
S = designated as a Sensitive species

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

No Impact. Aquatic resources, including riparian areas, wetlands, and certain aquatic vegetation communities are considered sensitive biological resources and can fall under the jurisdiction of several regulatory agencies. The United States Army Corps of Engineers (USACE) exerts jurisdiction over "waters of the United States," including, but not limited to, all waters which are subject to the ebb and flow of tide; wetlands and other waters such as lakes, rivers, streams (including intermittent or ephemeral streams), mudflats, sandflats, sloughs, prairie potholes, vernal pools, wet meadows, playa lakes, or natural ponds, and tributaries of the above features (USACE 2019).

CDFW exercises jurisdiction over wetland and riparian resources associated with rivers, streams, and lakes under California Fish and Game Code Sections 1600 to 1607. CDFW has the authority to regulate work that would substantially divert, obstruct, or change the natural flow of a river, stream, or lake; substantially change the bed, channel, or bank of a river, stream, or lake; or use material from a streambed. The CDFW's jurisdiction along a river, stream, creek, or other water body is usually bounded by the top-of-bank or the outermost edges of riparian vegetation.

During the 2017 and 2019 field surveys, no evidence of hydrology or riparian/wetland vegetation was noted within the limits of the study area. Therefore, no USACE jurisdictional "waters of the United States" are present within the study area. In addition, no jurisdictional streambeds or habitats under the jurisdiction of CDFW were noted within the study area during the 2017 and 2019 field surveys. The site is very flat and the on-site drainages are not well developed, do not have specific features such as high water marks or defined "banks," and do not contain riparian vegetation or wetlands. Therefore, no impacts would occur relative to wetlands or jurisdictional areas.

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?

Less Than Significant Impact. No major wildlife movement corridors or linkage have been identified within the Project study area or immediate vicinity. The Project site is surrounded by land uses that are in agricultural production, are undeveloped desert land, or are occupied by rural residences. The Project region contains large expanses of open space that provide ample amounts of area for local and regional wildlife movement and provides opportunities for wildlife movement elsewhere in the vicinity of the Project study area. Implementation of the Project would not interfere with wildlife movement. Impacts would be less than significant and no mitigation is required.

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

No Impact. The proposed Project would not conflict with goals and policies outlined in the Kern County General Plan or the Willow Springs Specific Plan. Local policies and ordinances protecting biological resources are provided in Section 1.10.10 of the Kern County General Plan and Biological Resources section of the Willow Springs Specific Plan, which provide for the conservation of oak trees, oak woodlands. There are no oak trees or oak woodlands or Joshua trees located within the study area; therefore, no impact would occur and no mitigation is required.

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

No Impact. There are no approved Habitat Conservation Plans, Natural Communities Conservation Plans, or other local, regional, or state habitat conservation plans that are applicable to the Project study area. Consequently, no conflicts with any adopted Habitat Conservation Plan, Natural Communities Conservation Plan, or other approved local, regional, or state habitat conservation plan would occur and no mitigation is required.

3.4.3 Mitigation Measures

BIO-1 Prior to, and as close to the actual construction date as feasible, pre-construction focused floral surveys shall be conducted within the Project study area. The focused floral surveys shall be conducted within the appropriate blooming periods to determine presence/absence of special-status plant species determined to have a potential to occur on-site, with focus on the alkali mariposa lily, which blooms from April to June.

BIO-2 A qualified biologist(s) shall monitor all initial earth-moving and vegetation altering construction activities to ensure that standard and special-status species-specific avoidance and minimization recommendations are adhered to. The monitor shall retain stop work authority in the event there is the likelihood of imminent take of special-status species. The biological monitor shall conduct a general pre-construction inspection no more than 14 days prior to the start of construction to verify that no special-status species are in the Project work area or its buffers. The monitor shall also conduct periodic surveys in and around work area to verify adherence to any applicable environmental compliance requirements. If the site is adequately fenced off following initial vegetation disturbance, the monitor will only be needed for periodic check-ins.

BIO-3 The footprint of disturbance shall be minimized to the extent feasible. Access to the Project site shall be via pre-existing access routes, to the greatest extent possible, and the work area boundaries shall be delineated with staking, flagging, or other comparable markings to minimize surface disturbance associated with vehicle straying. Signs and/or fencing shall be placed around the Project area to restrict access the construction work areas and Project-related vehicles.

BIO-4 Upon Project completion, any disturbance shall be, to the extent practicable in areas not occupied by permanent Project facilities, restored to pre-construction conditions. As required, the area of Project-related temporary disturbance shall be revegetated (reseeded) to pre-disturbance levels.

BIO-5 Only certified weed-free straw and hay bales shall be used, as necessary, during construction and weed-free seed for post-construction revegetation.

BIO-6 A qualified biologist(s) shall conduct pre-construction focused burrowing owl surveys within the Project footprint to determine presence/absence of the species. Surveys shall also record presence of any other species that might be considered to be of concern. If burrows are found, the appropriate CDFW-recommended buffer or a buffer deemed appropriate by a qualified biologist(s), shall be installed until occupancy status is determined. If the buffer cannot be maintained during the non-breeding season, owls may be evicted from the burrows using accepted methodology as approved by resource agencies; however evictions shall not occur during the nesting season. Occupied burrows shall not be disturbed during the owl nesting season and evictions shall not occur from, February 1 through August 31.

BIO-7 If construction occurs between February 15 through August 15, the time period typically referenced in California for the general bird nesting season, pre-construction nesting surveys shall be conducted within the Project study area by a qualified biologist within one week of the start of construction. If no active bird nests are found within this area, no further mitigation is required. If an active nest is found a 250-foot no disturbance buffer shall be instated around the nest if it belongs to a non-listed or migratory bird. If the nest belongs to a listed or fully-protected species, a 500-foot no disturbance buffer shall be instated around the nest. Nest buffers may be negotiated and nest removal prior to nesting season may be implemented through discussions with CDFW or other agencies, as applicable.

BIO-8 During construction, workers shall control areas where wildlife could hide or be trapped (e.g., open trenches, sheds, pits, uncovered basins, and laydown areas). Open trenches that could entrap smaller animals shall be provided with escape ramps and shall be backfilled as quickly as possible.

BIO-9 Prior to the start of construction, a Worker Environmental Awareness Program (WEAP) shall be prepared. All field-related Project personnel, including managers, supervisors, and workers, shall be required to undergo a WEAP training prior to construction. The WEAP training shall address adopted mitigation measures. The WEAP include training related to wildlife and plant species that could be encountered during Project activities, what to do if these species are encountered, and what to do if injured or dead wildlife is encountered. WEAP training shall include potential to encounter cultural and paleontological resources and the procedures to manage and report such finds. If new personnel are brought onto the Project during the construction phase, they shall undergo the WEAP training prior to starting work at the site. A sign-in sheet shall be kept to document each worker's attendance at the WEAP training.

BIO-10 Project-related equipment shall be cleaned (pressure wash or compressed air) prior to entering the Project area for the first time to reduce the chance of transporting noxious weed seeds from outside the area.

BIO-11 To avoid attracting predators and nuisance species, the Project footprint shall be clear of debris, where possible. All food-related trash items shall be enclosed in sealed containers and regularly removed from the Project site.

BIO-12 No pets or firearms shall be allowed on-site, and no harassment, injuring, or killing of wildlife shall be allowed.

3.5 Cultural Resources

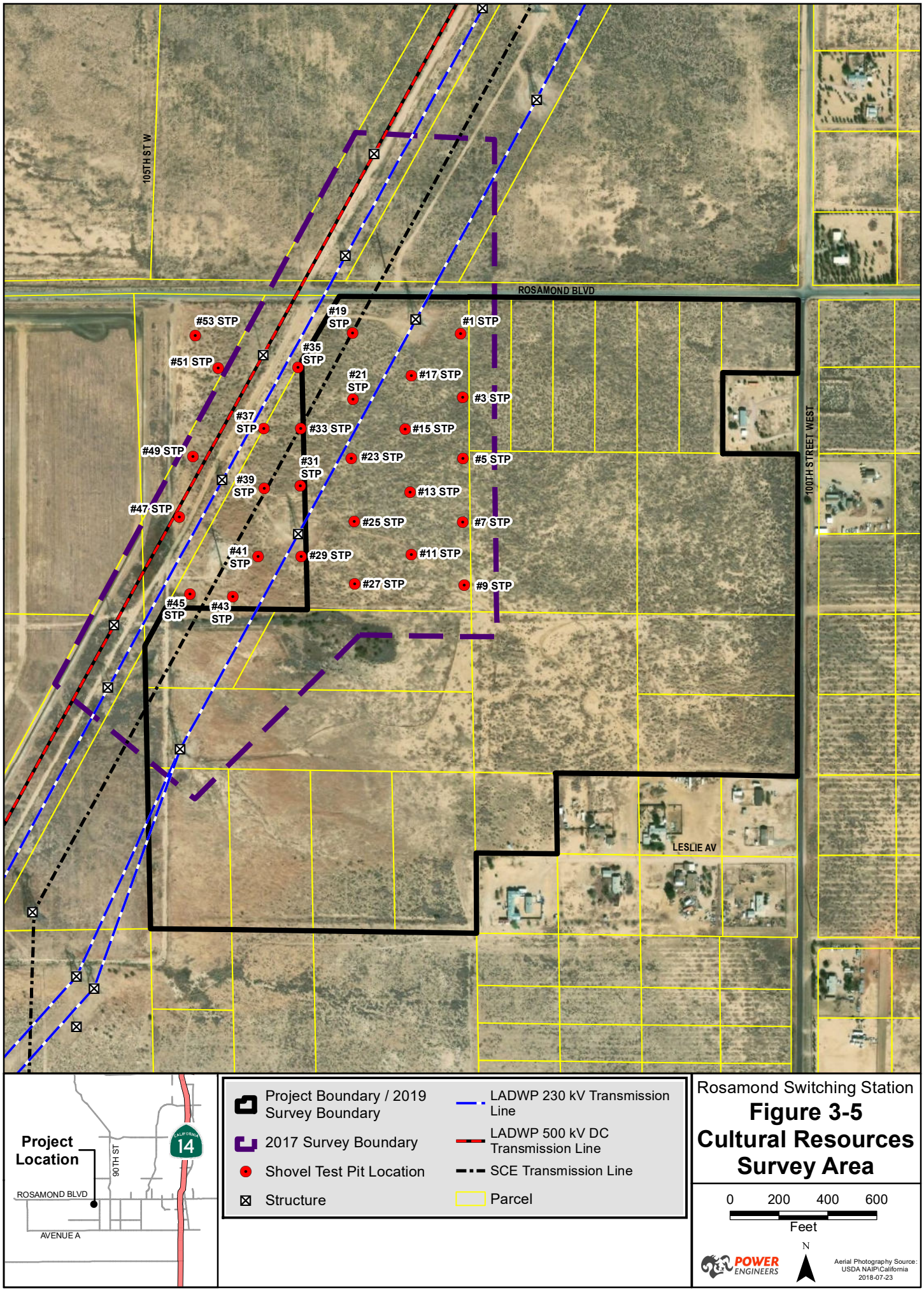
	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?	☐	☒	☐	☐
b) Cause a substantial adverse change in the significance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

The information in this section is based on the *Phase I Archaeological Resources Survey* report (POWER 2018), *Extended Phase I Archeological Resource Survey* (POWER 2019b), and *Addendum to the Extended Phase I Archaeological Resource Survey* (POWER 2019c).

3.5.1 Affected Environment

POWER conducted a Phase I cultural resource survey on several parcels of land totaling 19.3 acres in support of construction of the proposed switching station on October 5 and 6, 2017 and prepared the *Phase I Archaeological Resource Survey* report (POWER 2018). No cultural resource discoveries were made inside the Project footprint. However, as a result of tribal responses to LADWP AB 52 inquiries, LADWP requested that POWER staff shovel test the proposed 19.3 Project footprint with a tribal monitor observing the field work. The results of the shovel test were negative and POWER revised the *Phase I Archaeological Resources Survey* report (POWER 2018) into an *Extended Phase I Archeological Resource Survey* (POWER 2019b) provided in Appendix C. Subsequent to the 2017 cultural survey and 2018 shovel testing, the Project footprint was expanded to accommodate the proposed BESS and FACTS facilities. POWER conducted an additional Phase I cultural resource survey on August 20, 21, and 22, 2019 on several parcels of land totaling 97.5 acres (refer to Figure 3-5). Residential uses are located south of the survey area and none of these private lands were surveyed or crossed during the survey.

POWER prepared the *Addendum to the Extended Phase I Archaeological Resource Survey* report, provided in Appendix C, (POWER 2019c) to address the expanded Project boundary to accommodate the development of the BESS and FACTS. The Extended Phase I report summarized the methods and results of the 2017 cultural resource investigation of the proposed Project area, included archaeological and historical background research, and included results of the shovel testing conducted in 2018. The Addendum documents the survey results of the 2019 cultural resource survey. Background historical research shows that a few historic-era cultural resources are known for the area and that a single prehistoric core was detected in 2010 beneath the SCE transmission line near the western border of the Project. No previously recorded cultural resource sites would be directly impacted by construction within the 120-acre Project boundary. Portions of the Project area have been surveyed as part of previous high voltage transmission line work. During POWER's survey of the BR-HC portion of the Barren Ridge Renewable Transmission Project, no cultural resource discoveries were made inside the Project footprint.


105TH ST W
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#7 STP
#5 STP
#3 STP
#1 STP
Project Location
90TH ST
CALIFORNIA 14
ROSAMOND BLVD
AVENUE A
Project Boundary / 2019 Survey Boundary
2017 Survey Boundary
Shovel Test Pit Location
Structure
LADWP 230 kV Transmission Line
LADWP 500 kV DC Transmission Line
SCE Transmission Line
Parcel
Rosamond Switching Station
Figure 3-5
Cultural Resources Survey Area
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POWER ENGINEERS
Aerial Photography Source: USDA NAIP\California 2018-07-23

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3.5.2 Impact Assessment

Would the project:

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

Less Than Significant Impact With Mitigation. As part of the *Phase I Archaeological Resource Survey* (POWER 2018), a literature and records search was conducted at the Southern San Joaquin Valley Information Center (SSJVIC) on October 12, 2017. Records consulted at the SSJVIC included the inventory of the National Register of Historic Places, the California Register of Historical Resources, California Historic Landmarks list, topographic maps showing the locations of sites and surveys, and historic topographic maps. Because of the limited potential impacts assumed by the Project, a one-half mile search radius was utilized.

This research effort indicated that a few historic resources are located within a one-half mile of the Project area (refer to Table 3-6). The last survey on the Project site was conducted in January 2014 along the LADWP easement in the northwestern portion of the Project site. Research shows that the rest of the Project site has not been surveyed previously.

TABLE 3-6 KNOWN CULTURAL RESOURCES LOCATED WITHIN 0.5 MILE OF THE PROJECT

P NUMBER	TRINOMIAL	PERIOD AND TYPE	DISTANCE/DIRECTION FROM PROJECT AREA
P15-018681	CA-KER-10204	Historic: LADWP transmission line	T-line conduit skirts NW part of the Project site. No effect
P15-012786	n/a	Prehistoric: isolated core	500 feet west of Project
P15-018733	n/a	Historic: isolate	1,160 feet northwest of Project

Source: POWER 2018.

2017 Field Survey and Results

A field survey was conducted on October 5 and 6, 2017. The survey area included the entire Project area, along with additional and immediately adjacent areas, due to the potential for relocating several existing transmission line towers required as part of the Project (refer to Figure 3-5). The archaeological fieldwork was undertaken to substantiate the presence or absence of intact archaeological deposits within the survey area. Fieldwork included a combination of activities: intensive visual inspection of the ground surface, plus a series of transects spaced 10 to 15 meters apart throughout the entire Project area. Direct soil observation was good with about 25 percent visible throughout the entire survey area.

The survey revealed two historic isolates: two Prince Albert tobacco cans (ISO-1) and an amethyst glass bottle body fragment (ISO-2). Other fragments of metal were observed, including two metal containers recorded by previous studies in the Barren Ridge Renewable Transmission Project footprint. These resources were not located inside the Project study area.

Roads surround the Project site and the area appears to have been in use since World War II. Two to three miles north, in the areas of Willow Springs and Bean Springs, several prehistoric archaeological sites have been discovered in areas bearing intact prehistoric topsoil. Due to the more recent historical activities in the area, the likelihood of uncovering buried prehistoric archaeological materials is low to moderate for this Project site.

Shovel Testing Methodology and Results

Prior to undertaking the shovel testing on September 12 and 13, 2018, the entire Project area was inspected during an initial pedestrian survey, with transects spaced 50 meters apart in a north to south orientation. The property is currently utilized for existing LADWP 230 kV, LADWP 500 kV direct current, SCE transmission lines, associated ROW, tower pads, and patrol roads. The remaining portions not utilized by LADWP and SCE are fallow and unutilized. Ground cover and vegetation is sparse and allowed for ideal (100 percent) surface visibility of the soils.

As a result of AB 52 consultations, LADWP prepared a shovel testing plan (refer to Appendix D, Extended Phase I Testing Plan in the *Extended Phase I Archeological Resource Survey* (POWER 2019b). The Extended Phase I Testing Plan identified 53 potential shovel test pit (STP) locations for the field crew to choose from based on field conditions. Ultimately, 27 were excavated within the planned testing period. The STP locations are illustrated on Figure 3-5.

A data log of soil stratigraphy for each STP excavated was recorded and STPs were backfilled (refer to Table 3-7). Of the 53 plotted STPs, 27 were excavated in a grid-like fashion. The fieldwork crew achieved an average depth of approximately 40 centimeters below the current ground surface.

The characteristic stratigraphic soil profiles for the STPs consisted of fine sandy-silt over hardpan, or fine sand over hard pan. The interfacing surfaces of the stratigraphic levels were clearly defined by soil density and generally did not exhibit any signs of disturbance. The exception to this was located in STP 33 and STP 35 where a thin deposit of very fine grey silt was present between soil horizons; this was interpreted as a disturbance horizon of uncertain origin. The disturbance observed in STPs 33 and 35 did not have any associated cultural material, and it is likely a bi-product of when the existing transmission lines were constructed. No cultural material was recovered during the STP excavations.

TABLE 3-7 SHOVEL TEST PIT RECORD

STP#	LEVEL	DEPTH*	MUNSELL	COMPACTION	SOIL TYPE
1	I	0-34	10yr6/3	Moderate	Fine Sandy Silt
3	I	0-42	10yr6/3	Moderate	Fine Sandy Silt
	II	42-52	10yr6/3	High	Fine Sandy Silt
5	I	0-34	10yr6/3	Mod	Fine Sandy Silt
7	I	0-32	10yr6/3	Mod	Fine Sandy Silt
9	I	0-26	10yr6/3	Mod	Fine Sandy Silt
11	I	0-30	10yr6/3	Moderate	Fine Sandy Silt
13	I	0-4	10yr5/3	Low	Fine Sandy Silt
	II	4-10	10yr6/3	Moderate	Fine Sandy Silt
	III	10-32	10yr6/3	Moderate	Fine Sandy Silt
15	I	0-34	10yr6/3	Moderate	Fine Sandy Silt
17	I	0-27	10yr6/3	Moderate	Fine Sandy Silt
19	I	0-43	10yr6/3	Low	Sand
21	I	0-28	10yr6/3	High	Fine Sandy Silt
23	I	0-37	10yr6/3	Moderate	Fine Sandy Silt
25	I	0-38	10yr6/3	Moderate	Fine Sandy Silt
27	I	0-36	10yr6/3	Moderate	Fine Sandy Silt
29	I	0-24	10yr6/3	Low	Fine Sandy Silt
	II	24-43	10yr6/3	Moderate	Fine Sandy Silt
31	I	0-33	10yr6/3	Moderate	Fine Sandy Silt
33	I	0-34	10yr6/3	Moderate	Fine Sandy Silt
	II	34-41	2.5y7/1	Moderate	Silt
	III	41-46	10yr6/3	Moderate	Fine Sandy Silt
35	I	0-29	10yr6/3	Moderate	Fine Sandy Silt
	II	29-35	2.5y7/1	Moderate	Fine Silt
	III	35-50	10yr6/3	Moderate	Fine Sandy Silt
37	I	0-40	10yr6/3	Moderate	Sandy Silt
39	I	0-50	10yr6/3	Moderate	Sandy Silt
41	I	0-35	10yr6/3	Low	Sand
43	I	0-50	10yr6/3	Low	Sand
45	I	0-45	10yr6/3	Low	Sand
47	I	0-20	10yr6/3	Low	Sand
49	I	0-35	10yr6/3	Low	Sand
51	I	0-37	10yr6/3	Low	Sand
53	I	0-32	10yr6/3	Low	Sand

Note: *centimeters
Source: POWER 2019b.

2019 Field Survey and Results

The 2019 field survey was conducted by POWER on August 20, 21 and 22, 2019. The survey area included the expanded Project area of 97.5 acres (refer to Figure 3-5). POWER archaeologists surveyed the Project on foot, using a 15-meter spread for each transect. No artifacts were collected; however, cultural resources were plotted using a geographic information system (GIS) device, photographed and described.

The survey results showed that five historic-era isolates and two prehistoric-era isolates were identified in the area of direct potential impact. One small historic-era site was identified in the area of direct potential impact. The terrain is largely flat and a portion has been previously disturbed due to recent transmission line development within and adjacent to the LADWP and SCE easements and along Rosamond Boulevard.

The survey area is covered in high desert scrub with dry grasses, and ground exposure is about 25 percent. Residential uses are located south of the Project Site. None of these private parcels were crossed during the field survey.

The following are the historic-era and prehistoric-era isolates identified during the 2019 field survey:

- Isolate 1: an intact 50+ years old glass bottle.
- Isolate 2: a beverage can with church keyed opening and solder seal, probably 50+ years old.
- Isolate 3 consisted of two 50+ year soldered paint cans with church keyed openings.
- Isolate 4 is a beverage can with crimped seal and church keyed opening.
- Isolate 6 is a possible utilized core reduction flake.
- Isolate 7 is a secondary core reduction flake with flake removals suggestive of a ”pre-form” projectile point and may have been a possible Elko or Fish Slough Side-notch that was dropped unfinished.
- Site SD-1 is a 50+ trash pit with historic glass bottles, cans, metal and glass shards. This pit is dug slightly into the ground surface and is approximately 120 centimeters in diameter. This is most likely an expedient household waste dump site that is quite common in rural desert environments. Because this site is common in rural desert environments; POWER archaeologists believe that site SD-1 is not eligible for the National or California Registers of Historic Places.

Based on the cultural resources analysis conducted in support of the Project, no identified archaeological resources would be directly impacted. Given that few cultural resources are known for this area, and the site has been previously graded and/or otherwise disturbed due to recent transmission line development within and adjacent to the LADWP and SCE easements and along Rosamond Boulevard, the potential for discovering cultural resources is considered low to moderate. Because it is possible that Project-related earthmoving construction activities could uncover intact and significant cultural resources, there is a potential for encountering buried cultural resources. Implementation of MMs CULT-1 through CULT-3 would reduce impacts to cultural resources to less than significant.

b) Cause a substantial adverse change in the significance of an archaeological resource as defined in California Code of Regulations Section 15064.5?

Less Than Significant Impact With Mitigation. Refer to Checklist Response 3.5.2 (a), above. With implementation of MMs CULT-1 through CULT-3, impacts to cultural resources would be less than significant.

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

Less Than Significant Impact With Mitigation. The Project site does not exhibit a formal cemetery and is not adjacent to any known formal cemeteries. The Project site and vicinity have been surveyed for archaeological resources and no human remains interred outside formal cemeteries were detected during the survey. Given that the site has been previously graded and/or otherwise disturbed due to recent transmission line development within and adjacent to the LADWP and SCE easements and along Rosamond Boulevard, it is unlikely Project construction would disturb any buried human remains. However, if human remains are discovered during construction, State Health and Safety Code Section 7050.5 (b) states that further disturbances and activities must cease in the area of the suspected human remains, and the County Coroner contacted and permitted to examine the remains. If the Coroner determines that the remains are of Native American origin, the Coroner must then notify the NAHC of the existence of the find within 24 hours. Pursuant to PRC Section 5097.98, the NAHC would then notify the Most Likely Descendant (MLD) of the discovery. The MLD has 48 hours from being granted site access to complete their inspection and make recommendations or provide preferences for treatment. Disposition of remains shall be overseen by the MLD to determine the most appropriate means of treating the human remains and any associated grave artifacts.

Compliance with the above-mentioned California regulations and adherence to MMs CUL-1 through CUL-3 would ensure that the appropriate authorities are notified in the event Project-related construction activities unearth human remains.

3.5.3 Mitigation Measures

CUL-1 In the event that pre-contact cultural resources are discovered during Project-related construction activities, all work in the immediate vicinity of the find (within a 60-foot buffer) shall cease and a qualified archaeologist meeting Secretary of Interior standards shall be hired to assess the find. Work on the other portions of the Project outside of the buffered area may continue during this assessment period. Additionally, Tribes that have requested notification, including the San Manuel Band of Mission Indians Cultural Resources Department and the Tule River Tribe, shall be contacted, as detailed within mitigation measure TCR-1, if any such find occurs and be provided information after the archaeologist makes his/her initial assessment of the nature of the find, so as to provide Tribal input with regards to significance and treatment.

CUL-2 If significant Native American resources are discovered and avoidance cannot be ensured, the archaeologist shall develop a Monitoring and Treatment Plan, the drafts of which shall be provided to interested Tribes for review and comment, as detailed within mitigation measure TCR-1. The archaeologist shall monitor the remainder of the Project and implement the Plan accordingly.

CUL-3 If human remains or funerary objects are encountered during any activities associated with Project-related construction activity, work in the immediate vicinity (within a 100-foot buffer of the find) shall cease and the County Coroner shall be contacted pursuant to State Health and Safety Code §7050.5 that code enforced for the duration of the Project.

3.6 Energy

	POTENTIALLY SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
Would the Project:				
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	☐	☐	☒	☐
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	☐	☐	☐	☒

3.6.1 Affected Environment

The Project site is in unincorporated Kern County, approximately eight miles west of the unincorporated community of Rosamond. It is in the southwestern portion of Antelope Valley, in the northwestern portion of the Mojave Desert. Regional access includes SR-14, a four-lane highway, located approximately eight miles east of the Project site, SR-138, a two-lane roadway, located approximately 5.5 miles south of the Project site; and I-5 located approximately 30 miles west of the Project site. Local access to the site is via Rosamond Boulevard, which abuts the Project site on its northern boundary.

Edwards Air Force Base is located approximately 25 miles east of the site. The City of Bakersfield is located approximately 50 miles to the north. Los Angeles County communities of Lancaster and Palmdale are located approximately 15 and 20 miles, respectively, southeast of the Project site.

Land uses in the Project vicinity include undeveloped land, industrial uses (solar and wind generation), agriculture, and rural residential. Existing LADWP and SCE easements, along with associated transmission lines, traverse the site diagonally from northeast to southwest.

3.6.2 Impact Assessment

Would the Project:

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

Less Than Significant Impact. An objective of the proposed Project is to allow LADWP greater control in managing existing renewable energy transfer along the existing high voltage transmission lines, while increasing overall grid reliability and operational flexibility. The Project would also accommodate the interconnection process for planned renewable energy projects in the Project vicinity and would support LADWP's RPS and GHG reduction goals. Operation of the Project would support renewable energy transfer of the existing and planned renewable projects in the Project area, and decrease the need for energy from fossil fuel-based power plants in the state, which is considered a beneficial impact to statewide air quality. The proposed Project would not create a new source of wasteful, inefficient, or unnecessary consumption of energy resources during operation.

During Project construction, there would be a temporary consumption of energy resources due to the movement and operation of equipment and materials; however, the duration is limited and the area of construction is minimal. Compliance with federal, state, and local regulations, including current emission standards and related fuel efficiencies would reduce short-term energy demand during Project construction to the extent feasible. These include limiting idling times, maintaining construction equipment, and recycling construction debris. Therefore, the Project would have a less than significant impact on the consumption of energy resources during construction activities.

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

No Impact. One of the objectives for the proposed Project is to assist LADWP in meeting its RPS goal. The proposed Project would connect wind and solar resources, providing electrical power transmission to the Los Angeles Basin. The proposed Project would facilitate the interconnection process for renewable developers and support LADWP's RPS goals, as well as increase overall grid reliability and operational flexibility. Implementation of the proposed Project would not conflict with or obstruct state or local plans, policies, or regulations adopted related to renewable energy or energy efficiency.

3.6.3 Mitigation Measures

No mitigation measures are proposed.

3.7 Geology and Soils

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

3.7.1 Affected Environment

The Project site is located the Antelope Valley of the Mojave Desert Geomorphic Province, a broad interior region of isolated mountains separated by expanses of desert plains (California Geologic Survey [CGS] 2012a). There are two important fault trends that control topography in this region, a prominent northwest-southeast trend and a secondary east-west trend. The Mojave province is wedged in a sharp angle between the Garlock Fault (southern boundary Sierra Nevada Mountains) and the San Andreas Fault, where it bends east from its northwest trend. The northern boundary of the Mojave is separated from the prominent Basin and Range by the eastern extension of the Garlock Fault.

The Project site is located within the Willow Springs Specific Plan area, a seismically active region traversed by several active and potentially active fault zones. The area is subject to severe ground shaking resulting from movement along the Willow Springs-Rosamond, Garlock, San Andreas, or any other large fault in the region.

According to the DOC's Seismic Hazards Program, the Project site is not located within a designated Alquist-Priolo Earthquake Fault Zone (DOC 2019). No documented active faults traverse the Project site or immediate area; however, several faults are in proximity to the Project area and could potentially affect the Project site (Kern County 2004). The potential for damage resulting from seismic-related events exists within the Project area. Seismic hazards include ground shaking, ground failure, ground displacement, and liquefaction.

Soils

Based on the CGS' Geologic Map of California, Little Buttes Sheet (CGS 2012b), the Project site and surrounding area are underlain by younger alluvial fan deposits. The soils are unconsolidated to weakly consolidated, dark yellowish-brown to light yellowish-brown, and fine to medium arkosic silty sand with fine subrounded to subangular gravel (Kleinfelder 2019).

3.7.2 Impact Assessment

Would the Project:

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

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

Less Than Significant Impact. The Alquist-Priolo Earthquake Fault Zoning Act was passed in 1972 to mitigate the hazard of surface faulting to structures for human occupancy. The Project site is not located within an Alquist-Priolo Earthquake Fault Zone (DOC 2019). The nearest potentially active faults to the Project site are the Willow Springs-Rosamond fault located approximately one mile northeast of the Project site (DOC 2019). There are no known active faults underlying the Project site, nor are there any known active faults located adjacent to the Project site. Based on the absence of any documented active or potentially active faults that cross or come near the Project site, potential for surface ground rupture due to faulting at the site is considered low. Therefore, impacts related to fault rupture would be less than significant.

ii. Strong seismic ground shaking?

Less Than Significant Impact. As with most of southern California, the Project site is in a seismically active region within the influence of several fault systems that are considered active or potentially active. The largest active faults located in the Project area are the San Andres and Garlock faults. Numerous other faults are located within a 50 mile radius of the Project site (DOC 2019). The Project site, like much of southern California, would be subject to strong ground shaking in the event of a major earthquake. While Project facilities would include a control house with restroom facilities, Project personnel would only conduct periodic site visits, there is a very low probability that personnel would be at the facility during a major seismic event. Therefore, the potential for seismic ground shaking would not represent a significant new hazard to people.

Furthermore, the proposed Project would be designed and constructed to meet current requirements of the Kern County Building Code (Chapter 17.08) and would comply with seismic safety provisions of the most recent the California Building Code (CBC). The CBC contains provisions for earthquake safety based on factors of occupancy type, the types of soil and rock on-site, and the strength of ground shaking with specified probability occurring at a site. Because the CBC ensures that projects are designed and constructed based on site-specific parameters and current engineering practices, impacts related to ground shaking would be reduced. With adherence to regulatory requirements and standard engineering practices, potential impacts resulting from seismic ground shaking would be less than significant.

iii. Seismic-related ground failure, including liquefaction?

No Impact. Liquefaction is a process by which sediments below the water table temporarily lose strength and behave as a liquid rather than a solid. Seismic ground shaking of relatively loose, granular soils that are saturated or submerged can cause the soils to liquefy and temporarily behave as a dense fluid. Liquefaction is caused by a sudden temporary increase in pore water pressure due to seismic densification or other displacement of submerged granular soils. Liquefaction most often occurs in areas underlain by young alluvium where the groundwater table is shallower than 50 feet below the ground surface (bgs).

Surficial geologic units throughout much of the Kern County General Plan planning area, especially in the desert area of eastern Kern County and the Central Valley area of western Kern County, are comprised of thick, unconsolidated, coarse-textured alluvial sediments composed of gravel, sand and silt of granitic composition. Due to the great depth to groundwater in the desert area, liquefaction does not present a major potential hazard within the eastern Kern County area (Kern County 2004).

Because groundwater in the vicinity of the Project site is greater than 100 feet bgs (Kleinfelder 2019), the potential for liquefaction at the site is considered low. While the potential for liquefaction within the Project area and at the site would be low, the Project would be constructed in accordance with pertinent standard engineering practices and design criteria relative to seismic hazards and would comply with applicable CBC earthquake construction standards, including those related to soil characteristics. With adherence to all applicable regulations including Kern County Building requirements no impacts relative to liquefaction are anticipated.

iv. Landslides?

No Impact. The topography of the Project site and adjoining properties are relatively flat. Therefore, implementation of the proposed Project would not expose people or structures to substantial adverse impacts involving landslides. No significant impacts would occur and no mitigation is required.

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

Less Than Significant Impact With Mitigation. The Project site consists of approximately 120 acres of previously disturbed land consisting of desert scrub typical of the surrounding area. The site is relatively flat with a gentle east-southeast slope. Land uses in the vicinity of the site include undeveloped land, industrial uses (solar and wind generation), agriculture, and rural residential.

During construction of the switching station, on-site access roads, and BESS and FACTS would require ground-disturbing activities, including vegetation clearing, grading and soil compaction, and soil stabilization through use of water or soil binders. Grading and excavation required for foundation sites and installing electrical collection system could expose soil to wind and water erosion.

As discussed in Section 3.10, Hydrology and Water Quality, Checklist Response 3.10.2 (a), the Project would comply with National Pollutant Discharge Elimination System (NPDES) requirements for control of discharges of sediments and other pollutants during construction. A SWPPP would be prepared and

submitted to the State Water Resources Control Board (SWRCB) (refer to MM HYD-1). A SWPPP specifies BMPs to be implemented to manage erosion and the loss of topsoil during construction-related activities. Typical measures to prevent wind and water erosion may include, but are not limited to, application of water during earthwork activities, sand bags, straw waddles, and no work on high wind days. The SWPPP would also require preparation of an Erosion and Sediment Control Plan (refer to MM HYD-2). Mitigation measures provided Section 3.10, Hydrology and Water Quality, would reduce construction-related soil erosion impacts.

During construction-related activities, construction vehicles and equipment could contribute to soil erosion. Implementation of mitigation measure BIO-3 would minimize the disturbance footprint and limit grading to the minimum area necessary. Adherence to EKAPCD Rule 402 (Fugitive Dust), as detailed in Section 3.3, Air Quality, Checklist Response 3.3.2 (b), would prohibit any emissions of fugitive dust from construction, demolition, or other operations that remain visible in the atmosphere beyond the property line of the site of the source. Furthermore, the Project's grading plan would also ensure that the proposed earthwork is designed to avoid soil erosion. With adherence to the MMs HYD-1, HYD-2, BIO-3, and adherence to EKAPCD Rule 402, impacts relative to soil erosion would be reduced to a less than significant level.

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

Less Than Significant Impact. As discussed in Checklist Responses 3.7.2 (a) iii and iv above, the Project site is not located in an area subject to on- or off-site landslides or liquefaction. Because groundwater levels are greater than 100 feet bgs, the Project site is not susceptible to liquefaction or lateral spreading. Additionally, the site is not located in an area undergoing fluid withdrawal that could generate a potential subsidence effect.

However, alluvial soils in some arid and semi-arid environments have the tendency to possess characteristics that make them prone to collapse. To address the potential for unstable soils that may be prone to collapse; the Project would be the designed and engineered in compliance with Kern County Building Code and would comply with seismic safety provisions of the most recent the CBC. The CBC contains provisions for earthquake safety based on factors of occupancy type, the types of soil and rock on-site, and the strength of ground shaking with specified probability occurring at a site. Because the CBC ensures that projects are designed and constructed based on site-specific parameters and current engineering practices, impacts related to collapsible soils would be reduced. The proposed Project would incorporate recommendations from the proposed Project's site specific geotechnical investigation. The Project would also comply with Kern County Building Code and CBC requirements to withstand the effects of settlement or collapsible soils. With adherence to all applicable building code regulations, the Project would avoid potential impacts to structures resulting from unstable soils, and potential impacts would be less than significant.

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?

Less Than Significant Impact. Expansive soils are those soils with a significant amount of clay particles that have the ability to take on water (swell) or give up water (shrink). When these soils swell, the change in volume exerts significant pressures on loads that are placed on them. According to the Willow Springs Specific Plan, lateral and vertical extent of certain expansive soils are not accurately known (Kern County 1992). Geotechnical studies by a qualified civil engineering firm(s) shall be performed prior to final design and construction of the proposed Project.

To minimize expansive soil conditions, complete avoidance or engineering design for correction of adverse conditions are required prior to building permit issuance on an individual project basis. Special engineering designs are used effectively to alleviate problems caused by expansive soils. These designs include, but may not be limited to, the use of reinforcing steel in foundations, drainage control devices, over-excavation, and backfilling with non-expansive soils among others. Impacts relative to expansive soils can be alleviated through proper site investigations, soils testing, foundation design, and quality assurance during grading operations as required by the Kern County Building Code. Because construction of the Project would comply with applicable County Codes, CBC design requirements, and standard engineering practices, impacts related to expansive soils are anticipated to be less than significant.

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

Less Than Significant Impact. The Proposed Project includes on-site toilet facilities that would require either septic tanks or alternative wastewater systems. Shallow geologic units are comprised of thick, unconsolidated, coarse-textured alluvial sediments composed of gravel, sand and silt of granitic composition. Generally, these units are capable of supporting septic tanks or alternative wastewater disposal systems. In addition, groundwater in the vicinity of the Project site is greater than 100 feet bgs (Kleinfelder 2019), thus providing substantial separation between the septic system and groundwater resources. In addition, geotechnical studies by a qualified civil engineering firm(s) shall be performed prior to final design and construction of the Proposed Project to confirm that soils at the Project would adequately support the use of septic tanks.

The septic system would be designed to comply with requirements of the Kern County Health Services Department's Septic System Program which establishes standards for the approval, installation, and operation of on-site wastewater treatment systems within Kern County, consistent with plans, policies, and standards of the SWRCB and applicable regional water quality control boards (Kern County 2020). With proper siting, design, and construction of the proposed septic system in accordance with the County Health Services Septic System Program, impacts would be less than significant.

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

Less Than Significant Impact With Mitigation. Several recent projects in the general vicinity of the proposed Project site conducted surveys and literature reviews relative to the potential for encountering paleontological resources during construction activities. For the Willow Springs Solar Project, located approximately 0.5 mile south of the Project site, research indicated that the Project area is underlain by surficial deposits of younger and older Quaternary Alluvium. Younger Quaternary Alluvium is typically not paleontologically sensitive at shallow depths; however, younger Quaternary Alluvium in this area is paleontologically sensitive at greater depths. In addition, older Quaternary deposits, may contain significant vertebrate fossils. However, no vertebrate fossil localities have been recorded within or near the Project area (Kern County 2016).

There is the potential to encounter unique paleontological resources during grading and excavation activities for foundation sites and installation of the electrical collection system, particularly if excavation extends into older alluvium. Potential impacts to paleontological resources can be reduced to a less than significant level by implementing a program to educate construction workers on the nature of paleontological materials that may be encountered during construction, and by having a qualified paleontologist on-call to evaluate any suspected paleontological material discovered during construction. In accordance with MM BIO-9, a Project WEAP would be developed and presented to all workers on-site. The WEAP will include provisions should cultural and paleontological resources be encountered during construction activities. With implementation of MM BIO-9 impacts related to paleontological resources would be reduced to less than significant.

3.7.3 Mitigation Measures

Refer to MM BIO-9 in Section 3.4.3 (Biological Resources) and MMs HYD-1, HYD-2 in Section 3.10 (Hydrology and Water Quality).

3.8 Greenhouse Gas Emissions

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would the project:				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	☒	☐
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☒	☐

Information in this section is based on the *Rosamond Switching Station Project – Air Quality and Greenhouse Gas Emissions Impacts Assessment* prepared by TAHA (2019a) provided in Appendix A.

3.8.1 Affected Environment and Regulatory Framework

The GHG assessment was undertaken to determine whether construction or operation of the Project would have the potential to result in significant environmental impacts related to GHG emissions in the context of Appendix G Environmental Checklist criteria of the CEQA Statutes and Guidelines. Implementation of the proposed Project may result in a significant environmental impact related to GHG Emissions if the proposed Project would:

a) Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment; and/or

b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing GHG emissions.

Section 15064.4 of the CEQA Guidelines states that a lead agency should make a good-faith effort to describe, calculate, or estimate the amount of GHG emissions resulting from a project, and that the lead agency should consider the following factors when assessing the significance of impacts from GHG emissions on the environment:

1. The extent to which the project may increase or reduce GHG emissions as compared to the existing environmental setting;
2. Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project; and
3. 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.

The proposed Project is located in rural unincorporated Eastern Kern County and is generally surrounded by sparsely distributed residential plots, agricultural land, and solar generating facilities. There are no substantial stationary sources of GHG emissions in the immediate Project vicinity. In 2018, the Kern Council of Governments published and adopted its 2018 Regional Transportation Plan (RTP) to establish a set of regional transportation goals, policies, and actions intended to guide development of the planned

multimodal transportation systems in Kern County. California's Sustainable Communities and Climate Protection Act, or SB 375, calls for the Kern County RTP to include a Sustainable Communities Strategy that reduces GHG emissions from passenger vehicles and light-duty trucks. In addition, the RTP must comply with CEQA, and the 2018 RTP was determined to meet this requirement.

In 2012, the EKAPCD published guidance for evaluating GHG emissions within its jurisdiction under CEQA Guidelines when serving as the lead agency. The guidance states that any project that is not exempt from CEQA would require quantification of Project-Specific GHG Emissions to determine annual emissions. The EKAPCD guidance also states that projects emitting less than 25,000 tons per year of GHGs would be determined to have a less than significant individual or cumulatively considerable impact on GHG emissions and would not require further CEQA review. EKAPCD reasoned that 25,000 tons per year is less than the threshold the CARB uses for industrial source applicability as the first phase of the AB 32 Cap-and-Trade Program and slightly more stringent than the Cap-and-Trade Program. Due to the relatively small magnitude of the regional GHG emission inventory in Eastern Kern County, only large-scale industrial projects that may be subject to federal regulation and EKAPCD Rule 201.3 Federally Enforceable Limits on Potential to Emit could have potentially significant impacts related to GHG emissions under CEQA Guidelines under EKAPCD jurisdiction.

Greenhouse Gas Emissions

GHG emissions refer to a class of pollutant emissions that are generally understood to affect global climate conditions due to their long atmospheric lifetimes and ability to trap infrared heat energy in the atmosphere that is radiating from the Earth's surface, known as the greenhouse effect. The most prevalent anthropogenic GHG compounds are carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6). The presence of these gases and other GHG compounds in the atmosphere maintains global surface temperatures at generally habitable levels. Of all the GHG compounds, CO_2 is the most abundant gas that contributes to climate change, especially through fossil fuel combustion. The other GHG compounds are less abundant but have a higher potential to affect climate change on a per-mass basis. To account for the higher global warming potential, GHG emissions are commonly expressed in the equivalent mass of CO_2, denoted as carbon dioxide equivalent (CO_2e).

Anthropogenic emissions of CO_2, CH_4, and N_2O have resulted in atmospheric concentrations in excess of natural ambient levels that are responsible for intensifying the greenhouse effect. In acknowledgement of the environmental consequences of the amplified greenhouse effect, regulations have been adopted at international, federal, state, regional, and local levels to control GHG emissions. GHG emissions associated with implementation of the Project are evaluated in the context of applicable regulations aimed at reducing GHG emissions.

The proposed Project is not located within a metropolitan planning organization's jurisdiction for which an RTP has been prepared. The GHG emissions impacts assessment considers GHG emissions associated with implementation of the proposed Project with respect to statewide and EKAPCD policies.

3.8.2 Impact Assessment

Would the Project:

a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

Less Than Significant Impact. The atmospheric effects of GHG emissions are borne globally and cumulative in nature, and the direct effect of an individual project's GHG emissions on the environment cannot be delineated precisely. Regulations adopted to control and reduce GHG emissions generally take a holistic approach and consider a variety of sources and strategies to achieve their objectives. Due to the long atmospheric lifetimes of GHG emissions, the assessment of environmental impacts characterizes GHG emissions associated with implementation of the proposed Project in terms of annual emissions of tons of CO_2e. GHG emissions that would be generated by construction and operation of the proposed Project are analyzed together.

Construction would generate GHG emissions through the use of heavy-duty equipment and vehicle trips for workers and material hauling to and from the Project site. Annual GHG emissions were estimated using emission factors and calculations contained within CalEEMod, Version 2016.3.2, which is the preferred regulatory model for quantifying GHG and air pollutant emissions associated with land use development projects. The emissions modeling exercise incorporated conservative assumptions that 20 construction workers would report to the site every day and that all required equipment would be used continuously for eight hours per day. Construction of the proposed Project is expected to last for a total of approximately 38 months beginning in early 2020, with completion expected by the end of 2023.

SF_6 is a gas that is used as insulation in electric power transmission and distribution equipment such as circuit breakers. LADWP would routinely inspect and monitor all equipment to ensure equipment is operating properly. This would include inspecting the circuit breakers for leaks. LADWP would also maintain records when circuit breakers are refilled, noting the volumes used, thus allowing them to detect leaks and replace breakers with defective seals. PFCs and HFCs are refrigerants that may be used in the air conditioning systems at the Project site. Through the monitoring and inspection process, potential SF_6 PFC, and HFC emissions would be monitored and controlled, resulting in a less than significant impact relative to SF_6 PFC, and HFC emissions during Project operations.

Following the completion of construction activities, the proposed Project would be a passive land use that would not generate regular or substantial daily emissions. Maintenance activities would be minimal and intermittent and would include limited vehicle trips for inspection and repair of Project components. Operations would not introduce any new substantial source of GHG emissions to the Project area. Therefore, the emissions modeling exercise did not quantify any GHG emissions associated with operations.

Table 3-8 illustrates the results of the GHG emissions analysis for heavy duty construction equipment and vehicle trips during construction activities, expressed in tons of CO_2e. The GHG emissions associated with construction of the Project would cease entirely upon completion of construction activities. There would be negligible long-term operational sources of GHG emissions. The emissions modeling results presented in Table 3-8 demonstrate that maximum annual emissions associated with construction of the Project would be approximately 4,382.6 tons CO_2e. Based on the above analyses, impacts related to GHG emissions would be less than significant and no mitigation is required.

TABLE 3-8 ESTIMATED GHG EMISSIONS – PROJECT CONSTRUCTION

ACTIVITY AND YEAR	ANNUAL EMISSIONS (tons CO_2e)
Site Preparation (2020) – Equipment	878.2
Site Preparation (2020) – Mobile Sources	298.6
Site Construction (2020) – Equipment	568.0
Site Construction (2020) – Mobile Sources	240.7
Total 2020 Emissions	1,985.5
Site Construction (2021) – Equipment	2,367.6
Site Construction (2021) – Mobile Sources	972.7
Total 2021 Emissions	3,340.3
Site Preparation (2022) – Equipment	439.3
Site Preparation (2022) – Mobile Sources	140.2
Site Construction (2022) – Equipment	2,368.7
Site Construction (2022) – Mobile Sources	940.3
Site Finalization (2022) – Equipment	357.0
Site Finalization (2022) – Mobile Sources	137.2
Total 2022 Emissions	4,382.6
Site Construction (2023) – Equipment	1,801.1
Site Construction (2023) – Mobile Sources	573.1
Site Finalization (2023) – Equipment	297.6
Site Finalization (2023) – Mobile Sources	114.3
Total 2023 Emissions	2,786.1
Maximum Annual Emissions	4,382.6
EKAPCD Annual Threshold	25,000
Exceed Threshold?	No
Note: Emissions modeling files can be found in the Appendix.	

Source: TAHA 2019a.

b) Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

Less Than Significant Impact. Plans, policies, and regulations adopted to reduce GHG emissions generally focus on long-term sources of GHG emissions that provide opportunities for life-cycle improvements in efficiency and sustainability. Implementation of the proposed Project would not introduce a new permanent source of GHG emissions into the Project area, and GHG emissions resulting from construction activities would cease entirely following completion of the switching station. As discussed previously, construction of the Project would not generate GHG emissions of sufficient quantities to approach exceeding EKAPCD annual threshold and represent only 17.5 percent of the significance threshold value. Therefore, impacts related to GHG plans, policies, and regulations would be less than significant and no mitigation is required.

3.8.3 Mitigation Measures

No mitigation measures are proposed.

3.9 Hazards and Hazardous Materials

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

Information in this section is based on the *Phase I Environmental Site Assessment* prepared by Odic Environmental (2018) and the *Phase I Environmental Site Assessments* prepared by Kleinfelder (2019). Phase I Environmental Site Assessments (ESA) were conducted for parcels which make up the approximate 120-acre Project site and are shown in Table 3-9. The Phase I ESAs are bound under separate cover.

TABLE 3-9 KERN COUNTY ASSESSOR PARCEL NUMBERS

359-051-11	359-051-13	359-051-14	359-051-17
359-051-18	359-051-19	359-051-20	359-051-21
359-015-22	359-051-24	359-051-25	359-051-26
359-051-27	359-051-28	359-051-29	359-051-31
359-051-37	359-051-43	359-051-47	359-051-49

3.9.1 Affected Environment

The Phase I ESAs were performed in conformance with ASTM International Designation E 1527- 13, Standard Practice for Environmental Site Assessments. The purpose of the Phase I ESA's was to identify Recognized Environmental Conditions (RECs), Controlled Recognized Environmental Concern (CREC) or Historical Recognized Environmental Condition (HREC) related the sites, to the extent feasible.

- RECs are defined in ASTM Standard Practice as "the presence or likely presence of any hazardous substance or petroleum products in, on, or at a property: (1) due to any release to the environment; (2) under conditions indicative of a release to the environment; or (3) under conditions that pose a material threat of a future release to the environment."
- A CREC is defined in ASTM Standard Practice as "…a recognized environmental condition resulting from a past release of hazardous substances or petroleum products that has been addressed to the satisfaction of the applicable regulatory authority (for example, as evidenced by the issuance of a no further action letter or equivalent, or meeting risk-based criteria established by regulatory authority), with hazardous substances or petroleum products allowed to remain in place subject to the implementation of required controls (for example, property use restrictions, activity and use limitations, institutional controls, or engineering controls)."
- ASTM Standard defines HRECs as "…a past release of any hazardous substances or petroleum products that has occurred in connection with the property and has been addressed to the satisfaction of the applicable regulatory authority or meeting unrestricted use criteria established by a regulatory authority, without subjecting the property to environmental controls."

Standard Environmental Records Search

Federal, state, and local regulatory agencies publish databases or "lists" of businesses and properties that handle hazardous materials or hazardous waste, or are the known location of a release of hazardous substances to soil and/or groundwater. These databases are available for review and/or purchase at the regulatory agencies, or the information may be obtained through a commercial database service. Environmental Data Resources, Inc. (EDR), a commercial database service, performed the government database searches of the most current database sources maintained by state and federal regulatory agencies for listings within the ASTM Standard's minimum search distance from the Project site boundary for each searched database. The *EDR Radius Map™ Report with GeoCheck®* is provided as Appendix B for each Phase I ESA conducted for the Project.

As a result of the review of pertinent federal, state, and local regulatory databases or "lists" conducted in conjunction with preparation of the Phase I ESAs for each parcels within the Project boundary (refer to Table 3-9), no RECs, CRECs, or HRECs were identified on- or off-site.

3.9.2 Impact Assessment

Would the Project:

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

Less Than Significant Impact With Mitigation. Project-related construction activities would be short-term and may include the transport, storage, and short-term use of petroleum-based fuels, lubricants, and other similar materials, and disposal of hazardous materials associated with construction. Materials used in the construction of the Project would be stored, handled, and disposed of in accordance with federal, state, and local rules and regulations.

Additionally, a Spill Prevention, Control, and Countermeasure (SPCC) Plan for Project construction and for facility operation would be prepared (refer to mitigation measure HAZ-1). The SPCC Plan for Project construction would address fuels, lubricants, and hydraulic fluids expected to be used in construction equipment. Such equipment would be properly maintained to minimize leaks, and to prevent spills, vehicle service and repair would be performed off-site at an appropriate facility. The SPCC Plan for facility operation would address the oil that may be contained in Project facilities. The SPCC Plan for facility operation would be updated on a regular basis as new equipment is commissioned and turned over from construction to operations.

BESS batteries may contain materials that may be considered hazardous. Batteries and other materials for the BESS facilities would be manufactured off-site and transported to the site by truck. As stated in Section 2.0, Project Description, there are several options for the types of batteries used in BESS system.

One option is using lithium ion batteries. Transportation of lithium ion batteries is subject to 49 Code of Federal Regulations 173.185 (Pipeline and Hazardous Materials Safety Administration 2019). The BESS facility would be subject to Kern County Building Ordinance and the Kern County Uniform Fire Code, governing the storage of hazardous materials, liquids, and chemicals, including a provision related to the storage of hazardous materials. After the BESS becomes operational, the Project would be subject to annual inspection by the Kern County Fire Department. Project operation would also be required to comply with the most recent California Code of Regulations, Title 24, (California Fire Code) and the National Fire Protection Association rules and regulations governing the operation of stationary storage battery systems. Adherence to federal, state, and local requirements and regulations, personnel training, safe interim storage, and segregation from other potential waste streams would minimize any public hazard related to transport, use, and/or disposal of batteries.

All transport, handling, use, and disposal of substances, such as petroleum products, paints, and solvents, and batteries related to the construction and operation and maintenance of the proposed Project, would comply with all federal, state, and local laws regulating management and use of hazardous materials. With implementation of the SPCC (MM HAZ-1) and compliance with pertinent rules and regulations, use of such material would not create a significant hazard to the public and impacts would be reduced to a less than significant level.

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?

Less Than Significant Impact With Mitigation. As discussed above, construction of the proposed Project would involve the use of potentially hazardous materials, including vehicle fuels, oils, and transmission fluids. However, all hazardous materials would be contained, stored, and used in accordance with manufacturers' instructions and handled in compliance with applicable standards and regulations.

The level of risk associated with the accidental release of hazardous substances is not considered significant due to the small volume and low concentration of hazardous materials utilized during construction. However, as stated in the Checklist Response 3.9.2 (a), a SPCC Plan for construction and for facility operation would be prepared for the Project. The SPCC Plan for Project construction would address fuels, lubricants, and hydraulic fluids expected to be used for construction equipment. The SPCC Plan for facility operation would address the oil that would be contained Project facilities. With the implementation of the SPCC Plan (refer to HAZ-1), the Project would not create a significant hazard to the public or the environment through the reasonably foreseeable upset and accident conditions involving the release of hazardous materials; therefore, impacts would be less than significant.

c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

No Impact. There are no schools located within a one-quarter mile radius of the Project site and therefore no impact in this regard would occur.

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?

No Impact. As mentioned above, a database search was conducted to evaluate the potential for the Project site or properties near or adjacent to the Project site to create adverse environmental impacts. The database search for the proposed Project concluded that the Project site is not included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5. The Phase I ESAs revealed no evidence of RECs, CRECs, HRECs, or de minimis conditions in connection with the Project site or surrounding properties. As such, no impact would occur and no mitigation would be required.

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 site is not located within an airport land use plan nor is it located within two miles of a public airport or private airstrip; the closest airfield is the Lloyd's Landing Airport. This airfield is privately owned and located approximately three miles north of the Project site. Therefore, the proposed Project would not result in a safety hazard or excessive noise for people residing or working at the Project site. No impact would occur.

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

Less Than Significant Impact. Primary site access during construction and operation would be from Rosamond Boulevard. A secondary access road would also be constructed off 100th Street West. Neither roadway is officially designated as an evacuation route.

All construction and staging would occur within the Project boundaries and no road closures are anticipated during Project construction. Traffic control measures, such as flag persons, may be required at specific times to facilitate construction vehicle ingress to and egress from Rosamond Boulevard or 100th Street West onto the Project site. Interior access roads within the Project would be designed to provide sufficient access for fire trucks and emergency responders.

A Traffic Control Plan (refer to MM TRA-1 in Checklist Response 3.17.3, Transportation) would be prepared, which would include measures to avoid disruptions or access delays for emergency service vehicles. Appropriate police department, fire department, ambulance, and paramedic services would be notified in advance of Project construction. The Plan would also include contact information for those agencies, assign responsibility for notifying the service providers, and specify coordination procedures. Copies of the Plan would be provided to all affected police departments, fire departments, and ambulance and paramedic services.

Once completed, the proposed Project would operate primarily as an unmanned facility and generate a negligible amount of traffic and potential traffic disruptions. The proposed Project would not impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan during construction or operation; therefore, impacts would be less than significant.

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

Less Than Significant Impact With Mitigation. The Project site and immediate area are not located in "Hazardous Fire Area" as designated by the Kern County General Plan, Safety Element (Kern County 2009). Additionally, the Project site and immediate area are not designated as a "Fire Hazard Severity Zone" by the California Department of Forestry and Fire Protection (CAL FIRE 2007) nor is the site located in a "fire threat area" as designated by California Public Utilities Commission (CPUC) fire hazard maps (CPUC 2019). While remote, there is a possibility of, electrical sparks, combustion of fuel oil, hydraulic fluid, mineral oil, flammable liquids, explosions, and over-heated equipment may cause small fires at the site; however, the majority of the equipment would be of nonflammable material (aluminum and steel). During construction, standard fire prevention and suppression measures would be implemented for the proposed Project including locating portable fire extinguishers of appropriate sizes and types throughout the Project site.

Operation of the proposed Project would introduce Project components (e.g., lithium ion batteries) that could potentially increase the risk of fire. In order to reduce the risk reduce the risk of fire during operation of Project facilities including those associated with lithium ion batteries, an Emergency Acton Plan would be prepared which would address proper planning, risk assessment, storage methods, and response protocols (refer to MM HAZ-2). Personnel training would be required to help address the unique issues this type of battery technology presents, such as battery fire behavior, emergency response procedures, and fire extinguisher use (lithium-ion battery focus). This Emergency Acton Plan would be developed to effectively address all emergencies that may be reasonably expected to occur at the Project site (BESS focus). The Plan may include, but not limited to, a designated emergency coordinator who would be responsible for notification of emergency personnel, safely evacuating Project employees and the proper use of fire extinguishers (if applicable).

Project operation would be required to comply with the most recent California Code of Regulations, Title 24, (California Fire Code) and the National Fire Protection Association rules and regulations governing the operation of stationary storage battery systems. The Project would also be required to comply with all existing regulations and requirements of the Kern County General Plan Safety Element and the Kern County Fire Code (Chapter 17.32). With implementation of MM HAZ-2 and adherence to federal, state, and local requirements and regulations, impacts relative to significant risk of loss, injury, or death involving wildland fires would be less than significant.

3.9.3 Mitigation Measures

HAZ-1 Prior to construction of the Project, a SPCC Plan shall be prepared and certified by a professional engineer; a complete copy shall be maintained on-site. The SPCC Plan would include engineered and operational methods for preventing, containing, and controlling potential releases and provisions for a quick and safe cleanup during all phases of construction activities and operation of the Project. The SPCC Plan for facility operation would be updated on a regular basis as new equipment is commissioned and turned over from construction to operations.

HAZ-2 An Emergency Action Plan shall be prepared in coordination with the Kern County Fire Department and Kern County Building Department and shall address proper planning, risk assessment, storage methods, response protocols, and employee training. The Emergency Action Plan shall indicate and describe in detail the backup fire suppression equipment that will be available to County Fire Department responders in the event of a BESS fire. A map or plan identifying the locations of nearby existing fire hydrants shall be included. Any specialized fire response manuals or technical guidelines applicable to the Project shall be included in the Emergency Action Plan. The Emergency Action Plan shall effectively address all emergencies that may be reasonably expected to occur at the Project site focusing on the BESS components. The plan shall include protocol for notifying adjacent land uses in the event of a fire.

3.10 Hydrology and Water Quality

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

3.10.1 Affected Environment

Hydrology and Drainage

The Project site is located within the hydrologically-enclosed Antelope Valley Groundwater Basin of the South Lahontan Hydrologic Region. The Antelope Valley watershed area is bound by the Tehachapi Mountains on the northwest, the San Gabriel and Sierra Pelano Mountains on the south, and low-lying buttes in San Bernardino County to the east. All stormwater runoff generated in the Antelope Valley that does not percolate into the ground eventually ponds and evaporates in the Rosamond, Rogers, and Buckhorn dry lake beds (Kern County 1992). Rosamond Lake is located approximately 11 miles west of the Project site.

The SWRCB and nine RWQCBs oversee the protection of water quality in California. The SWRCB sets statewide policy for the implementation of state and federal laws and regulations. The RWQCBs adopt and implement Water Quality Control Plans (Basin Plans) which recognize regional differences in natural water quality, actual and potential beneficial uses, and water quality problems associated with human activities. The Project site is within the jurisdiction of the Lahontan RWQCB-Region 6 (SWRCB 2019).

The Project site consists of approximately 120 acres of previously disturbed land consisting of desert scrub typical of the surrounding area. Topographic relief is relatively flat with a gentle east-southeast slope. Surface flow exists primarily as sheet flow over the generally uniform terrain at the site. Based on site surveys, little evidence of significant drainage through the site exists and there are no designated blue line or intermittent drainages shown crossing the Project site.

Groundwater

The Site is located within the Antelope Valley Groundwater Basin of the South Lahontan Hydrologic Region. The Antelope Valley Groundwater Basin underlies an extensive alluvial valley in the western Mojave Desert. The basin is bound on the east by ridges, buttes, and low hills that form a surface and groundwater drainage divide. On the north, the Antelope Valley Groundwater Basin is separated from the Fremont Valley Groundwater Basin by a southeastward-trending groundwater divide, represented by a line from the mouth of Oak Creek through Middle Butte to exposed bedrock near Gem Hill, and the Rand Mountains farther east (Kleinfelder 2019).

The primary water-bearing materials are Pleistocene and Holocene age unconsolidated alluvial and lacustrine deposits, consisting of compact gravels, sand, silt, and clay. Coarse alluvial deposits form the two main aquifers of the basin; a lower aquifer and an upper aquifer. The upper aquifer is the primary source of groundwater for the valley and is generally unconfined. The lower aquifer is generally confined (Kleinfelder 2019).

Based on groundwater level measurements collected from federal and state wells, groundwater is anticipated to be greater than 100 feet bgs. Specific groundwater flow direction has not been identified at the Project site; however, groundwater in the Project area is anticipated to flow toward the east-southeast following regional surface topography (Kleinfelder 2019).

Floodplains

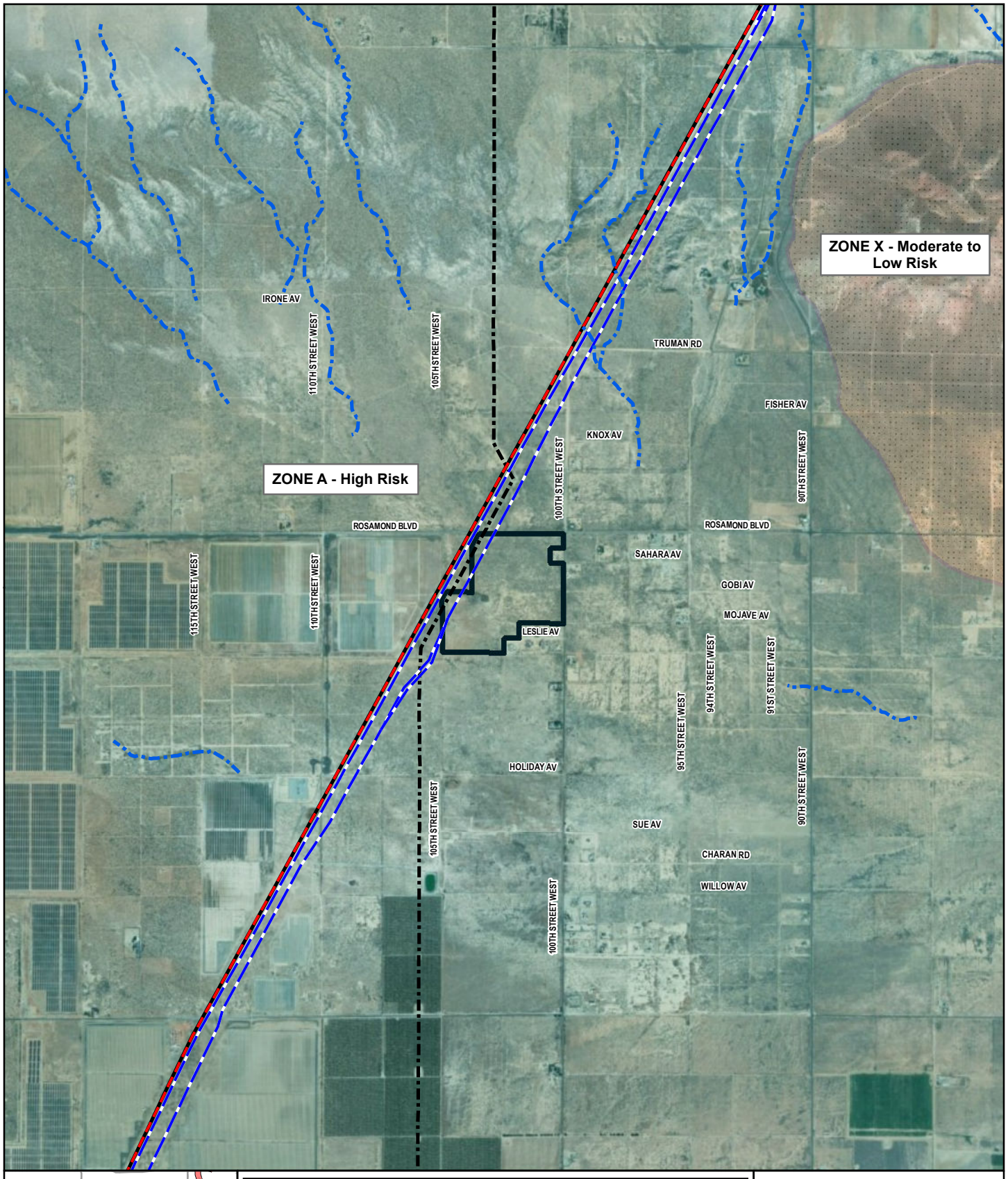
As indicated on the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (map number 06029C4000E, effective 09/26/2008), the Project site in located within Zone A. As defined by FEMA Zone A is a Special Flood Hazard Area subject to inundation by one percent annual chance flood event or also known as a 100-year flood event (refer to Figure 3-6).

3.10.2 Environmental Assessment

Would the Project:

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

Less Than Significant Impact With Mitigation. The proposed Project could result in short-term construction impacts without proper controls. Soils loosened during grading, as well as spills of fluids or fuels from vehicles and equipment, if mobilized or transported off-site in overland flow, have the potential to degrade water quality.



Project Boundary

LADWP 230 kV Transmission Line

LADWP 500 kV DC Transmission Line

SCE Transmission Line

Ephemeral Stream

FEMA Flood Zones

A - High Risk (Area with a 1% annual chance of flooding)

X - Moderate to Low Risk (Area of minimal flood hazard)

Rosamond Switching Station

Figure 3-6
Flood Zone Map

0 1,500 3,000 4,500

Feet

N

POWER ENGINEERS

Aerial Photography Source: USDA NAIP\California 2018-07-23

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The Project site is relatively flat, with low potential for surface runoff. Construction of the switching station, access roads, and BESS and FACTS would require ground-disturbing activities, including vegetation clearing, grading and compacting soils, and soil stabilization through water use or soil binders. Grading and excavation activities, for foundation sites and installing the electrical collection system, could affect drainage on the Project site. Because construction activities would exceed the one-acre threshold of ground disturbance, adherence to the NPDES General Construction Permit is required. LADWP would develop a SWPPP (refer to MM HYD-1). The SWPPP would include (BMPs, including measures to prevent soil erosion (i.e., soil stabilization, silt fencing, straw bale and temporary catch basins). These BMPs would be implemented during construction, and therefore, would minimize soil erosion and loss of topsoil to the extent feasible. With implementation of the SWPPP and MM HYD-1, the proposed Project would not result in substantial soil erosion during construction at the site or in the surrounding area.

As stated in Section 2.5, the switching station would be unmanned with automated features and remote control capabilities. No full-time, permanent personnel would be required at the Project site. It is anticipated that LADWP would conduct routine inspections on a weekly basis and perform maintenance on a monthly basis. For periodic and nominal vehicle and other motorized equipment use during operations and maintenance, an accidental release of diesel fuel, gasoline, lubricant oils, hydraulic fluid, antifreeze, transmission fluid, or lubricant grease could occur. In contrast with construction activities, which would include more intensive use of heavy equipment, operation and maintenance of the proposed Project would have substantially less potential to result in an accidental spill or release of hazardous materials that could result in water quality degradation.

The Project site is currently entirely pervious. New Project features would add approximately 26 acres of impervious areas that could possibly increase the rate of stormwater runoff, with potential for increased erosion and long-term siltation, and contribution to additional sources of polluted runoff. Except for the foundations for the switching station and project facilities (BESS and FACTS), most of the area would remain as permeable surface. The amount of new impervious surface as a result of the proposed Project would be negligible and would not result in a substantial increase in runoff leading to negative impact to surface water quality.

b) Substantially deplete decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?

Less Than Significant Impact. Following construction, the amount of impervious surface would increase within the Project area as a result of the proposed Project. However, the addition of paved surfaces associated with the Project would not substantially decrease groundwater recharge in the area. The amount of new impervious area would be limited relative to the existing pervious area of the Project site and surrounding area. The proposed Project may involve limited groundwater extraction, providing non-potable water supply for the switching station facilities. This limited use would not substantially decrease groundwater supplies and limited impervious area would not substantially interfere with groundwater recharge such that the Project may impede sustainable groundwater management of the basin. Potential impacts would be less than significant and no mitigation is required.

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;

Less Than Significant Impact With Mitigation. No streams or rivers exist on the Project site; therefore, no Project-related impact to such features would occur. The Project site is relatively level; nevertheless, some areas of the site where facilities are proposed would require grading for leveling.

While relatively minor landform modification and topography alteration is anticipated, site grading could interfere with existing drainage patterns on-site. During rainfall events, there would be the potential for surface erosion or siltation on- or off-site. As stated in Checklist Response 3.10.2 (a) a SWPPP would be prepared; the SWPPP would include BMPs that would minimize impacts from stormwater runoff and disturbance to existing drainage patterns. The SWPPP would identify areas with potential construction related erosion, and would specify the design of BMPs to minimize potential erosion and sedimentation impacts. In addition to preparing a SWPPP, a Drainage, Erosion, and Sedimentation Control Plan (refer to HYD-2), would be prepared to minimize runoff. The Drainage Plan would include post-construction structural and nonstructural BMPs, including, but may not be limited to, soil cover and stabilization, filtration, and energy dissipaters. Implementation of MMs HYD-1 and HYD-2 would reduce impacts on drainage patterns that could result in substantial erosion and siltation on-site or off-site to less than significant.

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

Less Than Significant Impact With Mitigation. As shown in Figure 3-6, the Project site is located in a FEMA Special Flood Hazard Area "Zone A", otherwise known as a 100-year flood area. Construction of the proposed Project would require grading, which could alter local site drainage patterns. The introduction of impervious surfaces related to the switching station, as well as BESS and FACTS, could increase runoff at the Project site, potentially resulting in on- or off-site flooding. However, because the site is relatively flat with a gentle slope, run-off is anticipated to spread out and have relatively shallow depths and slow velocities. In addition, as shown on Figure 2-4 Conceptual Site Plan, Project facilities would be widely separated across the approximate 120-acre Project site, and therefore, they would not substantially impede or redirect flood flows.

According to the Willow Springs Specific Plan, new development within the 100-year floodplain shall be regulated in accordance with Kern County Public Works Floodplain Management and is subject to the requirements of the Floodplain Management Ordinance, Chapter 17.48 of the County Code. Project design would account for anticipated site flooding hazards and include engineering features to minimize potential impacts to facilities, and avoid or minimize potential off-site impacts. In addition, the Drainage, Erosion, and Sedimentation Control Plan would address Project site stormwater drainage and runoff, both on- and off-site (refer to MM HYD-2). The Project would comply with the most recent requirements of the Kern County Building Codes and the Flood Damage Prevention Ordinance, Chapter 17.48. With adherence to existing regulations related to Floodplain Management and MM HYD-2 impacts related flooding on- or off-site would be less than significant.

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

Less Than Significant Impact With Mitigation. As discussed above, during construction of the proposed Project, LADWP would develop a SWPPP (refer to MM HYD-1), which would include specific design features to prevent soil erosion and discharge of other construction-related pollutants that could contaminate nearby drainages. The Drainage, Erosion, and Sedimentation Control Plan (refer to MM HYD-2) would address Project site stormwater drainage and runoff. These measures would control stormwater flows, erosion, and protect water quality during runoff events. During operation approximately 26 acres of site would be impervious areas; therefore, a substantial portion of Project site would remain as pervious surfaces, allowing infiltration of precipitation and runoff. With implementation of MM HYD-2, the proposed Project would not create or contribute runoff that would exceed the capacity of drainage systems or create substantial additional sources of polluted runoff; therefore, the impact would be less than significant.

iv) Impede or redirect flood flows?

Less Than Significant Impact With Mitigation. Refer to Checklist Response 3.10.2 (c) (i and ii) above for a discussion.

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

Less Than Significant Impact With Mitigation. No major surface water bodies are located within the Project area; therefore, the Project site would not be subject to inundation from seiches or tsunamis. Furthermore, the Project site is in a relatively flat area and not subject to mudflow. As stated in Checklist Response 3.10 (c) (ii), the Project area is located in a 100-year flood hazard zone. Project design would account for anticipated site flooding hazards and include engineering features to minimize potential impacts to facilities, and avoid or minimize potential off-site impacts. In addition, the Project would comply with the most recent requirements of the Kern County Building Codes and the Flood Damage Prevention Ordinance, Chapter 17.48. The Drainage, Erosion, and Sedimentation Control Plan (refer to HYD-2) would address Project site stormwater drainage and runoff. These measures would control stormwater flows, erosion and protect water quality during runoff events. With adherence to existing regulations related to Floodplain Management and MM HYD-2 impacts related flooding on- or off-site would be less than significant.

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

No Impact. As discussed above, the Project is located within the Antelope Valley Basin and under jurisdiction of the Lahontan RWQCB-Region 6.

The proposed Project could result in short-term construction impacts to surface water quality from clearing, grading, and other construction-related activities. Stormwater runoff from the Project site during construction could contain sediment resulting from these activities. Spills or leaks from heavy equipment and machinery, construction staging areas, or building sites could also enter runoff and would typically include petroleum products such as fuel, oil and grease, and heavy metals. Because construction activities would exceed the one-acre threshold of ground disturbance, adherence to the NPDES General Construction Permit, LADWP would be required to develop a SWPPP, which would include measures to prevent soil erosion and discharge of other construction-related pollutants that could contaminate nearby drainages. The Drainage, Erosion, and Sedimentation Control Plan (refer to HYD-2) would address Project site stormwater drainage and runoff. Substantial portions of the Project site would remain permeable, and therefore, not affect regional groundwater management. Therefore, the Project would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.

3.10.3 Mitigation Measures

HYD-1 Prior to construction, a SWPPP would be developed. The SWPPP shall describe the BMPs that would be implemented to control erosion, sediment, tracking, construction materials, construction wastes, and non-stormwater flows. This would be accomplished by, but not limited to, minimizing the acreage of disturbed and exposed soil during the construction phase and implementing soil stabilization measures where necessary. Methods may include straw wattles, straw bale barriers, or silt fencing, which would be placed at construction boundaries. Gravel ramps may be installed at access points to public roadways to prevent or minimize the tracking of mud, dirt, sediment, or similar materials onto the roadway. Selection of appropriate erosion control materials will be based on soil properties and anticipated surface flow or runoff.

Diesel fuel, gasoline, oil, and other lubricants, as well as adhesives and sealants, would be utilized during the construction. Bulk quantities may be stored in the designated construction yard/staging area. Vehicle fueling and maintenance activities would be restricted to staging areas. All construction vehicles would be monitored for leaks and receive regular off-site preventive maintenance to reduce the chance of leakage.

HYD-2 Prior to construction, a Drainage, Erosion, and Sedimentation Control Plan shall be prepared. The Drainage Plan would be designed to minimize runoff and shall include engineering recommendations to minimize the potential for impeding or redirecting 100-year flood flows. The final design of the Project facilities shall be graded as required by Kern County Floodplain Damage Prevention Ordinance.

3.11 Land Use and Planning

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

3.11.1 Affected Environment

The Project site is in unincorporated Kern County, approximately eight miles west of the unincorporated community of Rosamond. It is in the southwestern portion of Antelope Valley, in the northwestern portion of the Mojave Desert. Regional access includes SR-14, a four-lane highway, located approximately eight miles east of the Project site, SR-138, a two-lane roadway, located approximately 5.5 miles south of the Project site; and I-5 located approximately 30 miles west of the Project site. Local access to the site is via Rosamond Boulevard, which abuts the Project site on its northern boundary.

Edwards Air Force Base is located approximately 25 miles east of the site. The City of Bakersfield is located approximately 50 miles to the north. Los Angeles County communities of Lancaster and Palmdale are located approximately 15 and 20 miles, respectively, southeast of the Project site.

Land uses in the Project vicinity include undeveloped land, industrial uses (solar and wind generation), agriculture, and rural residential. Existing LADWP and SCE easements, along with associated transmission lines, traverse the site diagonally from northeast to southwest. The Project site consists of approximately 120 acres of previously disturbed land consisting of desert scrub typical of the surrounding area. Land uses in the vicinity of the site include undeveloped land, industrial/renewable energy generation (i.e., wind and solar), agriculture, and rural residential.

The Project site and surrounding areas are located in Kern County Willow Springs Specific Plan boundary. As shown on Figure 2-3, the zoning designation for the Project site is RS (2.5-Acres Residential Suburban Combining). Zoning designations within the immediate Project area include: RS (1-Acres Residential Suburban Combining), RS (2.5-Acres Residential Suburban Combining), RS (5-Acres Residential Suburban Combining), and A (Exclusive Agriculture).

The Project site is not located within two miles of a public airport; the closest airfield is the Lloyd's Landing Airport. This airfield is privately owned and located approximately three miles north of the Project site. The Project site is located outside of the geographical boundaries of military restricted airspace known as the R-2508 Joint Land Use Study Complex (R-2508 Complex) in the Airport Land Use Compatibility Plan (Kern County 2012).

3.11.2 Impact Assessment

Would the Project:

a) Physically divide an established community?

No Impact. The proposed Project involves constructing a new switching station and associated facilities, as well as construction of the BESS and FACTS. The site is currently undeveloped land with transmission lines traversing the Project boundary diagonally from southwest to northeast. Additional high-voltage transmission lines are located directly west of the Project. Rosamond Boulevard abuts the Project to the north, and undeveloped lands are located east and south of the Project location.

The nearest residential uses are located adjacent to the northeast and southeast quadrants of the Project site. Scattered rural single-family residences are also located farther northeast, east, and southeast the Project site.

Access to the adjacent land uses is via Rosamond Avenue and 100th Street West. The proposed Project would not alter access to adjacent properties. The area consists of scattered rural residential parcels, and the Project would not physically divide an established community. Therefore, no impact would occur and no mitigation is required.

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. According to the Kern County General Plan, Zoning Map, and Willow Springs Specific Plan, the Project would be built primarily on undeveloped lands designated as residential. The Project site is RS (2.5-Acres Residential Suburban Combining). Project components proposed by the Project are not a specified use within the RS zone. However, existing transmission facilities currently traverse the Project site and in accordance with California Government Code 53090, utilities are exempt from county building and zoning ordinances and county general plans.

As part of LADWP's duties as the lead agency under CEQA, LADWP has conducted an impact determination regarding the Project. CEQA establishes a clear duty of the lead agency to minimize environmental impacts as practical while also balancing competing public objectives in the review and potential approval of the proposed Project (Section 15021). In accordance with CEQA's public review and disclosure guidelines, Kern County, along with other agencies, organizations, and individuals, are provided with the opportunity to review and comment on the adequacy of the analysis conducted in relation to the potential environmental impacts of the Project and on the conclusions pertaining to the environmental impacts.

The proposed Project would not conflict with any land use plan, policy or regulation. Based on analysis contained in this Initial Study/MND, the proposed Project would not create a significant adverse effect either directly or indirectly to the physical environment. As such, impacts would be less than significant.

3.11.3 Mitigation Measures

No mitigation measures are proposed.

3.12 Mineral Resources

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

3.12.1 Affected Environment

The State Mining and Reclamation Act of 1975 identifies and protects California's mineral resources. The State Mining and Reclamation Act mandated the CGS to implement a classification-designation process. Based on an assessment of local and regional mineral deposits, CGS assigns different Mineral Resource Zones (MRZs). These include:

- MRZ 1: Areas where adequate information indicates that no significant mineral deposits are present or likely to be present.
- MRZ 2: Areas where significant mineral deposits are present or likely to be present.
- MRZ 3: Areas with known mineral deposits that may qualify as mineral resources.
- MRZ 4: Areas of unknown or undetermined mineral resource potential

3.12.2 Impact Assessment

Would the Project:

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

No Impact. Kern County contains numerous mining operations that extract a variety of materials, including sand and gravel, stone, gold, dimensional stone, limestone, clay, shale, gypsum, pumice, decorative rock, silica, and specialty sand. Based on readily available public data, mineral potential has not been officially assessed by CGS." There are no known mineral resources on the Project site (CGS 2015). The Project would not have a significant impact on future mineral development. Therefore, no impacts to mineral resources are anticipated and no mitigation is required.

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. There are no mineral resource recovery sites identified on or adjacent to the Project site. The proposed Project would not result in the loss of availability of a locally-important mineral resource recovery site. No impact would occur and no mitigation is required.

3.12.3 Mitigation Measures

No mitigation measures are proposed.

3.13 Noise

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

Information in this section is based on the *Rosamond Switching Station Project – Noise and Vibration Impacts Assessment* prepared by TAHA (2019b) provided in Appendix D.

3.13.1 Affected Environment and Regulatory Framework

The standard unit of measurement for noise is the decibel (dB). The human ear is not equally sensitive to sound at all frequencies. Addressing this human hearing limitation, the A-weighted dB scale, abbreviated dBA, reflects the normal hearing sensitivity range of the human ear. On this scale, the range of human hearing extends from approximately 3 to 140 dBA.

The noise analysis discusses sound levels in terms of Equivalent Noise Level (L_{eq}). L_{eq} is the average noise level, on an energy basis, for any specific time period. The L_{eq} for one hour is the energy average noise level during the hour. The average noise level is based on the energy content (acoustic energy) of the sound. L_{eq} can be thought of as the level of a continuous noise which has the same energy content as the fluctuating noise level. The equivalent noise level is expressed in units of dBA.

Noise levels decrease as the distance from the noise source to the receiver increases. Noise generated by a stationary noise source, or "point source," decreases by approximately 6.0 dBA over hard surfaces (e.g., reflective surfaces such as parking lots or smooth bodies of water) and 7.5 dBA over soft surfaces (e.g., absorptive surfaces such as soft dirt, grass, or scattered bushes and trees) for each doubling of the distance. For example, if a noise source produces a noise level of 89 dBA at a reference distance of 50 feet, then the noise level is 83 dBA at a distance of 100 feet from the noise source, 77 dBA at a distance of 200 feet.

Noise generated by a mobile source decreases by approximately 3.0 dBA over hard surfaces and 4.8 dBA over soft surfaces for each doubling of the distance. Generally, noise is most audible when the source is in a direct line-of-sight of the receiver. Barriers, such as walls, berms, or buildings, that break the line-of-sight between the source and the receiver, greatly reduce noise levels as sound can only reach the

receiver by bending over the top of the barrier. However, if a barrier is not sufficiently high or long to break the line-of-sight from the source to the receiver, its effectiveness is greatly reduced.

Studies have shown that the smallest perceptible change in sound level for a person with normal hearing sensitivity is approximately 3.0 dBA. A change of at least 5.0 dBA would be noticeable and may evoke a community reaction. A 10 dBA increase is subjectively heard as a doubling in loudness and would likely cause a negative community reaction.

The Project site is located in a rural environment with few substantial sources of noise. It is anticipated that audible noise includes occasional traffic and aircraft flyovers. As shown in Figure 3-7, the nearest land uses are residences located adjacent to the northeast and southeast portion of the Project site. Scattered rural single-family residences are also located approximately 200 to 1,400 feet to the east of the Project site. In 2017, a noise and vibration assessment, in a similar rural environment, was completed for the LADWP Fairmont Treatment Plant Project. The Fairmont Treatment Plant is located approximately 12 miles southwest of the Project site. Those measurements indicate that rural noise levels typically range from 47.7 to 55.1 dBA L_{eq}. It is anticipated that ambient noise levels would be similar at the Project site due to the similar rural environment.

The Kern County Code (Code) establishes noise standards related to construction at the Project site. Section 8.36(h) of the Code establishes prohibitions for construction noise. The Code states that construction activity may occur Mondays through Fridays from 6:00 a.m. to 9:00 p.m. and 8:00 a.m. to 9:00 p.m. on weekends. Construction occurring outside of those hours which would be audible to a person at 150 feet from the construction site at a residence within 1,000 feet of a construction site would be prohibited.

3.13.2 Impact Assessment

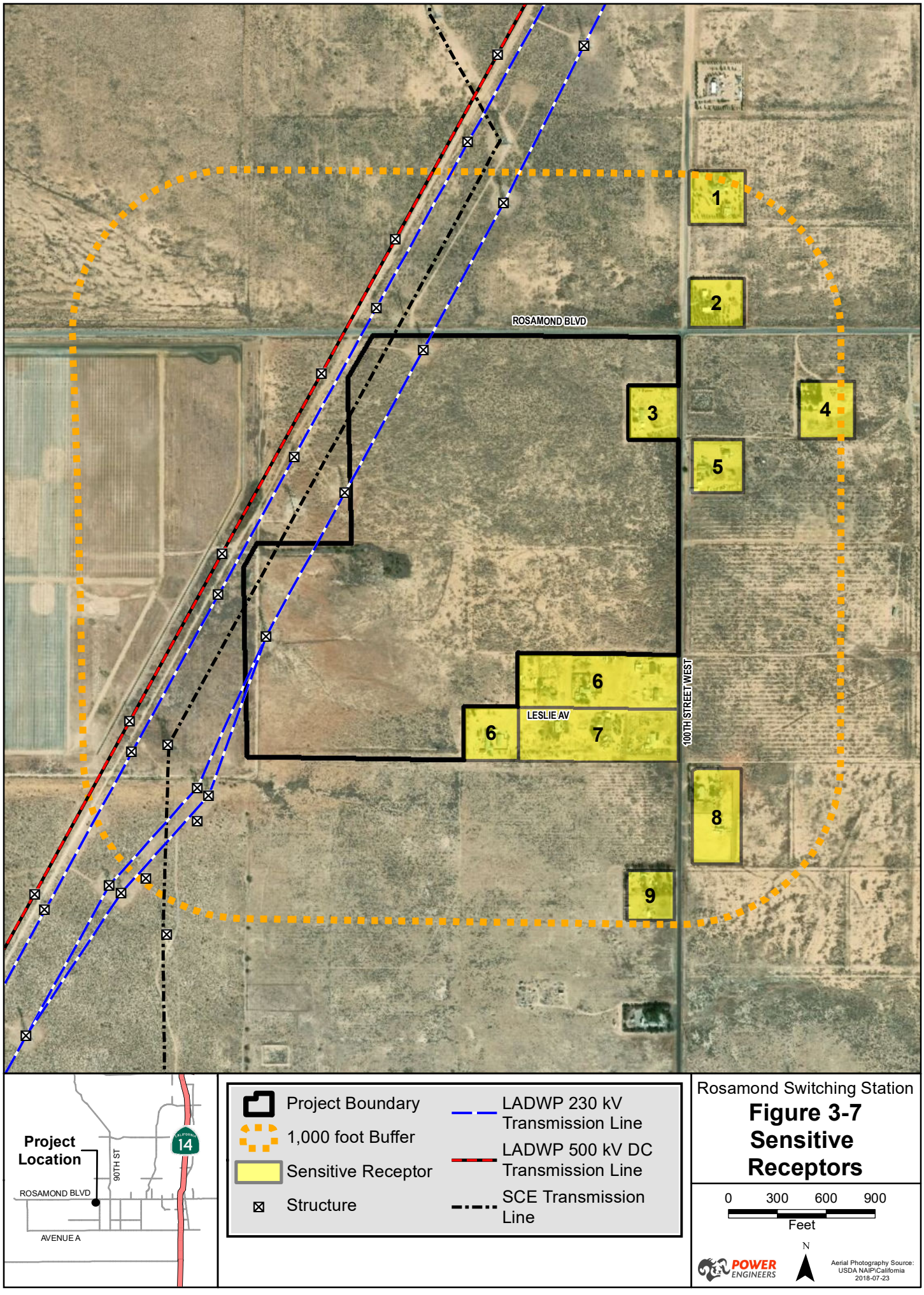
Would the Project:

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?

Less Than Significant Impact.

Construction

Noise impacts from construction of the proposed Project would fluctuate depending on the construction phase, equipment type and duration of use, distance between the noise source and receptor, and presence or absence of noise attenuation barriers. Construction activities typically require using numerous pieces of noise-generating equipment. Typical noise levels from various types of equipment that would be used during construction are listed in Table 3-10. Noise levels from individual pieces of equipment typically are between 67.7 and 82.2 dBA L_{eq} at 50 feet. To more accurately characterize construction-period noise levels, the noise levels shown in Table 3-11 take into account the likelihood that multiple pieces of construction equipment would be operating simultaneously and the typical overall noise levels that would be expected for each phase of construction. When considered as an entire process with multiple pieces of equipment, site preparation would generate the loudest noise level of approximately 89 dBA L_{eq} at 50 feet.


ROSAMOND BLVD
LESLIE AV
100TH STREET WEST
1
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Project Location
90TH ST
14
ROSAMOND BLVD
AVENUE A
Project Boundary
1,000 foot Buffer
Sensitive Receptor
Structure
LADWP 230 kV Transmission Line
LADWP 500 kV DC Transmission Line
SCE Transmission Line
Rosamond Switching Station
Figure 3-7
Sensitive Receptors
0
300
600
900
Feet
N
POWER ENGINEERS
Aerial Photography Source: USDA NAIP\California 2018-07-23

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TABLE 3-10 NOISE LEVEL RANGES OF TYPICAL CONSTRUCTION EQUIPMENT

CONSTRUCTION EQUIPMENT	NOISE LEVEL AT 50 FEET (dBA)
All Other Equipment > 5 HP	82.0
Auger Drill Rig	77.4
Backhoe	73.6
Compactor (ground)	76.2
Compressor (air)	73.7
Concrete Mixer Truck	74.8
Concrete Pump Truck	74.4
Crane	72.6
Dozer	77.7
Drum Mixer	77.0
Dump Truck	72.5
Excavator	76.7
Flat Bed Truck	70.3
Front End Loader	75.1
Generator	77.6
Gradall	79.4
Grader	81.0
Man Lift	67.7
Pickup Truck	71.0
Pneumatic Tools	82.2
Pumps	77.9
Scraper	79.6
Welder / Torch	70.0

Source: TAHA 2019b.

TABLE 3-11 TYPICAL OUTDOOR CONSTRUCTION NOISE LEVELS

CONSTRUCTION METHOD	NOISE LEVEL AT 50 FEET (dBA, L_{eq})
Ground Clearing	84
Site Preparation	89
Foundations	78
Structural	85
Finishing	89

Source: TAHA 2019b.

The Project area includes scattered rural residences within 1,000 feet of the active construction zone. Table 3-12 shows the anticipated maximum noise levels at these residences. It is anticipated that noise levels would range from 52.8 dBA Leq to 81.5 dBA Leq at nearby residences (refer to Figure 3-7). Construction noise would be audible at the nearest residences, particularly those to the south of the Project site, although equipment would primarily operate in the center of the Project site. Noise levels below represent a conservative level of analysis. Construction activity may occur Mondays through Fridays from 6:00 a.m. to 9:00 p.m. and 8:00 a.m. to 9:00 p.m. on weekends. Project construction would occur within these hours and would not require nighttime or early morning construction. Kern County has not established a quantitative noise threshold to determine noise impacts at sensitive receptors, but instead imposes time restrictions for construction.

The proposed Project would be consistent with Kern County standards and would not significantly increase noise levels at nearby residences. Therefore, the proposed Project would result in a less than significant impact related to on-site construction noise. No mitigation measures would be required.

TABLE 3-12 TYPICAL CONSTRUCTION LEVELS AT RECEPTORS

KEY TO FIGURE 3-	SENSITIVE RECEPTOR	DISTANCE (FEET) /A/	MAXIMUM NOISE LEVEL (DBA)
1	Residence on 100th St. north of Rosamond Blvd.	1,000	56.5
2	Residence on 100th St. north of Rosamond Blvd.	300	69.5
3	Residence on 100th St. south of Rosamond Blvd.	100	81.5
4	Residence on Rosamond Blvd. east of 100th St.	920	57.4
5	Residence on 100th St. south of Rosamond Blvd.	200	73.9
6	Residences on Leslie Ave.	150	77.1
7	Residences on Leslie Ave.	500	64.0
8	Residence on 100th St. south of Leslie Ave.	1,200	54.5
9	Residence on 100th St. south Leslie Ave.	1,400	52.8

/a/ Measured from the Project site to the nearest structure.

Source: TAHA 2019b.

Operations

Operational sources of noise would include mechanical equipment and periodic maintenance activities. On-site operational noise would be limited to low humming sounds from equipment, which would not be audible past the Project site boundary. Noise generated at the Project site would not be audible at the nearest residence, which is approximately 100 feet away. Therefore, the proposed Project would result in a less than significant impact related to operational noise and no mitigation would be required.

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

Less Than Significant Impact.

Construction

Construction activity can generate varying degrees of vibration, depending on the procedure and equipment. Operation of construction equipment generates vibrations that spread through the ground and diminish in amplitude with distance from the source. The effect on buildings located in the vicinity of a construction site often varies depending on soil type, ground strata, and construction characteristics of the receiver building(s). Construction-related vibration can range from no perceptible effects at the lowest vibration levels, to low rumbling sounds and perceptible vibration at moderate levels, and to slight damage at the highest levels. In most cases, the primary concern regarding construction vibration relates to damage.

The Federal Transit Administration provides vibration levels for various types of construction equipment, with an average source level reported in terms of velocity.[5] Construction activity would utilize equipment that is best characterized in Table 3-13 by large bulldozers. A large bulldozer produces a vibration level of 0.089 inch per second at 25 feet. Vibration is a localized event typically perceptible within 25 feet or less from construction equipment. The nearest receptor is located approximately 100 feet away and vibration generated at the Project site would not be perceptible at this land use. The vibration level would be less than 0.01 inch per second. Therefore, the proposed Project would result in a less than significant impact related to on-site construction vibration. No mitigation measures would be required

TABLE 3-13 VIBRATION LEVELS FOR CONSTRUCTION EQUIPMENT

EQUIPMENT	VIBRATION LEVEL AT 25 FEET (INCHES/SECOND)
Large Bulldozer	0.089
Loaded Trucks	0.076
Small Bulldozer	0.003

Source: TAHA 2019b.

Operations

Operation of the proposed Project would not include significant sources of vibration. Mechanical equipment and associated maintenance activities would not generate perceptible vibration beyond the Project site. Therefore, the proposed Project would result in a less than significant impact related to operational vibration. No mitigation measures would be required.

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 site is not located within an airport land use plan nor is it located within two miles of a public airport or private airstrip; the closest airfield is Lloyd's Landing Airport. This airfield is privately owned and located approximately three miles north of the Project site. No impact related to airport or airstrip noise would occur and no mitigation would be required.

3.13.3 Mitigation Measures

No mitigation measures are proposed.

[5] Federal Transit Administration, *Transit Noise and Vibration Impact Assessment*, May 2006.

3.14 Population and Housing

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

3.14.1 Affected Environment

According to the United States Census Bureau, 2010 Census data, Kern County's population was estimated to be 839,631, and the number of housing units in the County was estimated at 293,548 with an average household size of 3.1. The community of Rosamond's population was estimated at 18,150, and the number of housing units in Rosamond was estimated at 6,968 with an average household size of 2.93 (United States Census Bureau 2019).

Land uses in the vicinity of the site include undeveloped land, industrial uses (solar and wind generation), agriculture, and rural residential. The Project area is sparsely populated with scattered rural single-family residences. As shown in Figure 3-7, the nearest are residences are located adjacent to the northeast and southeast portion of the Project site. Scattered rural single-family residences are also located farther to the east of the Project site.

3.14.2 Impact Assessment

Would the project:

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

No Impact. The Project would not include the construction of new homes or businesses, nor would it extend roads into previously undeveloped areas or areas that are limited in potential for growth due to lack of infrastructure. Operation of the proposed Project would require maintenance activities that would be intermittent and would not require permanent staff on-site.

During construction, an average construction workforce of 56 workers per day is anticipated, with the peak number of workers estimated at 70 workers. It is anticipated that the majority of construction jobs for the proposed Project would be filled by workers from Kern County as well as Los Angeles County communities, such as Lancaster. Some specialty trade contractor's would likely come from the Los Angeles region.

Because construction would be temporary, it is not expected that workers from outside the Project vicinity would permanently relocate to the communities in the Project vicinity in order to work at the site; therefore, the proposed Project is not expected to contribute to population growth in the local area. Some workers may engage in "weekly commuting," in which they find temporary or transient housing closer to the job site during the workweek. It is expected that such workers would seek temporary housing in the local area, where rental housing as well as hotel or motel rooms would be available. According to the U.S. Census Bureau between 2013-2017 Kern County and the communities within the vicinity of the Project site had the following rental vacancy rates (United States Census Bureau 2019):

- Kern County - 5.3 percent
- Rosamond - 4.6 percent
- Lancaster - 7.3 percent
- Mojave - 7.4
- Tehachapi - 10.1 percent

The housing needs of the Project construction force would be spread throughout the surrounding communities and could use hotels, motels, mobile home sites, and campground RV spaces. A smaller percentage may use utilize vacant housing and apartment units. Therefore, there would be a sufficient supply of temporary housing options to accommodate workers who may seek temporary housing near the jobsite. The proposed Project would not induce substantial unplanned population growth, either directly or indirectly, no impact would occur as a result of the proposed Project and no mitigation is required.

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

No Impact. The proposed Project would be located on undeveloped land and would not displace housing. As stated above, the amount of vacant housing units and the amount of temporary housing accommodations in the Project area would accommodate the construction workforce during peak construction. The proposed Project would not displace substantial numbers of people, necessitating the construction of replacement housing elsewhere. Therefore, no impact would occur and no mitigation is required.

3.14.3 Mitigation Measures

No mitigation measures are proposed.

3.15 Public Services

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
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:				
Fire protection?	☐	☒	☐	☐
Police protection?	☐	☒	☐	☐
Schools?	☐	☐	☐	☒
Parks?	☐	☐	☐	☒
Other public facilities?	☐	☐	☐	☒

3.15.1 Affected Environment

Fire

The Kern County Fire Department (KCFD) provides fire suppression and prevention, along with emergency medical services, to unincorporated areas of Kern County, as well as the cities of Arvin, Delano, Maricopa, McFarland, Ridgecrest, Shafter, Taft, Tehachapi and Wasco. KCFD has over 546 uniformed firefighters stationed in 46 fire stations throughout Kern County. KCFD also participates in 14 Mutual Aid Agreements with neighboring fire suppression organizations to further strengthen emergency services response capabilities (KCFD 2019a). The closest fire station to the Project is Station #15 Rosamond Station located at 3219 35th West Street in Rosamond.

Police/Sheriff

Kern County Sheriff's Department (Sheriff's Department) provides law enforcement for unincorporated Kern County. The Sheriff's Department is comprised of five major bureaus: Office of the Undersheriff, Support Services Bureau, Detentions Bureau, Law Enforcement Bureau, and Investigations Bureau; each bureau is be divided in divisions that manage identified assignments. The Law Enforcement Bureau is comprised of Metro Patrol, Communications and Substations.

The closest substation to the Project site is the Rosamond Substation, located at 1379 35th Street West, Rosamond. The Rosamond Substation serves approximately 20,000 residents. Response times to the service area range from three to 10 minutes for non-emergency response, and approximately three to six minutes for emergency response (Sheriff Department 2019).

In addition, the California Highway Patrol provides law enforcement through patrol of State and County highways throughout Kern County. The California Highway Patrol's Central Division, Bakersfield Area (9855 Compagnoni Street, Bakersfield) serves Bakersfield and Kern County and is available to report to

major accidents anywhere in the unincorporated areas and has mutual aid agreements with other agencies to assist in emergencies. The Bakersfield area's jurisdiction encompasses two major freeways (SR-99 and SR-58).

3.15.2 Impact Assessment

Would the Project:

a) 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 following public services:

Less Than Significant Impact With Mitigation.

Fire protection?

The Project site and immediate area are not located in "Hazardous Fire Area" as designated by the Kern County General Plan, Safety Element (Kern County 2009). Additionally, the Project site and immediate area are designated as a "High Fire Severity Zone" by CAL FIRE (CAL FIRE 2007) nor is the site located in a "fire threat area" as designated by CPUC fire hazard maps (CPUC 2019). As stated in Checklist Response 3.9.2 (g) there is a remote possibility of small fires at the site due to electrical sparks, combustion of fuel oil, hydraulic fluid, mineral oil, flammable liquids, explosions, and over-heated equipment. The majority of the equipment would be of nonflammable material (aluminum and steel,). During construction, standard fire prevention and suppression measures would be implemented for the proposed Project.

No permanent residential structures would be constructed as part of the proposed Project. The proposed Project would not induce substantial population growth on the site or in the surrounding area. The unmanned switching station, and BESS and FACTS facilities would be fenced as well as managed, monitored, and controlled 24 hours per day by remote controlled motion-detection cameras. Project is not anticipated to exceed the existing fire service capacities and would not interfere with established service ratios or response times. Therefore, additional permanent fire protection services, equipment, facilities, or personnel is not anticipated to be required. Therefore, impacts related to fire protection and emergency medical services would be less than significant.

As discussed in Checklist Response 3.9.2 (g), operation of the proposed Project would introduce Project components (e.g., lithium ion batteries) that could potentially increase the risk of fire. In order to reduce the risk reduce of fire during operation of Project facilities including those associated with lithium ion batteries, an Emergency Acton Plan would be prepared which would address proper planning, risk assessment, storage methods, and response protocols. While the Project would not result in adverse physical impacts associated with the provision of new or physically altered governmental facilities, implementation of MM HAZ-2 would ensure coordination with the KCFD.

Short-term congestion related to the construction phase would be minimized with the implementation of a Traffic Control Plan (refer to MM TRA-1) as described below in Checklist Response 3.17.2 (a). The Plan would include measures to avoid disruptions or delays in access for emergency service vehicles. The applicable fire department, ambulance, and paramedic services would be notified in advance of Project construction. The Plan would also include contact information for those agencies, assign responsibility for notifying the service providers, and specify coordination procedures. Once completed, the proposed Project would operate primarily as an unmanned facility and generate a negligible amount of traffic and potential traffic disruptions.

Police protection?

The proposed Project does not include residential or commercial components that would increase the population in the area resulting in the need to provide additional police protection services, equipment, or facilities. As stated above, security measures at the site include complete enclosure of the site with fencing as well as managed, monitored, and controlled 24 hours per day by remote motion-detection cameras. The proposed Project not anticipated to exceed the existing police protection capacities, and would not interfere with established service ratios or response times. Therefore, additional, permanent police protection services, equipment, facilities, or personnel is not anticipated to be required. Therefore, no impacts related to police protection services would occur during operation of the proposed Project.

Construction of the proposed Project would generate truck and employee traffic along Rosamond Boulevard, which could temporarily result in a minor increase of the accident potential in these areas resulting in an increase in demand for police protection services over existing levels; however, the small number of incidents would be well within the capability of existing police facilities to accommodate. The slight and temporary increase in needed services during construction activities would not result in the construction of new facilities or a major alteration to existing facilities such that a significant impact to the physical environment would occur. Further, implementation of MM TRA-1 would reduce impacts related to traffic congestion. The Plan would include measures to avoid disruptions or delays in access for emergency service vehicles. The applicable Sheriff's Department and California Highway Patrol would be notified in advance of Project construction. The Plan would also include contact information for those agencies, assign responsibility for notifying the service providers, and specify coordination procedures. Once completed, the proposed Project would operate primarily as an unmanned facility and generate a negligible amount of traffic and potential traffic disruptions.

Schools, Parks, or Other Facilities?

No Impact. The Project would not result in an increase in population or facilities that would require the services of schools, parks or other facilities, or result in the need for new or physically altered facilities. The temporary workforce would not result in an increase in population that would adversely affect the local schools, parks, or other populations. No impact would occur and no mitigation would be required.

3.15.3 Mitigation Measures

Refer to MM HAZ-2 in Section 3.9.3 (Hazards and Hazardous Materials) and MM TRA-1 in Section 3.17.3 (Transportation), no additional mitigation measures are required.

3.16 Recreation

	Potentially Significant Impact	Less Than Significant with Mitigation	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?	☐	☐	☐	☒
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?	☐	☐	☐	☒

3.16.1 Affected Environment

There are no parks within the vicinity of the Project site. According to the Willow Springs Specific Plan (Kern County 1992), there are no parks or community buildings within the Specific Plan boundary with the closest park facilities located in Rosamond.

3.16.2 Impact Assessment

Would the Project:

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 Impact. Implementation of the proposed Project would not induce population growth or result in an increase in the demand for existing neighborhood or regional park facilities; therefore, no impacts related to demand or use of recreation facilities would occur and no mitigation is required.

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 Impact. As stated above, the proposed Project does not include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment. No impact would occur and no mitigation is required.

3.16.3 Mitigation Measures

No mitigation measures are proposed.

3.17 Transportation

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

Information in this section is based on the *Traffic Study for LADWP Rosamond Switching Station* prepared by KOA (2019) provided in Appendix E.

3.17.1 Affected Environment

Project Area

The traffic study for the proposed Project quantitatively assesed Project construction impacts on roadway segments on the construction truck and employee vehicle trip route. Roadway segment counts were compiled from counts conducted along Rosamond Boulevard, between the Project site and SR-14. The following are the study roadway segments included in the traffic impact analysis:

- Rosamond Boulevard east of 100th Street
- Rosamond Boulevard east of 55th Street
- Rosamond Boulevard west of 25th Street

The daily traffic count summaries collected for these study roadway segments are provided in the Appendix E of this Initial Study/MND (Appendix A of the traffic study).

Analysis Methodology

The traffic report includes analysis of the trip distribution, trip assignment, and daily roadway volumes for the designated study area. The analysis is based on the impacts of Project during peak construction activity. Project construction would peak in 2022. This year was defined as the future analysis year, because it represents the period of highest combined construction truck and worker traffic.

Vehicle Miles Traveled

Updated CEQA Guidelines became effective on December 28, 2018, this change required vehicle miles traveled (VMT) metrics in CEQA transportation analysis efforts instead of level of service (LOS). LOS metrics can continue to be used under local agency review of traffic circulation, but automobile delay cannot be the determinant of impacts.

VMT analysis is required under CEQA to review potential impacts that could be caused by development projects. VMT metrics are not an appropriate measurement of Project construction activity, however. VMT data focuses on trip type, automobile use, transit use, walking and bicycling, and general auto trip reduction qualities of development and the management of travel to and from development sites. As Project construction activities involve necessary travel to and from the site by construction employees and the necessary use of construction truck delivery and hauling operations, VMT is not an appropriate analysis tool and has been excluded from this analysis.

Existing Conditions

Rosamond Boulevard provides direct vehicular access to the Project site. Adjacent to the Project site, this is a two-lane paved roadway with a striped centerline. Shoulders are soft (no curbs, dirt graded areas on each side). Posted speed limit is 45 mph.

West of the intersection with 35th Street, Rosamond Boulevard transitions into a four-lane roadway, with that configuration continuing to the east from that point. There is a center striped two-way left-turn lane. Posted speed limit is also 45 mph in this area.

In the vicinity of the SR-14 interchange, the roadway has a posted speed limit of 35 mph.

Project Construction Trips

Project Trip Generation Methodology

Project trip generation calculations included construction truck trip estimates and construction employee vehicle trips. The trip generation totals were determined based on the period that would generate the highest number of combined trips for the Project. Truck volumes were multiplied by a Passenger Car Equivalency (PCE) factor of 2.5 to estimate the real effect of total Project. This methodology is consistent with truck studies in the area.

Although some carpooling would likely occur during Project construction, trip generation calculations conservatively assumed that each employee would commute in a single personal vehicle. To provide a conservative analysis, the total number of trips analyzed represents the highest anticipated trips generated by both construction employees and trucks.

3.17.2 Impact Assessment

Would the Project:

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

No Impact. As analyzed in Checklist Response 3.17.2 (b), Project construction and operation would not generate substantial traffic as compared to existing condition. The proposed Project would not conflict with the applicable congestion management program, ordinances, or policies related to the circulation system. No impact would occur and no mitigation is required.

b) Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?

Less Than Significant Impact.

The total daily Project trips defined in Table 3-14 represent one-way inbound and outbound trips by both the construction personnel vehicles and construction trucks. Foundation work on the Project would be the most intense construciton period, with 153 concrete truck trips to and from the site over a 180-day working period. Trash haul trucks and delivery trucks would add additional trips.

The construction daily trip numbers are based on the estimated peak day of construction, based on these totals: the peak day truck trip totals would be up to 10 concrete trucks, four trash trucks, and four delivery trucks in use at the peak period of construction or 18 trucks. Each truck was assumed to make two round trips per day.

- 36 daily peak-period truck round trips
- 70 construction employees on-site

The 36 daily truck trips are round trips, so those were multiplied by two, with a total of 72 one-way trips. Those trips were then multiplied by a PCE rate of 2.5 trip number of 180.

TABLE 3-14 PROJECT CONSTRUCTION WEEKDAY TRIP GENERATION

TRIP GENERATION	AVERAGE DAILY PCE TRIPS		
	Trucks*	Employee	Total
Field Personnel	0	140	140
Construction Trucks	180	0	180
TOTAL TRIPS	180	140	320
*Truck trips include a PCE factor of 2.5.			

Source: KOA 2019.

During the peak period of construction, the Project site is estimated to generate a weekday daily total of 320 passenger car-equivalent trips.

This total daily number of trips is included in the analysis of the daily capacity of the affected roads while also accounting for existing traffic volumes. Peak-hour trips related to construction (i.e., during the morning and evening period when workers would be arriving and departing the site) were not considered because there is no discernable peak traffic period in the vicinity of the Project site.

Project Trip Distribution

Construction employee and truck vehicle trip patterns were based on the local roadway network that would provide primary access to the Project site.

Rosamond Boulevard has a full-access interchange with the SR-14 freeway to the east of the Project site. Project construction-period traffic would use Rosamond Boulevard to access the regional highway network. The analyzed roadway segments were therefore along Rosamond Boulevard, on two-lane and four-lane portions of the roadway, between the Project site and SR-14. All of the Project-generated trips were assumed to travel across all of the analyzed study roadway segments.

Roadway Impact Analysis

As both existing and future projected volumes at the analyzed roadway segments are very low and do not approach the capacities of the roadways, this analysis focuses on daily volumes.

The tables below provide a comparison of the analyzed existing and future volumes with and without the Project, for the study roadway segments. Comparisons to the total roadway capacity are provided, based on the lane configuration of the roadways, and daily volume capacities generally defined by the Highway Capacity Manual that are 10,000 vehicles per lane for major roadways.

Table 3-15 provides a Project volume analysis based on the existing period analysis, included here based on CEQA precedence that Project impact analyses should include a scenario without future estimated traffic growth.

TABLE 3-15 PROJECT STUDY ROADWAY SEGMENT - EXISTING VOLUMES ANALYSIS

ROADWAY SEGMENT	EXISTING DAILY VOLUMES	DAILY CONSTRUCTION TRIPS	EXISTING WITH CONSTRUCTION	ROADWAY CAPACITY
Rosamond Boulevard east of 100th Street W	1,226	320	1,546	20,000
Rosamond Boulevard east of 50th Street W	6,297	320	6,617	20,000
Rosamond Boulevard west of 25th Street W	18,651	320	18,971	40,000

Source: KOA 2019.

Table 3-16 provides a Project volume analysis at the roadway segments based on a future volume analysis. Future year-2022 volumes were defined by multiplying the existing year-2019 volumes by an ambient growth rate for the area defined by modeled sub-regional analysis output within the Metro Congestion Management Program.

TABLE 3-16 PROJECT STUDY ROADWAY SEGMENT - FUTURE VOLUMES ANALYSIS

ROADWAY SEGMENT	EXISTING DAILY VOLUMES	FUTURE 2022 WITHOUT CONSTRUCTION	DAILY CONSTRUCTION TRIPS	FUTURE 2022 WITH CONSTRUCTION	ROADWAY CAPACITY
Rosamond Boulevard east of 100th Street W	1,226	1,276	320	1,596	20,000
Rosamond Boulevard east of 50th Street W	6,297	6,553	320	6,873	20,000
Rosamond Boulevard west of 25th Street W	18,651	19,408	320	19,728	40,000

Source: KOA 2019.

For the remainder of the construction period, construction traffic volumes would decline from the peak levels analyzed. The roadway capacities of the roadway segments range from 20,000 to 40,000 vehicles per day. The roadway segments analyzed would operate in the range of 1,596 to 19,728 total vehicles per day based on the construction period numbers in Table 3-15 and Table 3-16.

On all of the roadway study segments, adequate capacity would remain during the construction period. At least half of the roadway capacity would remain. During the other non-peak months of the overall construction schedule, traffic volumes would decline from these peak levels. Therefore, the proposed Project would not create any significant impacts at the analyzed locations and impacts would be less than significant and no mitigation would be required.

Project Operational Trips

While it is anticipated that the proposed Project would require intermittent maintenance to be conducted by the Project staff or contractors, such maintenance would be minimal requiring a negligible amount of traffic trips on an annual basis. Operational impacts would therefore be less than significant.

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

No Impact. Primary access to the Project site during construction and operation would be via Rosamond Boulevard. A secondary access road would also be constructed off 100th Street West. New internal access roads would be constructed to access Project facilities. All road improvements would be designed by a registered civil engineer to meet development standards, as applicable. The proposed Project would not substantially increase safety hazards due to a geometric design feature or incompatible use. No impact would occur and no mitigation is required.

d) Result in inadequate emergency access?

Less Than Significant Impact With Mitigation. No road closures are anticipated during Project construction. Traffic control measures, such as flag persons, may be required at specific times to facilitate construction vehicle ingress to and egress from Rosamond Boulevard. Interior access roads within the Project would allow for sufficient access for fire trucks and emergency responders. A Traffic Control Plan (refer to MM TRA-1) would be prepared, which would include measures to avoid disruptions or delays in access for emergency service vehicles and to keep emergency service agencies informed of any road or traffic impacts. The Plan would also include advance notification to police and fire departments of Project construction activities. With implementation of MM TRA-1 impacts relative to emergency access would be less than significant.

3.17.3 Mitigation Measures

TRA-1 Prior to the start of construction, LADWP shall submit a Traffic Control Plan to agencies with jurisdiction over public roads that would be directly affected by construction activities. Although no road closures are anticipated, the Plan shall define the use of flag persons, warning signs, lights, barricades, cones, etc. to control construction traffic as necessary. The Plan shall include measures to avoid disruptions or delays in access for emergency service vehicles. Appropriate police department, fire department, ambulance services, and paramedic services shall be provided with the Plan and notified in advance of Project construction by LADWP. The Plan shall also include contact information for those agencies, assign responsibility for notifying the service providers, and specify coordination procedures.

3.18 Tribal Cultural Resources

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
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), or	☐	☒	☐	☐
b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	☐	☒	☐	☐

3.18.1 Affected Environment

Native American Coordination

Sacred Lands Search Letter and Responses

POWER performed a sacred lands file search in 2016 for the Barren Ridge Renewable Transmission Project, located in the immediate Project area. The purpose of the sacred lands file search request was to determine if any known Native American cultural properties (e.g., traditional use or gathering areas, places of religious or sacred activity) are present within or adjacent to the Project area. The sacred lands file records search failed to indicate the presence of Native American cultural resources within the immediate Project area.

AB 52 Consultation

On January 20, 2018 LADWP received a list of tribes from the NAHC with traditional land or cultural places located in Kern County. Pursuant to AB 52 procedures, LADWP sent notification letters to the Native American tribes identified by NAHC. The letters informed the tribes of the proposed Project and included a brief Project description, location map, and Project contact information. The following Native American tribes were sent notification letters:

- Big Pine Paiute Tribe of the Owens Valley, Genevieve Jones, Chairperson
- Big Pine Paiute Tribe of the Owens Valley, Danelle Gutierrez, Tribal Preservation Officer
- Kitanemuk & Yowlumne Tejon Indians, Delia Dominguez, Chairperson

- San Manuel Band of Mission Indians, Lee Clauss, Director-CRM Department
- San Manuel Band of Mission Indians, Lynn Valbuena
- Chumash Council of Bakersfield, Julio Quair, Chairperson
- Kern Valley Indian Community, Julie Turner, Secretary
- Kern Valley Indian Community, Robert Robinson, Chairperson
- Santa Rosa Indian Community of the Santa Rosa Rancheria, Rueben Barrios Sr., Chairperson
- Tejon Indian Tribe, Octavio Escobedo, Chairperson
- Tubatulabals of Kern Valley, Robert L. Gomez, Jr., Tribal Chairperson
- Tule River Indian Tribe, Neil Peyron, Chairperson

San Manuel Band of Mission Indians and Tule River Indian Tribe responded. San Manuel Band of Mission Indians requested additional excavation at the Project site to determine presence/absence of cultural resources and the Tule River Indian Tribe requested continued updates related to the proposed Project.

POWER undertook a Phase I cultural resource survey on several parcels of land totaling 19.3 acres in support of proposed construction of the Project on October 5 and 6, 2017 and prepared the *Phase I Archaeological Resource Survey* report (POWER 2018). No cultural resource discoveries were made inside the Project footprint. However, as a result of tribal responses to LADWP AB 52 inquiries, LADWP requested that POWER staff shovel test the proposed 19.3 Project footprint of the switching station with a tribal monitor observing the field work. The results of the shovel test were negative and POWER revised the *Phase I Archaeological Resources Survey* report (POWER 2018) into an *Extended Phase I Archeological Resource Survey* (POWER 2019b). Subsequent to the 2017 cultural survey and 2018 shovel testing, the Project footprint was expanded to accommodate the proposed BESS and FACTS. POWER conducted an additional Phase I cultural resource survey on August 20, 21, and 22, 2019 on several parcels of land totaling 97.5 acres for the survey area. San Manuel Band of Mission Indians reviewed the results of the 2019 field survey and had no further request.

3.18.2 Impact Assessment

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

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

Less Than Significant With Mitigation. As discussed in Checklist Responses 3.5.2 (a), a literature and records search was conducted at the SSJVIC on October 12, 2017. Records consulted at the SSJVIC included the inventory of the National Register of Historic Places, the California Register of Historical Resources, California Historic Landmarks list, topographic maps showing the locations of sites and surveys, and historic topographic maps. Because of the limited potential impacts assumed by the Project, a one-half mile search radius was utilized. The objective of this records search was to identify prehistoric and historic period archaeological and built-environment resources that had been previously recorded within the study area during prior cultural resource investigations.

This research effort indicated that several historic resources are located within a one-half mile of the Project area (refer to Table 3-6). Many of the parcels near the Project have been surveyed by professional archaeologists in the last 40 years. The last survey on the Project site was conducted in January 2014 along the LADWP easement in the northwestern portion of the Project site. Research shows that the rest of the Project site has not been surveyed previously.

The region has been farmed since about 1890 and few cultural resources are known for this area. Since few area resources are known and the site was previously disturbed due to recent transmission line development within and adjacent to the LADWP and SCE easements and along Rosamond Boulevard, the potential for the discovery of cultural resources is considered low.

The field surveys and cultural resources analysis conducted in support of the proposed Project did not identify any archaeological resources located on-site or within the Project area. However, the lack of surface evidence of archaeological resources does not preclude their subsurface existence. As such, earth moving construction activities may encounter intact subsurface archaeological deposits. Implementation of MMs CULT-1 through CULT-3 (refer to Section 3.5.3, Cultural Resources) would reduce impacts to cultural resources to less than significant. In addition, MMs TCR-1 and TCR-2 would ensure continued coordination with Native American tribes.

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

Less Than Significant With Mitigation. Refer to Checklist Response 3.17.2 (a) above for a discussion.

3.18.3 Mitigation Measures

TCR-1 Tribes that have requested notification, including the San Manuel Band of Mission Indians Cultural Resources Department and Tule River Tribe, shall be contacted, as detailed in CUL-1, of any pre-contact cultural resources discovered during Project implementation, and be provided information regarding the nature of the find, so as to provide Tribal input with regards to significance and treatment. Should the find be deemed significant, as defined by CEQA (as amended, 2015), a Cultural Resources Monitoring and Treatment Plan (Plan) shall be created by the archaeologist, in coordination with Tribal representatives, and all subsequent finds shall be subject to this the monitoring Plan. This Plan shall allow for a monitor to be present that represents the Tribes for the remainder of the Project, should this be requested by an interested Tribe.

TCR-2 Any and all archaeological/cultural documents created as a part of the Project (isolate records, site records, survey reports, testing reports, etc.) shall be supplied to the Lead Agency, which will share this information with interested Tribes. The Lead Agency shall, in good faith, consult with interested Tribes throughout Project construction.

3.19 Utilities and Service Systems

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would the project:				
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 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?	☐	☐	☐	☒
d) Generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	☐	☐	☒	☐
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	☐	☐	☐	☒

3.19.1 Affected Environment

A variety of local and regional purveyors provide and maintain utility and service system facilities associated with water, sewer, electric, gas, telephone, and cable within the Project area. Existing utilities in the area include: potable water, reclaimed water, sewer, electrical, telecommunications, gas, and fiber optic.

3.19.2 Impact Assessment

Would the Project:

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

Less Than Significant Impact. During construction, wastewater would be contained within portable toilet facilities and disposed of by contract at an approved disposal site. The switching station, BESS, and FACTS would be unmanned with automated features and remote control capabilities. No full-time, permanent personnel would be required at the Project site. Routine maintenance and inspection of Project facilities is anticipated to include weekly site visits with maintenance at the site anticipated to occur approximately once a month. The Project includes a control house containing restroom facilities for use of

personnel on-site during operation and maintenance activities. To support the restroom facilities located in the control house, a septic system would be installed. The system would be installed in conformance with the standard conditions and permit requirements of the Kern County Environmental Health Services Division; the proposed Project would not exceed wastewater treatment requirements. The Project would not result in the relocation or construction wastewater treatment facilities, natural gas, or telecommunication facilities. In order to bring electricity into the switching station facilities, approximately 10 to 20 new distribution poles would be constructed along Rosamond Avenue and 100th Street West (height approximately 45 feet or less). It is anticipated that LAWDP would coordinate with SCE to obtain electricity for the site and tie into the existing electrical distribution system. The Project would not require or result in the substantial relocation or construction of public utility service systems; therefore, impacts would be less than significant and no mitigation would be required.

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

Less Than Significant Impact. Construction activity would require the use of water for dust control during construction activities. Water for construction purposes would be obtained from a new well proposed on-site. As stated above, no full-time, permanent personnel would be required at the Project site. Routine maintenance and inspection of Project facilities is anticipated to include weekly site visits with maintenance at the site anticipated to occur approximately once a month. The Project includes a control house containing restroom facilities for use of personnel on-site during inspection and maintenance activities.

The proposed Project may involve limited groundwater usage for non-potable water supply for the switching station facilities during construction and operation and would not require or result in the construction of new water infrastructure or expansion of existing facilities. In addition, LAWDP would coordinate with Kern County and obtain all necessary permits for construction of the proposed well. The proposed Project water usage would not adversely affect the available water supply that could be used by surrounding land uses. It is anticipated that sufficient water supplies would be available to serve the Project; therefore, impacts of the proposed Project on water supply would be less than significant.

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?

No Impact. The proposed Project would include a restroom and on-site septic system. It would not generate wastewater that would require treatment at a water treatment plant. No impact would occur and no mitigation would be required.

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

Less Than Significant Impact. Due to the nature of the Project, solid waste generated during the Project's operation phase would be minimal. However, construction of the proposed Project would generate wastes such as non-hazardous metal and refuse from construction workers that would be recycled or disposed of in local or regional facilities. Construction of the Project would marginally increase the amount of solid waste disposal above current levels. However, due to the small scale and short duration of Project construction, construction of the Project would not generate solid wastes in excess of state or local standards, or in excess of the capacity of local infrastructure nor would it impair the attainment of solid waste reduction goals. Impacts relative to construction-related solid waste disposal would be less than significant and no mitigation would be required.

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

No Impact. The solid waste generated during the construction and operation of the proposed Project would be disposed of in accordance with all applicable state, regional, and local statutes and conservation measures regarding solid waste and recycling of waste materials. No impact would occur and no mitigation would be required.

3.19.3 Mitigation Measures

No mitigation measures are proposed.

3.20 Wildfire

	POTENTIALLY SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
Would the Project:				
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☒
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	☐	☐	☐	☒
c) Require the installation 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 on the environment?	☐	☒	☐	☐
d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	☐	☐	☒	☐

3.20.1 Affected Environment

As stated in Section 3.15.1, KCFD provides fire suppression and prevention and emergency medical services for unincorporated areas of Kern County and the cities of Arvin, Delano, Maricopa, McFarland, Ridgecrest, Shafter, Taft, Tehachapi and Wasco. The Project site and surrounding area are served by the Rosamond Station #15, located at 3219 35th West Street.

The Project site and immediate area are not located in "Hazardous Fire Area" as designated by the Kern County General Plan, Safety Element (Kern County 2009). Additionally, the Project site and immediate area are not designated as a "Fire Hazard Severity Zone" (CAL FIRE 2007) nor is the site located in a "fire threat area" as designated by California Public Utilities Commission fire hazard maps (CPUC 2019).

The Kern County Emergency Operations Plan establishes an emergency management organization and assigns functions and tasks consistent with California's Standardized Emergency Management System and the National Incident Management System. The Emergency Operations Plan provides for the integration and coordination of planning efforts of the County/Operational Area with those of its cities, special districts and the state. The content is based on guidance provided by the California Emergency Management Agency, the Federal Emergency Management Agency and Department of Homeland Security. The intent of the Plan is to facilitate emergency response and short-term recovery by providing a framework for response to all significant emergencies, regardless of the nature of the event (KCFD 2019b).

The Emergency Operations Plan is comprised of four major parts as follows:

- **Basic Plan** – Overview of County/Operational Area's emergency management program, Emergency Management Organization, and concept of emergency operations.
- **General Procedures** – Emergency procedures to be implemented by employees at the time of a major emergency or disaster.
- **Emergency Operations Center Procedures and Annexes** – Procedures, annex and checklists for each major Emergency Operations Center function, and resource and contact lists.
- **Contingency Plans** – Event-specific information and emergency instructions (e.g., Terrorism). The Contingency Plans are separate documents that may be implemented independent of the Plan and are incorporated into the Plan by reference.

3.20.2 Impact Assessment

Would the Project:

a) Substantially impair an adopted emergency response plan or emergency evacuation plan?

No Impact. Kern County has developed an Emergency Operations Plan which identifies emergency response and actions. The Plan identifies emergency procedures to be implemented at the time of a major emergency or disaster. The Plan facilitates emergency response and short-term recovery by providing a framework for response to all significant emergencies, regardless of the nature of the event. The proposed Project would not impair implementation of or physically interfere with implementation of County's Emergency Operations Plan or any emergency response plan or emergency evacuation plan. Therefore, no impact would occur and no mitigation would be required.

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 does not include any habitable structures. Furthermore, the Project site and immediate area are not located in "Hazardous Fire Area" as designated by the Kern County General Plan, Safety Element (Kern County 2009). Additionally, the Project site and immediate area are not designated as a "Fire Hazard Severity Zone." Therefore, the Project would not exacerbate wildfire risks and would not expose occupants to pollutant concentrations from a wildfire.

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 on the environment?

Less Than Significant Impact With Mitigation. As stated in Checklist Response 3.9.2 (g), during construction there is a possibility of, electrical sparks, combustion of fuel oil, hydraulic fluid, mineral oil, flammable liquids, explosions, and over-heated equipment may cause small fires at the site. The majority of the equipment would be of nonflammable material (aluminum and steel). During construction-related activities, standard fire prevention and suppression measures would be implemented for the proposed Project. Portable fire extinguishers of appropriate sizes and types would be located throughout the Project site.

Lithium ion batteries used in the BESS could potentially increase the risk of fire at the Project site. To reduce the risk of fire from lithium ion batteries each battery module rack would be located within a metal

storage container, retrofitted to add insulation, air-conditioning, and fire suppression with separate enclosures for the electronic controls, inverters, and rectifiers.

The built-in fire protection system would utilize suppression through cooling, isolation, and containment. Each battery storage container would likely include a gaseous fire suppressant agent and an automatic fire extinguishing system with sound and light alarms. The system would be designed in accordance with the National Fire Protection Association safety standards including an automatic shutdown system for fans that keep the container sealed when the fire extinguishing system is activated. The fire suppressant agent is deployed by a releasing panel that uses an aspirating smoke detection system. In addition, each container would also have a manual release. A disable switch would be provided for maintenance to prevent accidental discharge while the system is being serviced. As such, the risk of fire from lithium ion batteries would be reduced to a less than significant level.

The proposed Project would comply with all existing regulations and requirements of the Kern County General Plan Safety Element and the Kern County Fire Code (Chapter 17.32), and would be reviewed for adherence to prevention measures for fires. Implementation of MM HAZ-2 and adherence to federal, state, and local requirements and regulations, would reduce fire ignitions and prevent the spread of fires, impacts related to the risk of fire would be reduced to less than significant.

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?

Less Than Significant Impact. The Project site and immediate surrounding area are relatively level, with a low potential for landslides. As discussed in Checklist Response 3.10.2 (c) above, the Project would not substantially alter the existing drainage patterns of the site or result in substantial erosion or siltation on- or off-site. Development of the switching station, BESS, or FACTS would not result in large slopes on the Project site. Therefore, implementation of the proposed Project would not expose people or structures to significant risks due to runoff, post-fire slope instability, or drainage changes.

3.20.3 Mitigation Measures

Refer to MM HAZ-2 in Section 3.9.3 (Hazards and Hazardous Materials).

3.21 Mandatory Findings of Significance

	Potentially Significant Impact	Less Than Significant with Mitigation	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?	☐	☒	☐	☐
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	☐	☒	☐	☐
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☒	☐	☐

Would the Project:

a) 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, 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?

Less Than Significant With Mitigation. As addressed in the pertinent sections of this Initial Study, the proposed Project would not substantially degrade the quality of the environment. As discussed in Section 3.4 (Biological Resources) of this Initial Study/MND, Project construction would not result in significant impacts on biological resources with implementation of MMs BIO-1 through BIO-12. As discussed in Section 3.5 (Cultural Resources) there are no known cultural resources on the Project site. However, because there is the potential for discovery of previously-unknown subsurface resources, MMs CUL-1 through CUL-3 would be implemented to reduce impacts to a less than significant level. In addition, implementation of MMs TCR-1 and TCR-2 would reduce impacts relative to tribal cultural resources to a less than significant level.

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

Less Than Significant Impact With Mitigation. As described in the previous sections of this Initial Study, Checklist Responses 3.1 through 3.20, the proposed Project would result in less than significant impacts with incorporation of mitigation measures. Project impacts would be individually limited and not cumulatively considerable due to the site-specific nature of the potential impacts.

Potentially significant impacts that can be reduced to less than significant level with implementation of recommended mitigation measures include the following areas: biological resources, cultural resources, geology and soils (erosion or loss of top soil), hazards/hazardous wastes, hydrology and water quality, public services (site access during construction), transportation, tribal cultural resources, and wildfire (fire hazards). These impacts would primarily be related to construction activities, would be temporary in nature, and would not substantially contribute to any potential cumulative impacts associated with these environmental topics. Potentially significant biological resources impacts would be reduced to less than significant with implementation of MMs BIO-1 through BIO-12. Potentially significant cultural resources impacts would be reduced to less than significant with implementation of MMs CUL-1 through CUL-3. Potentially significant impacts related to geology and soils would be reduced to less than significant with implementation of MM BIO-9. Potentially significant impacts related to hazards and hazardous materials would be reduced to less than significant with implementation of MMs HAZ-1 and HAZ-2. Potentially significant impacts related to hydrology and water quality would be reduced to less than significant with implementation of MMs HYD-1 and HYD-2. Potentially significant public service impacts would be reduced to less than significant with implementation of MM TRA-1. Potentially significant transportation impacts would be reduced to less than significant with implementation of MM TRA-1. Potentially significant tribal cultural resources impacts would be reduced to a less than significant with implementation of MMs TCR-1 and TCR-2. Potentially significant impacts related to wildfire (fire hazards) would be reduced to less than significant with implementation of MM HAZ-2.

The Project would have no impact or less than significant impacts to the following environmental areas: aesthetics, agriculture and forestry resources, air quality, energy, greenhouse gas emissions, land use and planning, mineral resources, noise, population and housing, recreation, and utilities and service systems. Therefore, the Project would not substantially contribute to any potential cumulative impacts for the topical issues analyzed in Checklist Responses 3.1 through 3.20.

All environmental impacts that could occur as a result of the Project would be reduced to less than significant level through the implementation of the mitigation measures recommended in this Initial Study/MND. Implementation of these measures would ensure that the impacts of the Project would be below established thresholds of significance and that these impacts would not combine with the impacts of other cumulative projects to result in a cumulatively considerable impact on the environment as a result of Project implementation.

c) Have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?

Less Than Significant With Mitigation. As described in the previous sections of this Initial Study, Checklist Responses 3.1 through 3.20, the proposed Project would result in less than significant impacts with incorporation of mitigation measures for biological resources, cultural resources, geology and soils, hazards/hazardous wastes, hydrology and water quality, public services, transportation, tribal cultural resources, and wildfire. Implementation of mitigation measures identified in the aforementioned resource areas of this Initial Study are required to reduce impacts to a less than significant level. Therefore, after implementation of the measures, the proposed Project would result in a less than significant impact on human beings.

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6.0 CLARIFICATIONS AND MODIFICATIONS

6.1 Introduction

This section includes clarifications and modifications that are intended to update the Draft IS/MND. These changes to the Draft MND constitute the Final MND to be presented to the City of Los Angeles Board of Water and Power Commissioners for adoption and Project approval. The changes to the Draft IS/MND shown in this section do not affect the overall conclusion of the environmental analysis relative to the significance of impacts and therefore these changes would not require the Draft IS/MND to be recirculated.

Text changes shown in this section are organized by respective sections of the Draft IS/MND. Deleted text is shown as ~~strikeout~~ (deletions) and new text is denoted with an underline (addition).

6.2 Revisions to the Draft Initial Study/Mitigated Negative Declaration

Table of Contents – Technical Studies (bound under separate cover)

LADWP prepared a Phase I Environmental Site Assessment for Assessor Parcel Number 359-051-30. The Phase I Environmental Site Assessment has been added to the table of contents and incorporated into the Final IS/MND as follows:

- 359-051-11
- 359-051-13
- 359-051-17
- 359-051-18
- 359-051-19
- 359-051-20
- 359-051-21
- 359-015-22
- 359-051-24
- 359-051-25
- 359-051-26
- 359-051-27
- 359-051-28
- 359-051-29
- 359-051-31
- 359-051-37
- 359-051-43
- 359-051-47
- 359-051-49
- 359-051-30

Section 2.0 Project Description

Table 2-1 on page 5 of the Draft IS/MND has been revised and incorporated into the Final IS/MND as follows:

The Project site is comprised of ~~20~~ 21 separate Assessor Parcel Numbers (APN), as shown in Table 2-1. Of the 20 parcels, only APN 359-051-22 is LADWP-owned.

TABLE 2-1 PROJECT SITE ASSESSOR PARCEL NUMBERS

359-051-11	359-051-13	359-051-14	359-051-17
359-051-18	359-051-19	359-051-20	359-051-21
359-051-22*	359-051-24	359-051-25	359-051-26
359-051-27	359-051-28	359-051-29	359-051-31
359-051-37	359-051-43	359-051-47	359-051-49
359-051-30			
*LADWP-owned parcel.			

Figures 2-2, Site Vicinity, 2-3, Existing Zoning, and 2-4, Conceptual Site Plan, in the Draft IS/MND have been revised in the Final IS/MND to reflect the updated Rosamond Switching Station Project boundary (as shown below):

Project boundary depicted in the Draft IS/MND.

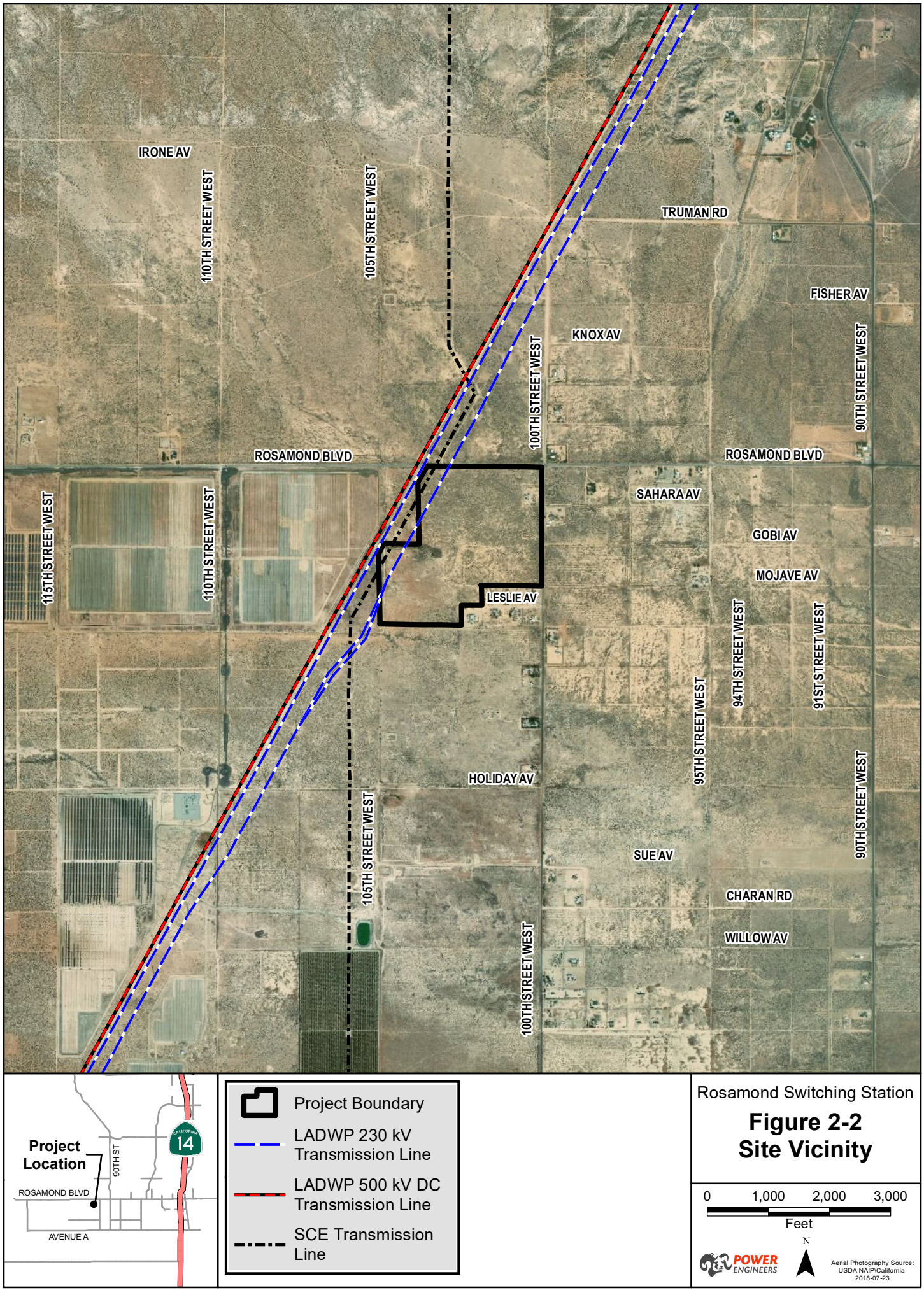
Project boundary revised in the Final IS/MND.

Section 3.9 Hazards and Hazardous Materials

Table 3-9 on page 82 of the Draft IS/MND has been revised and incorporated into the Final IS/MND as follows:

TABLE 3-9 KERN COUNTY ASSESSOR PARCEL NUMBERS

359-051-11	359-051-13	359-051-14	359-051-17
359-051-18	359-051-19	359-051-20	359-051-21
359-015-22	359-051-24	359-051-25	359-051-26
359-051-27	359-051-28	359-051-29	359-051-31
359-051-37	359-051-43	359-051-47	359-051-49
359-051-30			


IRONE AV
110TH STREET WEST
105TH STREET WEST
TRUMAN RD
FISHER AV
KNOX AV
100TH STREET WEST
90TH STREET WEST
ROSAMOND BLVD
ROSAMOND BLVD
115TH STREET WEST
110TH STREET WEST
SAHARA AV
GOBI AV
MOJAVE AV
LESLIE AV
94TH STREET WEST
91ST STREET WEST
95TH STREET WEST
HOLIDAY AV
105TH STREET WEST
90TH STREET WEST
SUE AV
CHARAN RD
WILLOW AV
100TH STREET WEST
Project Location
90TH ST
14
ROSAMOND BLVD
AVENUE A
Project Boundary
LADWP 230 kV Transmission Line
LADWP 500 kV DC Transmission Line
SCE Transmission Line
Rosamond Switching Station
Figure 2-2
Site Vicinity
0
1,000
2,000
3,000
Feet
N
POWER ENGINEERS
Aerial Photography Source: USDA NAIP\California 2018-07-23

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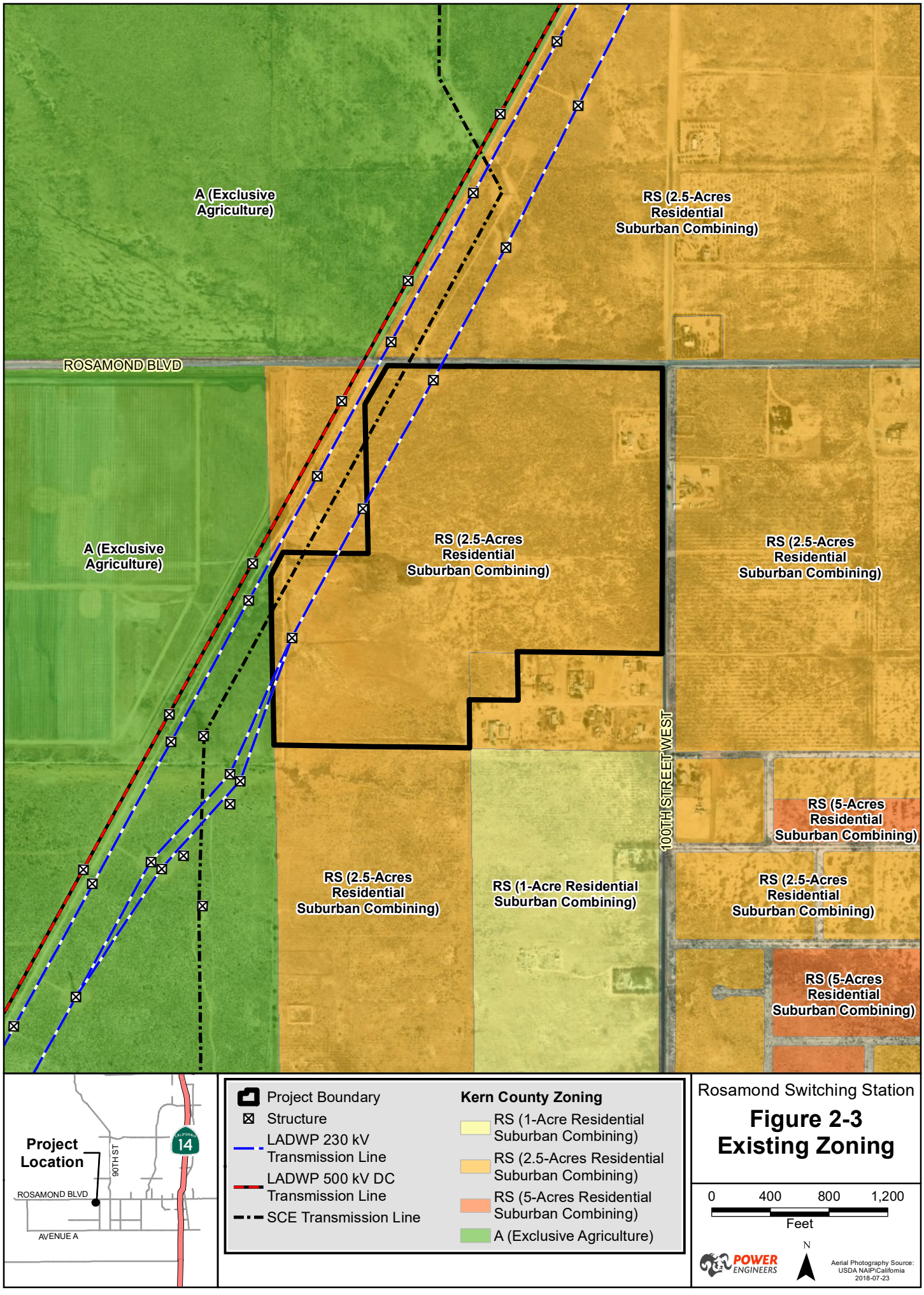
A (Exclusive Agriculture)
RS (2.5-Acres Residential Suburban Combining)
ROSAMOND BLVD
A (Exclusive Agriculture)
RS (2.5-Acres Residential Suburban Combining)
RS (2.5-Acres Residential Suburban Combining)
100TH STREET WEST
RS (5-Acres Residential Suburban Combining)
RS (2.5-Acres Residential Suburban Combining)
RS (1-Acre Residential Suburban Combining)
RS (2.5-Acres Residential Suburban Combining)
RS (5-Acres Residential Suburban Combining)
Project Location
90TH ST
14
ROSAMOND BLVD
AVENUE A
Project Boundary
Structure
LADWP 230 kV Transmission Line
LADWP 500 kV DC Transmission Line
SCE Transmission Line
Kern County Zoning
RS (1-Acre Residential Suburban Combining)
RS (2.5-Acres Residential Suburban Combining)
RS (5-Acres Residential Suburban Combining)
A (Exclusive Agriculture)
Rosamond Switching Station
Figure 2-3
Existing Zoning
0
400
800
1,200
Feet
N
POWER ENGINEERS
Aerial Photography Source: USDA NAIP\California 2018-07-23

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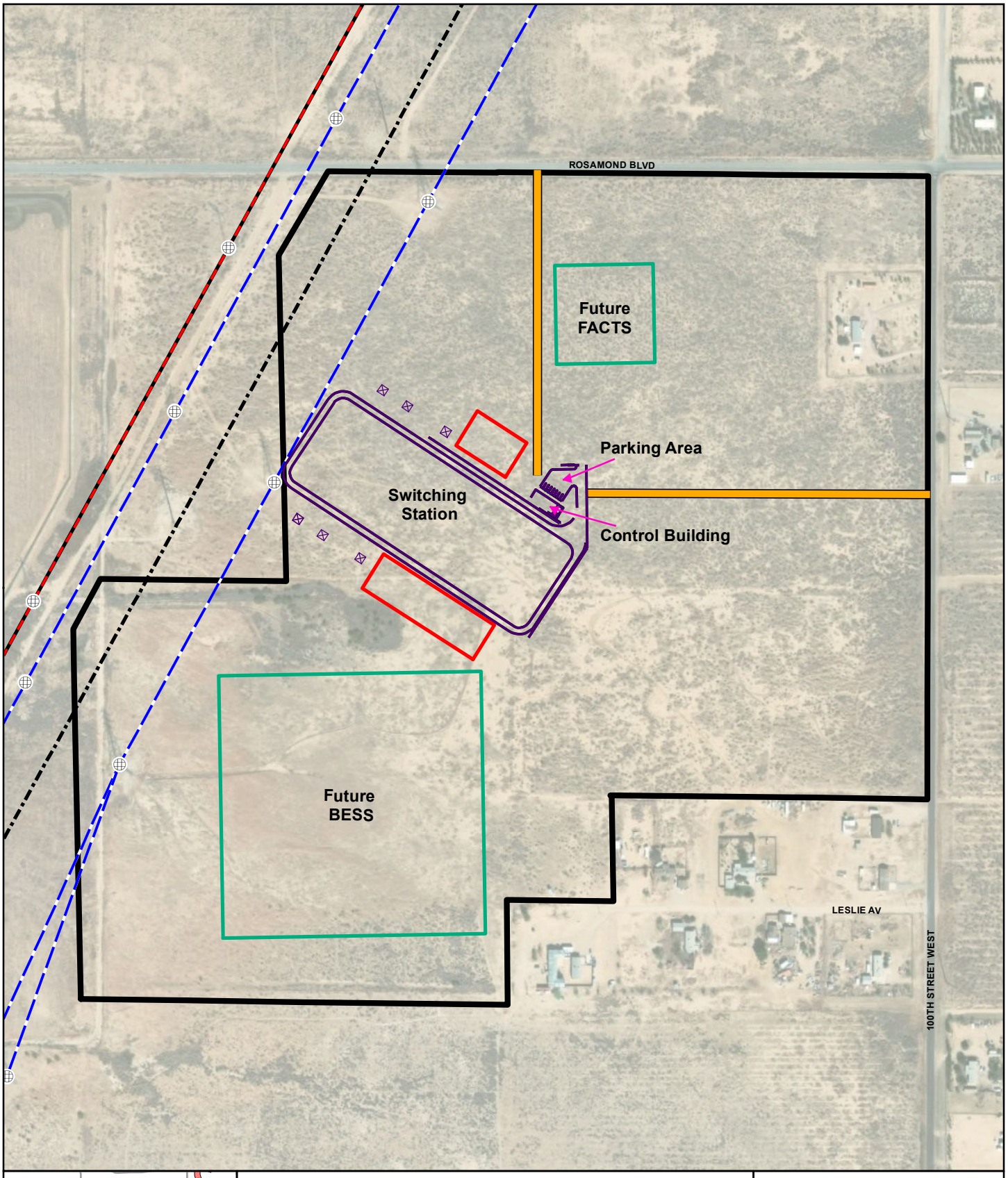

Project Boundary
Switching Station
Future Project Facilities
New Tower Structure
Existing Tower Structure
Interconnection Area
Access Road
LADWP 230 kV Transmission Line
LADWP 500 kV DC Transmission Line
SCE Transmission Line

Rosamond Switching Station

Figure 2-4 Conceptual Site Plan

0 200 400 600

Feet

N

POWER ENGINEERS

Aerial Photography Source: USDA NAIP\California 2018-07-23

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7.0 RESPONSES TO COMMENTS

7.1 Introduction

The Rosamond Switching Station Project (Project) IS/MND was distributed on April 23, 2020, to public agencies, organizations, and interested parties for review and comment pursuant to the California Environmental Quality Act (CEQA). The public review period concluded on May 25, 2020. The IS/MND was also made available for review and at Los Angeles Department of Water and Power (LADWP) Environmental Affairs Division, 111 North Hope Street, Room 1044, Los Angeles. In addition, an electronic version was made available on LADWP's website at http://ladwp.com/envnotices. No public meeting was held.

7.2 Comments Received on the Draft Initial Study / Mitigated Negative Declaration

During the public review period for the Project, LADWP received two comment letters. The commenting parties are listed in Table 7-1.

TABLE 7-1 LIST OF RESPONDENTS

LETTER	COMMENTERS	DATE OF COMMENT
State Agency(s)		
Comment 1	Department of Toxic Substances Control	May 6, 2020
Individual(s)		
Comment 2	Armando M. Mendoza	May 16, 2020

7.3 Comments and Responses to Comments

This section includes all written comments on the Draft IS/MND received by LADWP and the responses to those comments. Responses are prepared for those comments that address the sufficiency of the environmental document regarding the adequate disclosure of environmental impacts and methods to avoid, minimize, or mitigate those impacts. This section is formatted so that the respective comment letters are followed immediately by the corresponding responses. The comment number provided in the right margin of the letter corresponds to the responses provided.

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Department of Toxic Substances Control

Jared Blumenfeld
Secretary for
Environmental Protection

Meredith Williams, Ph.D.
Director
8800 Cal Center Drive
Sacramento, California 95826-3200

Gavin Newsom
Governor

May 6, 2020

Mr. Aiden Leong
Los Angeles Department of Water and Power
111 N. Hope Street, Room 1044
Los Angeles, California 90012
Aiden.Leong@ladwp.com

MITIGATED NEGATIVE DECLARATION FOR ROSAMOND SWITCHING STATION PROJECT – DATED APRIL 2020 (STATE CLEARINGHOUSE NUMBER: UNKNOWN)

Dear Mr. Leong:

The Department of Toxic Substances Control (DTSC) received a Mitigated Negative Declaration (MND) for Rosamond Switching Station Project. Under the proposed project, LADWP would construct a new 230 kilovolt (kV) switching station, Battery Energy Storage System (BESS), and Flexible Alternating Current Transmission System (FACTS) Device. The proposed switching station (approximately 1,200 feet long and 800 feet wide) would include a control house with space necessary for operational control. The BESS (approximately 850 feet by 850 feet) is used to store excess energy during peak renewable energy production and to provide a fast energy delivery response to power shortages, brownouts, and enhance grid stability and reliability. The FACTS Device consists of a switchyard (approximately 189 feet long, 180 feet wide, and 58 feet in height) and a control house (approximately 35 feet long, 86 feet wide, and 13 feet in height). The FACTS Device would help regulate and control voltage to help improve power reliability and to meet power demand. Other project activities include installation of access roads throughout the facility, installation of a perimeter fence, and installation of new steel lattice transmission towers to direct the existing circuits in and out of the proposed switching station. The overall purpose of the project is to help meet broader goals towards increasing the use of sustainable renewable energy sources while decreasing the production of greenhouse gas and air pollutant emissions.

DTSC recommends that the following issues be evaluated in the MND Hazards and Hazardous Materials section:

1. The MND should acknowledge the potential for historic or future activities on or near the project site to result in the release of hazardous wastes/substances on the project site. In instances in which releases have occurred or may occur, 1-1

further studies should be carried out to delineate the nature and extent of the contamination, and the potential threat to public health and/or the environment should be evaluated. The MND should also identify the mechanism(s) to initiate any required investigation and/or remediation and the government agency who will be responsible for providing appropriate regulatory oversight. 1-1 con't

2. Refiners in the United States started adding lead compounds to gasoline in the 1920s in order to boost octane levels and improve engine performance. This practice did not officially end until 1992 when lead was banned as a fuel additive in California. Tailpipe emissions from automobiles using leaded gasoline contained lead and resulted in aerially deposited lead (ADL) being deposited in and along roadways throughout the state. ADL-contaminated soils still exist along roadsides and medians and can also be found underneath some existing road surfaces due to past construction activities. Due to the potential for ADL-contaminated soil DTSC, recommends collecting soil samples for lead analysis prior to performing any intrusive activities for the project described in the MND. 1-2

3. If any sites within the project area or sites located within the vicinity of the project have been used or are suspected of having been used for mining activities, proper investigation for mine waste should be discussed in the MND. DTSC recommends that any project sites with current and/or former mining operations onsite or in the project site area should be evaluated for mine waste according to DTSC's 1998 Abandoned Mine Land Mines Preliminary Assessment Handbook (https://dtsc.ca.gov/wp-content/uploads/sites/31/2018/11/aml_handbook.pdf). 1-3

4. If buildings or other structures are to be demolished on any project sites included in the proposed project, surveys should be conducted for the presence of lead-based paints or products, mercury, asbestos containing materials, and polychlorinated biphenyl caulk. Removal, demolition and disposal of any of the above-mentioned chemicals should be conducted in compliance with California environmental regulations and policies. In addition, sampling near current and/or former buildings should be conducted in accordance with DTSC's 2006 *Interim Guidance Evaluation of School Sites with Potential Contamination from Lead Based Paint, Termiticides, and Electrical Transformers* (https://dtsc.ca.gov/wpcontent/uploads/sites/31/2018/09/Guidance_Lead_Contamination_050118.pdf). 1-4

5. If any projects initiated as part of the proposed project require the importation of soil to backfill any excavated areas, proper sampling should be conducted to ensure that the imported soil is free of contamination. DTSC recommends the imported materials be characterized according to *DTSC's 2001 Information Advisory Clean Imported Fill Material* (https://dtsc.ca.gov/wp-content/uploads/sites/31/2018/09/SMP_FS_Cleanfill-Schools.pdf). 1-5

6. If any sites included as part of the proposed project have been used for agricultural, weed abatement or related activities, proper investigation for 1-6

organochlorinated pesticides should be discussed in the MND. DTSC recommends the current and former agricultural lands be evaluated in accordance with DTSC's 2008 *Interim Guidance for Sampling Agricultural Properties (Third Revision)* (https://dtsc.ca.gov/wp-content/uploads/sites/31/2018/09/Ag-Guidance-Rev-3-August-7-2008-2.pdf). 1-6 con't

DTSC appreciates the opportunity to comment on the MND. Should you need any assistance with an environmental investigation, please submit a request for Lead Agency Oversight Application, which can be found at: https://dtsc.ca.gov/wp-content/uploads/sites/31/2018/09/VCP_App-1460.doc. Additional information regarding voluntary agreements with DTSC can be found at: https://dtsc.ca.gov/brownfields/.

If you have any questions, please contact me at (916) 255-3710 or via email at Gavin.McCreary@dtsc.ca.gov.

Sincerely,

Gavin McCreary
Project Manager
Site Evaluation and Remediation Unit
Site Mitigation and Restoration Program
Department of Toxic Substances Control

cc: (via email)

Governor's Office of Planning and Research
State Clearinghouse
State.Clearinghouse@opr.ca.gov

Ms. Lora Jameson, Chief
Site Evaluation and Remediation Unit
Department of Toxic Substances Control
Lora.Jameson@dtsc.ca.gov

Mr. Dave Kereazis
Office of Planning & Environmental Analysis
Department of Toxic Substances Control
Dave.Kereazis@dtsc.ca.gov

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Response to Letter 1

State of California Department of Toxic Substance Control
Site Evaluation and Remediation Unit
Site Mitigation and Restoration Program
Gavin McCreary, Project Manager
May 6, 2020

Response 1-1

The Phase I Environmental Site Assessments (ESA) were prepared pursuant to ASTM International Standard E1527-13, which is consistent with the requirements of the All Appropriate Inquiries (AAI) Final Rule at 40 CFR Part 312. AAI is the process of evaluating a property's environmental conditions related to former and current uses. The Phase I ESAs prepared for the proposed Project identified no releases or cleanup cases. Potential for soil or groundwater contamination appears low and additional investigation is not warranted. In Section 3.9.3 of the MND, mitigation measure (HAZ-2) identifies Kern County Fire Department and Kern County Building Department as the government agencies providing regulatory oversight.

Response 1-2

Based on the findings of the Phase I ESAs, location of the proposed Project, history of the parcels comprising the Project area, and the distance from the SR-14 highway, potential for ADL contamination is low. Therefore, soil sampling for ADL contamination is not warranted for the proposed Project.

Response 1-3

The Phase I ESAs identified an absence of historical mining activities at the Project area and surrounding properties. Further evaluation for mine waste is not warranted for the proposed Project.

Response 1-4

The scope of the proposed Project does not include demolition of any buildings or structures at this time. The current condition of the proposed Project area does not contain any existing buildings or structures. Surveys to evaluate the presence of lead-based paints or products, mercury, asbestos containing materials, and polychlorinated biphenyl caulk is not warranted at this time.

Response 1-5

The scope of the proposed Project does not include backfill of excavated areas using imported soils at this time. Should imported fill be used for the proposed Project, LADWP will screen the fill pursuant to DTSC guidelines.

Response 1-6

The Phase I ESAs found that there is potential for residual pesticides in shallow soil to exist. Based on the intended use of the area, the potential for pesticides in shallow area to be present at concentrations that would trigger regulatory action is low. Additional discussion of pesticides in the MND and further evaluation of the Project site is not warranted at this time.

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ARMANDO M. MENDOZA

25639 Gale Drive, Stevenson Ranch, CA 91381

Phone (818) 571-9350 Fax (818) 909-0083

May 16, 2020

Los Angeles Department of Water and Power
111 North Hope Street, Room 1044
Los Angeles, CA 90012
Attn: Mr. Aiden Leong

Re: Contruction of 230 Kilovolt switching station

Battery Energy Storage System

Dear Mr. Leong,

Your proposed project is located directly or near my property with a APN: 359-051-28-00-9 in a City of Rosamond, CA. Once the switching station is constructed, This will impacted the market value of my property. 2-1

My property is in front of Rosamond Blvd with future plan to build a single family residence. If the proposed project will be materialized, I will not able use it as residential lot any more. With loss in value due to your project, I appeal to Los Angeles Department of Water and Power to purchase my property with fair market value. 2-2

I hope and pray that my request be given a consideration. Your respond is very much appreciated.

Sincerely,

Armando M. Mendoza
Owner
APN: 359-28-00-9

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Comment Letter 2

Armando M. Mendoza
May 16, 2020

Response 2-1

Section 3.11 of the IS/MND discloses impacts towards land use and planning. The existing condition of the site is currently undeveloped except for transmission lines traversing diagonally along the Project boundaries. There are scattered single-family houses adjacent to the boundaries of the Project site. Access to the Project site is via Rosamond Avenue and 100th Street West. The IS/MND finds that the proposed Project would not physically divide an established community and would not conflict with any land use plan, policy, or regulation

Response 2-2

LADWP will consider the purchase of the property if the property is determined to be necessary for the proposed Project and after consideration and approval of the proposed Project from the Board of Water and Power Commissioners.

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APPENDIX A

AIR QUAILITY AND GREENHOUSE GAS EMISSIONS IMPACT ASSESSMENT

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Technical Memorandum

TO: Kim Quinn
POWER Engineers, Inc.

FROM: Terry A. Hayes Associates Inc.

DATE: November 4, 2019

RE: Rosamond Switching Station Project – Air Quality and Greenhouse Gas Emissions Impacts Assessment

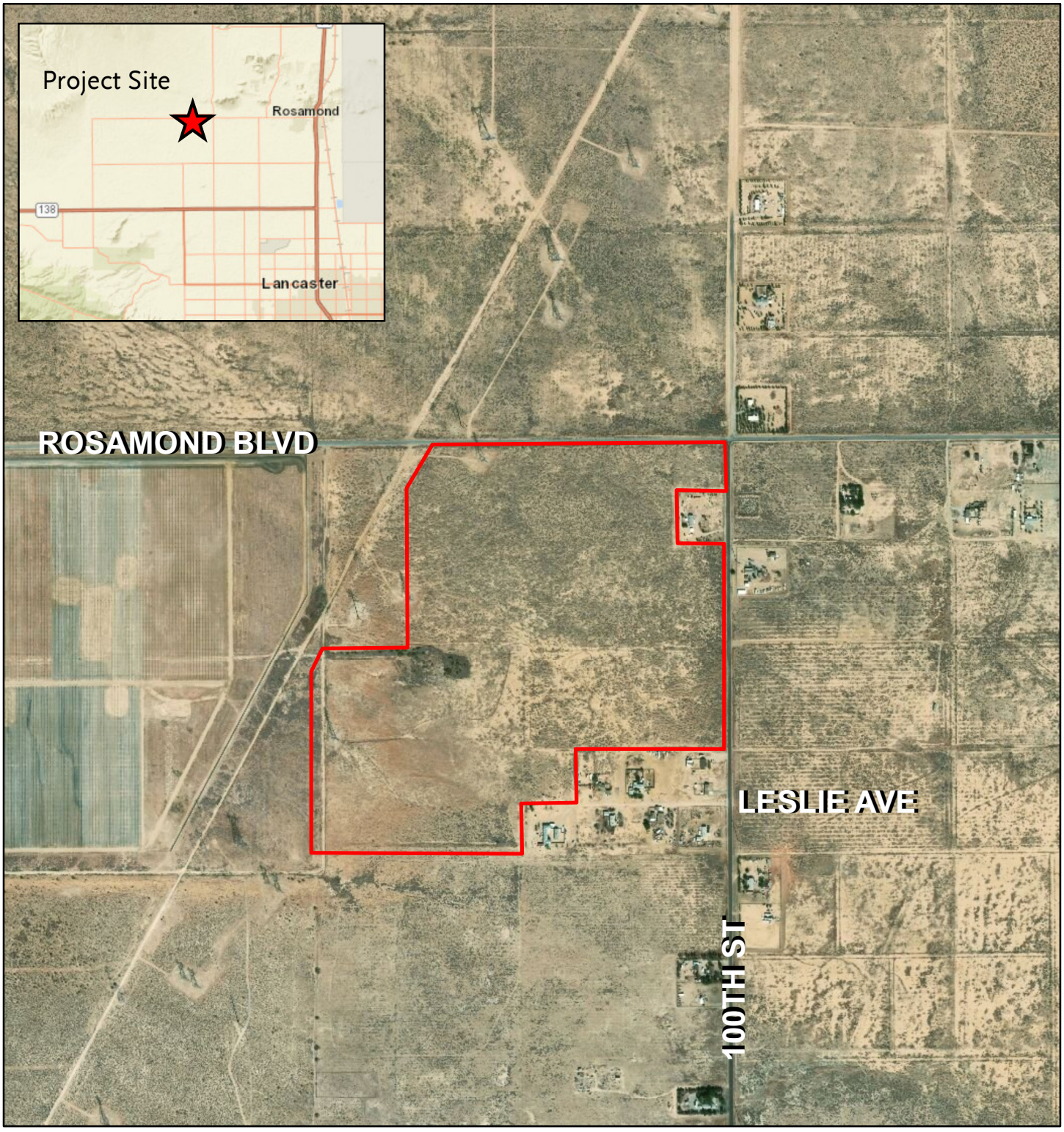
Introduction

Terry A. Hayes Associates Inc. (TAHA) has completed an Air Quality and Greenhouse Gas (GHG) impact assessments for the Rosamond Switching Station Project (proposed Project) in accordance with the provisions of the California Environmental Quality Act (CEQA) Statutes and Guidelines.

Project Description

The Los Angeles Department of Water and Power (LADWP) is proposing to construct and operate a new 230 kilovolt (kV) switching station in Kern County, California in the western Antelope Valley on 119.57 acres of land (**Figure 1**). The Project site is bounded on the north by Rosamond Boulevard, and vacant land lies to the east and south. Immediately to the west of the Project site, there are several high voltage transmission lines owned by LADWP and Southern California Edison (SCE). The project site is surrounded by sparsely vegetated vacant or undeveloped lands. The nearest land uses are residences located adjacent to the northeast and southeast quadrants of the project site. Scattered rural single-family residences are also located approximately 200 to 1,400 feet to the east of the Project site. Other land uses within the vicinity of the site include industrial uses, solar generation facilities, and agricultural plots.

The permanent disturbance within the new station is 1,200 feet in length and 800 feet in width. Two future expansions will occur on the Project site, the first expansion will be on the north side of the new switching station. The total station size will be expanded to 350 feet in length, 350 feet in width for the Flexible Alternating Current Transmission System (FACTS) Device. The second expansion will be on the south side of the new switching station. The total station size will be expanded to 850 feet in length, 850 feet in width for the Battery Energy Storage System (BESS) Device. The Project also includes operation and maintenance of the Rosamond Switching Station. Project activities include installation of electrical structures and equipment for transmission lines, staging areas, new roadway within the station, FACTS Device building, and BESS. Existing roads will be used to access the Project site.



Legend

Project Area

0 375 750 1,500 Feet

N

taha environmental planners

TAHA 2017-082

LADWP Rosamond Switching Station Project
Air Quality and Greenhouse Gas Technical Memorandum
Power Engineers Inc.

FIGURE 1
REGIONAL AND PROJECT LOCATION

Construction is anticipated to begin in Spring 2020 with active construction activity taking approximately 38 months. Up to 70 construction workers would be working on the proposed Project at any time. Construction equipment would typically include equipment similar graders and excavators, backhoes, drill rigs, water trucks, scrapers, sheep's foot compactors, front end loaders, concrete trucks, trucks and flatbed trailers. Cranes, man-lifts, portable welding units, line trucks, and mechanic trucks will also be required. Temporary construction fencing would be placed around the property boundary or extended area of construction, if necessary. Excavation at the Project site would largely be related to site preparation and would result in a limited number of off-site haul truck trips. Heavy-duty truck trips would include approximately 153 concrete truck trips to the site. Construction details are limited at this time in the planning process and the analysis assumes a maximum of 20 concrete truck trips per day and 10 truck trips per day for the aggregate base. Refer to the appendix to this Technical Memorandum for information related to the estimated fleet mix and daily activities.

Air Quality

This assessment was undertaken to determine whether construction or operation of the proposed Project would have the potential to result in significant environmental impacts related to Air Quality in the context of the Appendix G Environmental Checklist criteria of the CEQA Statute and Guidelines. Implementation of the proposed Project may result in a significant environmental impact related to air quality if the proposed Project would:

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; and/or

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

Background Information

The following analysis examines the degree to which the proposed Project may result in changes to air quality on regional and local scales. Air quality is characterized by ambient air concentrations of seven specific pollutants identified by the United States Environmental Protection Agency (USEPA) to be of concern with respect to health and welfare of the general public. These specific pollutants, known as "criteria air pollutants," are pollutants for which the federal and State governments have established ambient air quality standards, or criteria, for outdoor concentrations to protect public health. The federal ambient concentration criteria are known as the National Ambient Air Quality Standards (NAAQS), and the California ambient concentration criteria are referred to as the California Ambient Air Quality Standards (CAAQS). Federal and State criteria air pollutants include ground-level ozone (O_3), nitrogen dioxides (NO_2), carbon monoxide (CO), sulfur dioxide (SO_2), respirable particulate matter ten microns or less in diameter (PM_{10}), fine particulate matter 2.5 microns or less in diameter ($PM_{2.5}$), and lead (Pb). All of these pollutants are directly emitted to the atmosphere with the exception of O_3, which is formed through chemical reactions involving oxides of nitrogen (NO_X) and volatile organic compounds (VOC) in the presence of heat energy. Although all NO_X and VOC are not identified by regulatory authorities as criteria pollutants, their contributions to atmospheric O_3 formation and concentrations make them important regional air pollutants.

Existing Setting and Regulatory Framework

The project site is located within the jurisdiction of the Eastern Kern Air Pollution Control District (EKAPCD). The EKAPCD is a local government agency whose mission is to attain and maintain ambient air quality standards and protect the public and environment of eastern Kern County from significant adverse effects of air pollution. Endeavors undertaken by the EKAPCD to accomplish its goals include adoption of rules that limit pollution, issuance of permits to ensure compliance, and inspection of pollution sources. Additionally, the EKAPCD is tasked with preparing clean air plans to identify existing air quality conditions, assess air pollution sources and transport within the region, and determine how to control pollution sources most effectively. The EKAPCD also functions in a regulatory oversight role in assessing the air quality impacts associated with new businesses and land development projects.

USEPA and California Air Resources Board (CARB) have established federal and State standards for criteria pollutants. The pollutants relevant to the proposed Project include ground-level O_3, NO_2, CO, PM_{10}, and

$PM_{2.5}$. Extensive regional monitoring of SO_2 and lead concentrations have demonstrated sustained atmospheric levels substantially below applicable air quality standards, and proposed Project emissions would be of negligible magnitude, therefore these pollutants are excluded from the analyses contained herein. USEPA and CARB designate areas as attainment, maintenance, or nonattainment depending on air quality conditions. The EKAPCD jurisdiction is designated as serious nonattainment for the federal 8-hour O_3 and PM_{10} standards and nonattainment areas for State O_3 and PM_{10} standards.

EKAPCD Prohibitions (Regulation IV). EKAPCD Rule 401 and Rule 402 limit the emissions of visible particulate matter and wind erosion or fugitive dust from material handling and hauling, bulk storage, earthmoving, construction, and demolition. These rules prohibit any emissions of fugitive dust from construction, demolition, or other operations that remain visible in the atmosphere beyond the property line of the site of the source, except along roadways. Rule 419 prevents public nuisances.

EKAPCD published its *2017 Ozone Attainment Plan for the 2008 Federal 75 ppb 8-Hour Ozone Standard*, which was adopted July 27, 2017. The Plan contained a discussion of contingency measure requirements and how these requirements are met for Eastern Kern County by emission reductions from continued implementation of CARB's Mobile Source Program, including fleet turnover between the attainment year (2020) and the year following (2021). CARB is amending the Eastern Kern Ozone Plan to include emission inventories for ROG and NO_X for the 2011 baseline year, 2017 milestone year, and 2020 attainment year.

EKAPCD has adopted quantitative mass thresholds to guide the assessment of the potential for air quality impacts in accordance with CEQA.[1] A project would have a significant air quality impact on the environment, if it would generate daily or annual emissions exceeding any of the following threshold values:

TABLE 1: EKAPCD AIR QUALITY SIGNIFICANCE THRESHOLDS

Source and Averaging Period	Pollutant			
	VOC	NO_X	SO_X	PM_{10}
Annual Emissions, All Sources (tons/year)	25	25	27	15
Daily Emissions, Mobile Sources (pounds/day)	137	137	-	-

SOURCE: EKAPCD, 2004.

Additionally, a project may have a significance impact on air quality if it would:

- Cause or contribute to an exceedance of any CAAQS;
- Exceed the EKAPCD health risk public notification thresholds; or
- Be inconsistent with adopted federal and state Air Quality Attainment Plans.

[1]EKAPCD, *Kern County CEQA Implementation Document*, June 2004.

Impact Analysis

a) Would the proposed Project conflict with or obstruct implementation of the applicable air quality plan? (Less-than-Significant Impact)

Construction

Construction of the proposed Project is anticipated to begin in Spring 2020 and persist for a total of approximately 38 months with operational commissioning near the end of 2023. Graders, scrapers, and dozers would generate fugitive dust emissions during material displacement and site leveling activities. The water trucks employed on the project site would be used to suppress dust during the ground disturbance activities. Based on controlled dust suppression studies, application of water to disturbed areas at least twice daily would reduce fugitive dust (PM_{10} emissions) by approximately 55 percent.[2] Construction activities would be conducted in accordance with EKAPCD Rule rules and regulations to prevent the occurrence of unwarranted fugitive dust emissions and public nuisances. All air pollutant emissions associated with construction activities would cease upon completion of the project, and its implementation would not introduce a long-term source of air pollutant emissions to the project area. As shown in **Table 2** and **Table 3**, below, construction of the proposed Project would not exceed applicable annual or daily EKAPCD significance thresholds, respectively. Therefore, the proposed Project would result in a less-than-significant impacted related to construction conflict with or obstruct implementation of air quality plans. No mitigation measures would be necessary.

Operations

The proposed switching station is a passive land use that would not generate regular or substantial daily emissions. Maintenance activities would be intermittent and include limited vehicle trips for inspection and repair of project components. In addition, the proposed Project would accommodate the interconnection process for planned renewable energy projects in the project vicinity and would support LADWP's Renewable Portfolio Standard goals. The conversion of nonrenewable to renewable energy generation is a key component of local and statewide efforts to reduce air pollution. Therefore, the proposed Project would result in a less-than-significant impact related to operational conflict with or obstruct implementation of air quality plans. No mitigation measures would be necessary.

Mitigation Measures

No significant impacts have been identified related construction or operational air quality plans. Therefore, no mitigation measures are required.

[2]South Coast Air Quality Management District, *Fugitive Dust Mitigation Measure Table XI-A: Construction & Demolition*, revised 2007.

b) Would the proposed project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard? (Less-than-Significant Impact)

Construction

The project area is currently designated nonattainment for O_3 and PM_{10} standards. By its very nature, air pollution is largely a cumulative impact. No single project is sufficient in size to, by itself, result in nonattainment of ambient air quality standards. Instead, a project's individual emissions contribute to existing cumulatively significant adverse air quality impacts. If a project exceeds the identified significance thresholds, its emissions may be cumulatively considerable, potentially resulting in significant adverse air quality impacts to the region's existing air quality conditions. In that case, additional analysis to assess cumulative impacts would be necessary.

The EKAPCD significance thresholds presented in Table 1 are the reference metric for this analysis. Construction activities involved with implementation of the proposed Project would employ the following best management practices to comply with EKAPCD Rule 402 Fugitive Dust[3]:

- All soil excavated or graded should be sufficiently watered to prevent excessive dust. Watering should occur as needed with complete coverage of disturbed soil areas. Watering should be a minimum of twice daily on unpaved/untreated roads and on disturbed soil areas with active operations;
- All clearing, grading, earth moving, and excavation activities should cease
    a) During periods of winds greater than 20 mph (averaged over one hour), if disturbed material is easily windblown, or
    b) When dust plumes of 20 percent or greater opacity impact public roads, occupied structures, or neighboring property;
- All fine material transported offsite should be either sufficiently watered or securely covered to prevent excessive dust;
- If more than 5,000 cubic yards of fill material will be imported or exported from the site, then all haul trucks should be required to exit the site via an access point where a gravel pad or grizzly has been installed;
- Areas disturbed by clearing, earth moving, or excavation activities should be minimized at all times;
- Stockpiles of soil or other fine loose material shall be stabilized by watering or other appropriate method to prevent wind-blown fugitive dust;
- Once initial leveling has ceased all inactive soil areas within the construction site should be watered twice daily until soil has sufficiently crusted to prevent fugitive dust emissions;
- All active disturbed soil areas should be sufficiently watered to prevent excessive dust, but no less than twice a day;
- On-site vehicle speed should be limited to 15 miles per hour;

[3]EKAPCD, *Suggested Air Pollutant Mitigation Measures for Construction Sites for Eastern Kern APCD*, 2006.

- All areas with vehicle traffic should be paved, treated with dust palliatives, or watered a minimum of twice daily;
- Streets adjacent to the project site should be kept clean and accumulated silt removed;
- Access to the site should be by means of an apron into the project from adjoining surfaced roadways. The apron should be surfaced or treated with dust palliatives;
- Properly maintain and tune all internal combustion engine powered equipment;
- Require employees and subcontractors to comply with California's idling restrictions for compression ignition engines.

The application of water to disturbed areas and material stockpiles twice daily would reduce fugitive dust emissions by approximately 55 percent. Maximum daily air pollutant emissions during construction activities were quantified using off-road equipment emission factors and calculation methodologies contained in documentation for the California Emissions Estimator Model (CalEEMod, Version 2016.3.2). The CalEEMod software is the preferred tool for estimating air pollutant emissions associated with land use development projects under CEQA. All calculation sheets can be found in the Appendix files.

Construction of the Project would generally occur in three phases, Site Preparation, Site Construction, and Site Finalization. According to the preliminary schedule, Site Preparation activities would take place in 2020 and 2022, Site Construction activities would take place in 2020–2023, and Site Finalization activities would occur in 2022 and 2023. To analyze air pollutant emissions associated with construction activities, air pollutant emissions were compared to the EKAPCD significance thresholds presented in **Table 1**, above. **Table 2** presents the annual emissions of VOC, NO_X, SO_X, and PM_{10} that would be generated by construction of the proposed Project and compares them to the applicable EKAPCD significance thresholds. The EKAPCD has not established annual thresholds for CO or $PM_{2.5}$, therefore those emissions are not presented. Maximum annual emissions would not exceed the applicable EKAPCD thresholds in any year.

TABLE 2: CONSTRUCTION EMISSIONS ASSESSMENT – ANNUAL EMISSIONS

Year	Activity	Pollutant Emissions			
		VOC	NO_X	SO_X	PM_{10}
2020	Site Preparation	0.62	6.45	0.01	1.43
2020	Site Construction	0.34	3.41	0.01	0.37
2020	**Total Annual**	**0.96**	**9.86**	**0.02**	**1.80**
2021	Site Construction	1.28	12.61	0.03	1.45
2021	**Total Annual**	**1.28**	**12.61**	**0.03**	**1.45**
2022	Site Preparation	0.25	2.42	0.01	0.68
2022	Site Construction	1.24	11.36	0.04	1.39
2022	Site Finalization	0.21	1.92	0.01	0.29
2022	**Total Annual**	**1.70**	**15.71**	**0.05**	**2.36**
2023	Site Construction	0.88	7.70	0.03	0.98
2023	Site Finalization	0.16	1.44	0.01	0.23
2023	**Total Annual**	**1.05**	**9.14**	**0.03**	**1.21**
All	**Maximum Annual**	**1.70**	**15.71**	**0.05**	**2.36**
EKAPCD Annual Threshold (tons/year)		25	25	27	15
Exceed Threshold?		**No**	**No**	**No**	**No**

SOURCE: TAHA, 2019.

Table 3 presents the daily mobile source air pollutant emissions that would be generated by construction of the project. The emissions presented conservatively assume the possibility of overlap between activities in each given year.

TABLE 3: CONSTRUCTION EMISSIONS ASSESSMENT – DAILY MOBILE SOURCE EMISSIONS

Year	Activity	Daily Pollutant Emissions	
		VOC (lbs/day)	NO_X (lbs/day)
2020	Site Preparation	0.7	4.53
2020	Site Construction	1.07	7.35
2020	***Maximum Daily Overlap***	***1.79***	***11.88***
2021	Site Construction	0.92	6.19
2021	***Site Construction***	***0.92***	***6.19***
2022	Site Preparation	0.52	3.40
2022	Site Construction	0.74	4.6
2022	Site Final	0.49	1.47
2022	***Maximum Daily Overlap***	***1.75***	***9.52***
2023	Site Construction	0.74	4.64
2023	Site Final	0.49	1.47
2023	***Maximum Daily Overlap***	***1.23***	***6.11***
	Maximum Daily Emissions	**1.79**	**11.88**
EKAPCD Daily Mobile Threshold (pounds/day)		137	137
Exceed Threshold?		**No**	**No**

SOURCE: TAHA, 2019.

As shown in **Table 2** and **Table 3**, air pollutant emissions generated during construction activities would remain well below both the annual and daily EKAPCD significance thresholds. EKAPCD thresholds were designed to prevent the occurrence of air quality violations during construction of projects subject to CEQA. Therefore, the construction emissions do not have the potential to contribute to a cumulative effect. No mitigation measures would be necessary.

Operation

Regarding permanent activities, the proposed switching station is a passive land use that would not generate regular or substantial daily emissions. Maintenance activities would be intermittent and would include limited vehicle trips for inspection and repair of project components. Operations would not introduce any new source of air pollutant emissions to the Project area and therefore does not have the potential to contribute to a cumulative effect. This impact would be less than significant. No mitigation measures would be necessary.

Mitigation Measures

No significant impacts have been identified related to the Project. Therefore, no mitigation measures are required.

c) Would the proposed Project expose sensitive receptors to substantial pollutant concentrations? (Less-than-Significant Impact)

Construction

The greatest potential for toxic air contaminant exposure during construction would be associated with diesel particulate matter emissions from heavy equipment exhaust. The dose to which receptors are exposed is the primary factor used to determine health risk. Dose is a function of the concentration of a substance or substances in the environment and the duration of exposure to the substance. Dose is positively correlated with time, meaning that a longer exposure period would result in a higher exposure level for the maximally exposed individual. The risks estimated for a maximally exposed individual are higher if a fixed exposure occurs over a longer period of time. Local exposure would range from weeks to months depending on the construction phase and location.

Scattered rural single-family residences are located near the Project site, with the nearest being located 150 feet from the Project site on Leslie Avenue. Construction equipment, vehicle, and material movement activities would occur throughout the Project site and the majority of activity would generally occur in the western portion of the site, where installation of the station and ancillary infrastructure will be at least 1,000 feet from residences. In addition, the Project would be subject to the regulations and laws relating to toxic air containments at the regional, State, and federal level that would protect sensitive receptors from substantial concentrations. This impact would be less than significant.

Operation

Regarding permanent activities, the proposed switching station is a passive land use that would not generate regular or substantial daily emissions. Maintenance activities would be intermittent and would include limited vehicle trips for inspection and repair of project components. Operations would not introduce any new substantial source of air pollutant emissions to the project area and therefore does not have the potential to generate substantial pollutant concentrations. This impact would be less than significant.

Mitigation Measures

No significant impacts have been identified related to the Project. Therefore, no mitigation measures are required.

d) Would the proposed Project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people? (Less-than-Significant Impact)

Construction

Equipment exhaust would be the primary sources of odors during construction activities. Odors would be localized and generally confined to the immediate area surrounding the project site. Construction would employ best management practices (e.g., inspections and maintenance of diesel-fueled heavy-duty equipment) to prevent the occurrence of a nuisance odor in accordance with EKAPCD Rule 419, and the odors would be typical of most construction sites and temporary in nature. There are no schools or public parks, or other sensitive land uses in close proximity to the project site that would be especially sensitive to odors emanating from these sources. Additionally, the construction of the proposed Project would adhere to all requirements set forth in the EKAPCD Rules and Regulations. This impact would be less than significant.

Operation

Operational activities involve routine maintenance and would not introduce any new sources of odors to the Project area. There is no potential the proposed Project to result in a permanent impact related to odors.

Mitigation Measures

No significant impacts have been identified related to the Project. Therefore, no mitigation measures are required.

Greenhouse Gas Emissions

The assessment was undertaken to determine whether construction or operation of the Project would have the potential to result in significant environmental impacts related to GHG emissions in the context of the Appendix G Environmental Checklist criteria of the CEQA Statutes and Guidelines. Implementation of the proposed Project may result in a significant environmental impact related to GHG Emissions if the proposed Project would:

a) Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment; and/or
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing GHG emissions.

The lead agency is LADWP, which possesses the authority of discretionary approval for the proposed Project. Section 15064.4 of the CEQA Guidelines states that a lead agency should make a good-faith effort to describe, calculate, or estimate the amount of GHG emissions resulting from a project, and that the lead agency should consider the following factors when assessing the significance of impacts from GHG emissions on the environment:

1. The extent to which the project may increase or reduce GHG emissions as compared to the existing environmental setting;
2. Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project; and
3. 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.

Existing Setting and Regulatory Framework

The proposed Project is located in rural unincorporated Eastern Kern County and is generally surrounded by sparsely distributed residential plots, agricultural land, and solar generating facilities. There are no substantial stationary sources of GHG emissions in the immediate Project vicinity. In 2018, the Kern Council of Governments (KCOG) published and adopted its *2018 Regional Transportation Plan* (RTP) to establish a set of regional transportation goals, policies, and actions intended to guide development of the planned multimodal transportation systems in Kern County. California's Sustainable Communities and Climate Protection Act, or Senate Bill (SB) 375, calls for the Kern County RTP to include a Sustainable Communities Strategy (SCS) that reduces GHG emissions from passenger vehicles and light-duty trucks. In addition, the RTP must comply with CEQA, and the 2018 RTP was determined to meet this requirement.

In 2012, the EKAPCD published guidance for evaluating GHG emissions within its jurisdiction under CEQA Guidelines when serving as the lead agency.[4] The guidance states that any project that is not exempt from CEQA would require quantification of Project-Specific GHG Emissions to determine annual emissions. The EKAPCD guidance also states that projects emitting less than 25,000 tons per year (tpy) of GHGs would be determined to have a less than significant individual or cumulatively considerable impact on GHG emissions and would not require further CEQA review. EKAPCD reasoned that 25,000 tpy is less than the threshold the

[4]EKAPCD, *Addendum to CEQA Guidelines Addressing GHG Emissions Impacts for Stationary Source Projects When Serving as Lead CEQA Agency*, March 2012.

CARB uses for industrial source applicability as the first phase of the Assembly Bill (AB) 32 Cap-and-Trade Program and slightly more stringent than the Cap-and-Trade Program. Due to the relatively small magnitude of the regional GHG emission inventory in Eastern Kern County, only large-scale industrial projects that may be subject to federal regulation and EKAPCD Rule 201.3 Federally Enforceable Limits on Potential to Emit could have potentially significant impacts related to GHG emissions under CEQA Guidelines under EKAPCD jurisdiction.

Impact Analysis

GHG emissions refer to a class of pollutant emissions that are generally understood to affect global climate conditions due to their long atmospheric lifetimes and ability to trap infrared heat energy in the atmosphere that is radiating from the Earth's surface, known as the greenhouse effect. The most prevalent anthropogenic GHG compounds are carbon dioxide (CO_2), methane (CH_4), and nitrous oxide (N_2O). The presence of these gases and other GHG compounds in the atmosphere maintains global surface temperatures at generally habitable levels. Of all the GHG compounds, CO_2 is the most abundant gas that contributes to climate change, especially through fossil fuel combustion. The other GHG compounds are less abundant but have a higher potential to affect climate change on a per-mass basis. To account for the higher global warming potential, GHG emissions are commonly expressed in the equivalent mass of CO_2, denoted as CO_2e.

Anthropogenic emissions of CO_2, CH_4, and N_2O have resulted in atmospheric concentrations in excess of natural ambient levels that are responsible for intensifying the greenhouse effect. In acknowledgement of the environmental consequences of the amplified greenhouse effect, regulations have been adopted at international, federal, state, regional, and local levels to control GHG emissions. GHG emissions associated with implementation of the Project are evaluated in the context of applicable regulations aimed at reducing GHG emissions. As mentioned previously in the Introduction, the proposed Project is not located within a metropolitan planning organization's jurisdiction for which an RTP has been prepared. The GHG emissions impacts assessment considers GHG emissions associated with implementation of the proposed Project with respect to statewide and EKAPCD policies.

a) Would the proposed Project generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment? (Less-than-Significant Impact)

The atmospheric effects of GHG emissions are borne globally and cumulative in nature, and the direct effect of an individual project's GHG emissions on the environment cannot be delineated precisely. Regulations adopted to control and reduce GHG emissions generally take a holistic approach and consider a variety of sources and strategies to achieve their objectives. Due to the long atmospheric lifetimes of GHG emissions, the assessment of environmental impacts characterizes GHG emissions associated with implementation of the proposed Project in terms of annual emissions of tons of CO_2e. GHG emissions that would be generated by construction and operation of the proposed Project are analyzed together.

Construction would generate GHG emissions through the use of heavy-duty equipment and vehicle trips for workers and material hauling to and from the project site. Annual GHG emissions were estimated using emission factors and calculations contained within CalEEMod, Version 2016.3.2, which is the preferred regulatory model for quantifying GHG and air pollutant emissions associated with land use development projects. The emissions modeling exercise incorporated conservative assumptions that 20 construction workers would report to the site every day and that all required equipment would be used continuously for eight hours per day. Construction of the proposed Project is expected to last for a total of approximately 38 months beginning in early 2020, with completion expected by the end of 2023.

Following the completion of construction activities, the proposed switching station is a passive land use that would not generate regular or substantial daily emissions. Maintenance activities would be minimal and intermittent and would include limited vehicle trips for inspection and repair of Project components. Operations would not introduce any new substantial source of GHG emissions to the Project area. Therefore, the emissions modeling exercise did not quantify any GHG emissions associated with operations.

Table 4 displays the results of the GHG emissions analysis for heavy duty construction equipment and vehicle trips during construction activities, expressed in tons of CO_2e. The GHG emissions associated with construction of the Project would cease entirely upon completion of construction activities. There would be negligible long-term operational sources of GHG emissions. The emissions modeling results presented in **Table 4** demonstrate that maximum annual emissions associated with construction of the Project would be approximately 4,382.6 tons CO_2e. Based on the above analyses, the proposed Project would result in a less-than-significant impact related to GHG emissions.

Mitigation Measures

No significant impacts have been identified related to the Project. Therefore, no mitigation measures are required.

TABLE 4: ESTIMATED GHG EMISSIONS – PROJECT CONSTRUCTION	
Activity & Year	**Annual Emissions (Tons CO_2e)**
Site Preparation (2020) – Equipment	878.2
Site Preparation (2020) – Mobile Sources	298.6
Site Construction (2020) – Equipment	568.0
Site Construction (2020) – Mobile Sources	240.7
Total 2020 Emissions	**1,985.5**
Site Construction (2021) – Equipment	2,367.6
Site Construction (2021) – Mobile Sources	972.7
Total 2021 Emissions	**3,340.3**
Site Preparation (2022) – Equipment	439.3
Site Preparation (2022) – Mobile Sources	140.2
Site Construction (2022) – Equipment	2,368.7
Site Construction (2022) – Mobile Sources	940.3
Site Finalization (2022) – Equipment	357.0
Site Finalization (2022) – Mobile Sources	137.2
Total 2022 Emissions	**4,382.6**
Site Construction (2023) – Equipment	1,801.1
Site Construction (2023) – Mobile Sources	573.1
Site Finalization (2023) – Equipment	297.6
Site Finalization (2023) – Mobile Sources	114.3
Total 2023 Emissions	**2,786.1**
Maximum Annual Emissions	**4,382.6**
EKAPCD Annual Threshold	25,000
Exceed Threshold?	**No**

Note: Emissions modeling files can be found in the Appendix.
SOURCE: TAHA, 2019.

b) Would the proposed Project or its alternatives conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs? (Less-than-Significant Impact)

Plans, policies, and regulations adopted to reduce GHG emissions generally focus on long-term sources of GHG emissions that provide opportunities for life-cycle improvements in efficiency and sustainability. Implementation of the proposed Project would not introduce a new permanent source of GHG emissions into the project area, and GHG emissions resulting from construction activities would cease entirely following completion of the switching station. As discussed previously, construction of the Project would not generate GHG emissions of sufficient quantities to approach exceeding EKAPCD annual threshold and represent only 17.5 percent of the significance threshold value. Therefore, the proposed Project would result in a less-than-significant impact related to GHG plans, policies, and regulations.

Mitigation Measures

No significant impacts have been identified related to the Project. Therefore, no mitigation measures are required.

References

Eastern Kern County Air Pollution Control District, *2017 Ozone Attainment Plan For 2008 Federal 75 ppb 8-Hour Ozone Standard*, July 2017.

Eastern Kern County Air Pollution Control District, *Addendum to CEQA Guidelines Addressing GHG Emission Impacts for Stationary Sources When Serving as Lead CEQA Agency*, March 2012.

Eastern Kern County Air Pollution Control District, *Kern County CEQA Implementation Document*, June 2004.

Eastern Kern County Air Pollution Control District, *Suggested Air Pollutant Mitigation Measures for Construction Sites for Eastern Kern APCD,* revised March 2012.

Kern Council of Governments, *2018 Regional Transportation Plan*, adopted August 2018.

South Coast Air Quality Management District, *Fugitive Dust Mitigation Measure Table XI-A: Construction & Demolition*, revised 2007.

APPENDIX B

BIOLOGICAL RESOURCES HABITAT ASSESSMENT

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October 2019

LOS ANGELES DEPARTMENT OF WATER AND POWER

Rosamond Switching Station Project

Kern County, California

Draft – Biological Resources Habitat Assessment

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Rosamond Switching Station Project
Kern County, California
Draft – Biological Resources Habitat Assessment

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ACRONYMS AND ABBREVIATIONS

BESS	Battery Energy Storage System
BLM	Bureau of Land Management
BR-HC	Barren Ridge – Haskell Canyon
Cal-IPC	California Invasive Plant Council
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
°F	degrees Fahrenheit
FACTS	Flexible Alternative Current Transmission System
FR	Federal Register
kV	kilovolt
LADWP	Los Angeles Department of Water and Power
POWER	POWER Engineers, Inc.
Project	Rosamond Switching Station Project
ROW	right-of-way
SCE	Southern California Edison
USFS	U.S. Forest Service
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey

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1.0 INTRODUCTION

The Los Angeles Department of Water and Power (LADWP) proposes to construct and operate the new 230 kilovolt (kV) Rosamond Switching Station (Project). The proposed Project would be constructed adjacent to the LADWP right-of-way (ROW) for the Barren Ridge – Haskell Canyon (BR-HC) 230 kV Transmission Lines 1, 2, and 3 and would be located approximately 30 miles south of the Barren Ridge Switching Station. The construction of the proposed Project would be located on a LADWP-owned property. The station is needed to allow LADWP greater control in managing the renewable energy transfer along the existing high voltage transmission lines and increase overall reliability. The Project would also accommodate the interconnection process for planned renewable energy projects in the Project vicinity and would support LADWP's Renewable Portfolio Standard goals. In order to control energy transfer capabilities, the station design includes the "cut-in" of the BR-HC Transmission Lines 1, 2, and 3 and one interconnector with a breaker and half bus configuration. The final configuration of the station needs to accommodate reactive compensation equipment and existing and planned renewable energy interconnections.

1.1 Project Location

The proposed Project is located in Kern County, California in the western Antelope Valley approximately three miles north of the Los Angeles County border (refer to Figure 1). It is situated in the northeast portion of Section 24 of Township 9N, Range 14W as shown on the Little Buttes, CA 1:24,000 United States Geological Survey (USGS) quadrangle (refer to Figure 2). Rosamond Boulevard borders the Project area to the north, 100th Street West to the east, 105th Street West to the west, and Astoria Avenue to the South. Vacant land surrounds the study area, with scattered rural residential to the south and east. Immediately to the west of the proposed Project, there are several high voltage transmission lines owned by LADWP and Southern California Edison (SCE).

The Project site consists of 120 acres of undeveloped land. The field survey was conducted within the whole of the Project area with additional and immediately adjacent areas surveyed (approximately 149 acres) due to the potential need for relocation of existing transmission line towers as part of the Project (refer to Figure 3 for the boundary of the study area).

1.2 Project Description

The Project includes the construction of a new switchyard and a designated area for the 10-bay expansion and new control house. The permanent disturbance within the new station is 1,200 feet in length and 800 feet in width. Two future expansions are planned to occur on the Project site, the first expansion would be to the north of the new switching station and would consist of the construction of the Flexible Alternating Current Transmission System (FACTS) Device. The total area for the FACTS device would be 350 feet in length, 350 feet in width. The second expansion would be to the south of the new switching station and would consist of the construction of the Battery Energy Storage System (BESS) Device. The total area for the BESS device would be 850 feet in length, 850 feet in width. The Project would also include operation and maintenance of the Rosamond Switching Station. Project construction activities include installation of electrical structures and equipment for transmission lines, staging areas, new roadway(s) within the station, FACTS Device building, and BESS. Existing roads will be used to access the Project site. The estimated schedule for Project construction is 38 months.

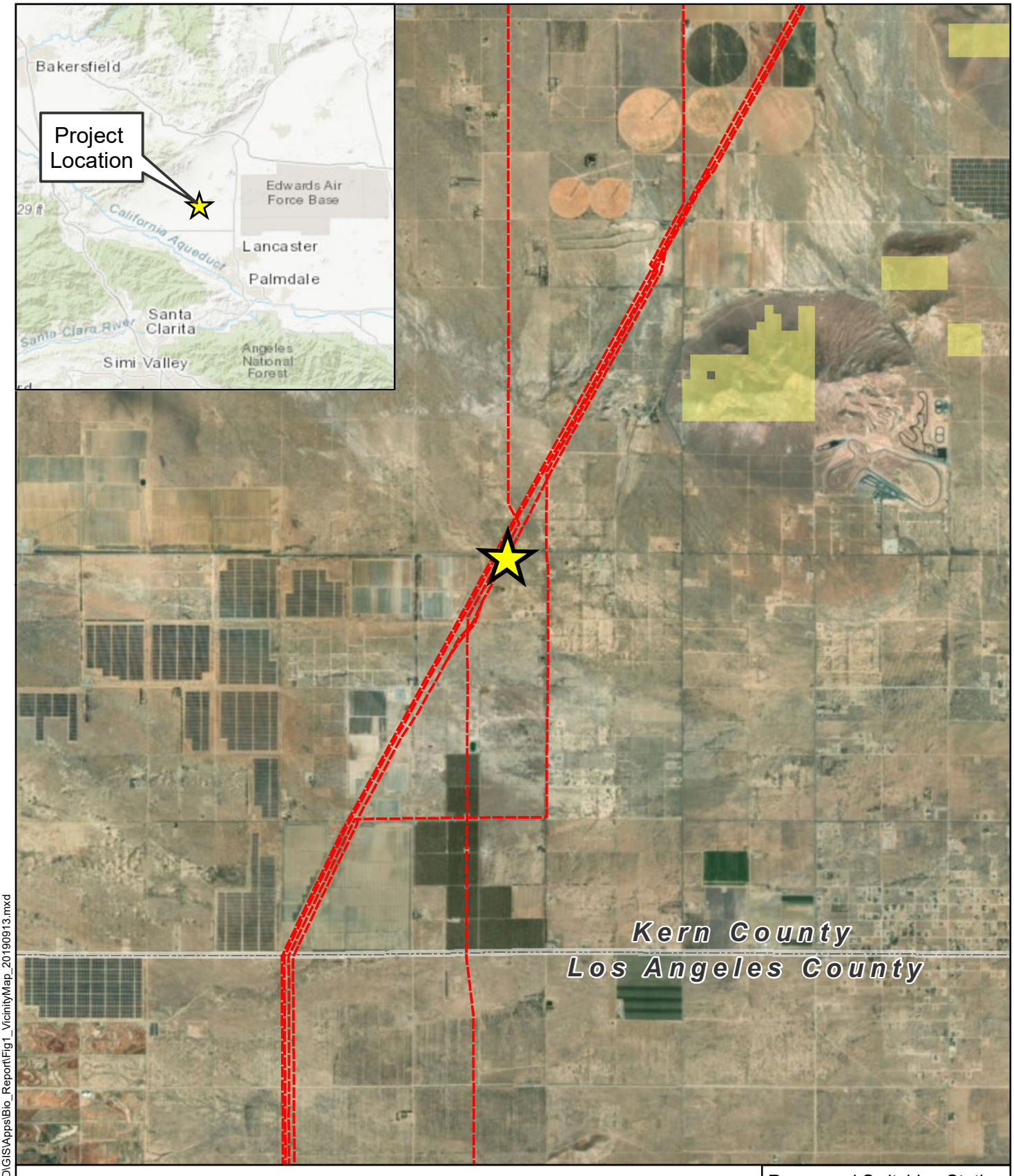
Construction activities include site grading and drainage development, installation of concrete foundation and steel support structures, installation of below- and above-ground electrical conduits for equipment power and control, installation of below- and above-grade grounding conductors,

FACTS Device building, FACTS switchyard, BESS station, and installation of new control and relay houses.

Site preparation work for the Project includes clearing and grubbing, excavation, placement, and compaction of engineered fill to provide stabilized subgrade for switching station facilities. Temporary silt fence and other storm water pollution prevention Best Management Practices will be implemented in accordance with the Storm Water Pollution Prevention Plan. The Project site will be graded to maintain current drainage patterns to the greatest extent possible. The switching station yard will be covered with crushed-rock aggregate.

Reinforced concrete foundations will be installed to support the steel structures, electrical equipment, and control facilities following site grading and development. Foundation work will require approximately 153 trips to the site by 40-ton, 10-yard capacity concrete trucks over a 180-day working period. Equipment required for station construction includes graders and excavators, backhoes, drill rigs, water trucks, scrapers, sheep's foot compactors, front end loaders, concrete trucks, trucks, and flatbed trailers. Cranes, man-lifts, portable welding units, line trucks, and mechanic trucks will also be required. Subsequent to the foundation installation, trenches will be dug to facilitate placement of copper conductors for the station grounding mat.

The elevation of the site is approximately 2,475 feet above mean sea level. The area is vegetated with native and non-native plant species, and portions of the area have been mechanically disturbed by human activities. Annual average precipitation is approximately seven inches, with January and February receiving nearly half the rainfall (Natural Resources Conservation Service, Mojave Station 2019). The average low temperature is 49.6 degrees Fahrenheit (°F), and the average high temperature is 76.2°F, with an average daily mean temperature of 62.9°F. Land uses in the vicinity of the site include industrial uses, solar generation, agriculture, and rural residential.



Legend

- Project Location
- Existing Transmission Line (115 kV to 500 kV)
- County Boundary

Jurisdiction

- Bureau of Land Management

Aerial Photography:
USDA NAIP\California 2018-07-23

Rosamond Switching Station

Figure 1
Vicinity Map

0 0.5 1 1.5
Miles

N

POWER ENGINEERS

Date: 9/16/2019

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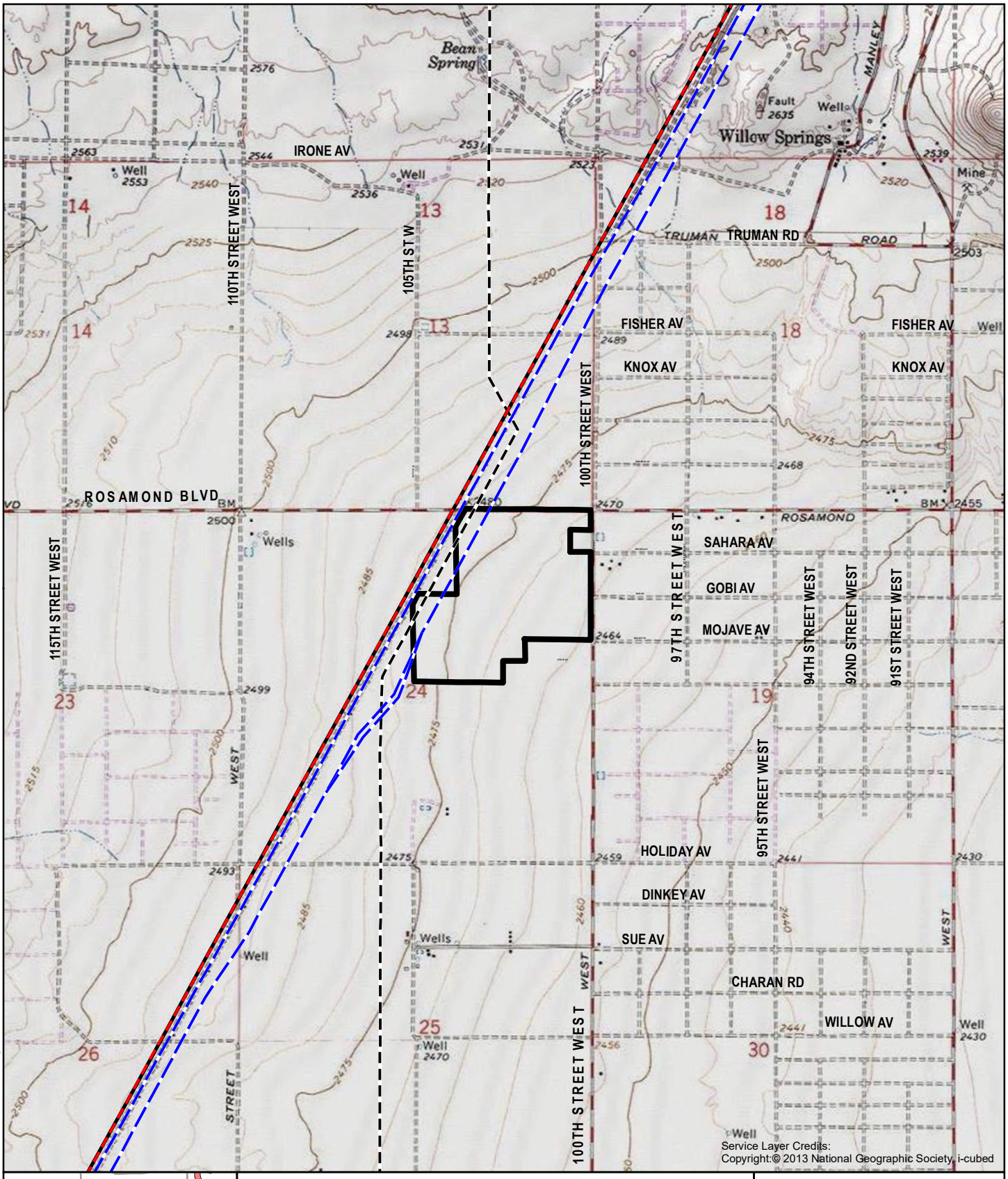

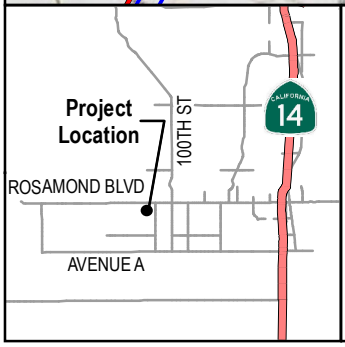

Legend

- Survey Boundary
- LADWP 230 kV Transmission Line
- LADWP 500 kV DC Transmission Line
- SCE Tranmission Line

Rosamond Switching Station

Figure 2
Location Map

0 1,000 2,000 3,000
Feet

N

POWER ENGINEERS

Date: 10/4/2019

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2.0 METHODS

2.1 Approach to Data Collection

The first step in the approach to data collection for this analysis included the identification and characterization of biological resources, including vegetation community types and special-status plant and animal species that are known to occur or have potential to occur in the Project area. The biological study area that was surveyed is approximately 149 acres and is shown in Figure 3.

"Special-status," as used in this report, refers to species that are:

- Listed, proposed for listing, or candidates for listing as threatened or endangered under the Federal Endangered Species Act (50 Code of Federal Regulations [CFR] Part 17.12 [listed plants], 50 CFR Part 17.11 [listed animals], 67 Federal Register [FR] 40657 [candidate species], and various notices in the Federal Register [proposed species]);
- Listed or proposed for listing by the State of California as threatened or endangered under the California Endangered Species Act California Department of Fish and Wildlife (CDFW; CDFW 2019);
- Identified by the CDFW as species of concern or fully protected species, including fish and wildlife that do not have State or federal threatened or endangered status but may still be threatened with extinction (CDFW 2019);
- California Species of Special Concern: vertebrate species that have been designated as "species of special concern" by the CDFW because declining population levels, limited range, and/or continuing threats have made them vulnerable to extinction (CDFW 2019);
- Included in the California Native Plant Society (CNPS) Rare Plant Inventory (CNPS 2019);
- Otherwise defined as rare, threatened, or endangered under the California Environmental Quality Act (CEQA; CEQA Guidelines, Section 15380); or
- Identified by the Bureau of Land Management (BLM) as a sensitive species (BLM 2015).

Prior to conducting fieldwork, the biologist reviewed records of known occurrences to identify special-status species that may occur within the study area, including the proposed Project area. Those records were then compared with lists of federal- or State-listed threatened, endangered, or other special-status species. Details of the survey work and approaches to collecting data are described below.

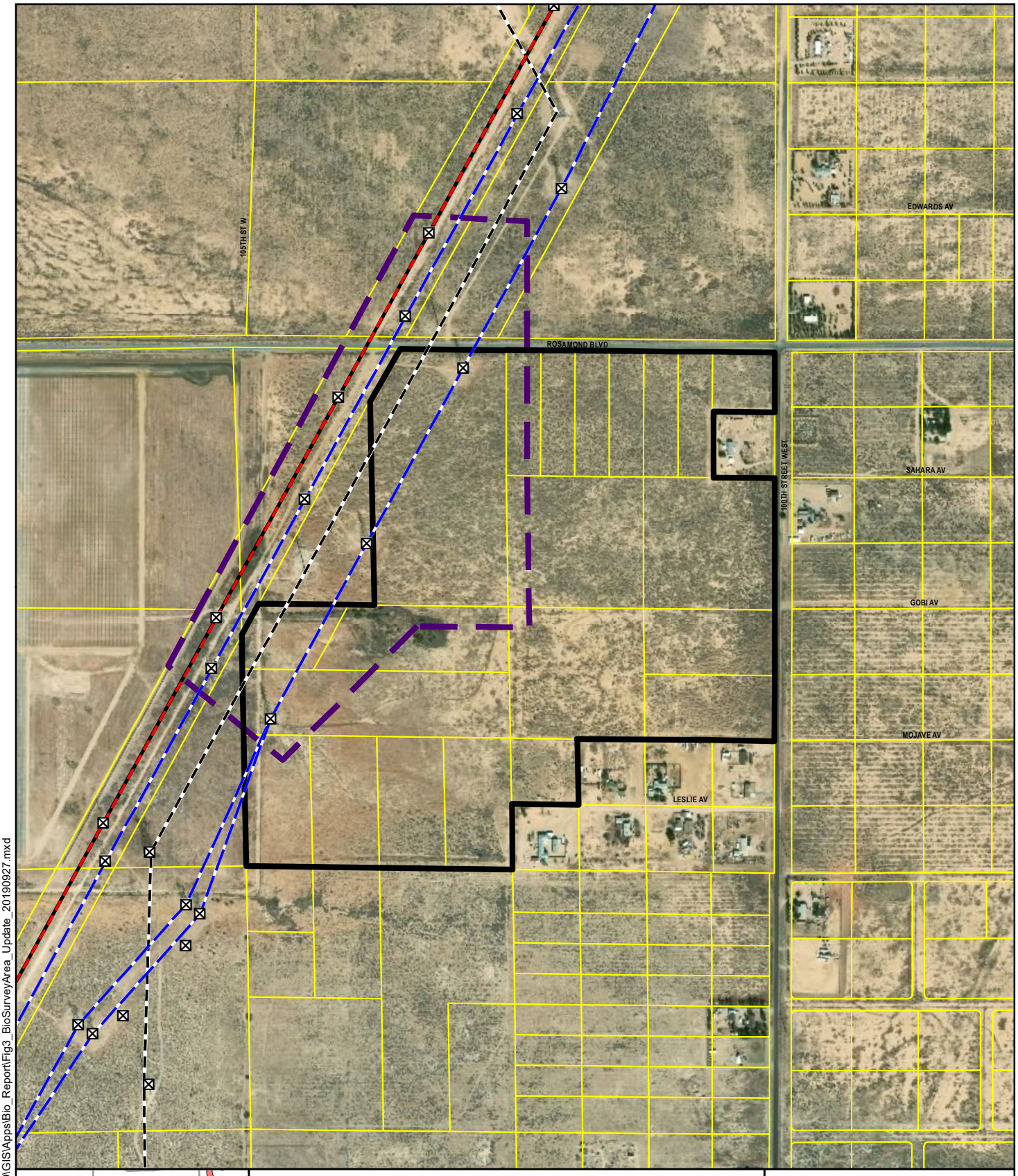
2.2 Literature Review

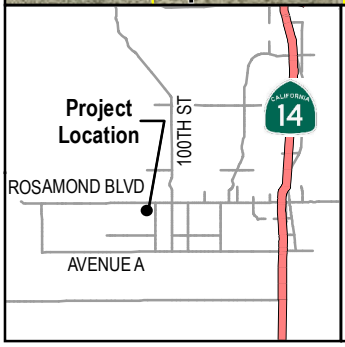
Preliminary investigation included review of information obtained from literature searches, examinations of habitat as discernible from aerial photographs, and database searches including CNPS and the California Natural Diversity Database (CNDDB) records (CDFW 2019). To identify the existing and potential biological resources present in the vicinity of the proposed Project, a geographic information system search was performed. This consisted of mapping baseline biological resource data (vegetation mapping and CNDDB records).

2.3 Field Survey

Reconnaissance-level biological resource surveys were conducted by POWER Engineers, Inc. (POWER) biologist, Ken McDonald. An initial survey was conducted on for October 5, 2017, and a survey of an updated and increased area on August 29, 2019. Areas surveyed in 2017 and in 2019 are shown in Figure 3. Weather was sunny during both survey efforts, with the temperature ranging from low 60s to low 70s °F for the initial survey and the low 60s to high 90s °F for the later survey. The

survey included vegetation mapping as well as botanical and wildlife inventories within the study area, and was conducted by walking throughout the study area and recording detected species. Vegetation communities were classified according to Holland (1986). The botanical inventory of the site was floristic in nature, meaning that all plants observed were identified to the taxonomic level needed to determine whether they were special-status plant species. Wildlife species were detected either by observation, by vocalization, or by sign (e.g., tracks, burrows, scat). Because the reconnaissance-level survey was not conducted during an optimum time of year to detect presence of all special-status plant species with potential to occur, focused floral surveys may be required prior to construction and during the appropriate blooming period(s), as close to the actual construction date as feasible.





Legend

- 2019 Survey Boundary
- 2017 Survey Boundary
- Parcel
- Structure
- LADWP 230 kV Transmission Line
- LADWP 500 kV DC Transmission Line
- SCE Tranmission Line

Aerial Photography: USDA NAIP\California 2018-07-23

Rosamond Switching Station

Figure 3
Biological
Survey Boundary

0 180 360 540 720 900
Feet

N

POWER ENGINEERS

Date: 10/4/2019

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3.0 RESULTS

Vegetation communities consisted mostly of saltbush scrub and rabbitbrush scrub. A more detailed description of these vegetation communities is provided below. No special-status plant species were observed during the survey. A list of plant species observed during the field survey is provided in Appendix A. No special-status wildlife species were detected during the surveys. Few wildlife species were observed within the study area, but wildlife sign was observed more frequently. Burrows of varying sizes were present intermittently throughout the study area, primarily small rodent burrows. Appendix B provides a list of observed animal species the study area.

3.1 Vegetation Community Descriptions

The following vegetation communities were mapped according to Holland (1986) within the study area. Vegetation communities within the study area, for both the 2017 and 2019 surveys are shown in Figure 4.

3.1.1 Saltbush Scrub

Saltbush scrub is an open community dominated by low, grayish, microphyllous shrubs, 0.3 to 1.0 meter tall, usually with a low-growing herbaceous cover, matching the Holland type desert saltbush scrub community. Overall cover is often low, with bare ground surrounded widely spaced shrubs. Stands of desert saltbush scrub are usually dominated by a single species of saltbush (*Atriplex* spp.). Site characteristics include finely textured, poorly drained soils (Holland 1986).

Saltbush comprises the majority of the saltbush scrub community within the study area, with occasional individuals of creosote (*Larrea tridentata*) and rubber rabbitbrush (*Chrysothamnus nauseosus*), with varying amounts of non-native grass species in the herbaceous layer. This community was the largest observed within the study area and comprised the majority of the study area.

3.1.2 Rabbitbrush Scrub

The Holland type rabbitbrush scrub consists of dense to open stands composed almost solely of rubber rabbitbrush shrubs that are typically three feet in height. The community is comprised of fairly evenly spaced gray shrubs flowering in late summer or fall. Rabbitbrush scrub is a disturbance-maintained type that occupies sites that have been burned, grazed, tilled, or otherwise disturbed (Holland 1986). The rubber rabbitbrush series is the equivalent in the Sawyer and Keeler-Wolf (1995) system.

Within the study area, rabbitbrush scrub is predominantly comprised of rubber rabbitbrush with varying cover of species typical of Mojave mixed woody scrub, and with varying amounts of non-native grass species in the herbaceous layer. This community was observed on the eastern portion of the study area.

3.1.3 Non-native Grassland

Non-native grassland is an upland type composed of a dense to sparse cover of mainly introduced annual grasses, usually less than three feet in height Holland (1986). Non-native grassland is widespread in coastal and interior California. It occurs on a variety of soil types, often on level or rolling terrain. Non-native grassland may contain some native perennial grasses, and often includes a diverse assemblage of native annual and perennial forbs (wildflowers). The species composition of

annual grasses and forbs varies considerably between stands. The equivalent series in the system of Sawyer and Keeler-Wolf (1995) is the California annual grassland series.

Annual grass species common in this habitat include cheat grass (*Bromus tectorum*) and other bromes (*Bromus* spp.). Annual forbs observed include Russian thistle (*Salsola tragus*) and red-stem filaree (*Erodium cicutarium*). There appeared to be a heavy presence of native annual forbs, long since desiccated, making this community reminiscent of wildflower fields. This community was observed on the south-western portion of the study area, but components of this community occur throughout all vegetation communities observed within the study area.

3.1.4 Ruderal

Ruderal vegetation is the term used to describe upland vegetation of roadsides and other disturbed sites. It is composed mainly or entirely of weedy non-native grasses and forbs. Ruderal vegetation is not a natural vegetation type; therefore, it is not included in the classification systems of Holland (1986) or Sawyer and Keeler-Wolf (1995).

The ruderal vegetation within the study area was comprised of introduced annual forbs and grasses. Russian thistle, tumble mustard (*Sisymbrium altissimum*), and cheat grass were the most common species observed in the ruderal areas. This community was observed on the western portion of the study area.

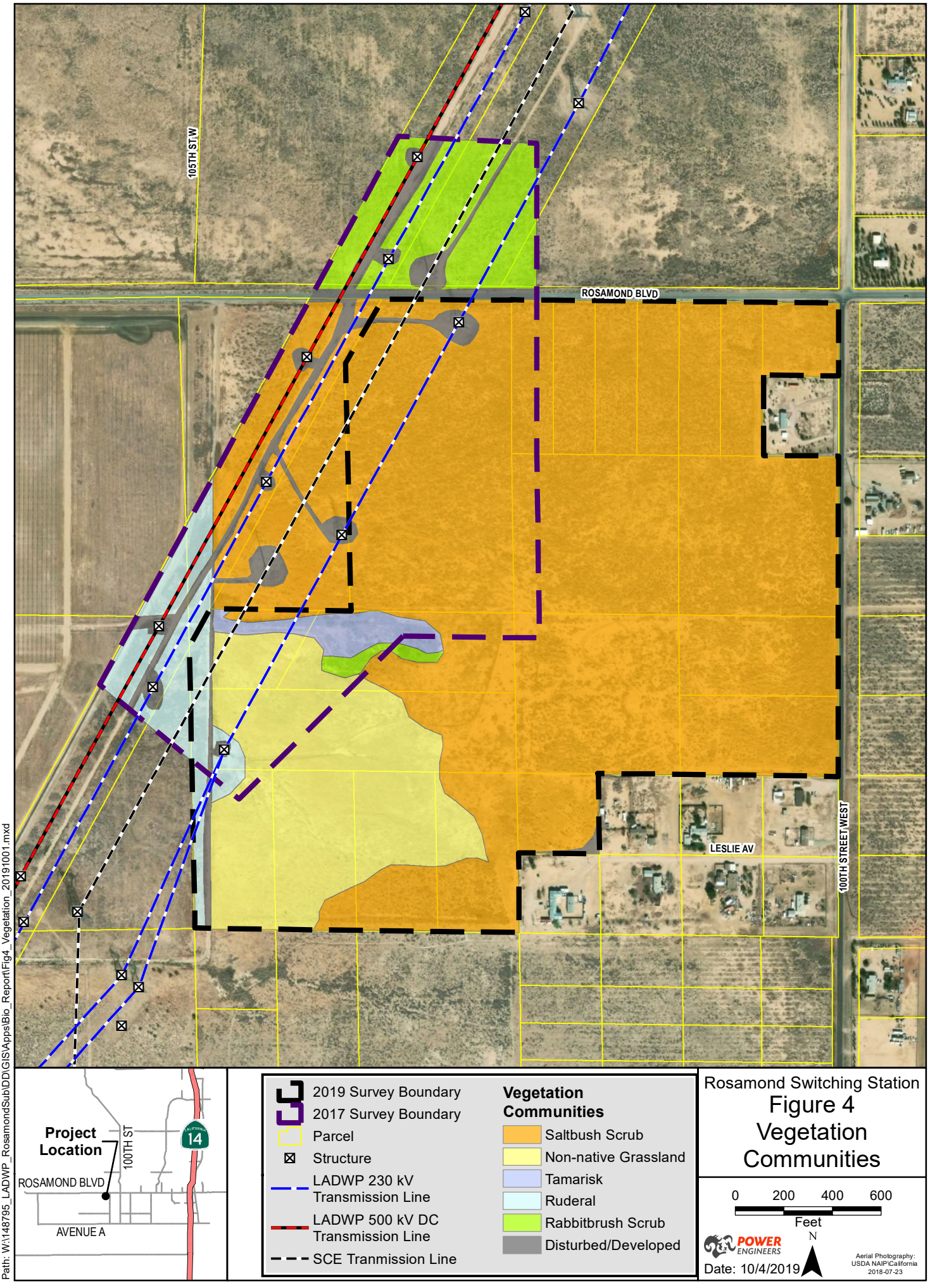
3.1.5 Disturbed/Developed

Disturbed/developed areas include cleared or graded lands and clumps of non-native trees, such as tamarisk (*Tamarisk* spp.). Disturbed/developed areas are typically characterized by heavily compacted soils that have been frequently or recently disturbed. They are often devoid of vegetation or possess only a sparse cover, or are vegetated by weedy plant species adapted to disturbance.

Table 1 provides approximate vegetation community acreages found within the 2017 and 2019 study area.

TABLE 1 VEGETATION COMMUNITIES WITHIN THE PROJECT AREA

VEGETATION COMMUNITY	ACRES
Saltbush Scrub	102.8
Rabbitbrush Scrub	9.4
Ruderal	6.9
Non-native Grassland	21.1
Tamarisk	2.2
Disturbed/Developed	7.0
Total Acres	149.4


105TH ST W
ROSAMOND BLVD
LESLIE AV
100TH STREET WEST
Project Location
100TH ST
ROSAMOND BLVD
AVENUE A
14
2019 Survey Boundary
2017 Survey Boundary
Parcel
Structure
LADWP 230 kV Transmission Line
LADWP 500 kV DC Transmission Line
SCE Tranmission Line
Vegetation Communities
Saltbush Scrub
Non-native Grassland
Tamarisk
Ruderal
Rabbitbrush Scrub
Disturbed/Developed
Rosamond Switching Station
Figure 4
Vegetation Communities
0 200 400 600
Feet
N
POWER ENGINEERS
Date: 10/4/2019
Aerial Photography: USDA NAIP\California 2018-07-23
Path: W:\148795_LADWP_RosamondSub\DD\GIS\Apps\Bio_Report\Fig4_Vegetation_20191001.mxd

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3.2 Special-Status Plant Species

Two special-status plant species were determined by the literature review to potentially occur within the study area and are described below. Special-status botanical species were not detected during the field survey. However, the study area provides habitat that could support special-status species. Of the two plant species considered to have a potential to occur within the study area, one was determined to have a moderate potential and the other was determined to be absent. Potential for occurrence was based on habitat, elevation, soil, and proximity to known recorded occurrences of a species. The accounts for species with known occurrences within the Little Buttes USGS 7.5' quadrangle are included below. Their habitat description, status, and potential for occurrence within the survey area are provided in Table 2.

3.2.1 Horn's Milk-vetch

Horn's milk-vetch (*Astragalus hornii* var. *hornii*) is a BLM sensitive species and is included on List 1B.1 of the CNPS online inventory (CNPS 2019). It is a white- or pale-lilac-flowered annual herb in the Pea Family (*Fabaceae*). It ranges from 195 to 2,790 feet in elevation, and blooms from May to October. Horn's milk-vetch is threatened by habitat loss. Although observations of Horn's milk-vetch have been documented within two miles of the study area, the most recent observation is more than 85 years old (CDFW 2019). Suitable habitat for Horn's milk-vetch does not occur within the study area and, therefore, the species is considered to be absent.

3.2.2 Alkali Mariposa Lily

Alkali mariposa lily (*Calochortus striatus*) is a BLM and U.S. Forest Service (USFS) sensitive species and is included on List 1B.2 of the CNPS online Inventory (CNPS 2019). It is a white to lavender-flowered perennial bulbiferous herb in the Lily Family (*Liliaceae*). This species occurs in chenopod scrub, chaparral, Mojavean desert scrub, and meadows and seeps, on alkaline soils. It ranges from 230 to 5,230 feet in elevation, and blooms from April to June. Alkali mariposa lily is threatened by agricultural activities, energy development, urbanization, and off-road vehicle usage. Suitable habitat for this species occurs within the study area, and there are records of occurrences less than one mile of the study area (CDFW 2019). Populations of this species occur within one mile of the study area. Alkali mariposa lily has a moderate potential to occur within the study area, but because the habitat assessments were conducted outside of the appropriate blooming period, it could not be identified as present.

3.3 Non-native Plant Species

A comprehensive plant inventory, including non-native species, was taken during the reconnaissance surveys and is included in Appendix A. Non-native plants are rated by the California Invasive Plant Council (Cal-IPC) as falling into one of three categories (Cal-IPC 2019):

- **High** – These species have severe ecological impacts on physical processes, plant and animal communities, and vegetation structure. Their reproductive biology and other attributes are conducive to moderate to high rates of dispersal and establishment. Most are widely distributed ecologically.
- **Moderate** – These species have substantial and apparent—but generally not severe—ecological impacts on physical processes, plant and animal communities, and vegetation structure. Their reproductive biology and other attributes are conducive to moderate to high rates of dispersal, though establishment is generally dependent upon ecological disturbance. Ecological amplitude and distribution may range from limited to widespread.

- **Limited** – These species are invasive but their ecological impacts are minor on a statewide level or there was not enough information to justify a higher score. Their reproductive biology and other attributes result in low to moderate rates of invasiveness. Ecological amplitude and distribution are generally limited, but these species may be locally persistent and problematic.

Some species are not currently rated due to lack of adequate information or lack of significant impacts on native communities.

The non-native plant species that were detected during reconnaissance surveys are rated by Cal-IPC as follows:

- cheat grass (*Bromus tectorum*) – rated as High.
- tamarisk (*Tamarix ramossisima*) – rated as High.
- Black mustard (*Brassica nigra*) – rated at Moderate
- ripgut brome (*Bromus madritensis* ssp. *rubens*) – rated as Moderate
- redstem filaree (*Erodium cicutarium*) – rated as Limited.
- Russian thistle (*Salsola tragus*) – rated as Limited.
- Mediterranean grass (*Schismus barbatus*) – rated as Limited.

TABLE 2 SPECIAL-STATUS PLANT SPECIES AND THEIR POTENTIAL TO OCCUR WITHIN THE BIOLOGICAL STUDY AREA

SPECIES[1]	STATUS[2]	HABITAT[2]	BLOOMING PERIOD[2]	POTENTIAL FOR OCCURRENCE
Astragalus hornii var. *hornii* Horn's milk-vetch	Fed: None State: None CNPS: 1B.1 BLM: S USFS: None	Annual herb occurring in alkali playa, lake shores, and meadow and seeps. From 195 to 985 feet in elevation.	May – October	Absent. No suitable habitat occurs on site.
Calochortus striatus alkali mariposa lily	Fed: None State: None CNPS: 1B.2 BLM: S USFS: S	Perennial bulbiferous herb occurring in chaparral, chenopod and Mojavean desert scrub, ephemeral washes, and meadows and seeps (alkaline, mesic). From 230 to 5,230 feet in elevation.	April – June	Moderate. Suitable habitat occurs on site, with recent occurrences observed within one mile from the study area.

Notes:
1. Sources of scientific names and common names are: Hickman (1993), CNPS (2019), and CalFlora (2019).
2. Sources of habitat characteristics and flowering times are: CNDDB (CDFW 2019) and CNPS (2019).

CNPS (State Rare Plant Rank)
1B: Considered rare, threatened, or endangered in California and elsewhere.

Threat Ranks/ Decimal notations: A California Native Plant Society extension added to the SRPR
.1 Seriously threatened in California (over 80% of occurrences threatened / high degree and immediacy of threat)
.2 Moderately threatened in California (20-80% occurrences threatened / moderate degree and immediacy of threat)

Bureau of Land Management (BLM)
S: Sensitive species are those species that are designated by the State Director for special management consideration.

U.S. Forest Service (USFS)
S: Sensitive species are those species that are designated by the State Director for special management consideration.

Occurrence Code:
Moderate: Species or sign not observed on the site, but conditions suitable for occurrence and/or an historical record exists in the vicinity.
Absent: Species or sign not observed on the site, outside of the known range, and conditions unsuitable for occurrence.

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3.4 Special-Status Wildlife Species

A total of nine special-status wildlife species were determined by the literature review to potentially occur within the study area. Of the nine wildlife species considered to have a potential to occur within the vicinity, two were determined to have a high potential for occurrence within the study area, one had a moderate potential, and the rest were determined to have a low potential for occurrence. Their habitat description, status, and potential for occurrence within the study area are provided in Table 3.

The accounts below include species that are determined to have at least a moderate potential to occur at either site, or were observed during the field surveys.

3.4.1 Burrowing Owl

The burrowing owl (*Athene cunicularia*) is a BLM Sensitive Species, CDFW Species of Special Concern, and U.S. Fish and Wildlife Service (USFWS) Bird of Conservation Concern. It typically inhabits lowlands, including those in the Central Valley, northeastern plateau, southeastern deserts, and coastal areas. For shelters, the burrowing owl uses rodent burrows in sparse grassland, desert, and agricultural habitats. Nesting begins in late March and April. Burrowing owls are typically active at dusk and dawn, but can also be active at night.

Suitable habitat occurs within the study area. There are multiple recent sightings of burrowing owl in the vicinity, with one sighting less than half a mile from the study area (CDFW 2019), giving this species a high potential for occurrence.

3.4.2 Swainson's Hawk

Swainson's hawk (*Buteo swainsonii*) is State-listed as Threatened, BLM Sensitive Species, and USFS Sensitive Species, as well as a USFWS Bird of Conservation Concern. Its breeding habitat includes grasslands with scattered trees, juniper-sage flats, riparian areas, savannahs, and agricultural fields and ranches. Swainson's hawk also requires adjacent suitable foraging areas, such as grasslands or alfalfa or grain fields, which support rodent populations. Hawks are restricted to portions of the Central Valley and Great Basin regions where suitable nesting and foraging habitat is still available. The loss of agricultural lands to various residential and commercial developments is a serious threat to this hawk throughout California.

Because its range encompasses the study area, and the presence of suitable habitat, this species may occur within or immediately adjacent to the Project area, although most likely as a migrant passing through. There are multiple recent sightings of Swainson's hawk in the vicinity, with one sighting less than a mile from the study area (CDFW 2019), giving this species a high potential for occurrence.

3.4.3 Mountain Plover

The mountain plover (*Charadrius montanus*) is a California Species of Special Concern. This migratory shorebird winters in California from approximately September through March, preferring chenopod scrub, short grasslands, and newly-plowed and newly sprouting agricultural fields (CDFW 2019). Mountain plover most commonly winters in Central and Imperial Valley, but also winters in agricultural areas in the western Mojave Desert (Shuford and Gardali 2008).

Suitable habitat for wintering mountain plover occurs within the study area, and recent observations of mountain plover have been made within two miles of the Project area, giving this species a moderate potential for occurrence.

TABLE 3 SPECIAL-STATUS WILDLIFE SPECIES AND THEIR POTENTIAL TO OCCUR WITHIN THE BIOLOGICAL STUDY AREA

SPECIES	STATUS	HABITAT	POTENTIAL FOR OCCURRENCE
Anniella pulchra northern California legless lizard	Fed: None State: SSC BLM: None	Occurs in sandy or loose loamy soils under sparse vegetation. Soils with high moisture content are required.	Low. Marginal suitable habitat to support this species occurs within the study area.
Aquila chrysaetos golden eagle	Fed: None State: THR BLM: S	Nests in cliffs or large trees, typically in mountainous regions and in the vicinity of open grassland or oak savanna habitat. Forages in areas of open habitat.	Low. Marginal suitable foraging habitat to support this species occurs within the study area, with records of this species within one mile of the study area (CDFW 2019). There is no nesting habitat within the study area.
Athene cunicularia burrowing owl	Fed: None State: SSC BLM: S	Occurs in open, dry annual or perennial grasslands, deserts, and scrublands with low-growing vegetation. This includes a wide variety of vegetation communities, including coastal prairies, coastal scrub, Great Basin grassland, Great Basin scrub, Mojavean desert scrub, Sonoran desert scrub, and valley and foothill grasslands. Depends on fossorial mammals for burrows.	High. Suitable habitat available for this species within the study area and in the area immediately surrounding the Project, with records of this species less than 0.5 miles from the study area (CDFW 2019).
Buteo regalis ferruginous hawk	Fed: None State: WL BLM: None	Occurs in Great Basin grassland, Great Basin scrub, pinon and juniper woodlands, and valley and foothill grassland.	Low. Marginal suitable habitat to support this species occurs within the study area.
Buteo swainsoni Swainson's hawk	Fed: None State: THR BLM: S	Breeds in grasslands with scattered trees, juniper-sage flats, riparian areas, savannahs, agricultural areas, and ranches. Requires adjacent suitable foraging areas such as grasslands, or alfalfa or grain fields supporting rodent populations.	High. Suitable habitat available for this species within the study area and in the area immediately surrounding the Project, with records of this species within one mile from the study area (CDFW 2019).
Charadrius montanus mountain plover	Fed: None State: SSC BLM: S	Occurs in chenopod scrub, short grasslands, freshly-plowed fields, newly-sprouting grain fields, and occasionally sod farms. Needs a mixture of short vegetation and bare ground, along with flat topography. Prefers grazed areas and areas with fossorial rodents.	Moderate. Some suitable habitat to support for this species at this site and in the area immediately surrounding the Project, with records of this species within two miles from the study area (CDFW 2019).

SPECIES	STATUS	HABITAT	POTENTIAL FOR OCCURRENCE
Lanius ludovicianus loggerhead shrike	Fed: None State: SSC BLM: None	Open space with patchy shrubs and trees, including desert scrub, agricultural areas, pastoral habitat, and suburban areas.	Low. Marginal suitable habitat to support this species occurs within the study area, with records of observation within four miles.
Taxidea taxus American badger	Fed: None State: SSC BLM: None CA: fur-bearing mammal	Occurs in a wide variety of habitats and vegetation communities but is most abundant in drier, open stages of most shrub, forest, and herbaceous habitats in areas with friable soils. Requires open, uncultivated ground.	Low. Marginal suitable habitat to support this species occurs within the study area, with records of observation within 1.5 miles.
Toxostoma lecontei Le Conte's thrasher	Fed: None State: SSC BLM: None	Occurs primarily in open desert wash, desert scrub, alkali desert scrub, and desert succulent scrub habitats. Commonly nests in dense, spiny shrubs or densely-branched cacti.	Low. Suitable foraging habitat for this species occurs within the study area, with records of observation within four miles, although not recent. There is no nesting habitat within the study area.

Low: Species or sign not observed on the site, but conditions marginal for occurrence.
Moderate: Species or sign not observed on the site, but conditions suitable for occurrence and/or an historical record exists in the vicinity.
High: Species or sign not observed on the site, but reasonably certain to occur on the site based on conditions, species ranges, and recent records.

State status
THR = listed as Threatened under the California Endangered Species Act
SSC = designated as a Species of Concern
WL = Watch List
BLM status
S = designated as a Sensitive species

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4.0 RECOMMENDATIONS

The following recommendations are provided for avoidance and minimization of effects to biological resources:

1. Conduct pre-construction focused floral surveys within the study area to determine presence/absence of special-status plant species determined to have a potential to occur, within the appropriate blooming periods, prior to and as close to the actual construction date as feasible, with focus on the alkali mariposa lily, which blooms from April to June.
2. A qualified biologist(s) will monitor all initial earth-moving and vegetation altering construction activities to ensure that standard and special-status species-specific avoidance and minimization recommendations are adhered to. The monitor will retain stop work authority in the event there is the likelihood of imminent take of special-status species. The biological monitor will conduct a general pre-construction inspection no more than 14 days prior to the start of construction to verify that no special-status species are in the project work area or its buffers. The monitor will also conduct periodic surveys in and around work to verify adherence to any applicable environmental compliance requirements. If the site is adequately fenced off following initial vegetation disturbance, the monitor will only be needed for periodic check-ins.
3. The footprint of disturbance will be minimized to the extent feasible. Access to sites will be via pre-existing access routes, to the greatest extent possible, and the work area boundaries will be delineated with staking, flagging, or other comparable markings to minimize surface disturbance associated with vehicle straying. Signs and/or fencing will be placed around the Project area to restrict access to Project-related vehicles.
4. Conduct pre-construction focused burrowing owl surveys within the Project footprint to determine presence/absence of the species. Surveys will record presence of any other species that might be considered to be of concern. If burrows are found, the appropriate CDFW-recommended buffer or a buffer deemed appropriate by a qualified biologist, will be installed until occupancy status is determined. If the buffer cannot be maintained during the non-breeding season, owls may be evicted from the burrows using accepted methodology as approved by resource agencies. Occupied burrows will not be disturbed during the owl nesting season, February 1 and August 31. Eviction will not occur during the nesting season.
5. If construction occurs between February 15 and August 15, the time period typically referenced in California for the general bird nesting season, pre-construction nesting surveys will be conducted within the Project footprint by a qualified biologist within one week of the start of construction. If no active bird nests are found within this area, no further mitigation is required. If an active nest is found, a 250-foot no disturbance buffer will be instated around the nest if it belongs to a non-listed or migratory bird. If the nest belongs to a listed or fully-protected species, a 500-foot no disturbance buffer will be instated around the nest. Nest buffers may be negotiated and nest removal prior to nesting season may be implemented through discussions with CDFW or other agencies, as applicable.
6. Upon Project completion, any disturbance will be, to the extent practicable in areas not occupied by permanent project facilities, restored to pre-construction conditions. As required, the area of Project-related temporary disturbance will be revegetated (reseeded) to pre-disturbance levels.
7. Only certified weed-free straw and hay bales will be used, as necessary, during construction and weed-free seed for post-construction revegetation.

8. Project-related equipment will be cleaned (pressure wash or compressed air) prior to entering the Project area for the first time to reduce the chance of transporting noxious weed seeds from outside the area.
9. Vehicles and equipment should be maintained and free of leaks. All hazardous material, oil, hydraulic, or other fluid leaks should be contained and cleaned immediately to reduce the risk of negatively impacting water quality.
10. To avoid attracting predators and nuisance species, the Project footprint will be clear of debris, where possible. All food-related trash items will be enclosed in sealed containers and regularly removed from the Project footprint.
11. To the extent practical project activities will avoid evening or night work, when common local wildlife species are most likely to be active.
12. No pets or firearms will be allowed on-site, and no harrassment, injuring, or killing of wildlife will be allowed.
13. The potential for fires will be minimized by using shields, mats, or other fire prevention methods when grinding, welding, or conducting any other activities that generate sparks or could otherwise start a fire. Fire extinguishers, water, and shovels will be kept on-site during construction activities.

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APPENDIX A PLANT SPECIES OBSERVED DURING THE FIELD SURVEY

SCIENTIFIC NAME	COMMON NAME
DICOTYLEDONS	
APOCYNACEAE	DOGBANE FAMILY
*Nerium oleander**	oleander
ASTERACEAE	SUNFLOWER FAMILY
Ambrosia acanthicarpa	annual bur-sage
Baccharis salicifolia	mule fat
Chrysothamnus nauseosus	rubber rabbitbrush
Gutierrezia sp.	matchweed
Helianthus annuus	common sunflower
*Lactuca serriola**	prickly lettuce
Lastenia californica	goldfields
BORAGINACEAE	BORAGE FAMILY
Amsinckia sp.	fiddleneck
Amsinckia tesselata	Devils lettuce
Heliotropium curassavicum	salt heliotrope
Pectocarya sp.	pectocarya
BRASSICACEAE	MUSTARD FAMILY
*Brassica nigra**	black mustard
*Brassica tournefortii**	Sahara mustard
Descurainia pinnata	western tansy-mustard
*Sisymbrium altissimum**	tumble mustard
CHENOPODIACEAE	GOOSEFOOT FAMILY
*Atriplex semibaccata**	Australian saltbush
Atriplex sp.	saltbush
*Salsola tragus**	Russian thistle
EUPHORBIACEAE	SPURGE FAMILY
Eremocarpus setigerus	dove weed
GERANIACEAE	GERANIUM FAMILY
*Erodium cicutarium**	red-stemmed filaree
HYDROPHYLLACEAE	WATERLEAF FAMILY
Phacelia fremontii	Fremont's phacelia
POLEMONACEAE	PHLOX FAMILY
Eriastrum densifolium	woollystar
SOLANACEAE	NIGHTSHADE FAMILY
Datura sp.	jimson weed

SCIENTIFIC NAME	COMMON NAME
TAMARICACEAE	TAMARISK FAMILY
*Tamarix ramosissima**	Mediterranean tamarisk
ZYGOPHYLLACEAE	*CALTROP FAMILY*
Larrea tridentata	creosote bush
MONOCOTYLEDONS	
LILIACEAE	LILY FAMILY
Yucca brevifolia	Joshua tree
POACEAE	GRASS FAMILY
Bromus sp.*	brome
*Bromus madritensis**	foxtail chess
*Bromus tectorum**	cheat grass
*Schismus barbatus**	Mediterranean schismus

*non-native species

APPENDIX B WILDLIFE SPECIES OBSERVED DURING THE FIELD SURVEYS

SCIENTIFIC NAME	COMMON NAME	OBSERVATION TYPE
CLASS INSECTA	INSECTS	
POMPILIDAE	SPIDER WASPS	
Pepsis sp.	tarantula hawk	O
CLASS REPTILIA	REPTILES	
IGUANIDAE	IGUANID LIZARDS	
Uta stansburiana	common side-blotched lizard	O
TEIIDAE	WHIPTAIL LIZARDS	
Cnemidophorus sp.	whiptail	O
CLASS AVES	BIRDS	
ACCIPITRIDAE	HAWKS, KITES, EAGLES	
Buteo jamaicensis	red-tailed hawk	O
ALAUDIDAE	LARKS	
Eremophila alpestris	horned lark	O, A
COLUMBIDAE	PIGEONS AND DOVES	
Columba livia	mourning dove	O, A
CORVIDAE	JAYS & CROWS	
Corvus corax	common raven	O, A
EMBERIZIDAE	EMBERIZIDS	
Amphispiza belli	sage sparrow	O, A
Zonotrichia leucophrys	white-crowned sparrow	O, A
CLASS MAMMALIA	MAMMALS	
LEPORIDAE	HARES & RABBITS	
Lepus californicus	black-tailed jackrabbit	O, S, T
Sylvilagus audubonii	desert cottontail	O
SCIURIDAE	SQUIRRELS	
Spermophilus sp.	ground squirrel	O, A, B
CANIDAE	WOLVES & FOXES	
Canis latrans	coyote	S, T
Vulpes velox	kit fox	T

O = observed
A = aural
B = burrow
S = scat
T = tracks

APPENDIX C

CULTURAL RESOURCES ASSESSMENT

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January 2019

LOS ANGELES DEPARTMENT OF WATER AND POWER

Rosamond Switching Station Project
Kern County, California
Extended Phase I Archaeological Resource Survey

PROJECT NUMBER:
148795

PROJECT CONTACT:
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POWER ENGINEERS

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Rosamond Switching Station Project
Kern County, California
Extended Phase I Archaeological Resource Survey

PREPARED FOR: LOS ANGELES DEPARTMENT OF WATER AND POWER

PREPARED BY:

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ABSTRACT

POWER Engineers, Inc. (POWER) undertook an Extended Phase I cultural resource survey on several parcels of land in support of proposed construction of the Rosamond Switching Station (Project). The Project would be constructed, owned, and operated by the Los Angeles Department of Water and Power (LADWP). This report has been prepared as part of an Initial Study/Mitigated Negative Declaration, in accordance with the California Environmental Quality Act (CEQA). LADWP will serve as the lead CEQA agency.

This report summarizes the methods and results of the cultural resource investigation of the proposed Project area. The assessment included archaeological and historical background research, a Phase I cultural resource survey, shovel testing, and the documentation and evaluation of the cultural resources in the Project area. The purpose of the investigation was to determine the potential for the proposed Project to impact historical resources under CEQA.

The Project is located in Kern County, California in the western Antelope Valley approximately three miles north of the Los Angeles County border. It is situated in the northeast portion of Section 24 of Township 9N, Range 14W as shown on the Little Buttes, CA 1:24,000 United States Geological Survey quadrangle. Rosamond Boulevard borders the Project area to the north, and vacant land lies to the east and south. Immediately to the west of the proposed Project, there are several high voltage transmission lines owned by LADWP and Southern California Edison (SCE). The proposed station site would be approximately 565 feet by 352 feet located on two parcels (359-051-22 and 359-051-06) with an elevation of approximately 2,474 feet above mean sea level.

Background historical research shows that a few historic-era cultural resources are known for the area and that a single prehistoric core was detected in 2010 beneath the SCE transmission line near the western border of the Project. No previously recorded cultural resource sites will be directly impacted by construction within switching station footprint. Portions of the Project area have been surveyed as part of previous high voltage transmission line work.

The Phase I survey was conducted within the whole of the Project area with additional and immediately adjacent areas surveyed due to the need for relocation of several existing transmission line towers that would be required as part of the Project. Figure 3 shows the boundary of the survey area. The goal of the survey was to identify any cultural resources within the Project area, and to determine if these resources should be avoided. The results of the survey showed that two isolated historic-era cans were identified in the area of direct potential impact; however, no sites were identified in the area of direct potential impact. The terrain is largely flat and a portion has been previously disturbed due to recent transmission line development within and adjacent to the LADWP and SCE easements and along Rosamond Boulevard. Neither of the noted isolated resources will require mitigation.

During POWER's survey of the Barren Ridge to Haskell Canyon portion of the Barren Ridge Renewable Transmission Project (BRRTP), no cultural resource discoveries were made inside the Project footprint. As a result of tribal responses to LADWP Assembly Bill 52 (AB 52) inquiries, LADWP requested that POWER staff shovel test the proposed footprint of the switching station with a tribal monitor observing the field work. The results of the shovel test were negative and subsequently the draft version of this report was revised into an Extended Phase I Survey.

POWER has determined that the potential for impacts to buried or unknown cultural resources during Project construction is low. POWER further recommends that archaeological monitoring need not take place for this Project.

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ACRONYMS AND ABBREVIATIONS

AB 52	Assembly Bill 52
BP	Before present
BR-HC	Barren Ridge to Haskell Canyon 230kV transmission line
BRRTP	Barren Ridge Renewable Transmission Project
CCR	California Code of Regulations
CEQA	California Environmental Quality Act
cm	centimeter
CRHR	California Register of Historical Resources
GLO	General Land Office
HVDC	High Voltage Direct Current
kV	kilovolt
LADWP	Los Angeles Department of Water and Power
OWE-TOL	Owens Gorge to Toluca Lake historic era transmission line
POWER	POWER Engineers, Inc.
PRC	[California] Public Resources Code
Project	Rosamond Switching Station Project
ROW	Right-of-way
SCE	Southern California Edison
SSJVIC	Southern San Joaquin Valley Information Center
STP	Shovel test pit
TCR(s)	Tribal Cultural Resource(s)
USGS	United States Geological Survey

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1.0 INTRODUCTION

The Los Angeles Department of Water and Power (LADWP) proposes to construct and operate the new 230 kilovolt (kV) Rosamond Switching Station (the Project). The Project would be constructed adjacent to the LADWP right-of-way (ROW) for the Barren Ridge – Haskell Canyon (BR-HC) 230 kV Transmission Lines 1, 2, and 3 and would be located approximately 30 miles south of the Barren Ridge Switching Station. The construction of the proposed Project would be located on two LADWP-owned parcels approximately 19.3 acres in size. The station is needed to allow LADWP greater control in managing the renewable energy transfer along the existing high voltage transmission lines and increase overall reliability. The Project would also accommodate the interconnection process for planned renewable energy projects in the Project vicinity and would support LADWP's Renewable Portfolio Standard goals. To control energy transfer capabilities, the station design includes the "cut-in" of the BR-HC Transmission Lines 1, 2, and 3, and one interconnector with a breaker and half bus configuration. The final configuration of the station needs to accommodate reactive compensation equipment, and existing and planned renewable energy interconnections.

1.1 Project Location

The Project is located in Kern County, California in the western Antelope Valley approximately three miles north of the Los Angeles County border (refer to Figure 1). It is situated in the northeast portion of Section 24 of Township 9N, Range 14W as shown on the Little Buttes, CA 1:24,000 United States Geological Survey (USGS) quadrangle (refer to Figure 2). Rosamond Boulevard borders the Project area to the north, and vacant land lies to the east and south. Immediately to the west of the proposed Project, there are several high voltage transmission lines owned by LADWP and Southern California Edison (SCE). The proposed station site would be approximately 565 feet by 352 feet located on two parcels (359-051-22 and 359-051-06).

The field survey was conducted within the whole of the Project area with additional and immediately adjacent areas surveyed due to the need for relocation of several existing transmission line towers that would be required as part of the Project. Figure 3 shows the boundary of the survey area.

1.2 Project Description

The switching station would be approximately 565 feet by 352 feet to accommodate the necessary circuit positions and control equipment. The station would include steel support structures, circuit breakers, disconnect switches, and associated equipment. The Project would also include a control room building on-site approximately 112 feet long by 36 feet wide, constructed of gray concrete block. The station yard would be covered with crushed-rock aggregate. Rosamond Boulevard would be used to access the site. As part of the proposed Project, transmission line tower modifications or new towers would be necessary in the immediate vicinity of the Project in order to bring the three existing BR-HC 230 kV transmission line circuits into and out of the proposed switching station.

The Project consists of previously disturbed land consisting of desert scrub typical of the surrounding area. Vegetation communities consist mostly of saltbush scrub and rabbitbrush scrub. The site is relatively flat with an elevation of approximately 2,475 feet above mean sea level. Land uses in the vicinity of the site include industrial uses, solar generation, agriculture, and rural residential.

1.3 Regulatory Environment

1.3.1 California Environmental Quality Act

LADWP is the lead California Environmental Quality Act (CEQA) agency. According to CEQA (Public Resources Code [PRC] Section 21084.1), historical resources include any resource listed, or determined eligible for listing, in the California Register of Historical Resources (CRHR). Properties listed, or determined eligible for listing, in the National Register of Historic Places, such as those identified in the Section 106 process, are automatically listed in the CRHR. Therefore, all "historic properties" under federal preservation law are automatically "historical resources" under state preservation law. Historical resources are also presumed to be significant if they are included in a local register of historical resources or identified as significant in a qualified historical resource survey. Section 21084.1 of CEQA states that a project has a significant adverse environmental impact if the project causes a substantial or potentially substantial adverse change in the significance of a historical resource.

As defined under state law in Title 14, California Code of Regulations (CCR) Section 4850, the term "historical resource" means "any object, building, structure, site, area, place, record, or manuscript which is historically or archaeologically significant, or which is significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural history of California." For the purposes of CEQA, "historical resource" is further defined under PRC Section15064.5 as a "resource listed in or determined eligible for listing in the California Register." Section 15064.5 of the CEQA Guidelines sets forth the criteria and procedure for determining significant historical resources and the potential effects of a project on such resources. Generally, a cultural resource shall be considered by the lead CEQA agency to be eligible for the California Register if the resource meets any of the following criteria for listing in the CRHR:

- The resource is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage.
- The resource is associated with the lives of persons important in our past.
- The resource 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.
- The resource has yielded, or may be likely to yield, information important in prehistory or history.

1.3.2 California Assembly Bill 52

Effective July 1, 2015, CEQA was revised to include early consultation between local agencies and California Native American tribes, and to include the consideration of Tribal Cultural Resources (TCRs) in this consultation. Pursuant to Assembly Bill 52 (AB 52; PRC Section 21074[a]), TCR means 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 California Register of Historical Resources
    ii. Included in a local register of historical resources as defined in PRC Section 5020.1, subdivision (k)
2. A resource determined by a California lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in PRC Section 5024.1, subdivision (c).

Legend

- Site Location
- Existing Transmission Line (115 kv to 500 kV)
- County Boundary

Jurisdiction

- Bureau of Land Management

Aerial Photography: USDA NAIP 2016, 60cm.

Rosamond Switching Station

Figure 1
Vicinity Map

0 0.5 1 1.5
Miles

N

POWER ENGINEERS

Date: 1/23/2018

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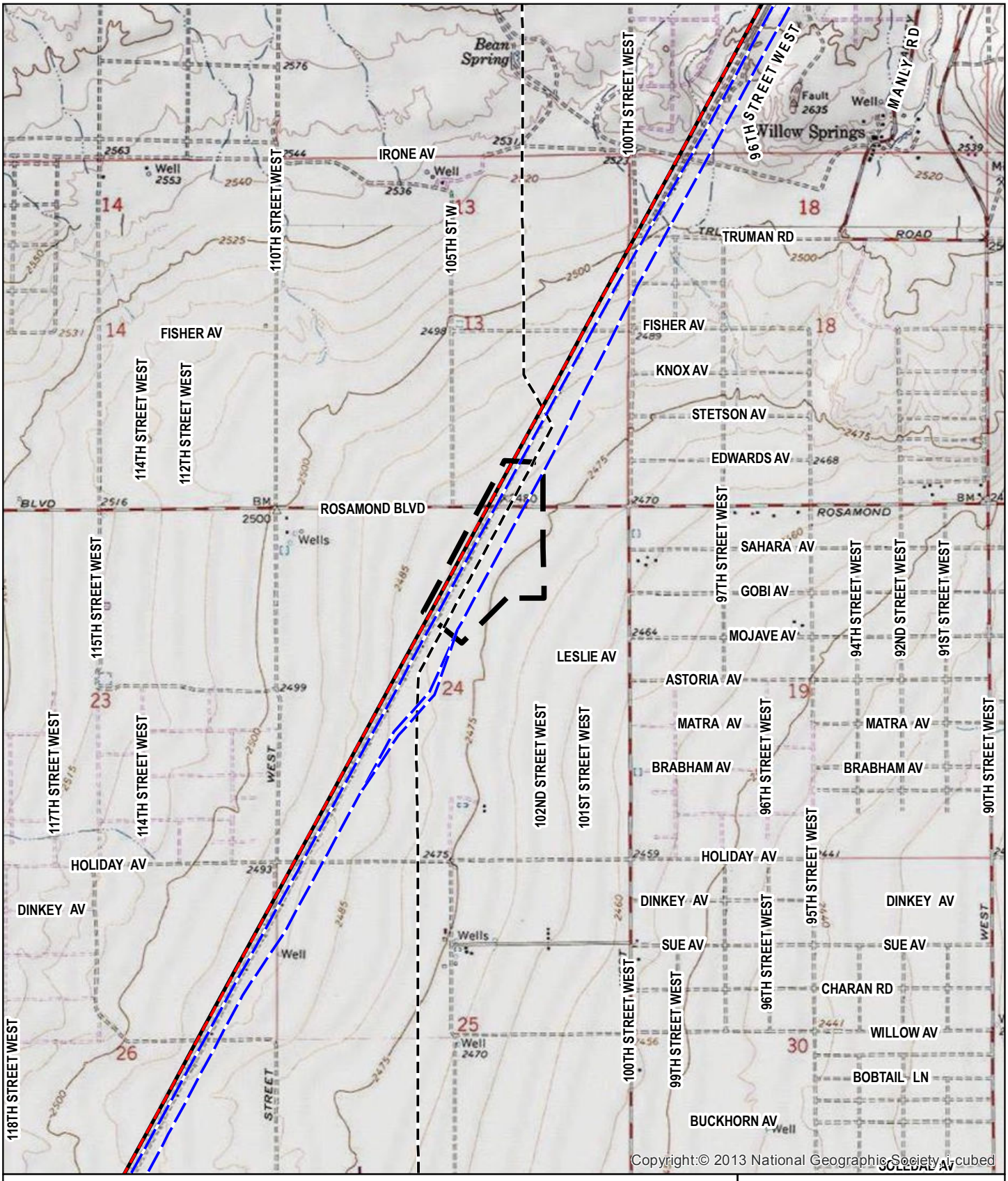

Legend

- Survey Boundary
- LADWP 230 kV Transmission Line
- LADWP 500 kV DC Transmission Line
- SCE Tranmission Line

Rosamond Switching Station

Figure 2
Location Map

0 1,000 2,000 3,000
Feet

N

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FIGURE 3

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PRC Section 21074(b) further relays that 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. PRC Section 21074(c) states that a historical resource described in PRC Section 21084.1, a unique archaeological resource as defined in subdivision (g) of PRC Section 21083.2, or a "nonunique archaeological resource" as defined in subdivision (h) of PRC Section 21083.2 may also be a TCR if it conforms with the above criteria.

AB 52 requires that the lead CEQA agency consult in good faith with California Native American tribes that have requested a consultation for projects that may affect TCRs. The law requires that the lead CEQA agency consult with participating Native American tribes prior to the release of a negative declaration, mitigated negative declaration, or environmental impact report. Under AB 52, a project that has potential to impact a tribal cultural resource such that it would cause a substantial adverse change constitutes a significant effect on the environment unless mitigation reduces such effects to a less than significant level.

1.3.3 State Health and Safety Code Section 7050.5

According to the CEQA Guidelines, archaeological sites known to contain human remains shall be treated in accordance with the provisions of State Health and Safety Code Section 7050.5. The protection of human remains is also ensured by PRC Sections 5097.94, 5097.98, and 5097.99. If human remains are exposed during construction, State Health and Safety Code Section 7050.5 states that no further disturbance shall occur until the County Coroner has made the necessary findings as to origin and disposition pursuant to PRC Section 5097.98. Construction must halt in the area of the discovery, the project proponent must guarantee that the area is protected, and consultation and treatment shall occur as prescribed by law.

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2.0 CULTURAL SETTING

This section provides the results of a cultural resource records check and background literature review that extended one-half mile from the Project footprint. To place these records into historical context, an overview of the prehistory, history, and ethnographic information of the region is provided below.

2.1 Prehistoric Context

The Project area lies near the historical community of Willow Springs, in the western portion of the Antelope Valley in the northern Mojave Desert. Sutton (1996) categorized the cultural chronology of the Mojave Desert as follows: Paleo-Indian (12,000-10,000 before present [BP]), Lake Mojave Complex (10,000-8000 BP), Pinto Complex (9000-5000 BP), Gypsum Lake Complex (4000-1800 BP), Rose Spring Complex (1800-900 BP), and Late Prehistoric (900 BP – European contact). Social and temporal models of prehistoric occupations in areas surrounding the Project site are reflected in this chronology, which has been refined in recent years (Sutton et al. 2007).

2.1.1 Paleo-Indian (ca. 12,000 – ca. 10,000 BP)

The time of the earliest arrival of humans to the Americas is inconclusive, although concrete evidence for human occupation of California can be traced to 11,000 years ago. Several archaeological studies push back this date to at least 13,000 years ago based on data indicating nearshore seasonal resource exploitation by people in the Northern Channel Islands, including Arlington Springs, Daisy Cave, and Cardwell Bluffs (Erlandson et al. 2007; Erlandson et al. 2011; Johnson et al. 2002; Kennett et al. 2008). Chipped stone crescents are often thought to be indicators of late Pleistocene and early Holocene occupations, numbering approximately 2,000 in California (Erlandson 2011). The dominant tool type used among Paleo-Indian found in the archaeological record is the fluted projectile point, a type of point which includes the well-known Clovis spearhead. Over 400 fluted projectile points have been found in California. None are known near the Project.

2.1.2 Lake Mojave Period (ca. 8000 – ca. ~6000 BP)

In the California deserts the number of archaeological sites increases significantly after 8000 BP, which suggests a dramatic increase in the Native American population during and following the late Paleo-Indian period, possibly due to advantageous climatic change. Warren and Crabtree (1986) treat the Lake Mojave period as the first phase in the transition from Paleo-Indian to Archaic adaptations. In the Mojave Desert, sites of the Lake Mojave period are characterized by large, Great Basin Stemmed and concave-based projectile points, gravers, drills, scrapers, crescents, and a few heavy core tools. Fluted points are rare according to Warren and Crabtree (1986) and absent according to Sutton (1996). Milling stones are rare or absent (Warren and Crabtree 1986). Most Lake Mojave sites are limited to surface scatters only. Lake Mojave sites are well known in the central and eastern Mojave, but rare in the Western Mojave except in the China Lake/Coso area near Ridgecrest (Sutton 1996).

The Lake Mojave period is thought by some archaeologists to have been a time of generalized hunting and gathering, similar to that found throughout the Great Basin (Warren 1967; Warren and Crabtree 1986). However, Lake Mojave sites are often found along the former shorelines of dry Pleistocene lakes (Warren 1980 and 1984; Warren and Crabtree 1986), which has led other archaeologists to suggest that this period was characterized by an economic focus on wetland plants and animals. Some of these sites may have been occupied periodically but over many subsequent generations (Thomas 2012). The large projectile points found at these sites suggest that large game hunting was important, but because the sites are usually only surface scatters, bones and other organic remains are very rare and it is difficult to infer the specific plants and game animals that were exploited (Thomas 2012). This adaptation is thought to have ended with the slow disappearance of

pluvial lakes that marks the formal end of the Late Pleistocene/Early Holocene across much of the western United States.

2.1.3 Pinto Period (ca. 6000 – ca. 4000 BP)

With the onset of the Middle Holocene, the climate throughout the western United States became drier and hotter than earlier times. This period, also known as the Clyde Phase (Bettinger 1982), is much debated by archaeologists as it is argued that the tribes withdrew to more desirable locations as the pluvial lakes dried up (Moratto 1984). It is unknown exactly how people adjusted to the new arid environment. Warren and Crabtree (1986) suggest that populations may have fluctuated with lower elevations essentially being uninhabited at times. Settlement patterns might have shifted from lakeshores to streams and springs found in upland areas, because this would have been where game and plant resources would be more readily available (Sutton 1996): short-term encampments were established near available resources (Gilreath 1995).

Sites of the Pinto Period are relatively rare in the Mojave Desert and those that are known are typically small in size. These facts suggest a regional drop in human population. Pinto sites also seem to appear slightly before the end of the Lake Mojave Period, with the earliest dated at roughly 8500 BP (Sutton et al. 2007). Pinto Period sites in the Mojave Desert are often only surface scatters, lacking stratigraphy; however, evidence suggests that the populations were highly mobile and utilized a wide selection of animal and plant resources. Faunal assemblages from sites at Fort Irwin show that lagomorphs (rabbits and hares), followed by artiodactyls (including deer, sheep, and pronghorn), were the primary focus (Sutton 1996). At some sites, tortoise bones are also present.

Archaeological evidence suggests a change in tool types during this period; the Pinto Period is characterized by the distinctive Pinto and Little Lake projectile points (Bettinger 1976; Moratto 1984; Warren and Crabtree 1986), which have been associated with ephemeral lakes. Lithic material was predominantly basalt and rhyolite; obsidian was not yet frequently used. Percussion flaking was the preferred technology (Warren and Crabtree 1986). Common tool types included scraper-planes and choppers; and the earliest appearance of ground stone tools such as basin metates and manos for grinding plant foods. Milling stones are present but rare at Pinto Period sites (Warren 1980 and 1984; Warren and Crabtree 1986; Sutton 1996). Evidence of pinyon nut exploitation at some sites suggests a shift to seed processing to supplement the diet (Sutton 1996). Sutton (1996) sees cultural continuity from the Lake Mohave Period to the Pinto Period, suggesting that Pinto can be seen as the final phase of a transition from Paleo-Indian material culture to adaptations more typical of Archaic sites. Pinto appears to be a broadly generalized cultural adaption related to a climatic shift to an increasingly xeric environment and the final desiccation of the Pleistocene lakes (Sutton 1996).

2.1.4 Gypsum Period (ca. 4000 BP – ca. 1800 BP)

About 4,000 years ago, climatic conditions shifted again to a cooler and moister environment than the previous Pinto Period. This change led to more favorable environmental conditions in terms of plant and animal populations, which in turn seems to have contributed to an increase in population in the Mojave Desert; the development of trade between different groups; and greater social complexity beyond a simple band structure. Gypsum Period hunters exploited a wide range of game animals, including mountain sheep. They probably used the atlatl, a weighted stick used to throw a large dart farther and more accurately than was possible with the unaided arm. Stone tools used at this time included two-edged blades, scrapers, hammerstones for lithic core reduction, and milling stones for grinding seeds collected from grasses and other plants (Warren 1980 and 1984; Warren and Crabtree 1986).

2.1.5 Rose Spring / Saratoga Springs Period (ca. 1800 BP – ca. 900 BP)

Throughout the Great Basin, approximately 1,500 years ago, smaller projectile point types were introduced, indicating the introduction of the bow and arrow. This technology probably replaced the atlatl, which had been used for nearly 10,000 years. Numerous sites dating to this period, including major villages, have been recorded in eastern California. Many of them contain bedrock milling features and portable milling stones, which suggest that gathering seeds, nuts, and other plant foods, had increased in importance in the people's diet. In the Antelope Valley, artifacts from some Rose Spring Period sites suggest that trade or other ties to coastal Native American groups may have been associated with local changes in subsistence and the development of larger villages (Warren 1980 and 1984; Warren and Crabtree 1986).

2.1.6 Late Prehistoric Period (ca. 900 BP – Contact)

During the Late Period, the Desert Side-notched projectile point became a distinctive temporal marker. Pottery also appears for the first time in this Period. Trade between different Native American groups increased along the Mojave River and over the Sawmill-Liebre Range, although there is evidence at the very end of the period that the trade network along the Mojave River had broken down, possibly due to a collapse of Anasazi economies, the droughts of the thirteenth century, or the introduction of Shoshoneans into eastern California. Concurrently with this decline in trade in the eighteenth century, the abundance and size of villages in the Antelope Valley declined (Warren 1980 and 1984; Warren and Crabtree 1986).

2.2 Historic Context

The transition from the prehistoric period to the historic era began during the late 1690s with the arrival of Spanish Jesuit Missionaries on the Baja Peninsula. Establishing the first outpost in La Paz in 1697, the Jesuits slowly extended Spanish control over the Peninsula. In 1768, the Jesuits were expelled to Cuba (Bancroft 1883) and replaced by the Franciscan Order in California and the Dominican Order in Baja California. The Franciscans established the first Mission on what is now American soil in 1769 at San Diego, and that year marks the standard transition end point between the prehistoric and historic in southern California. A short-lived phenomenon, Franciscan rule was ended in 1773 when the Spanish Crown required the Dominicans to begin managing all existing Missions and establish new Missions. Because of Russian and British territorial advances in the North Pacific during the mid to late 1700s, the Dominicans, initially under Fr. Junipero Serra, were allowed to establish new Missions northward from San Diego near the coast until 1823 when the last Spanish mission was founded at Sonoma.

Once the lands near each Mission were stocked with cattle, a need to survey nearby unexplored lands was required not only for calculation of pasture size and knowledge of water sources, but to control the ubiquitous Indian raiders and determine the whereabouts of trails associated with coast to interior trade routes. Regionally, one of the first explorations into the interior was led by Gaspar de Portola in 1769 into the upper reaches of the Santa Clara Valley near present day Newhall. The expense of maintaining the Missions caused the Spanish Crown to question holding onto them (McCarty 1976) and once king Charles IV and Ferdinand VII abdicated in favor of Napoleon Bonaparte (in 1808), Mexicans began to assert their territorial rights. The decline of the Missions as religious institutions and as the local political seat had been occurring since 1804, when the Spanish Crown began reducing funding in its Colonies in reaction to a series of economic recessions in Europe (Bancroft 1883).

Real change began in 1821 when Mexico gained independence from Spain. The authority of the Dominicans began to erode when, in 1826, the Mexican military removed the neophytes at the Missions from church control (Castillo 1978). Mission lands were seized by the Mexican government in August 1833 after the Act of Secularization was formalized: ranchos composed of former Mission

lands were deeded to important Mexican loyalists and leading citizens (aka the Californios) through the decrees of local Mexican governors. Several years later, the new state of Mexico was on the verge of bankruptcy and revolution, and this forced the Mexican Government to shed much of its northern frontier. After the Mexican – American War of 1846-1848, the Treaty of Guadalupe Hidalgo was signed (in 1849), and Alta California (this territory included California, Nevada, Arizona, Colorado, and a portion of Wyoming) plus additional territory was ceded to the United States along with a credit of $15,000,000 in Mexican debt. Flirting with independency for a few months, California was admitted to the union in 1850.

During the Mexican period in southern California, the economy was almost entirely dependent on cattle ranching and agriculture; mining was seldom noted by the early historians and the central government was remote and ineffective. Placer gold was discovered in Placerita Canyon in 1841 by Don Francisco Lopez, leading to a small gold rush (Hill 1999). Controlled by the Mission San Fernando, a small amount of development of this mine took place prior to Americanization (Osio 1996). Because the Spanish presidios and Mission lands were located along the coast, the interior of California was difficult to explore, and potential mining districts were arid, neither the Spanish nor the Mexican authorities held hope of developing gold and silver mines in California. The interior of California was seen as a wasteland with some possibility that gold would be discovered, while the Pacific Coast allowed for agriculture and cattle ranching. Hard rock mining would not be possible for several more decades.

Mineral exploration began in earnest in the deserts of California and extreme southern Sierra Nevadas just after the Civil War. A rush to mine placers on the Kern River began about 1851, and other smaller riverine deposits were exploited in the San Joaquin Valley as the initial deposits were exhausted (Shumway et al. 1980). Mining in districts where no water was located required the “dry-wash” method, which used the action of forced air through a bellows to separate the gold from alluvium. Once concentrated, the gold and other minerals can be extracted from the pay dirt through chemical means. Typically, hard rock miners attempted to detect the source locations of fine dry washed gold, and then once the veins were located, mining claims were established. Gold, silver and tungsten are typically recovered in the Rand District (Clark 1970). The towns grew to vast sizes until the Depression. After World War II, some mining returned to the area but on a smaller scale.

Mining in the Randsburg-Johannesburg District, and near the town of Mojave, accounts for the majority of gold extracted from Kern County. No active mines are located south of Willow Springs and in the Transverse Ranges. The Mohave mining district was established in the late 1890s after silver and gold was discovered in hydrothermal veins on five buttes southwest of town. Gold and silver are the principal minerals extracted from the buttes (Clark 1970), and some of the shafts at the Golden Queen were sunk 1,000 feet below the surface (Goldenqueen n.d.).

Desert mining in this portion of California required considerable investment, but had the allure of considerable return. To be successful, at least until the ore body played out, mine operators needed to develop and send electricity to the mine for stamp mills and winches, coerce nearby railroads to build spurs so that ore could be shipped safely and securely, and build camps or establish towns with all the necessities of life for workers. Roads between the mines and stage or railroad stops were built, often from Indian trails or stagecoach tracks. Each of these developments allowed mine operators at the Mojave-Rosamond District to succeed for many decades. Mining for gold and silver is continuing southwest of Mojave and will likely continue until 2030 (Goldenqueen n.d.). Each town that bloomed before about 1880 was due to mining, but those established in the Antelope Valley after 1880 were due to transportation and agriculture.

During the early historic period, the arid environment of the Mojave Desert and Antelope Valley made the region inhospitable for homesteading, except by miners. However, the area did serve as an

important transportation corridor between the California coast and the Colorado River to the east. One of these early routes, the Mojave Road, was located near the Mojave River. Originally a Native American trail (the Mohave Trail), following a string of water holes and springs that fed the river, early Spanish explorers Pedro Fages and Fray Francisco Garcés followed the route in the late 1700s. Later, the Mexican then the American militaries established outposts along the trail and eventually named it the Mojave Road and the Old Government Road (Hoover et al. 1990).

The Old Spanish Trail crossed the desert from the Colorado, ascended Cajon Pass and entered the Los Angeles Basin near San Bernardino. The route was first pioneered as a route to California from Abiquiu, New Mexico by Antonio Armijo in 1829-1930. Over the next 20 years the trail was crossed by a number of smaller trails creating a network along the route leading to coastal towns. Trading in horses and woolen products increased between New Mexico and the greater Los Angeles area. The Tehachapi-Willow Springs Road was one of the early trails in this area, running between Willow Springs, across Oak Creek, and over Oak Creek Pass to Tehachapi. From 1864 to the 1870s this was the route of the Los Angeles-Havilah stage line, which was discontinued when the Southern Pacific Railroad was built in 1876 between Los Angeles and Mojave. Oak Creek Pass was the only way to cross the Tehachapi Mountains until spurs linking this railroad with railroads in the San Joaquin Valley were completed.

Soon after, the Southern Pacific finished construction of a track between what is now Bakersfield, via Keene, through the Tehachapi Loop, and thence to a new stop at Mojave (Orsi 2005). At this time, an affordable track extending south from Bakersfield through the Grapevine Pass and/or passes to the west was not technically possible. Humbly begun as a railroad stop, Mojave quickly became a transportation crossroads and transfer location for gold and silver ore from nearby mines and borax from Death Valley. The Southern Pacific then laid track to Lancaster, and because it took several more years before tracks could be laid to Los Angeles via Santa Clarita, passengers disembarked and rode to Los Angeles on stagecoaches.

In 1860, the Los Angeles Water Company completed the first water system in Los Angeles, utilizing the Los Angeles River. By 1870, Los Angeles had grown to a population of just over 5,000 and the supply of water was adequate. However, by the turn of the century the city had grown to over 100,000 residents and the cyclic nature of rainfall caused severe shortages sandwiched between oversupply. Relying on the Los Angeles River system for their water (and sewer) needs, the City bought the original water system and asked water department engineers to propose plans for increasing supply and reliability. William Mulholland, superintendent of the City Water Department at the time, advocated procuring additional sources of water for Los Angeles from watersheds to the north that had not yet been tapped by larger communities. Mulholland conceived a plan to build a gravity-fed aqueduct system to transport water from the eastern Sierra Nevadas to reservoirs located north of Los Angeles. In 1904, he formalized plans to buy land and build an aqueduct to deliver “excess” water from the Owens Valley into the city (Mulholland 2002).

In 1906, the Water Department became a separate agency within the managerial structure of the City and was named the Bureau of Los Angeles Aqueduct (WPA n.d.). Mulholland became chief engineer of water, and Ezra Scattergood, Mulholland’s electrical engineer at the Water Department, became the chief electrical engineer of the power division. Mulholland’s vision became a reality when in 1907, the residents of Los Angeles voted to provide the bonds necessary to purchase water rights in the Owens Valley and complete the aqueduct. Construction took over five years. By 1913, the 400-kilometer-long waterway began to deliver water to the City. Later extensions allowed for exportation of water from the Mono Basin. Mulholland continued to develop schemes for the City well in the 1920s.

Two high voltage transmission lines are located near each of the cultural resources discussed in this report. The first was originally known as the OWE-TOL (Owens Gorge to Toluca) high voltage transmission line. Between 1948 to 1952, LADWP built three powerhouses north of Bishop, California in the Owens Gorge and sent alternating current voltage southbound along the 280-mile 230,000 volt OWE-TOL (Barrows 1977) to one of the five "belt" switching stations including Station "E" at Toluca Lake, California. Construction of the gorge powerhouses was planned as early as 1910 but construction could not begin until after World War II ended, due to wartime materiel restrictions (Kahrl 1982). Page (2011) notes that the first of the voltage from the three plants was sent to Los Angeles in 1951, suggesting that the transmission line was built and completed just as the #1 Owens Gorge powerhouse came on-line. This transmission line forged a new ROW between the Owens Valley, through the Angeles National Forest, and into the Santa Clarita Valley. Later, the receiving station was moved to Rinaldi and the line renamed "OWE-RIN."

The second transmission line paralleling the Barren Ridge Renewable Transmission Project (BRRTP) for much of its length is the Pacific Intertie. First envisioned in the middle 1960s, the Intertie was one of the first high voltage direct current (HVDC) lines constructed in the United States to take advantage of new Swedish HVDC technology (Eriksson et al. 2014). Built in the late 1960s and commissioned in 1970, the equipment was initially rated at 400 kilovolts, but upgrades in the 1980s and in 2004 pushed the capacity of 500 kV and 3,100 megawatts. A third set of towers was recently built as part of the Tehachapi Renewable Transmission Project.

2.3 Ethnographic Context

Spanish colonization of coastal California in 1769 subjected Native Americans to sweeping social and cultural shifts. The establishment of the Spanish mission system brought about dramatic and systemic change to social structures. The introduction of new diseases eventually decimated indigenous populations, particularly the smallpox epidemics of 1863 and 1870. Background research has not established which tribal entity may have lived near the Project area at European contact; Sutton (1980:214) and others suggest that the Antelope Valley was virtually abandoned by 300 years BP Harrington's 1917 field notes (Blackburn and Bean 1978) suggest that Kitanemuk villages were known for the mountains west of the Antelope Valley and the extreme western part of the valley may have been used by this tribe for hunting and gathering.

2.3.1 Tataviam

Very little is known about the Tataviam because they virtually disappeared as a distinct sociopolitical group by 1900 (King and Blackburn 1978). The territory of the Tataviam surrounded the upper reaches of the Santa Clara River drainage east of Piru Creek, and included the southwest portions of Antelope Valley. To the south, the territory extended into the San Gabriel Mountains just north of the Los Angeles Basin and San Fernando Valley (King and Blackburn 1978). By 1810, most Tataviam had been baptized at San Fernando Mission, and in 1916, the last speaker of the Tataviam language died. Like their neighbors, the Tataviam probably followed an annual cycle of trapping, hunting, and harvesting plants and animals. Settlements ranged from large villages of 200 people to small communities of fewer than 10. Groups consisting of several related families; larger kin groups lived in permanent villages (King and Blackburn 1978). Tataviam villages included Changuayanga, Tochonanga, and Juyunga, which are all in the Liebre Mountain Range and Sierra Pelona area.

2.3.2 Kitanemuk

The Kitanemuk were a small tribe of Takic speakers that lived on the southern and eastern flanks of the Tehachapi Mountains and the extreme southern end of the Sierra Nevadas (Blackburn and Bean 1978). Encountered by Garces in 1776 (Kroeber 1925), he found them similar to the Southern Yokuts in many ways, which is understandable since they shared portions of the southernmost San Joaquin

Valley. As a result of Mexican and Anglo territorial gains, all tribal members had been displaced from their homeland toward the south and onto the Tejon Ranch, and some to the Tule River Reservation. By the time the first ethnographies had been written, none appeared to be living within their ancestral homeland. The tribe was small, with no more than an estimated 500 to 1,000 living members at contact. Ecological adaptations and subsistence differed little from the Serrano, who lived to the east and southeast, the Yokuts to the north, and the Tataviam to the south. The fact that their territory was located at a key crossroads for travel into southern California and the coast probably led to their early demise.

2.3.3 Serrano

The spoken language of the Serrano is of the Takic-Serran branch of the Uto-Aztecan language family. Their range was located in the inland mountainous areas, typically east of the Cajon Pass area of the San Bernardino Mountains, inclusive and north of San Timoteo Canyon, west of Twenty-nine Palms and south of Victorville (Bean and Smith 1978). A few Serranos in the more remote areas of their homeland were able to remain relatively unaffected by European incursions until the 1870s (Bean and Vane 2000).

Serrano populations studied by ethnographers were a remnant of their cultural form prior to contact with the Spanish Missionaries. Nonetheless, the Serrano are viewed as clan and moiety-oriented or local lineage-oriented group tied to traditional territories or use-areas. Typically, a “village” consisted of a collection of families centered about a ceremonial house, with individual families inhabiting willow-framed huts with tule thatching. Considered hunter-gatherers, Serrano exhibited a sophisticated technology devoted to hunting small animals and gathering roots, tubers and seeds of various kinds. Like other California natives, smallpox epidemics killed many tribal members in the 1800s, and prior to 1840 most surviving tribal members had been missionized, further decimating the native lifestyle. Today, Serrano descendants are found mostly on the rolls of the Morongo and San Manuel reservations.

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3.0 RECORDS SEARCH AND CONSULTATON

3.1 Known Cultural Resources

A literature and records search was conducted at the Southern San Joaquin Valley Information Center (SSJVIC) by Research Assistant Carrie Stephens on October 12, 2017. Records consulted at the SSJVIC included the inventory of the National Register of Historic Places, the CRHR, California Historic Landmarks list, topographic maps showing the locations of sites and surveys, and historic topographic maps. Because of the limited potential impacts assumed by the Project, a one-half mile search radius was utilized.

This research effort indicated that several historic properties were located within a one-half mile of the Project area (refer to Table 1). The last survey on the Project site was conducted in January 2014 along the LADWP easement in the northwestern portion of the Project parcel. Research shows that the rest of the Project site has not been surveyed previously.

TABLE 1 KNOWN CULTURAL RESOURCES LOCATED WITHIN 0.5 MILE OF THE PROJECT

P NUMBER	TRINOMIAL	PERIOD AND TYPE	DISTANCE/DIRECTION FROM PROJECT AREA
P15-018681	CA-KER-10204	Historic: LADWP transmission line	T-line conduit skirts NW part of the Project area. No effect.
P15-012786	n/a	Prehistoric: isolated core	500 feet west of project.
P15-018733	n/a	Historic: isolate	1,160 feet northwest of project.

Many of the parcels near the Project have been surveyed by professional archaeologists in the last 40 years as part of CEQA compliance documents. The region has been farmed since about 1890, but agricultural buildings and infrastructure more than 50 years old that can be observed on historic aerial maps were recorded and evaluated under CEQA guidelines after about the year 2000; they were often ignored prior to this time. Given that few cultural resources are known for this area and the site has been previously disturbed due to recent transmission line development within and adjacent to the LADWP and SCE easements and along Rosamond Boulevard, the potential for the discovery of cultural resources is considered low.

3.2 Historic Aerial Photographs and Maps

Historic maps have been produced by the USGS since 1901 and are available for review on the Historicaerials.com website (Nationwide Environmental Title Research 2018) as well as the USGS Historical Topographic Map collection site. Both on-line archival resource websites were examined during this phase of the analysis. In addition, the on-line Bureau of Land Management's General Land Office (GLO) website was accessed in order to determine if any early historic-era homesteading records for the Project area have been stored within the archives of the Bureau of Land Management.

Aerial photos taken between 1948 and 2009 show that the Project site had not been plowed or actively farmed between those years. The LADWP Owens Gorge transmission line corridor was built about 1951 (POWER Engineers, Inc. [POWER] 2015) and the 1959 aerial shows the transmission line patrol road quite clearly.

The GLO website showed that the northeast quarter (160 acres) of Section 24 was patented by one Charles Wheeler on July 26, 1897 in Los Angeles. A historical background review of this landholder revealed no significant historical notes.

3.3 Native American Consultation

LADWP has undertaken an AB 52 consultation effort with local tribes as part of the planning portion of this Project. In support of this effort, prehistory, history, and ethnographic information of the region has been provided in Chapter 2.0 of this report and the results of the records search has been provided in Section 3.1 of this report. One result of the active consultation, which began in the spring of 2018, was that the Phase I survey be amended to include shovel testing of the Project footprint. The shovel testing portion of this study occurred on September 12 and 13, 2018.

POWER performed a sacred lands file search for BRRTP in 2016 and none were identified for the Project area. The purpose of the search request was to determine if any known Native American cultural properties (e.g., traditional use or gathering areas, places of religious or sacred activity) were present within or adjacent to the Project area.

4.0 FIELD METHODOLOGY AND RESULTS

4.1 Methodology

The field survey was conducted by POWER archaeologist Rebekka Knierim on October 5 and 6, 2017. The survey area includes the whole of the Project area with additional and immediately adjacent areas surveyed due to the need for relocation of several existing transmission line towers that would be required as part of the Project (refer to Figure 3). The archaeological fieldwork was undertaken to substantiate the presence or absence of intact archaeological deposits within the survey area. Fieldwork consisted of a combination of intensive visual inspection of the ground surface plus a series of transects spaced 10 to 15 meters apart throughout the entire Project area. Direct soil observation was good with about 25 percent throughout the entire survey area.

4.2 Field Survey

The survey revealed two historic isolates: two Prince Albert tobacco cans (ISO-1) and an amethyst glass bottle body fragment (ISO-2) (refer to Appendix B, Survey Site Photos and Appendix C, Recorded Isolates). Other fragments of metal were observed including two metal containers that had been recorded by previous studies in the BRRTP project footprint. These extra resources were not located inside the Project footprint. Roads surround the Project site and the area appears to have been in use since World War II. Two to three miles to the north, in the areas of Willow Springs and Bean Springs, several prehistoric archaeological sites have been discovered in areas bearing intact prehistoric topsoil. Due to the more recent historical activities in the area, the likelihood of uncovering buried prehistoric archaeological materials is low to moderate for this Project site.

4.3 Shovel Testing Methodology and Results

Prior to undertaking the testing, on September 12 and 13, 2018, the Project area was wholly inspected during an initial pedestrian survey in transects spaced 50 meters apart and in a north to south orientation. The property is currently utilized for existing LADWP 230 kV, LADWP 500 kV direct current, SCE transmission lines, associated ROW, tower pads, and patrol roads. The remaining portions not utilized by LADWP and SCE are fallow and unutilized. Ground cover and vegetation is sparse and allowed for ideal (100 percent) surface visibility of the soils.

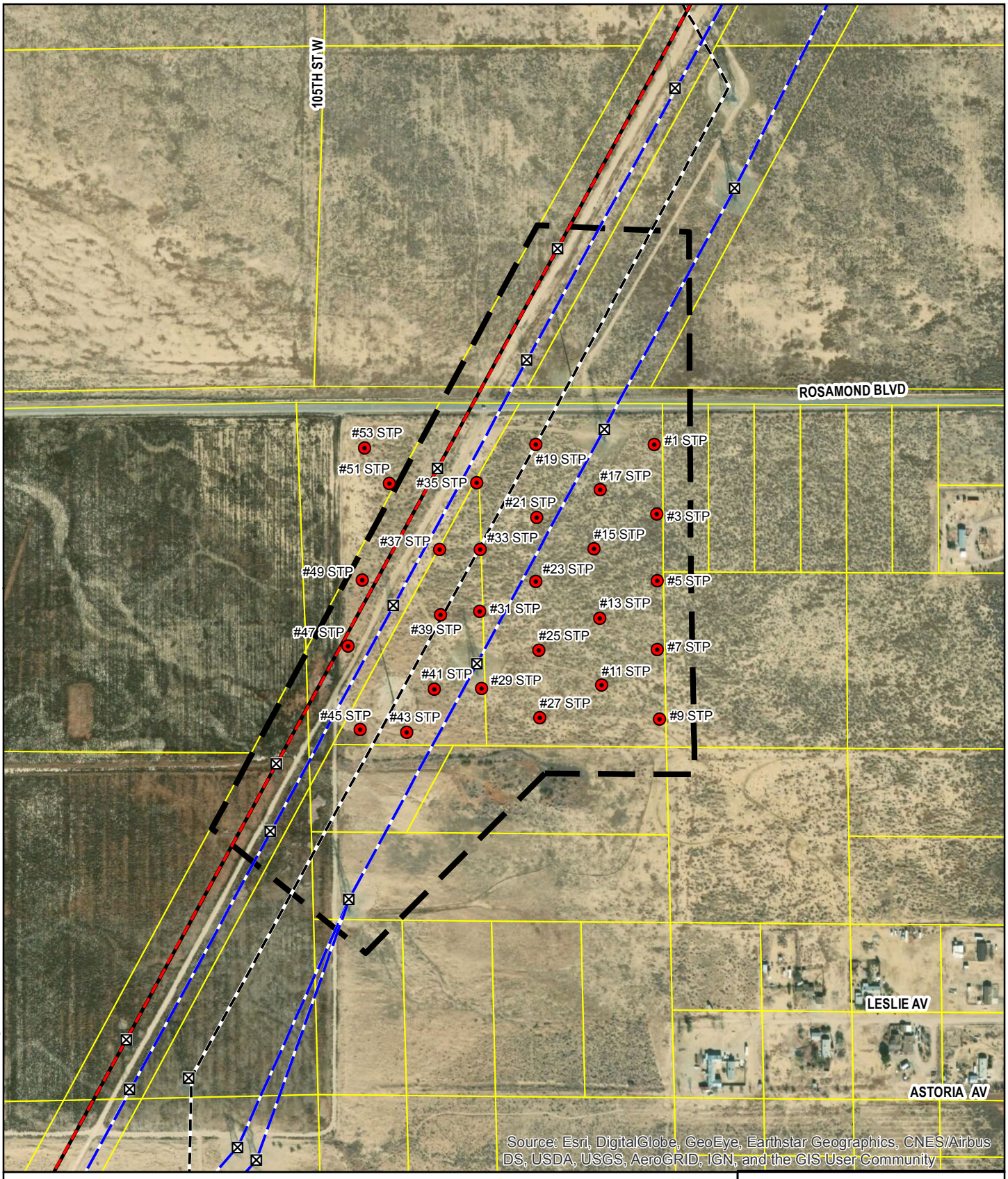
As a result of AB 52 consultations, LADWP prepared a shovel testing plan (refer to Appendix D, Extended Phase I Testing Plan). The Extended Phase I Testing Plan identified 53 potential shovel test pit (STP) locations for the field crew it chose from based on field conditions. Ultimately 27 were excavated within the planned testing period. The STP locations are illustrated on Figure 4.

The subsurface testing method consisted of the hand excavation of 50 x 50 centimeter (cm) STPs at 27 locations. Prior to shovel testing, 53 test locations were laid out with pin flags in the field in a grid pattern and labeled 1 through 53. Minor discretionary adjustments were made in the field to the locations of the STPs to focus on areas which exhibited elevated probability for encountering cultural resources (e.g., presence of environmental characteristics that tend to be associated with archaeological site locations, such as level and well drained terrain, and proximity to natural resources such as fresh water).

The soil was removed from each STP and screened through 0.25-inch wire cloth mesh by natural soil levels if such levels were visible, and by 10 cm increments where visible stratigraphy escaped the eye. The excavations continued in depth until a sterile stratum or hard pan was reached, or a natural obstacle presented itself. A data log of soil stratigraphy for each STP excavated was recorded and STPs were backfilled (refer to Table 2). Data was collected with ArcPad 10.2 on a Trimble Geoexplorer 6000 series in NAD83.

TABLE 2 SHOVEL TEST PIT RECORD

STP#	LEVEL	DEPTH (CM)	MUNSELL	COMPACTION	SOIL TYPE
1	I	0-34	10yr6/3	Moderate	Fine Sandy Silt
3	I	0-42	10yr6/3	Moderate	Fine Sandy Silt
	II	42-52	10yr6/3	High	Fine Sandy Silt
5	I	0-34	10yr6/3	Mod	Fine Sandy Silt
7	I	0-32	10yr6/3	Mod	Fine Sandy Silt
9	I	0-26	10yr6/3	Mod	Fine Sandy Silt
11	I	0-30	10yr6/3	Moderate	Fine Sandy Silt
13	I	0-4	10yr5/3	Low	Fine Sandy Silt
	II	4-10	10yr6/3	Moderate	Fine Sandy Silt
	III	10-32	10yr6/3	Moderate	Fine Sandy Silt
15	I	0-34	10yr6/3	Moderate	Fine Sandy Silt
17	I	0-27	10yr6/3	Moderate	Fine Sandy Silt
19	I	0-43	10yr6/3	Low	Sand
21	I	0-28	10yr6/3	High	Fine Sandy Silt
23	I	0-37	10yr6/3	Moderate	Fine Sandy Silt
25	I	0-38	10yr6/3	Moderate	Fine Sandy Silt
27	I	0-36	10yr6/3	Moderate	Fine Sandy Silt
29	I	0-24	10yr6/3	Low	Fine Sandy Silt
	II	24-43	10yr6/3	Moderate	Fine Sandy Silt
31	I	0-33	10yr6/3	Moderate	Fine Sandy Silt
33	I	0-34	10yr6/3	Moderate	Fine Sandy Silt
	II	34-41	2.5y7/1	Moderate	Silt
	III	41-46	10yr6/3	Moderate	Fine Sandy Silt
35	I	0-29	10yr6/3	Moderate	Fine Sandy Silt
	II	29-35	2.5y7/1	Moderate	Fine Silt
	III	35-50	10yr6/3	Moderate	Fine Sandy Silt
37	I	0-40	10yr6/3	Moderate	Sandy Silt
39	I	0-50	10yr6/3	Moderate	Sandy Silt
41	I	0-35	10yr6/3	Low	Sand
43	I	0-50	10yr6/3	Low	Sand
45	I	0-45	10yr6/3	Low	Sand
47	I	0-20	10yr6/3	Low	Sand
49	I	0-35	10yr6/3	Low	Sand
51	I	0-37	10yr6/3	Low	Sand
53	I	0-32	10yr6/3	Low	Sand



Legend

- Shoveled Locations
- Structure
- Survey Boundary
- Parcel
- LADWP 230 kV Transmission Line
- LADWP 500 kV DC Transmission Line
- SCE Tranmission Line

Rosamond Switching Station

Figure 4
Shovel Test Pit Locations

0 260 520 780

Feet

N

POWER ENGINEERS

Date: 9/28/2018

Path: W:\148795_LADWP_RosamondSub\DD\GIS\Apps\Report\Cultural\Fig4_ShovelTestPitLocationsV2.mxd

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Of the 53 plotted STPs, 27 were excavated in a grid-like fashion. The fieldwork crew achieved an average depth of approximately 40 cm below the current ground surface.

The characteristic stratigraphic soil profiles for the STPs consisted of fine sandy-silt over hardpan, or fine sand over hard pan. The interfacing surfaces of the stratigraphic levels were clearly defined by soil density and generally did not exhibit any signs of disturbance. The exception to this was located in STP 33 and STP 35 where a thin deposit of very fine grey silt was present between soil horizons; this was interpreted as a disturbance horizon of uncertain origin. The disturbance observed in STPs 33 and 35 did not have any cultural material associated with it and is likely a biproduct of the construction of the existing transmission lines. In summary, no cultural material was recovered during the shovel test pit excavations.

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5.0 CONCLUSIONS AND RECOMMENDATIONS

POWER has conducted an Extended Phase I cultural resource survey on several parcels of land in support of construction of the proposed Project. The survey fieldwork resulted in the detection of two historic isolates in the survey area, while the shovel testing fieldwork resulted in the discovery of no buried cultural resources of any kind. The lack of prehistoric resources reinforces the fact that the potential for such resources was considered low as a result of the background research. The fact that no archaeological or historic-era sites were observed suggests that the chance that any will be found during construction is low.

Because the Project will not result in an impact to any known significant cultural resources, and because the potential for impacting buried historic properties is considered low, POWER does not recommend any further cultural resources research on this Project. In addition, POWER does not recommend that archaeological monitoring take place during construction.

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APPENDIX A RESUMES OF REBEKKA G. KNIERIM, LINDSEY WEEKS AND MICHAEL H. DICE

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REBEKKA KNIERIM

ARCHAEOLOGIST

YEARS OF EXPERIENCE

5

EDUCATION

- B.A., Anthropology, Humboldt State University, 2007
- M.A., Anthropology, California State University, Los Angeles, 2015

AREAS OF EXPERTISE

> Pedestrian survey
> Site excavation
> Construction monitoring
> Curation and analysis

MILITARY SERVICE

SEMINARS

> Conference Presenter, 2014. Rebekka G. Knierim, René L. Vellanoweth. Residue Analyses from a Ceremonial Stone Mortar on San Nicolas Island, California. 79th Annual Meeting of the Society for American Archaeology, Austin, TX.
> Conference Presenter, 2013. William E. Kendig, Rebekka G. Knierim, Nicholas W. Poister, Lisa Thomas-Barnett, René L. Vellanoweth, Jon M. Erlandson, and Steven J. Schwartz. Documenting the Excavation of the Redwood Box Cache from San Nicolas Island, California. 47th Annual Meeting of the Society for California Archaeology, Berkeley, CA.
> Conference Presenter, 2012. William E. Kendig, Rebekka G. Knierim, Lisa Thomas-Barnett, René L. Vellanoweth, Jon M. Erlandson, and Steven J. Schwartz. (Eighth California Island Symposium) Photographic Documentation of the Discovery and Excavation of the Redwood Box Cache from CA-SNI-14 on San Nicolas Island, California. 8th California Islands Symposium, Ventura, CA.
> Conference Presenter, 2011. Rebekka G. Knierim, Barney G. Bartelle, and René L. Vellanoweth. The Balancing Stone Features of Tule Creek Village, San

EXPERIENCE SUMMARY

Ms. Knierim is experienced in cultural resource management and brings expertise with pedestrian surveys, test excavation and data recovery at prehistoric and historic sites throughout California, Oregon and Montana. Sites have included complex cultural stratigraphy, and a prehistoric ritual locale. She has served as a crew leader involved in coordination and execution of field work. Her laboratory experience includes cleaning, sorting, cataloguing, and curation according to federal requirements. She has experience setting up archival systems and curation methods. Ms. Knierim also brings tribal consultation experience.

Los Angeles Department of Water and Power, Barren Ridge EIS/EIR, California

Archaeologist responsible for conducting pedestrian surveys, site testing, and ongoing monitoring. The project would provide the City with access to wind- and solar-generated power in the Tehachapi Mountain and Mojave Desert areas of southern California. It would improve system reliability and help the City meet its Renewable Portfolio Standard obligations mandated by the State of California and the City of Los Angeles. The project includes new and upgraded double circuit lines over a distance of 200 miles.

Los Angeles Department of Water and Power, Environmental Surveys, Monitoring and Mitigation, Celilo to Sylmar 500 kV DC Transmission Line, California

Archaeologist who participated in the archaeology survey. POWER conducted biological and cultural resource surveys, mitigation monitoring, and revegetation efforts at various sites along the Celilo-Sylmar 500 kV Transmission Line. Twenty-three tower spans on the line had been found to be in violation of new ground-to-conductor separation distance standards by the North American Electric Reliability Corporation, requiring LADWP to either raise the height of existing towers or excavate areas that were in violation. POWER provided preconstruction resource surveys at all 23 sites and, with concurrence from the BLM, provided biological monitoring at five sites and cultural monitoring at one site.

NorthWestern Energy, Jackrabbit to Big Sky 161 kV Transmission Line EIS, Montana

Archaeologist who participated in the survey and testing. POWER prepared an Environmental Impact Statement (EIS) as a third-party contractor to the US Forest Service for the proposed rebuild and upgrade of an existing 69 kV transmission line. POWER prepared an Environmental Impact Statement (EIS) as a third-party contractor to the US Forest Service for the proposed rebuild and upgrade of an existing 69 kV transmission line in Gallatin County, Montana. NorthWestern Energy has applied to the Forest Service to

Nicolas Island, California. 45th Annual Meeting of the Society for California Archaeology, Rohnert Park, CA

> Conference Presenter. 2011. Richard Guttenberg, William Kendig, Rebekka Knierim, Steven Schwartz and René Vellanoweth. GIS as a Tool for Analyzing Intrasite Spatial Variability on San Nicolas Island. 76th Annual Meeting for the Society for American Archaeology, Sacramento, CA.

> Conference Presenter. 2008. Rebekka G. Knierim, Johanna V. Marty, and René L. Vellanoweth. The Significance of Iron-Rich Objects at Tule Creek Village (CA-SNI-25), San Nicolas Island, California. 42nd Annual Meeting of the Society for California Archaeology, Burbank, CA

> Conference Presenter. 2008. Rebekka G. Knierim and René L. Vellanoweth. Buried Brilliance: A Spatial Analysis of Red Ochre from Tule Creek Village (CA-SNI-25). 7th California Island Symposium, Oxnard, CA

> Conference Presenter, 2008. Barney Bartelle, Johanna Marty, Lisbet Husby-Gerry, William E. Kendig, Rebekka G. Knierim, and René Vellanoweth. Analysis of A Newly Discovered Dog Burial from San Nicolas Island, California. 42nd Annual Meeting of the Society for California Archaeology, Burbank, CA

> Conference Presenter, 2007. René L. Vellanoweth, Barney G. Bartelle, William E. Kendig, Rebekka G. Dozier and Amanda C. Cannon. The Role of Animals and Plants in Ritual Contexts at Tule Creek Village, San Nicolas Island, California 41st Annual Meeting of the Society for California Archaeology, San Jose, CA

EQUIPMENT

PUBLICATIONS

> Knierim, Rebekka G., René L. Vellanoweth, William E. Kendig, Barney G. Bartelle, and Richard B. Guttenberg. 2013. Portable Religious Stone Features from a Ceremonial Complex on San Nicolas Island, California. Journal of California and Great Basin Anthropology 33(1):39-51.

> Guttenberg, Richard B., René L. Vellanoweth, William E. Kendig,

amend its existing Special Use Permit for the operation of the transmission line in Gallatin National Forest to allow an upgrade to 161kV. Issues include Gallatin River crossings, Forest Service recreational residences, raptors and other avian species, timber harvesting and vegetation management, cultural resources, and visual impacts.

Renewable Resources Group, Palo Verde Mesa Solar, California

Archaeologist who participated in the survey supporting preparation of a joint EIR and EA (CEQA and NEPA) for a new 485 MW photovoltaic solar project. Duties included site documentation and photographing of sites and isolates. POWER supported Renewable Resources Group and Riverside County in preparing an Environmental Impact Report (EIR) for the 470 MW Palo Verde Mesa Solar PV project, which will connect to Southern California Edison's Colorado River Substation. POWER provided assistance in all phases of the environmental process, including support in preparation of technical reports required for the project, which includes a 3,250-acre solar facility and proposed 14-5 mile 230 kV transmission line.

Los Angeles Department of Water and Power, Southern Owens Valley Solar Ranch EIR, California

Archaeologist who participated in the archaeological survey, testing, and artifact illustration. POWER prepared an Environmental Impact Report (EIR) for an LADWP solar project located on City-owned lands within the Owens Valley in Inyo County, CA. The project will be a 200 MW solar photovoltaic (PV) project on approximately 3,000 acres. POWER prepared technical studies to evaluate proposed and alternative project sites, prepared visual simulations, and performed intensive cultural resource evaluations.

California Pacific and Electric Company (CalPeco), 625 kV and 650 kV Transmission Line Upgrades, Lake Tahoe, California

Archaeologist who participated in the cultural survey from the Truckee substation to the Kings Beach Switching Station for the 650 kV line upgrade and from Kings Beach to the Tahoe City Substation for the 625 kV upgrade. POWER was subcontracted by Ascent Environmental Inc. for this cultural survey. POWER completed the survey and submitted a cultural resources inventory addendum report.

PREVIOUS WORK HISTORY

Bell Ranch Desalter Project Survey, Camarillo, California

Sole surveyor responsible for identifying, photographing, and recording on Trimble GPS cultural resources on an avocado, lemon, and celery ranch covering several hundred acres and including an ephemeral watercourse.

Suncrest Project, San Diego Gas and Electric, California

Sole cultural field technician with biologist, responsible for conducting surface survey of area covering several hundred acres on private land adjacent to the Cleveland National Forest. Also inspected previously recorded bedrock mortar site. Photographed finds and documented finds on Trimble GPS.

Rebekka G. Knierim, and Steven J. Schwartz. 2013. Geographic Information Systems as a Tool for Analyzing Intrasite Spatial Variability on San Nicolas Island, California. In: Small Islands, Big Implications: The California Channel Islands and Their Archaeological Contributions. Jennifer Perry and Christopher Jazwa, editors. University of Utah Press.

Tenderfoot 12kV, Southern California Edison, California

Field technician responsible for monitoring for cultural resources at a historic mining archaeological site for laying of ½ mile long electric line. Recorded on Trimble GPS and photographed trenching activity, and relocated several features and isolates.

YMCA Construction Project Salvage Excavation, Santa Monica, California

Field technician, responsible for screen sifting and identifying human remains and prehistoric artifacts salvaged from bulldozer bucket loads during construction of YMCA building on approximately three acre area. Human bone was bagged and sent for curation.

Trinidad Museum Society, Trinidad, California

Lead archivist and archaeological consultant for museum. Developed archival system, accessioned new acquisitions, and curated artifacts. Researched and curated Native American artifacts from Tsurai site (CA-HUM-169), and currently writing report on Tsurai artifact collection to be housed in museum archives.

Scotia Inn Construction, General Excavation, California

Field technician participating in an open area salvage excavation, wet screening, and mapping of remains of historic hotel destroyed by fire on approximately half an acre. Responsibilities also included teaching grade school children about archaeological methods, specifically identifying historical artifacts and wet screening.

Pacific Gas and Electric Substation Reliability Project, California

Lead monitor responsible for identifying historic or prehistoric cultural resources during excavations for footings for new substation. Recorded and photographed historical finds and completed DPR forms in accordance with federal regulations.

Highway 127 AT&T Fiber Optic Cable Survey and Testing, California

Field technician responsible for identifying, photographing, and recording on Trimble GPS prehistoric and historic sites and isolates along Highway 127 in compliance with installation for fiber optic cable through the BLM, Barstow field office. Responsible for excavating test units using square shovel and breaker bar.

RBF Indio Varner and Jefferson Interchange Project, California

Field technician responsible for monitoring for cultural resources for road widening project. Activity occurred on either side of roads by eight feet and ran about 100 feet in length radiating from junction of Varner Road and Jefferson Road. Construction covered a portion of a known Native American

lakeside fishing camp. A number of surface artifacts were flagged, photographed, recorded on Trimble GPS, and in case of destruction, were collected and bagged for curation.

Terra-Gen Wind Farm, Mojave, California

Field technician responsible for monitoring for paleontological resources. Sediments were collected from several locations, wet-sifted in graded screens, and picked for micro-fossils. Spoils piles from excavators creating pads for wind turbines were inspected for fossils, and surface specimens located anywhere in the project area were collected. Project covered thousands of acres.

United States Navy, Special Excavation, San Nicolas Island, California

Excavation illustrator responsible for drawing contents of two redwood boxes discovered in seaside cliff cache dating to late 1700s – early 1800s by Native American with access to historic resources such as glass and metal. Excavation in accordance with Section 110 of the Code of Federal Regulations for the US Navy.

Redwood National Park, Testing, Hiouchi, California

Field technician responsible for excavating shovel tests in preparation for construction of new sewage system for dormitory for Redwood National Park rangers and interns. Site was mapped using theodolite and finds were bagged and collected. Consultation with Tolowa tribe was conducted and tribal members inspected site.

Santa Susana Field Laboratory, Santa Susana, California

Monitor responsible for identifying cultural resources during soil study at nuclear power plant for California EPA. Duties included inspecting liter-sized samples of soil augured and bagged to be sent to lab to be measured for radiation levels. Vegetation removal was monitored in preparation for large scale ground penetrating radar for measuring radiation levels in preparation for turnover of power plant site to California State Parks and Recreation.

El Segundo Energy Center, NRG Energy Incorporated, California

Monitor responsible for identifying historic and prehistoric cultural resources and paleontological resources for construction of new power plant and upgrading of existing power plant. Historic resources were discovered and photographed and recorded.

Sunshine Canyon Landfill, Sylmar, California

Field technician conducting odor survey around adjacent residential neighborhood on behalf of landfill for public relations purposes. Responsible for monitoring for marine paleontological resources during continual construction and excavation at landfill site covering approximately 1-2 square mile of ground.

Administration and Theatre Building Construction, College of the

Redwoods, Eureka, California

Monitor responsible for identifying cultural resources on behalf of the Bear River Band of the Rohnerville Rancheria during excavations for construction of building on approximately five square acres. Potential finds were photographed and recorded.

Mendocino Redwood Company Timber Harvest Plan, Larrabee Creek, California

Field technician responsible for surveying Native American village site, recording isolates, and mapping rock shelter for timber harvest plan use on behalf of the Bear River Band of the Rohnerville Rancheria.

Graduate Teaching Assistant, California State University, Los Angeles, California

Taught graduate and undergraduate students open-area excavation techniques for San Nicolas Island field school. Responsibilities included teaching mapping techniques, stratigraphic excavation methods, identifying and recording discrete features, as well as artifact and material identification.

LINDSEY WEEKS

AREA LEAD (SOI HISTORIAN)

YEARS OF EXPERIENCE

12

EDUCATION

> B.A., Geography and Anthropology, University of Southern Maine, 2009

AREAS OF EXPERTISE

> Project Management
> Phase I Cultural Resource Investigation
> Laboratory analysis
> Technical CRM report development
> Midwest and New England archaeology
> National Environmental Policy Act (NEPA)
> Section 106 and 110 of the National Historic Preservation Act (NHPA)
> Archaeological Resources Protection Act (ARPA)

SPECIAL TRAINING

> POWER Project Manager / Project Engineer Training
> NEDCC training in Care and Handling of Artifacts (2010)
> ESRI ArcGIS
> NPI Section 106: 18 hour training
> FERC Environmental Review and Compliance for Natural Gas Facilities (2015 and 2016)
> NERC CIP Safety Training
> NAUI open water SCUBA certification

AFFILIATIONS

> Eastern States Archaeological Federation
> New Hampshire Archaeological Society
> Isles of Shoals Historical and Research Association
> Maine Archaeological Society
> Northeast Chapter of the Massachusetts Archaeological Society
> New England Museum Association
> Osher Map Library Associates
> National Speleological Society

EXPERIENCE SUMMARY

Ms. Lindsey Weeks is the Midwest Area Lead for cultural resources compliance and oversees and guides a multidisciplinary staff of Archaeologists, Architectural Historians, Historians, Field Directors, Crew Chiefs and field and laboratory Technicians and coordinates and oversees sub-contractors as necessary. In additional to standard office spaces, facilities under Ms. Weeks supervision include the POWER Archaeology Research Laboratory and curatorial storage facility.

She has twelve years of experience in historic preservation, cultural resource management, environmental assessment, and archaeology in the continental United States and Mexico. She has successfully managed a wide range of Section 106 and NEPA compliance Projects in the Midwest, Mid-Atlantic and Northeast. Her professional technical expertise includes State and Federal cultural resource laws and implementation, planning and directing field investigations for both professional and academic settings, prehistoric and historic period artifact analyses, and composing comprehensive reports to federal and state standards.

American Electric Power, Various Ongoing Projects, OH, IN, WV, VA, KY (2011-2017)

POWER continually conducts environmental compliance studies for AEP proposed transmission line and substation projects. These projects span five states in the mid-Atlantic and Midwest. Ms Weeks is the Cultural resource consultant responsible for SHPO and interested party coordination and supervision of technical staff. Responsibilities include but are not limited to desktop analysis and GIS archaeological and historic resources site location data for inclusion in constraints mapping, reviewing AEP constraints and providing environmental background research for permitting studies, supervision of Phase 1, 2, and 3 field studies, laboratory and artifact processing and analysis and final report development and submission.

TransCanada, Buckeye Express Project, OH (2017)

Area Lead responsible for coordination and oversight of Phase 1 cultural resources surveys, tribal consultations, and associated reporting and resources reports for 60+ miles of LNG pipeline.

American Electric Power D/B/A Appalachian Power Company, Fayette County Area Improvements Project, West Virginia (2013-2016)

Cultural Resource Specialist responsible for providing high level desktop analysis and GIS archaeological and historic resources site location data for inclusion in constraints mapping, reviewing APCo constraints, providing environmental background research for permitting studies, reconnaissance level field survey, Phase I archaeological investigation, report development, and submission to lead federal agency.

American Electric Power D/B/A Appalachian Power Company, Abingdon Area Improvements Project, Virginia (2015-2016)

Cultural Resource Specialist responsible for providing high level desktop analysis and GIS archaeological and historic resources site location data for inclusion in constraints mapping, reviewing APCo constraints, providing environmental background research for permitting studies, reconnaissance level survey, Phase I archaeological investigation, report development, and submission to lead federal agency.

American Electric Power D/B/A Appalachian Power Company, Tazewell and McDowell Counties Area Improvements Super Project, West Virginia and Virginia (2013-2015)

Cultural Resource Specialist responsible for providing high level desktop analysis and GIS archaeological and historic resources site location data for inclusion in constraints mapping, reviewing AEP constraints, providing environmental background research for permitting studies, reconnaissance level field survey, Phase I archaeological investigation, report development, sub-contractor coordination, and report submission to lead federal agency.

American Electric Power, Sag Study Program, OH, IN, WV (2011-2015)

The multi-year program is comprised of approximately 150 projects across five states. POWER is examining each project area for regulatory requirements and monitoring ground disturbance due to access roads and other impacts from the fixes. Ms Weeks served as Cultural resource consultant responsible for providing constraints, desktop analysis and environmental background for permitting studies. Additionally, she oversaw the coordination and execution field studies as required – including approximately ***80 projects in the State of Ohio***. The SHPO was solicited for comment and concurrence on a project specific basis as the need was identified in the permitting studies.

American Electric Power, Transco Projects, OH, IN, WV, VA, KY (2011-2015)

POWER conducted environmental compliance studies for more than 30 proposed transmission line rebuild projects that span five states in the mid-Atlantic and Midwest.

Kinder Morgan, Broad Run, FERC Filing, WV, VA, KY (2014)

Cultural resources specialist for the oversight and coordination of cultural subcontractor and Historian responsible for the development of FERC Resource Report 4.

National Geographic Society, Emal Archaeological Project, Yucatan, Mexico (2014-2015)

Cultural Resource Specialist responsible for conducting Phase I surface excavation and reconnaissance survey. Tasks included “trail blazing”, mapping pyramids and submerged stone alignments with a Trimble, as well as excavation of submerged prehistoric human burials.

MICHAEL DICE, RPA
SENIOR ARCHAEOLOGIST

YEARS OF EXPERIENCE
29

EDUCATION
- M.A., Anthropology, Arizona State University, 1995
- B.A., Anthropology, Washington State University, 1986

AREAS OF EXPERTISE
> Historic and Prehistoric Archaeology
> Native American Coordination and Consultation
> Section 106 and CEQA Compliance
> Architectural History
> Environmental Compliance Inspection and Monitoring
> Independent Contracting

MILITARY SERVICE

SPECIAL TRAINING
> Completed Section 106 and Historic Architecture Seminar, City of Los Angeles (SWCA staff), April 2012.
> Completed County of Riverside archaeological training/permitting program. 2005, 2010.
> Completed County of San Diego archaeological training/permitting program. 2008, 2012.

EQUIPMENT

AFFILIATIONS
> Register of Professional Archaeologists (RPA) since 2002.
> Society for American Archaeology (SAA) since 1999.
> BLM-California Statewide Survey Permit 2014.
> State of Oregon Registered Archaeologist. 2014.

PUBLICATIONS
> Author. 2013. HPSR (HRER/ASR). Caltrans District 6 Fulton Mall Redevelopment Project. Draft submitted July 2013 and final submitted August 2013.

EXPERIENCE SUMMARY

Mr. Dice is a Registered Professional Archaeologist specializing in archaeology and cultural resource management. He has conducted more than 200 cultural resource survey, testing, monitoring, data recovery, and inspection/monitoring/restoration projects in California, Arizona, Utah, Colorado and New Mexico. He has participated in a wide range of projects for local, state, and federal agencies, as well as for major utilities and project developers. Very active in the field as the primary archaeologist during field research, his studies have involved housing tracts, commercial tracts, high voltage transmission lines, natural gas pipelines, telecommunications facilities, and transportation projects. His experience includes projects on BLM lands in California, Arizona and New Mexico.

Kinder Morgan, Mojave Line No. 1901 Replacement Project, California

POWER Engineers provided environmental project and task management during the permitting phase of the Line No. 1901 Replacement Project, which replaced existing 30-inch-diameter pipe with thicker-walled pipe along a section of the existing Mojave Pipeline in Kern County, California. Pipe replacement was on privately owned land, as well as lands managed by the BLM. The project was subject to environmental review under NEPA; FERC was the lead federal agency. The project was also subject to BLM jurisdiction. POWER services included biological and cultural resource surveys, preparation of the Environmental Report for the FERC application, and more.

PREVIOUS WORK HISTORY

Caltrans, HPSR/HRER/ASR Projects, California

Principle Investigator for various Caltrans projects in southern California: wrote and teamed with colleagues on multiple projects requiring cultural resource compliance. Projects included new transportation-related infrastructure or federal roadway/transit-funded projects in Riverside, San Bernardino, Orange and Fresno Counties. Historic Property Survey Reports, supported by Archaeological Survey Reports and Historic Resource Evaluation Reports (written by colleagues) were developed and submitted.

California Department of Corrections, Cultural Resource Support, California

Cultural Resources Specialist associated with MND's and EIR's for improvements to state prisons in San Luis Obispo, San Diego, Los Angeles and Riverside counties.

- Lead author. 2011. Class III Cultural Resource Assessment for the LADWP Powerline Road Maintenance Project: Victorville to Baker Segment, County of San Bernardino, California. BLM ARPA Permit #CA-10-05, California Field Authorization Permit #FA-680-11-14 (acreage: BLM 685.234, State Lands Commission 24.196, Private /Unclassified 402.305. Michael Brandman Associates #0575.0043.
- Lead Author. 2013. Cultural Resources Survey and Assessment of the Dunnigan Specific Plan, Phase 1 Project Area. County of Yolo, California. Michael Brandman Associates #0575.0043.
- Lead Author. 2009. Phase I Archaeological Survey, Phase II Cultural Resources Assessment and Paleontological Records Review for the Barstow Industrial Park Specific Plan of 1,150 Acres. City of Barstow, San Bernardino County, California. Michael Brandman Associates #2958.0002.

City of Barstow, Barstow Industrial Park Phase I Survey and Phase II Significance Assessment, California

Lead Archaeologist in support of a large redevelopment project in the City of Barstow. Designed project methodology (Phase 1, Phase II and Phase III), directed and led a team of five archaeologists during survey of approximately 1,150 acres of former agricultural and vacant dune land lying adjacent to the east bank of the Mojave River. Rediscovered eight archaeological sites and two low-number RIV archaeological sites then tested a series of these sites with a group of four archaeologists. Conducted work with Native American monitors, and personally performed consultations with tribes for the City of Barstow. Wrote EIR section, which gained approval from City staff.

Various State-level Architectural History Projects: Evaluating Historic Buildings for Significance under CEQA Guidelines

Architectural Historian responsible for analyzing a series of historic-era buildings in multiple jurisdictions. Designed project-level analyses and undertook numerous individual historical building surveys and CEQA-level evaluations within the following jurisdictions: City of La Verne, CA (The Whitney Building), the City of Banning, CA. (The San Gorgonio Inn), The City of Long Beach (F&M Artesia Bank Building), The City of Santa Fe Springs, CA. (Premier Lanes Bowling Alley, Washington Boulevard Redevelopment District, Consolidated Redevelopment District), The City of Chino (Alfa Leisure Building).

City of Fresno, Fulton Mall Redevelopment Project, California

Cultural Resources Specialist and report author in support of various City of Fresno General Plan and EIR Projects. Wrote certain technical sections of the City's General Plan EIR, wrote the technical sections of the Fresno Mall Redevelopment EIR. Also responsible for compiling the HPSR/HRER/ASR (federal) portions of the project and funneling the draft and final reports through Caltrans District 6 staff prior to the development of the FOE.

Los Angeles, Riverside, Kings and Kern Counties, Silverado Power Passive Solar Farm Projects, California

Lead Archaeologist and report author for a series of proposed solar power stations in multiple counties. Designed project methodology for each, then directed and led a team of cultural resource specialists on survey of over 2,000 acres at 14 different locations of proposed utility-scale power plants in four different counties during a four-year competitive contract period. Numerous historic-era archaeological sites and prehistoric sites were encountered. Each project survey report was written to meet CEQA and Section 106 guidelines due anticipated future involvement with federal agencies, including FERC, ACOE and the BLM.

Los Angeles Department of Water and Power, On-Call Cultural Services Support, California

Lead Archaeologist responsible for providing rapid response cultural resource services in support of various LADWP projects in southern California and the Eastern Sierras. Projects included the Van Norman Dam Project, the Harbor Refineries Project, the Griffith Park Development

Project, the Olancha Overcrossing Project, the Victorville to Baker Powerline Road Maintenance Project, the Pine Creek - Rovana Meter Replacement Project, the Hines Spring Well Project, and the Owens Lake Solar Demonstration Project.

LA-RICS Authority, "LTE" Project Sites, California

Cultural Resources Specialist for the Authority subcontractor, Ultrasystems, Inc. Designed the process for architectural history and archaeological site visitations, performed archaeological site visits at 50 LTE locations, helped to develop the cultural resource section of the project EA, developed the databases associated with raw data management, and visited dozens of historic buildings as part of the FCC Form 620 assessments.

Riverside County Waste Management Department, Badlands Landfill and Lamb Canyon Landfill Expansion Projects, California

Lead Cultural Resources Specialist and report author in support of two Riverside County landfill projects. Designed project methodology for each, then directed and led a team of archaeologists and paleontologists on a total of 1000 acres adjacent to the existing Badlands Landfill and approximately 600 acres adjacent to the Lamb Canyon Landfill, both in the County of Riverside. The purpose of the studies was to evaluate adjacent property as part of an analysis for potential impacts during expansion of the Landfills, and the reports would support EIR's written by County staff. Several new resources were detected and recorded during the study. While RCWMD will not construct for several decades, the sites will be avoided when land development takes place in the site areas. Conducted consultations with local Tribal Authorities.

City of Moreno Valley, Phase I Survey, Phase II Historical Evaluation and Phase IV Monitoring for the World Center Specific Plan, California

Lead Archaeologist for two developmental projects, one project-level and the other program-level, for Highland Fairview's World Specific Plan. Undertook a Phase 1 survey of 3,200 acres of fallow agricultural property, in addition to other properties controlled by the proponent, and then headed a team of cultural professionals performing historic building evaluations and Phase II tests of archaeological sites. Led a field crew of monitors during the earth-moving phase of complex construction. Evaluated several historic era buildings and more than one dozen archaeological sites. Conducted consultations with local tribal authorities.

Colgreen Energy, Felicity and North Salton Sea Passive Solar Farm Projects, California

Cultural Resources Specialist and co-project coordinator for two proposed solar power stations in southeast California. Colgreen Energy of El Centro, CA initiated development of two 480 acre passive solar power stations, one near the Salton Sea and another northwest of the Quechan Reservation. Led the archaeological surveys with a team of archaeological technicians, and then tested previously recorded and newly discovered archaeological sites. Reports were provided to the County of Riverside and the County of El Centro.

APPENDIX B SURVEY SITE PHOTOS

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Overview of the Project site from the LADWP patrol road to the new BRRTP tower. October 6, 2017.

Overview of the Project site from the southeast corner of the Project site to the west. October 6, 2017.

Overview of the Project site from the southeast corner of the Project site to the north. October 6, 2017.

View of isolate #1 (two smashed tobacco cans) and isolate #2 (fragment of amethyst glass). October 6, 2017.

APPENDIX C RECORDED ISOLATES

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APPENDIX C

CONFIDENTIAL

NOT FOR PUBLIC REVIEW

APPENDIX D EXTENDED PHASE I TESTING PLAN

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POWER ENGINEERS, INC.
731 EAST BALL ROAD
SUITE 100
ANAHEIM, CA 92805 USA

PHONE 714-507-2700
FAX 714-507-2799

MEMORANDUM

DATE: June 26, 2018

TO: Julie Van Wagner

C: Mike Strand

FROM: Michael Dice

SUBJECT: Rosamond Switching Station, Internal Extended Phase 1 Testing Plan

MESSAGE

POWER Engineers, Inc. (POWER) undertook a Phase I cultural resource survey on several parcels of land in support of proposed construction of the Rosamond Switching Station (Project). The Project would be constructed, owned, and operated by the Los Angeles Department of Water and Power (LADWP). A draft Phase 1 survey report was prepared as part of an Initial Study/Mitigated Negative Declaration (IS/MND), in accordance with the California Environmental Quality Act (CEQA). LADWP will serve as the lead CEQA agency.

The Project is located in Kern County, California in the western Antelope Valley approximately three miles north of the Los Angeles County border. It is situated in the northeast portion of Section 24 of Township 9N, Range 14W as shown on the Little Buttes, CA 1:24,000 United States Geological Survey (USGS) quadrangle. Rosamond Boulevard borders the Project area to the north, and vacant land lies to the east and south. Immediately to the west of the proposed Project, there are several high voltage transmission lines owned by LADWP and Southern California Edison (SCE). The proposed station site would be approximately 565 feet by 352 feet located on two parcels (359-051-22 and 359-051-06) with an elevation of approximately 2,474 feet above mean sea level.

The draft Phase 1 survey report (no testing undertaken) was distributed by LADWP to native American tribal organizations as part of its obligation to consult as Lead CEQA Agency under "AB 52" tribal consultation guidelines. The AB 52 consultation process applies to any project for which a Notice of Preparation, Notice of Mitigated Negative Declaration or Notice of Negative Declaration is filed by the lead CEQA agency on or after July 1, 2015. One tribal response received by LADWP requested that subsurface archaeological testing (Extended Phase 1) take place to confirm presence/absence of prehistoric cultural resources.

1. 0 BACKGROUND RESEARCH

The proposed Project is situated within mostly unaltered land near the southwest corner of Rosamond Boulevard and 100th Street Southwest. The new switching station will require mass grading of the entire area of potential construction, which will cover about 4. 56 acres. The tribal commenter requested that the whole of the proposed construction area be tested for the presence/absence of subsurface cultural resources.

Soils

According to the USDA's on-line Web Soil Survey (https://websoilsurvey. sc. egov. usda. gov/App/WebSoilSurvey. aspx), the project area bears exposures of Rosamond loam (46% of the project area), Rosamond fine sandy loam (36%) and Hesperia fine sandy loam (18%). The Hesperia series consists of soils on long smooth alluvial fans, and valley fill. The alluvium is from granite and closely related rocks. Elevations are as low as 200 feet in the San Joaquin Valley and as high as 4,800 feet in the high desert. Typical climate is semiarid bordering on arid. The Rosamond series consists of deep, well drained soils that formed in material weathered mainly from granitic alluvium. Rosamond soils are on the lower margin of the alluvial fans between the sloping fans and the playas and have slopes of zero to two percent.

POWER previously excavated into soils similar to these during a multi-site testing program for the Barren Ridge Renewable Transmission Project (BRRTP) (POWER 2015). Strata exposed at CA-KER-7034, located about 0.5 mile south of the Rosamond Project area, consisted of loose silty sediments to about 30 centimeters below modern grade whereupon a clayey hardpan similar to concrete was reached. A Phase 3 data collection report was prepared for the BRRTP project (POWER 2017), and no artifacts in this hard pan were observed at either CA-KER-10199 and -10200 some 1.25 miles to the northeast of this project area.

Phase 1 Survey Literature Review

POWER conducted a records search in late 2017 to locate recorded cultural resources within the proposed Project area and vicinity. A literature and records search was conducted at the Southern San Joaquin Valley Archaeological Information Center (SSJVIC) by Research Assistant Carrie Stephens on October 12, 2017. Records consulted at the SSJVIC included the inventory of the National Register of Historic Places, the CRHR, California Historic Landmarks list, topographic maps showing the locations of sites and surveys, and historic topographic maps. Because of the limited potential impacts assumed by the Project, a one-half mile search radius was utilized. The research effort indicated that several historic properties were located within a one-half mile of the Project area, but no cultural resources are known for the Project area. The last survey on the Project site was conducted in January 2014 along the LADWP easement in the northwestern portion of the Project area. Research shows that the rest of the Project site had not been surveyed previously.

The draft Phase 1 survey report indicated the existence of two historic isolates: two Prince Albert tobacco cans clustered as one isolate (ISO-1) and an amethyst glass bottle body fragment (ISO-2). Other fragments of metal were observed including two metal containers that had been recorded by previous studies in the BRRTP project footprint (POWER 2014). No prehistoric cultural resources were observed and no further archaeological work was recommended for the site.

2. 0 EXTENDED PHASE 1 PROPOSED FIELD METHODS

Since the entirety of the Project area was subjected to a very recent pedestrian archeological survey, judgmental shovel testing in a grid pattern across the entirety of the 4.6 acre switching station footprint will take place. Shovel tests will be excavated to a depth where sterile substrates (hard pan) are encountered, if possible. Because the topsoils are identified as having a low geoarchaeological surface potential and are likely late Holocene in age, it is anticipated that shovel tests will generally be shallow in nature. Given that the landscape within and around the Project area is uniform, flat, and covered with saltbush scrub and rabbitbrush scrub, placement of testing points can be set before entering the field then changed slightly to account for field conditions. The attached map shows the locations of the planned shovel tests: each acre of ground inside the Project footprint will contain eight to nine finished shovel tests. 54 plots are shown on the attached

map and a total of 40 will be excavated. The shovel tests will be placed on ground that has not been previously disturbed by development of the adjacent high voltage transmission lines.

Clay-dense hardpan is anticipated to occur 30 centimeters below surface. All soil matrices will be sifted through 6.3 millimeter (1/4 inch) mesh hardware cloth unless the matrix is dominated by clay. Clayey matrix will be finely divided by trowel and visually inspected. A shovel test that yields artifacts (culturally positive) will be followed by shovel tests placed approximately 5m apart along a transect in the four cardinal directions until two shovel tests absent of artifacts (negative) are excavated, sterile soil is encountered at the surface, or a break in topography is found. Sites will be delineated only within the Project area. Sites will be given a temporary designation in the field. A site form (or isolate form) will then be submitted to the CHRIS center for Kern County and a permanent trinomial will be requested.

For each of the shovel tests, the following information will be recorded on POWER shovel test logs: location, maximum depth, and the number of soil strata. For each soil stratum, thickness, texture, color, and the presence or absence and nature of cultural materials will be recorded. No collection of surface or subsurface artifacts is proposed, so all potentially diagnostic artifacts will be photographed in the field to aid in determination of their cultural and temporal affiliation. All artifacts will be identified in the field by the crew chiefs or Project Archeologist, recorded by provenience (site, unit, layer, level, content, and date), and reburied in the shovel test unit. All shovel tests will be backfilled upon completion.

Should vegetation prevent placement of the shovel test, the test point will be moved slightly to allow excavation to occur. The soils will be placed on a tarp, then moved back into the test hole once work has been completed. An appropriate tribal representative will be retained or hired by POWER Engineers to observe the fieldwork.

3. 0 DOCUMENTATION

Following completion of the fieldwork, POWER will convert the existing draft Phase 1 survey report into an “Extended Phase 1” survey and resubmit to LADWP for review. Based on findings of the additional fieldwork, the current recommendations and/or mitigation measures will be reviewed and modified as needed by POWER staff.

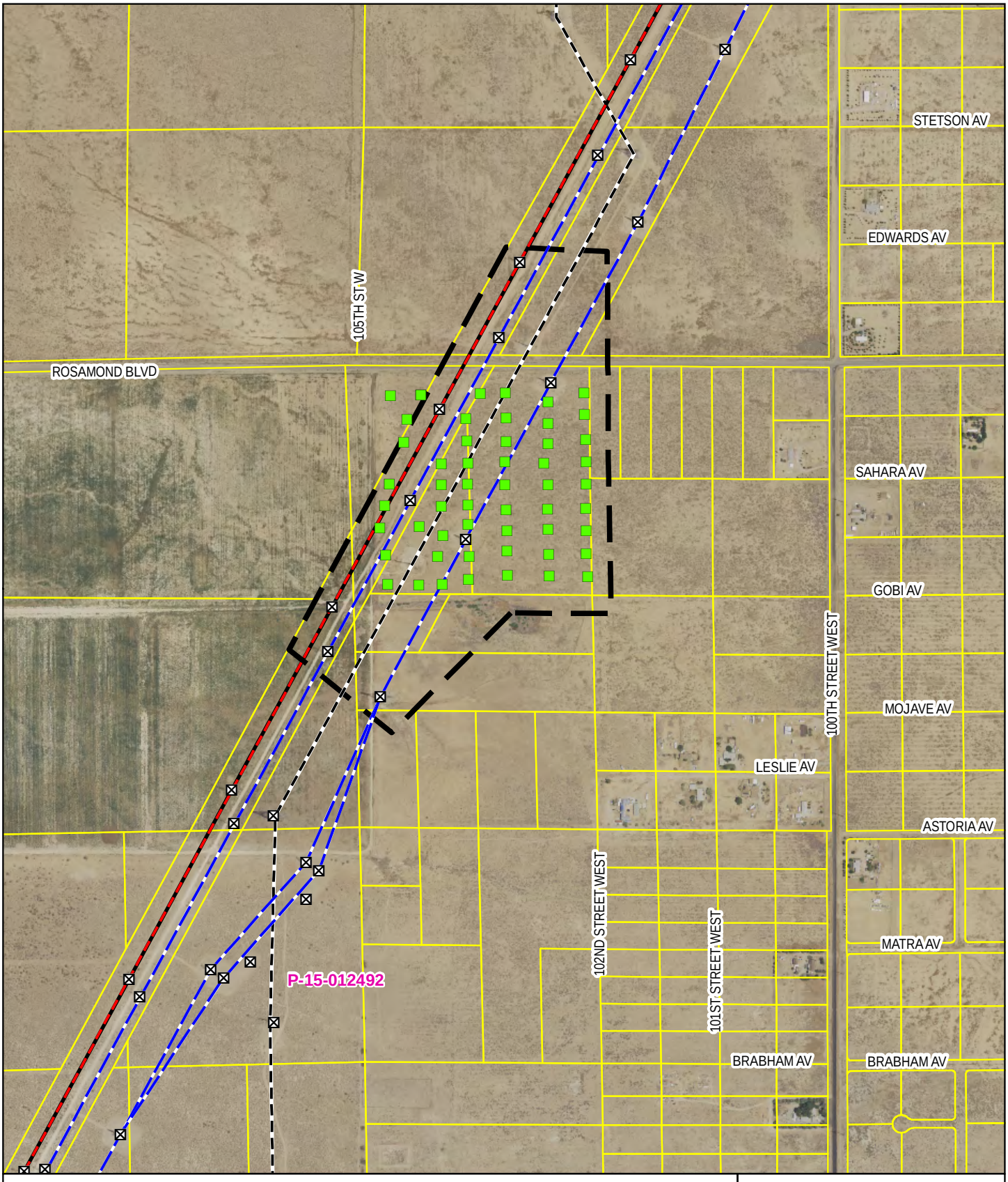
One hard copy and one electronic draft copy of the report along with a shapefile for the project area will be provided to LADWP, as required. Upon receipt of agency comments, POWER will address all comments and submit copies of the final report as well as an electronic report to the CHRIS center.

4. 0 REFERENCES

POWER Engineers, Inc. (POWER) 2014. Barren Ridge Renewable Transmission Project: Cultural Resources Survey for the Barren Ridge-Haskell Canyon 230 kV Transmission Line, Los Angeles and Kern Counties, California. (Draft). Prepared for Los Angeles Department of Water and Power, Los Angeles, CA. POWER Engineers, Inc. Anaheim, CA.

2015. Barren Ridge Renewable Transmission Project: Historic Property Treatment Plan for Archaeological Sites TW-17, TW-18 and CA-KER-7034 Los Angeles and Kern Counties, California. Prepared for Los Angeles Department of Water and Power, Los Angeles, CA. POWER Engineers, Inc. Anaheim, CA.

2017. Barren Ridge Renewable Transmission Project. Archaeological Data Collection Findings at CA-KER-10200, CA-KER-10199H and CA-KER-7034H. Prepared for Los Angeles Department of Water and Power, Los Angeles, CA. POWER Engineers, Inc. Anaheim, CA.



Confidential

Legend

- Survey Boundary
- Test Point
- Parcel
- Structure
- LADWP 230 kV Transmission Line
- LADWP 500 kV DC Transmission Line
- SCE Tranmission Line

Aerial Photography: USDA NAIP 2016, 60cm.

Rosamond Switching Station

Planned Testing Points

0 250 500 750 1,000

Feet

N

POWER ENGINEERS

Date: 7/5/2018

Path: W:\148795_LADWP_RosamondSub\DD\GIS\Apps\Report\Cultural\TestSites.mxd

October 2019

LOS ANGELES DEPARTMENT OF WATER AND POWER

Rosamond Switching Station Project
Kern County, California
Addendum to the Extended Phase I Archaeological Resource Survey

PROJECT NUMBER:
148795

PROJECT CONTACT:
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714.507.2755

POWER ENGINEERS

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Rosamond Switching Station Project
Kern County, California
Addendum to the Extended Phase I Archaeological Resource Survey

PREPARED FOR: LOS ANGELES DEPARTMENT OF WATER AND POWER

PREPARED BY:

MICHAEL HARRISON DICE, M.A.
PRINCIPAL INVESTIGATOR
PHONE: 714.507.2755
MICHAEL.DICE@POWERENG.COM

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ABSTRACT

POWER Engineers, Inc. (POWER) undertook a Phase I cultural resource survey on several parcels of land totaling 19.3 acres in support of proposed construction of the Rosamond Switching Station (Project) on October 5 and 6, 2017. No cultural resource discoveries were made inside the Project footprint. However, as a result of tribal responses to Los Angeles Department of Water and Power (LADWP) Assembly Bill 52 (AB 52) inquiries, LADWP requested that POWER staff shovel test the proposed 19.3 Project footprint of the switching station with a tribal monitor observing the field work. The results of the shovel test were negative and thus the draft version of this report was revised into an Extended Phase I Archeological Resource Survey. Subsequent to the 2017 cultural survey and 2018 shovel testing, the Project footprint was expanded to accommodate the proposed Flexible Alternating Current Transmission System (FACTS) device building and a Battery Energy Storage System (BESS). POWER conducted an additional Phase I cultural resource survey on August 20, 21, and 22, 2019 on several parcels of land totaling 97.5 acres (residential uses are located south of the survey area and none of these private lands were surveyed or crossed during the survey).

The Project would be constructed, owned, and operated by LADWP. This report has been prepared as part of an Initial Study/Mitigated Negative Declaration, in accordance with the California Environmental Quality Act (CEQA). LADWP will serve as the lead CEQA agency.

POWER has prepared this Addendum to the Extended Phase I Archaeological Resource Survey Report to address the expanded Project boundary to accommodate the future development of the FACTS device building and the BESS. The Extended Phase I report summarized the methods and results of the 2017 cultural resource investigation of the proposed Project area, included archaeological and historical background research, and included results of the shovel testing conducted in 2018. This Addendum documents the survey results of the 2019 cultural resource survey.

The Project is located in Kern County, California in the western Antelope Valley approximately three miles north of the Los Angeles County border. It is situated in the northeast portion of Section 24 of Township 9N, Range 14W as shown on the Little Buttes, CA 1:24,000 United States Geological Survey quadrangle. Rosamond Boulevard borders the Project area to the north, 100th Street West to the east, 105th Street West to the west, and Astoria Avenue to the south. Vacant land surrounds the study area, with scattered rural residential to the south and east. Immediately to the west of the proposed Project, there are several high voltage transmission lines owned by LADWP and Southern California Edison (SCE).

Background historical research shows that a few historic-era cultural resources are known for the area and that a single prehistoric core was detected in 2010 beneath the SCE transmission line near the western border of the Project. No previously recorded cultural resource sites will be directly impacted by construction within the switching station footprint. Portions of the Project area have been surveyed as part of previous high voltage transmission line work. During POWER's survey of the Barren Ridge to Haskell Canyon portion of the Barren Ridge Renewable Transmission Project (BRRTP), no cultural resource discoveries were made inside the Project footprint.

The 2017 Phase I survey was conducted within 19.3 acres including additional and immediately adjacent areas surveyed due to the potential need for relocation of several existing transmission line towers that would be required as part of the Project. The goal of the survey was to identify any cultural resources within the Project area, and to determine if these resources should be avoided. The results of the survey showed that two isolated historic-era cans were identified in the area of direct potential impact; however, no sites were identified in the area of direct potential impact. The terrain is largely flat and a portion has been previously disturbed due to recent transmission line development

within and adjacent to the LADWP and SCE transmission line easements and along Rosamond Boulevard. Neither of the noted isolated resources will require mitigation.

As stated above, as a result of tribal responses, LADWP requested POWER archaeologists shovel test the proposed Project footprint. The results of the shovel test were negative and subsequently the Draft Phase I Archaeological Resource Survey report was revised into an Extended Phase I Archaeological Resource Survey.

The 2019 Phase I cultural survey was conducted within 97.5 acres (refer to Figure 4). The goal of this survey was to identify any cultural resources within the expanded footprint area, and to determine if these resources should be avoided. The results of the survey showed that five historic-era isolates and two prehistoric-era isolates were identified in the area of direct potential impact. One small historic-era site was identified in the area of direct potential impact. These resources will not require mitigation.

POWER has determined that the potential for impacts to buried or unknown cultural resources during Project construction is low. POWER further recommends that additional shovel testing and archaeological monitoring is not needed for this Project.

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FIGURES:

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Acronyms and Abbreviations

AB 52	Assembly Bill 52
BESS	Battery Energy Storage System
BR-HC	Barren Ridge to Haskell Canyon 230kV transmission line
CEQA	California Environmental Quality Act
cm	centimeter
FACTS	Flexible Alternating Current Transmission System
kV	kilovolt
LADWP	Los Angeles Department of Water and Power
POWER	POWER Engineers, Inc.
Project	Rosamond Switching Station Project
SCE	Southern California Edison

1.0 INTRODUCTION

The Los Angeles Department of Water and Power (LADWP) proposes to construct and operate the new 230 kilovolt (kV) Rosamond Switching Station (Project) including the future development of Flexible Alternating Current Transmission System (FACTS) device building and a Battery Energy Storage System (BESS). The proposed Project would be constructed adjacent to the LADWP right-of-way for the Barren Ridge – Haskell Canyon (BR-HC) 230 kV Transmission Lines 1, 2, and 3 and would be located approximately 30 miles south of the Barren Ridge Switching Station. The construction of the proposed Project would be located on a LADWP-owned property. The station is needed to allow LADWP greater control in managing the renewable energy transfer along the existing high voltage transmission lines and increase overall reliability. The Project would also accommodate the interconnection process for planned renewable energy projects in the Project vicinity and would support LADWP's Renewable Portfolio Standard goals. In order to control energy transfer capabilities, the station design includes the "cut-in" of the BR-HC Transmission Lines 1, 2, and 3 and one interconnector with a breaker and half bus configuration. The final configuration of the station needs to accommodate reactive compensation equipment and existing and planned renewable energy interconnections.

POWER Engineers, Inc. (POWER) conducted a Phase I cultural resource survey in 2017 on several parcels of land totaling 19.3 acres in support of proposed construction of the proposed Project on October 5 and 6, 2017. No cultural resource discoveries were made inside the Project footprint. However, as a result of tribal responses to LADWP Assembly Bill 52 (AB 52) inquiries, LADWP requested that POWER archaeologists shovel test the proposed 19.3 Project footprint with a tribal monitor observing the field work. The results of the shovel test in 2018 were negative. The results of the shovel test were documented in an Extended Phase I Archeological Resource Survey Report. Subsequent to the 2017 cultural survey and 2018 shovel testing, the Project footprint was expanded to accommodate the proposed FACTS device building and the BESS. POWER conducted an additional Phase I cultural resource survey on August 20, 21, and 22, 2019 on several parcels of land totaling 97.5 acres for the survey area (residential uses are located south of the survey area and none of these private lands were surveyed or crossed during the survey).

POWER has prepared this Addendum to the Extended Phase I Archaeological Resource Survey Report to address the expanded Project boundary to accommodate the future development of the FACTS device building and the BESS. The Project would be constructed, owned, and operated by the LADWP. This report has been prepared as part of an Initial Study/Mitigated Negative Declaration, in accordance with the California Environmental Quality Act (CEQA).

1.1 Project Location

The Project is located in Kern County, California in the western Antelope Valley approximately three miles north of the Los Angeles County border (refer to Figure 1). It is situated in the northeast portion of Section 24 of Township 9N, Range 14W as shown on the Little Buttes, CA 1:24,000 United States Geological Survey quadrangle (refer to Figure 2). Rosamond Boulevard borders the Project area to the north, 100th Street West to the east, 105th Street West to the west, and Astoria Avenue to the south. Vacant land surrounds the study area, with scattered rural residential to the south and east. Immediately to the west of the proposed Project, there are several high voltage transmission lines owned by LADWP and Southern California Edison (SCE).

1.2 Project Description

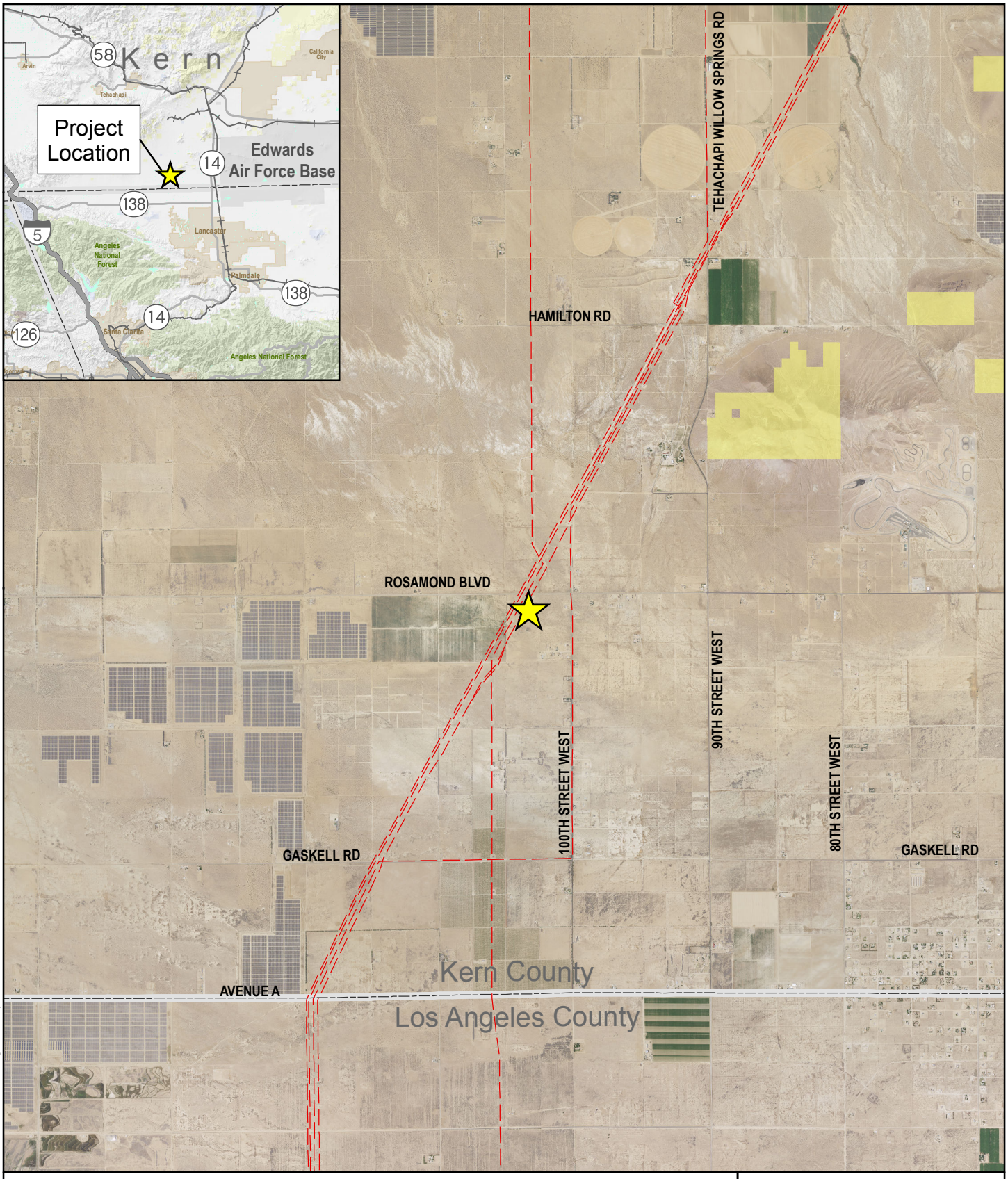
The proposed Project includes mostly undeveloped land to construct the Rosamond Switching Station on approximately 109 acres (refer to Figure 3). The Project includes the construction of a new switchyard and a designated area for the 10-bay expansion and new control house. The permanent disturbance within the new station is 1,200 feet in length and 800 feet in width. Two future expansions are planned to occur on the Project site, the first expansion would be to the north of the new switching station and would consist of the construction of the FACTS device building. The total area for the FACTS device building would be 350 feet in length, 350 feet in width. The second expansion would be to the south of the new switching station and would consist of the construction of the BESS. The total area for the BESS device would be 850 feet in length, 850 feet in width. The Project would also include operation and maintenance of the Rosamond Switching Station. Project construction activities include installation of electrical structures and equipment for transmission lines, staging areas, new roadway(s) within the station, FACTS device building, and BESS. Existing roads will be used to access the Project site. The estimated schedule for Project construction is 38 months.

Construction activities include site grading and drainage development, installation of concrete foundation and steel support structures, installation of below- and above-ground electrical conduits for equipment power and control, installation of below- and above-grade grounding conductors, FACTS Device building, FACTS switchyard, BESS station, and installation of new control and relay houses.

Site preparation work for the Project includes clearing and grubbing, excavation, placement, and compaction of engineered fill to provide stabilized subgrade for switching station facilities. Temporary silt fence and other storm water pollution prevention Best Management Practices will be implemented in accordance with the Storm Water Pollution Prevention Plan. The Project site will be graded to maintain current drainage patterns to the greatest extent possible. The switching station yard will be covered with crushed-rock aggregate.

Reinforced concrete foundations will be installed to support the steel structures, electrical equipment, and control facilities following site grading and development. Foundation work will require approximately 153 trips to the site by 40-ton, 10-yard capacity concrete trucks over a 180-day working period. Equipment required for station construction includes graders and excavators, backhoes, drill rigs, water trucks, scrapers, sheep's foot compactors, front end loaders, concrete trucks, trucks, and flatbed trailers. Cranes, man-lifts, portable welding units, line trucks, and mechanic trucks will also be required. Subsequent to the foundation installation, trenches will be dug to facilitate placement of copper conductors for the station grounding mat.

The Project consists of previously disturbed land consisting of desert scrub typical of the surrounding area. Vegetation communities consist mostly of saltbush scrub and rabbitbrush scrub. The site is relatively flat with an elevation of approximately 2,475 feet above mean sea level. Land uses in the vicinity of the site include industrial uses, solar generation, agriculture, and rural residential.



Legend

- Project Location
- Existing Transmission Line (115 kv to 500 kV)
- County Boundary

Jurisdiction

- Bureau of Land Management

Aerial Photography: USDA NAIP 2016, 60cm.

Rosamond Switching Station

Figure 1
Vicinity Map

0 0.5 1 1.5
Miles

N

POWER ENGINEERS

Date: 2/16/2018

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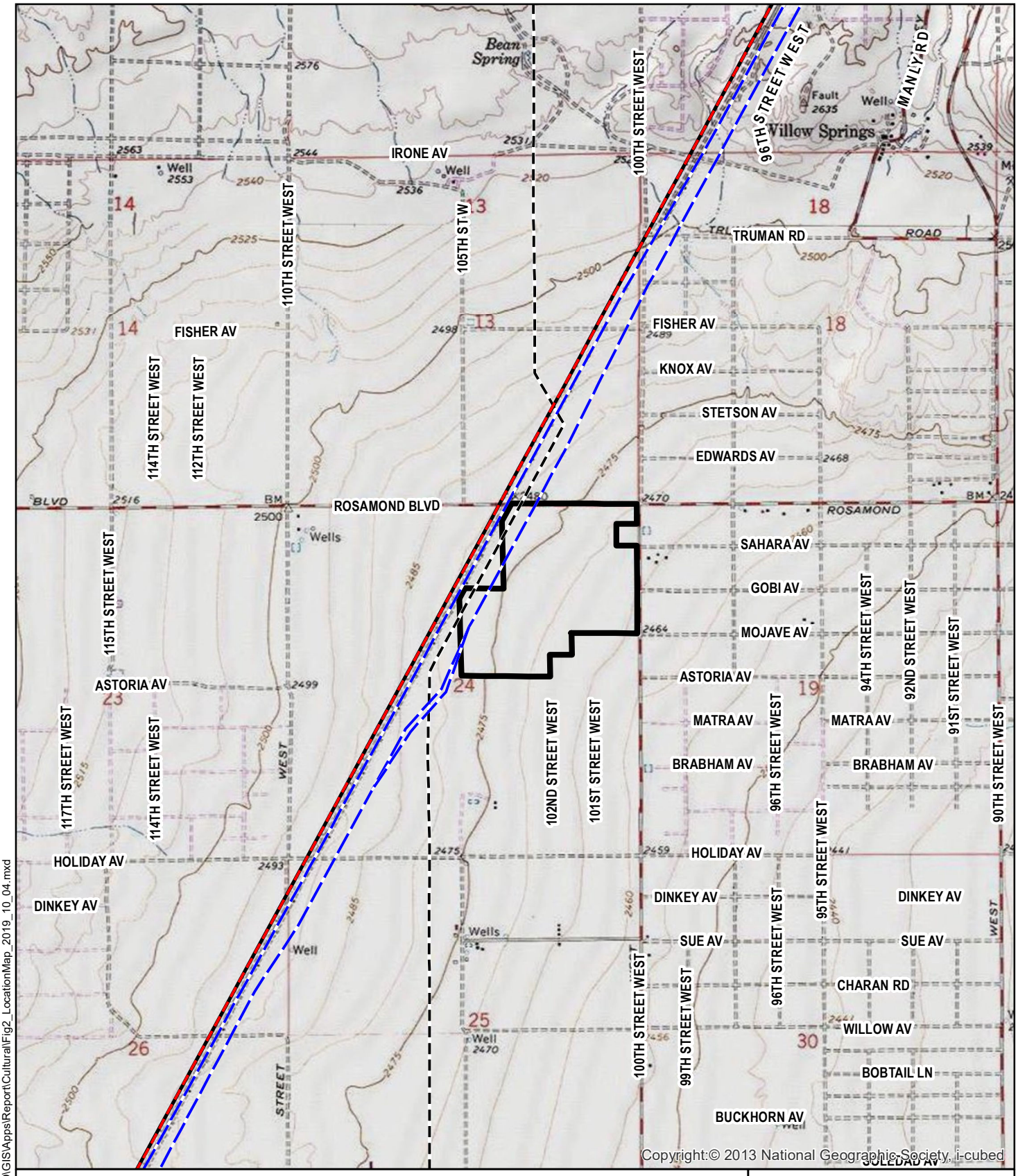

Legend

- Site Boundary
- LADWP 230 kV Transmission Line
- LADWP 500 kV DC Transmission Line
- SCE Tranmission Line

Rosamond Switching Station

Figure 2
Location Map

0 1,000 2,000 3,000

Feet

N

POWER ENGINEERS

Date: 10/8/2019

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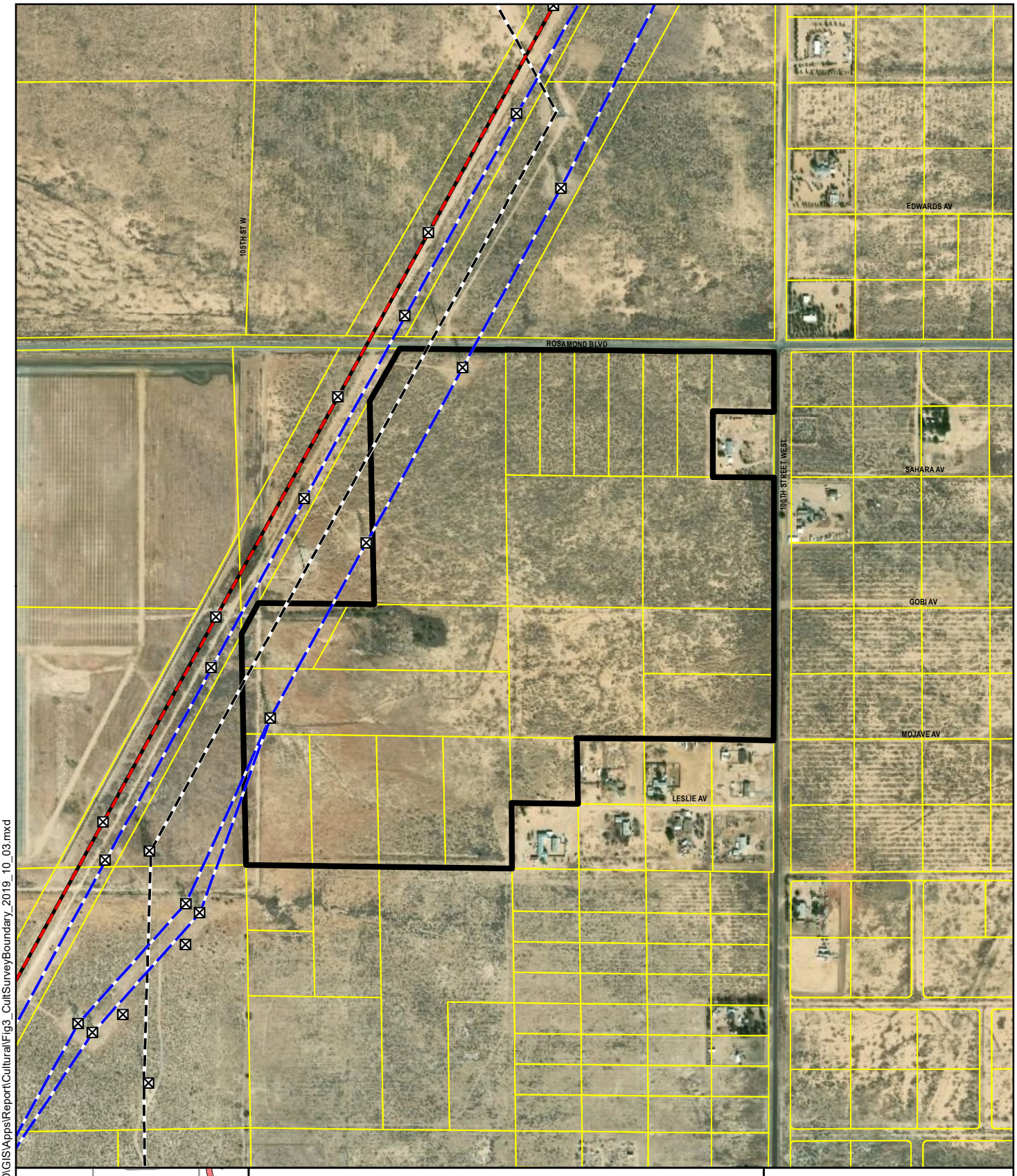

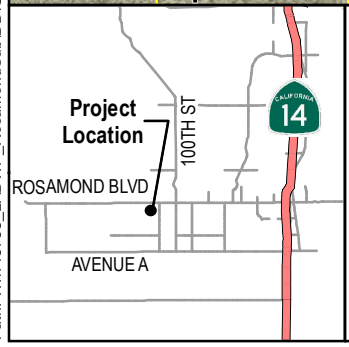

Legend

- Project Site Boundary
- Parcel
- Structure
- LADWP 230 kV Transmission Line
- LADWP 500 kV DC Transmission Line
- SCE Tranmission Line

Aerial Photography: USDA NAIP\California 2018-07-23

Rosamond Switching Station

Figure 3
Project Site Boundary

0 180 360 540 720 900
Feet

N

POWER ENGINEERS

Date: 10/4/2019

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2.0 FIELD METHODOLOGY AND RESULTS

2.1 Methodology

Previous studies in 2017 and 2018 were undertaken by POWER on land located generally northwest of and adjacent to the acreage examined during this new fieldwork (refer to Figure 4). The 2019 field survey was conducted by POWER archaeologists Sam Dillon and Rocky Ciarmoli on August 20, 21 and 22, 2019. The survey area included the expanded Project area of 97.5 acres (refer to Figure 4). The goal of the survey was to identify any cultural resources within the Project survey area and to determine if these resources should be avoided. POWER archaeologists surveyed the Project on foot using 15 meter spread for each transect and collected no artifacts. Each had encountered isolate and a historic-era trash dump was plotted using a geographic information system (GIS) device, photographed and described.

2.2 Results

The results of the survey showed that five historic-era isolates and two prehistoric-era isolates were identified in the area of direct potential impact. One small historic-era site was identified in the area of direct potential impact. The terrain is largely flat and a portion has been previously disturbed due to recent transmission line development within and adjacent to the LADWP and SCE easements and along Rosamond Boulevard. The survey area is covered in high desert scrub with dry grasses, and ground exposure is about 25 percent. Residential uses are located south of the Project Site. None of these private parcels were crossed during the field survey.

Isolate 1 is an intact 50+ years old glass bottle. Isolate 2 is a beverage can with church keyed opening and solder seal, probably 50+ years old. Isolate 3 consisted of two 50+ year soldered paint cans with church keyed openings. Isolate 4 is a beverage can with crimped seal and church keyed opening. Isolate 6 is a possible utilized core reduction flake. Isolate 7 is a secondary core reduction flake with flake removals suggestive of a ”pre-form” projectile point and may have been a possible Elko or Fish Slough Side-notch that was dropped unfinished. Survey site photos are provided in Attachment A. Site SD-1 is a 50+ trash pit with historic glass bottles, cans, metal and glass shards. This pit is dug slightly into the ground surface and is 120 centimeters (cm) in diameter. This is most likely an expedient household waste dump site that is quite common in rural desert environments. Because this site is common in rural desert environments; POWER archaeologists believe that site SD-1 is not eligible for the National or California Registers.

No previously recorded cultural resource sites will be directly impacted by construction within the Project footprint: one isolated artifact in this footprint (P15-12786) has been previously recorded. As far as POWER is aware, no portion of the 97.5 acres has been previously surveyed by qualified archaeologists.

3.0 CONCLUSION

POWER has conducted previous site surveys in 2017 and 2018 and has determined that the potential for impacts to buried or unknown cultural resources during Project construction is low. POWER does not recommend any further cultural resources research on this Project. In addition, POWER does not recommend that archaeological monitoring take place during construction. POWER further recommends that additional shovel testing is not needed for this Project.

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FIGURE 4

CONFIDENTIAL

NOT FOR PUBLIC REVIEW

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APPENDIX A SURVEY SITE PHOTOS

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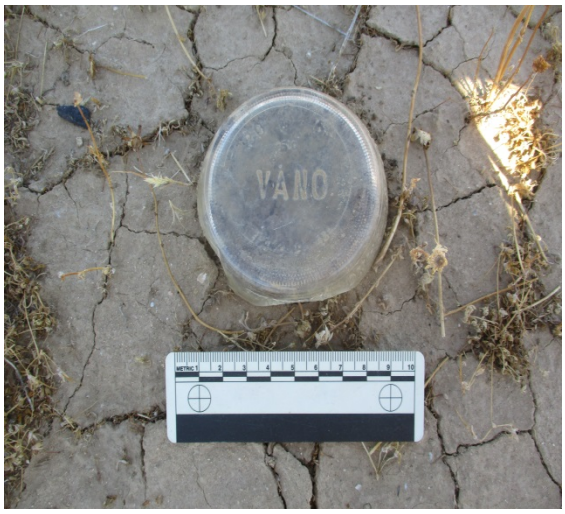
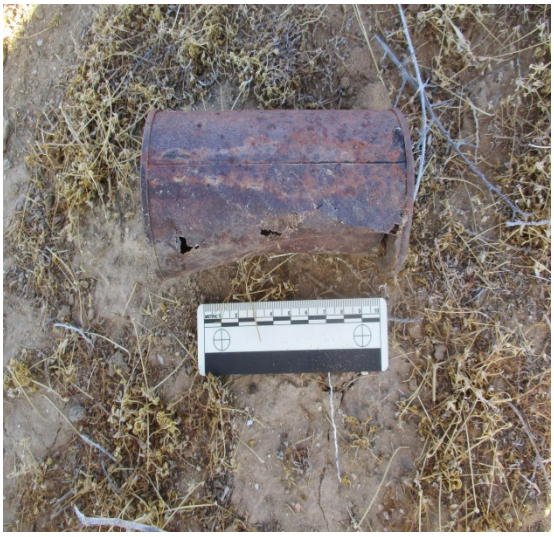
View of SD-1: Common household waste dump site approximately 120 cm in diameter. August 20, 2019.



SD-1: view of historic glass bottle. August 20, 2019.

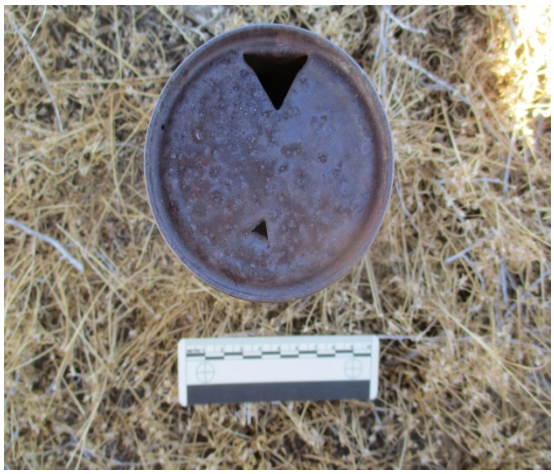
SD-1: view of historic glass bottle. August 20, 2019.

View of Isolate #1: Intact 50+ year's old glass bottle. August 20, 2019.

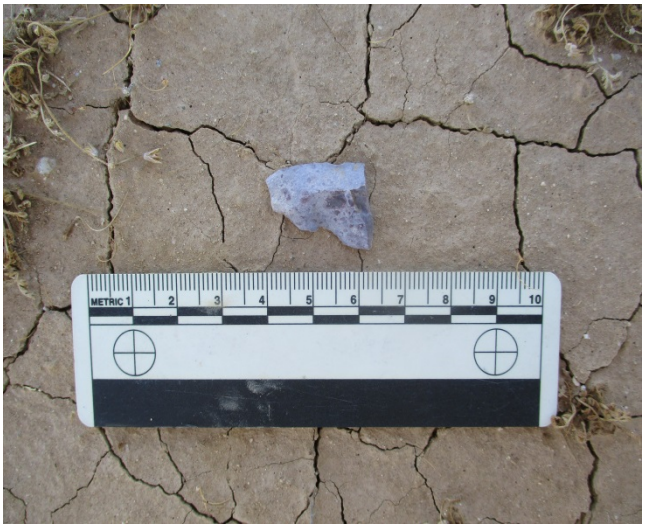


View of Isolate #2: Beverage can with church keyed opening and solder seal. August 20, 2019.

View of Isolate #3: Two 50+ year old soldered paint cans with church keyed openings. August 20, 2019.



View of Isolate #4: Beverage can with crimped seal and church keyed opening. August 20, 2019.



View of Isolate #6: Possible core reduction flake. August 21, 2019

View of Isolate #7: Secondary core reduction flake suggestive of “pre-form” projectile point. August 21, 2019.

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APPENDIX B RECORDED ISOLATES

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APPENDIX B

CONFIDENTIAL

NOT FOR PUBLIC REVIEW

APPENDIX D

NOISE AND VIBRATION IMPACTS ASSESSMENT

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Technical Memorandum

TO: Kim Quinn
POWER Engineers, Inc.

FROM: Terry A. Hayes Associates Inc.

DATE: November 4, 2019

RE: Rosamond Switching Station Project – Noise and Vibration Impacts Assessment

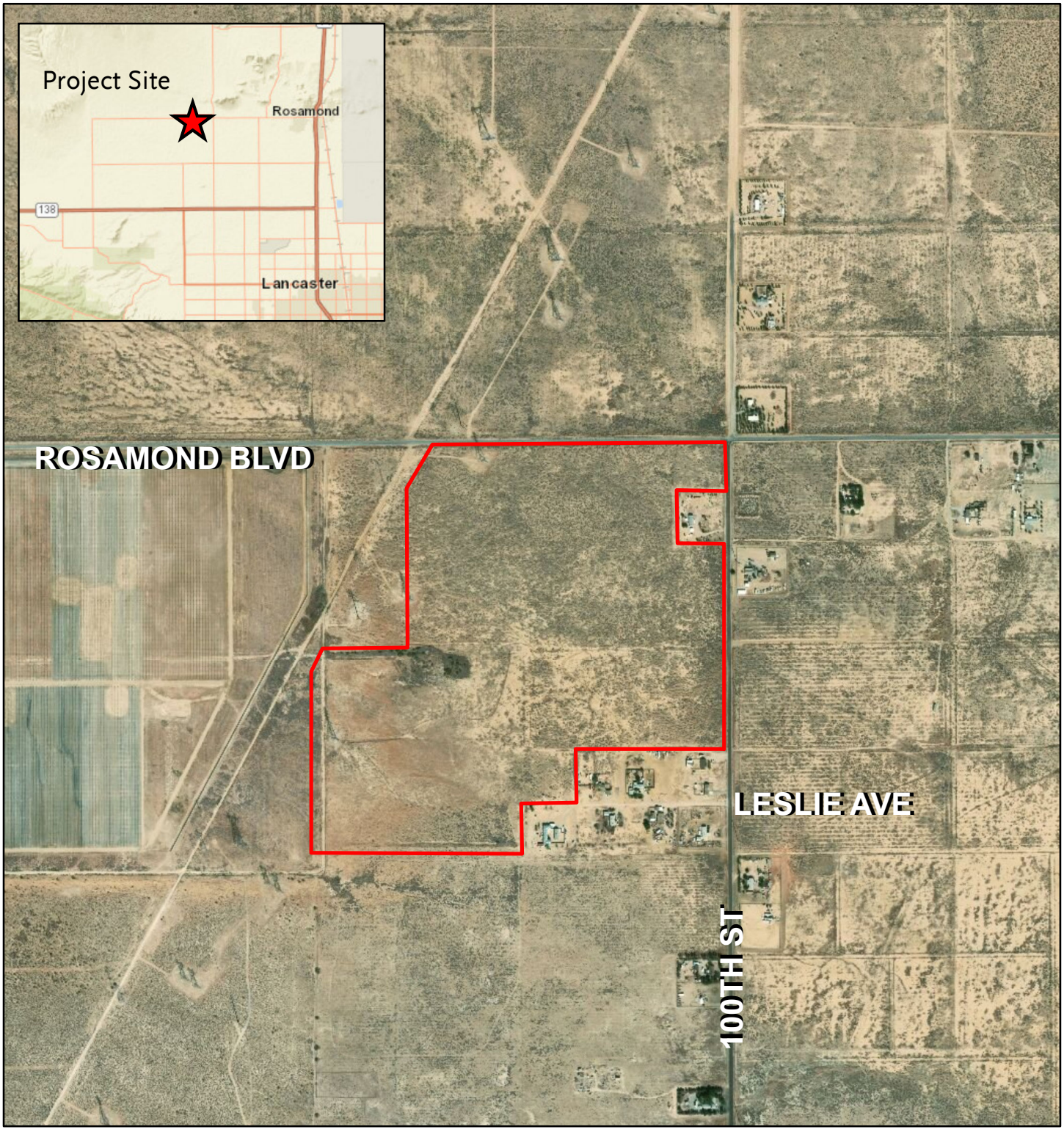
Introduction

Terry A. Hayes Associates Inc. (TAHA) has completed a noise and vibration impact assessment for the Rosamond Switching Station Project (proposed Project) in accordance with the provisions of the California Environmental Quality Act (CEQA) Statutes and Guidelines.

Project Description

The Los Angeles Department of Water and Power (LADWP) is proposing to construct and operate a new 230 kilovolt (kV) switching station in Kern County, California in the western Antelope Valley on 119.57 acres of land (**Figure 1**). The Project site is bounded on the north by Rosamond Boulevard, and vacant land lies to the east and south. Immediately to the west of the Project site, there are several high voltage transmission lines owned by LADWP and Southern California Edison (SCE). The project site is surrounded by sparsely vegetated vacant or undeveloped lands. The nearest land uses are residences located adjacent to the northeast and southeast quadrants of the project site. Scattered rural single-family residences are also located approximately 200 to 1,400 feet to the east of the Project site. Other land uses within the vicinity of the site include industrial uses, solar generation facilities, and agricultural plots.

The permanent disturbance within the new station is 1,200 feet in length and 800 feet in width. Two future expansions will occur on the Project site, the first expansion will be on the north side of the new switching station. The total station size will be expanded to 350 feet in length, 350 feet in width for the Flexible Alternating Current Transmission System (FACTS) Device. The second expansion will be on the south side of the new switching station. The total station size will be expanded to 850 feet in length, 850 feet in width for the Battery Energy Storage System (BESS) Device. The Project also includes operation and maintenance of the Rosamond Switching Station. Project activities include installation of electrical structures and equipment for transmission lines, staging areas, new roadway within the station, FACTS Device building, and BESS. Existing roads will be used to access the Project site.



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Project Area

0 375 750 1,500 Feet

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taha environmental planners

TAHA 2017-082

LADWP Rosamond Switching Station Project
Noise & Vibration Technical Memorandum

Power Engineers Inc.

FIGURE 1

REGIONAL AND PROJECT LOCATION

Construction is anticipated to begin in Spring 2020 with active construction activity taking approximately 38 months. Up to 70 construction workers would be working on the proposed Project at any time. Construction equipment would typically include equipment similar graders and excavators, backhoes, drill rigs, water trucks, scrapers, sheep's foot compactors, front end loaders, concrete trucks, trucks and flatbed trailers. Cranes, man-lifts, portable welding units, line trucks, and mechanic trucks will also be required. Temporary construction fencing would be placed around the property boundary or extended area of construction, if necessary. Excavation at the Project site would largely be related to site preparation and would result in a limited number of off-site haul truck trips. Heavy-duty truck trips would include approximately 153 concrete truck trips to the site. Construction details are limited at this time in the planning process and the analysis assumes a maximum of 20 concrete truck trips per day and 10 truck trips per day for the aggregate base.

Noise

This assessment was undertaken to determine whether construction or operation of the proposed Project would have the potential to result in significant environmental impacts related to noise or vibration in the context of the Appendix G Environmental Checklist criteria of the CEQA Guidelines. Implementation of the proposed Project may result in a significant environmental impact related to noise and vibration if the proposed Project would result in:

a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies;
b) Generation of excessive ground-borne vibration or ground-borne noise levels;
c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels;

Background Information

The standard unit of measurement for noise is the decibel (dB). The human ear is not equally sensitive to sound at all frequencies. The A-weighted scale, abbreviated dBA, reflects the normal hearing sensitivity range of the human ear. On this scale, the range of human hearing extends from approximately 3 to 140 dBA. The noise analysis discusses sound levels in terms of Equivalent Noise Level (L_{eq}). L_{eq} is the average noise level on an energy basis for any specific time period. The L_{eq} for one hour is the energy average noise level during the hour. The average noise level is based on the energy content (acoustic energy) of the sound. L_{eq} can be thought of as the level of a continuous noise which has the same energy content as the fluctuating noise level. The equivalent noise level is expressed in units of dBA.

Noise levels decrease as the distance from the noise source to the receiver increases. Noise generated by a stationary noise source, or "point source," decreases by approximately 6 dBA over hard surfaces (e.g., reflective surfaces such as parking lots or smooth bodies of water) and 7.5 dBA over soft surfaces (e.g., absorptive surfaces such as soft dirt, grass, or scattered bushes and trees) for each doubling of the distance. For example, if a noise source produces a noise level of 89 dBA at a reference distance of 50 feet, then the noise level is 83 dBA at a distance of 100 feet from the noise source, 77 dBA at a distance of 200 feet.

Noise generated by a mobile source decreases by approximately 3 dBA over hard surfaces and 4.8 dBA over soft surfaces for each doubling of the distance. Generally, noise is most audible when the source is in a direct line-of-sight of the receiver. Barriers, such as walls, berms, or buildings that break the line-of-sight between the source and the receiver greatly reduce noise levels from the source since sound can only reach the receiver by bending over the top of the barrier. However, if a barrier is not sufficiently high or long to break the line-of-sight from the source to the receiver, its effectiveness is greatly reduced.

Studies have shown that the smallest perceptible change in sound level for a person with normal hearing sensitivity is approximately 3 dBA. A change of at least 5 dBA would be noticeable and may evoke a community reaction. A 10-dBA increase is subjectively heard as a doubling in loudness and would likely cause a negative community reaction.

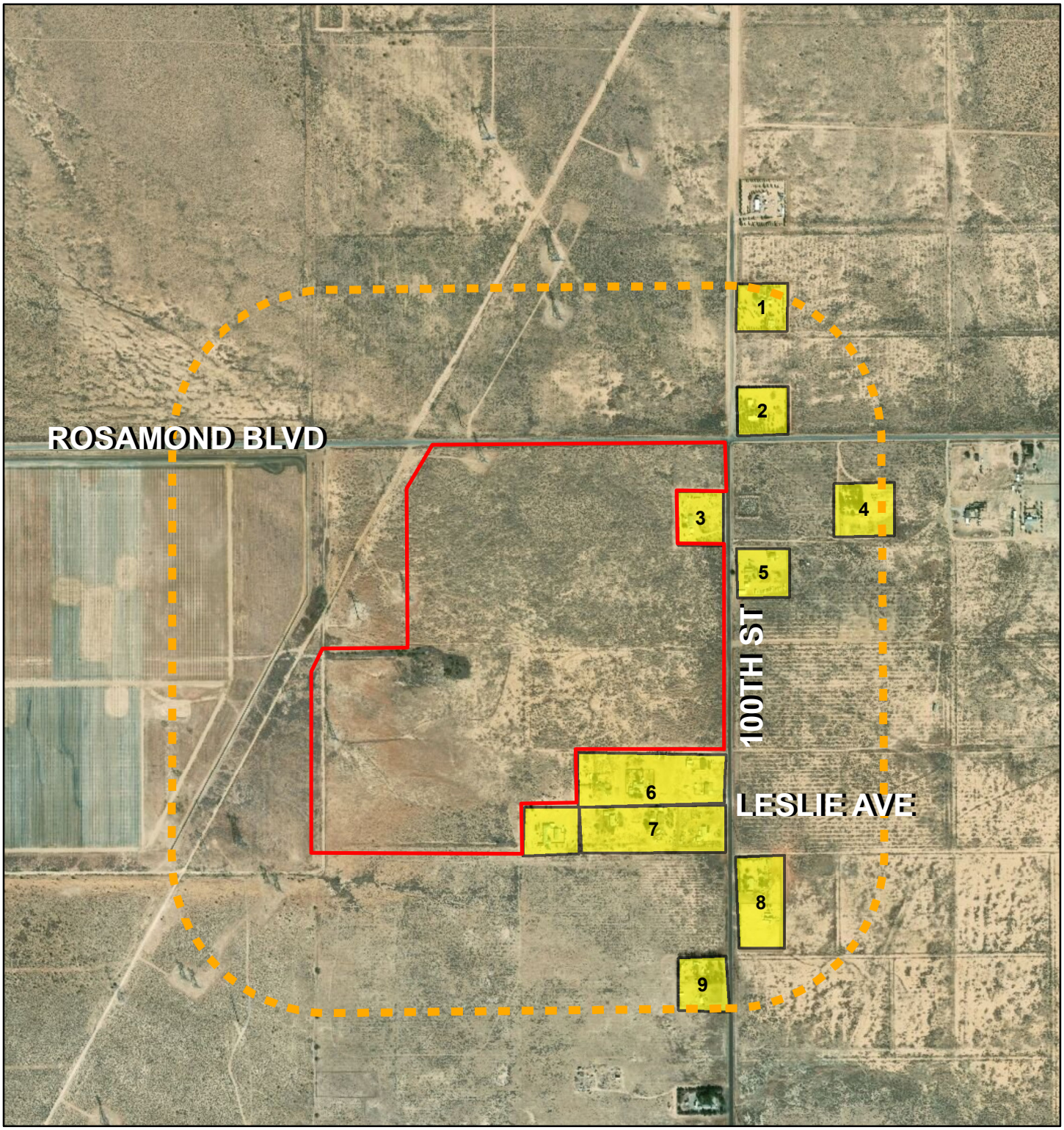
Existing Setting and Regulatory Framework

The Project site is located in a rural environment with few substantial sources of noise. It is anticipated that audible noise includes occasional traffic and aircraft flyovers. As shown in **Figure 2**, the nearest land uses are residences located adjacent to the northeast and southeast quadrants of the project site. Scattered rural single-family residences are also located approximately 200 to 1,400 feet to the east of the Project site.

In 2017, TAHA completed a noise and vibration assessment in a similar rural environment for the LADWP Fairmont Treatment Plant Project. The Fairmont Treatment Plant is located approximately 12 miles southwest of the Project site. Those measurements indicate that rural noise levels typically range from 47.7 to 55.1 dBA L_{eq}. It is anticipated that ambient noise levels would be similar at the Project site due to the similar rural environment.

The Kern County Code (Code) establishes noise standards related to construction at the Project site. Section 8.36(h) of the Code establishes prohibitions for construction noise. The Code states that construction activity may occur Mondays through Fridays from 6:00 a.m. to 9:00 p.m. and 8:00 a.m. to 9:00 p.m. on

weekends. Construction occurring outside of those hours which would be audible to a person at 150 feet from the construction site at a residence within 1,000 feet of a construction site would be prohibited.



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Project Area | 1,000 Foot Buffer | Sensitive Receptors

0 375 750 1,500 Feet

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TAHA 2017-082

LADWP Rosamond Switching Station Project
Noise & Vibration Technical Memorandum
Power Engineers Inc.

FIGURE 2
SENSITIVE RECEPTORS

Noise and Vibration Impact Assessment

a) Would the Project result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies? (Less-than-Significant Impact)

Construction

Noise impacts from construction of the proposed Project would fluctuate depending on the construction phase, equipment type and duration of use, distance between the noise source and receptor, and presence or absence of noise attenuation barriers. Construction activities typically require the use of numerous pieces of noise-generating equipment. Typical noise levels from various types of equipment that would be used during construction are listed in **Table 1**. Noise levels from individual pieces of equipment typically are between 67.7 and 82.2 dBA L_{eq} at 50 feet. To more accurately characterize construction-period noise levels, the noise levels shown in **Table 2** take into account the likelihood that multiple pieces of construction equipment would be operating simultaneously and the typical overall noise levels that would be expected for each phase of construction. When considered as an entire process with multiple pieces of equipment, site preparation would generate the loudest noise level of approximately 89 dBA L_{eq} at 50 feet.

TABLE 1: NOISE LEVEL RANGES OF TYPICAL CONSTRUCTION EQUIPMENT

Construction Equipment	Noise Level at 50 feet (dBA)
All Other Equipment > 5 HP	82.0
Auger Drill Rig	77.4
Backhoe	73.6
Compactor (ground)	76.2
Compressor (air)	73.7
Concrete Mixer Truck	74.8
Concrete Pump Truck	74.4
Crane	72.6
Dozer	77.7
Drum Mixer	77.0
Dump Truck	72.5
Excavator	76.7
Flat Bed Truck	70.3
Front End Loader	75.1
Generator	77.6
Gradall	79.4
Grader	81.0
Man Lift	67.7
Pickup Truck	71.0
Pneumatic Tools	82.2
Pumps	77.9
Scraper	79.6
Welder / Torch	70.0

SOURCE: Federal Highway Administration, *Roadway Construction Noise Model*, Version 1.1, 2008.

TABLE 2: TYPICAL OUTDOOR CONSTRUCTION NOISE LEVELS	
Construction Method	**Noise Level at 50 feet (dBA, L_{eq})**
Ground Clearing	84
Site Preparation	89
Foundations	78
Structural	85
Finishing	89
SOURCE: USEPA, *Noise from Construction Equipment and Operations, Building Equipment and Home Appliances*, PB 206717, 1971.	

The Project area includes scattered rural residences within 1,000 feet of the active construction zone. **Table 3** shows the anticipated maximum noise levels at these residences. It is anticipated that noise levels would range from 52.8 dBA L_{eq} to 81.5 dBA L_{eq} at nearby residences. Construction noise would be audible at the nearest residences, particularly those to the south of the Project site, although equipment would primarily operate in the center of the Project site at Project components and the noise levels below represent a conservative level of analysis. Construction activity may occur Mondays through Fridays from 6:00 a.m. to 9:00 p.m. and 8:00 a.m. to 9:00 p.m. on weekends. Project construction would occur within these hours and would not require nighttime or early morning construction. Kern County has not established a quantitative noise threshold to determine noise impacts at sensitive receptors, but instead imposes time restrictions for construction. The proposed Project would be consistent with Kern County standards and would not significantly increase noise levels at nearby residences. Therefore, the proposed Project would result in a less-than-significant impact related to on-site construction noise. No mitigation measures would be necessary.

TABLE 3: TYPICAL CONSTRUCTION NOISE LEVELS AT RECEPTORS			
Key to Figure 2	**Sensitive Receptor**	**Distance (feet) /a/**	**Maximum Noise Level (dBA)**
1	Residence on 100th St. north of Rosamond Blvd.	1,000	56.5
2	Residence on 100th St. north of Rosamond Blvd.	300	69.5
3	Residence on 100th St. south of Rosamond Blvd.	100	81.5
4	Residence on Rosamond Blvd. east of 100th St.	920	57.4
5	Residence on 100th St. south of Rosamond Blvd.	200	73.9
6	Residences on Leslie Ave.	150	77.1
7	Residences on Leslie Ave.	500	64.0
8	Residence on 100th St. south of Leslie Ave.	1,200	54.5
9	Residence on 100th St. south Leslie Ave.	1,400	52.8
/a/ Measured from the project site to the nearest structure. **SOURCE**: TAHA, 2019.			

Operations

Operational sources of noise would include mechanical equipment and periodic maintenance activities. On-site operational noise would be limited to low humming sounds from equipment, which would not be audible past the Project site boundary. Noise generated at the Project site would not be audible at the nearest residence, which is approximately 100 feet away. Therefore, the proposed Project would result in a less-than-significant impact related to operational noise.

Mitigation Measures

No significant impacts have been identified related to construction or operational noise. Therefore, no mitigation measures are required.

b) Would the proposed Project result in generation of excessive ground-borne vibration or ground-borne noise levels? (Less-than-Significant Impact)

Construction

Construction activity can generate varying degrees of vibration, depending on the procedure and equipment. Operation of construction equipment generates vibrations that spread through the ground and diminish in amplitude with distance from the source. The effect on buildings located in the vicinity of a construction site often varies depending on soil type, ground strata, and construction characteristics of the receiver building(s). The results from vibration can range from no perceptible effects at the lowest vibration levels, to low rumbling sounds and perceptible vibration at moderate levels, and to slight damage at the highest levels. In most cases, the primary concern regarding construction vibration relates to damage.

The FTA provides vibration levels for various types of construction equipment with an average source level reported in terms of velocity.[1] Construction activity would utilize equipment that is best characterized in **Table 4** by large bulldozers. A large bulldozer produces a vibration level of 0.089 inches per second at 25 feet. Vibration is a localized event typically perceptible within 25 feet or less from construction equipment. The nearest receptor is located approximately 100 feet away and vibration generated at the Project site would not be perceptible at this land use. The vibration level would be less than 0.01 inches per second. Therefore, the proposed Project would result in a less-than-significant impact related to on-site construction vibration. No mitigation measures would be necessary.

TABLE 4: VIBRATION LEVELS FOR CONSTRUCTION EQUIPMENT

Equipment	Vibration Level at 25 feet (Inches/Second)
Large Bulldozer	0.089
Loaded Trucks	0.076
Small Bulldozer	0.003

SOURCE: FTA, *Transit Noise and Vibration Impact Assessment*, May 2006.

Operations

The proposed Project would not include significant sources of vibration. Mechanical equipment and associated maintenance activities would not generate perceptible vibration beyond the Project site. Therefore, the proposed Project would result in a less-than-significant impact related to operational vibration. No mitigation measures would be necessary.

Mitigation Measures

No significant impacts have been identified related to construction or operational vibration. Therefore, no mitigation measures are required.

[1]Federal Transit Administration, *Transit Noise and Vibration Impact Assessment*, May 2006.

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 site is not located within an airport land use plan or is it located two miles of a public airport or private airstrip. Therefore, no impact related to airport or airstrip noise would occur.

Mitigation Measures

No significant impacts have been identified related to the proposed Project. Therefore, no mitigation measures are required.

References

California Department of Transportation, *Technical Noise Supplement to the Traffic Noise Analysis Protocol*, September 2013.

Cowan, James P., *Handbook of Environmental Acoustics*, 1994.

Federal Highway Administration, *Roadway Construction Noise Model*, Version 1.1, 2008.

Federal Transit Administration (FTA), *Transit Noise and Vibration Impact Assessment*, September 2018.

Kern County Code, *Section 8.36 (h)*, May 10, 2018.

Kern County General Plan, *Noise Element*, September 22, 2009.

U.S. Environmental Protection Agency (USEPA), *Noise from Construction Equipment and Operations, Building Equipment and Home Appliances*, PB 206717, 1971.

APPENDIX E

TRAFFIC STUDY

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Traffic Study for
LADWP Rosamond Switching Station

November 6, 2019

Prepared For:

POWER Engineers, Inc.
731 East Ball Road Suite 100
Anaheim, CA 92805 USA
(714) 507-2700

Prepared by:

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Monterey Park, California 91754
(323) 260-4703

JB71216

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List of Tables

Attachment

1. Introduction

The purpose of this traffic study is to assess the traffic impacts on the surrounding roadway system of construction activities and post-construction operations for the proposed City of Los Angeles Department of Water and Power (LADWP) Rosamond Switching Station (Project). The report was prepared while under contract for POWER Engineers, Inc. for inclusion in the environmental documentation.

A. Project Location

The Project would be constructed adjacent to the LADWP right-of-way (ROW) for the Barren Ridge – Haskell Canyon power transmission corridor. The proposed Project site is located on the south side of Rosamond Boulevard in unincorporated Kern County, approximately three miles north of the Los Angeles County border.

Direct access to the site is provided by Rosamond Boulevard, an east-west thoroughfare that borders the north side of the property and has a full-access interchange with State Highway 14 (SR-14), approximately eight miles east of the Project site.

B. Project Description

LADWP proposes to construct and operate the new 230 kilovolt (kV) Rosamond Switching Station (the Project). The Project would be constructed adjacent to the LADWP right-of-way for the Barren Ridge – Haskell Canyon (BR-HC) 230 kV Transmission Lines 1, 2, and 3 and would be located approximately 30 miles south of the Barren Ridge Switching Station. The construction of the proposed Project would be located on LADWP-owned land of 120 acres in size. The final configuration of the station needs to accommodate reactive compensation equipment and existing and planned renewable energy interconnections.

Site Access

Direct vehicular access to the Project site during construction and in the operations period would be provided on Rosamond Blvd.

Construction Duration and Intensity

Construction of the proposed Project would occur over an approximate 38-month period, planned by LADWP to start in the year 2020.

The Project construction activities would generate additional vehicle trips in the immediate area, based on necessary truck hauling/delivery trips and the construction employee population.

Off-site dirt hauling truck trips or materials delivery trips are anticipated to be extremely limited. Hauling truck trips are anticipated to occur only for a short duration during site clearing. For concrete deliveries, the calculated trip generation reflects anticipated weekly concrete truck traffic. The peak construction employee population and related vehicle trips was also included.

Operations Phase Traffic

The Project once constructed would generally be in operations 24 hours per day, 7 days per week, but it will not require a regular daily workforce. Maintenance and operations workforce would not generate a significant number of trips that would create impacts on the local transportation network or otherwise substantially affect levels of service in the area. Consequently, operations period trip generation is not discussed further in this report.

C. Project Study Area

This study quantitatively assesses Project construction impacts on roadway segments on the construction truck and employee vehicle trip route. Roadway segment counts were compiled from counts conducted along Rosamond Boulevard, between the Project site and the SR-14 freeway, conducted for this report. The following are the study roadway segments included in the traffic impact analysis:

1. Rosamond Blvd, east of 100th St
2. Rosamond Blvd, east of 55th St
3. Rosamond Blvd, west of 25th St

The daily traffic count summaries collected for these study roadway segments are provided in Attachment A. These volumes are analyzed in Section 4 of this report.

D. Analysis Methodology

KOA analyzed the trip distribution, trip assignment, and daily roadway volumes for the designated study area. In the sections that follow, impacts of the construction of the proposed Project on study area roadways are discussed. The analysis is based on the impacts of Project during the peak of construction activity.

Project construction activities would peak in 2022. This year was defined as the future analysis year, because it represents the period of highest combined construction truck and worker traffic.

2. Existing Conditions

The following describes the study area, along the primary routes to and from the Project site.

Direct vehicular access to the Project site during construction would be provided on Rosamond Boulevard. Adjacent to the Project site, this roadway is a two-lane paved roadway with a striped centerline and a posted speed limit of 45 mph. The shoulders are soft (no curbs, dirt graded areas on each side).

To the west of the intersection with 35th Street, Rosamond Boulevard transitions into a four-lane roadway, with that configuration continuing to the east from that point. There is a center striped two-way left-turn lane. The posted speed limit is also 45 mph in this area.

In the vicinity of the SR-14 interchange, the roadway has a posted speed limit of 35 mph.

3. Project Construction Trips

This section focuses on the definition of construction truck and employee vehicle trip total that are expected to occur during the peak period of Project construction. The distribution and assignment of those trips to the study area roadway network is also discussed here.

A. Project Trip Generation Methodology

Project trip generation calculations included construction truck trip estimates and construction employee vehicle trips. The trip generation totals were determined based on the period which would generate the highest number of combined trips for the Project. Truck volumes were multiplied by a Passenger Car Equivalency (PCE) factor of 2.5 to estimate the real effect of total Project, consistent with truck studies in the area.

Although some carpooling would likely occur during Project construction, trip generation calculations conservatively assumed that each employee would commute in a single personal vehicle. To provide a conservative analysis, the total number of trips analyzed represents the highest trips generated by both construction employees and trucks.

B. Trip Generation Totals

The total daily Project trips defined by Table 1 represent one-way inbound and outbound trips by both the construction personnel vehicles and construction trucks. Foundation work on the project would be the most intense construction period, with 153 concrete truck trips to and from the site over a 180-day working period. Trash haul trucks and delivery trucks would add additional trips.

The construction daily trip numbers were based on the estimated peak day of construction, based on these totals: The peak day truck trip totals would be up to 10 concrete trucks, four trash trucks, and four delivery trucks in use at the peak period of construction, or 18 trucks. Each truck was assumed to make two round trips per day.

- 36 daily peak-period truck round trips
- 70 construction employees on-site

The 36 daily truck trips are round trips, so those were multiplied by two, with a total of 72 one-way trips. Those trips were then multiplied by a Passenger Car Equivalency (PCE) rate of 2.5, consistent with area traffic models, with a total PCE trip number of 180.

Table 1 – Project Construction Weekday Trip Generation

TRIP GENERATION	AVERAGE DAILY PCE TRIPS		
	Trucks*	Employee	Total
Field Personnel	0	140	140
Construction Truck	180	0	180
TOTAL TRIPS	**180**	**140**	**320**

** Truck trips include a Passenger Car Equivalency (PCE) factor of 2.5.*

During the peak period of construction, the Project site is estimated to generate a weekday daily total of 320 passenger car-equivalent trips.

This total daily number of trips is included in the analysis of the daily capacity of the affected roads while also accounting for existing traffic volumes. Peak-hour trips related to construction (i.e., during the morning and evening period when workers would be arriving and departing the site) were not considered because there is no discernable peak traffic period in the vicinity of the Project site.

C. Project Trip Distribution

Construction employee and truck vehicle trip patterns were based on the local roadway network that would provide primary access to the project site.

Rosamond Blvd. has a full-access interchange with the SR-14 freeway to the east of the Project site. Project construction-period traffic would use Rosamond Blvd. to access the regional highway network. The analyzed roadway segments were therefore along Rosamond Boulevard, on two-lane and four-lane portions of the roadway, between the Project site and SR-14. All of the Project-generated trips were assumed to travel across all of the analyzed study roadway segments.

4. Project Impacts Analysis

A. Roadway Impact Analysis

As both existing and future projected volumes at the analyzed roadway segments are very low and do not approach the capacities of the roadways, this analysis focuses on daily volumes.

The tables below provide a comparison of the analyzed existing and future volumes with and without the Project, for the study roadway segments. Comparisons to the total roadway capacity are provided, based on the lane configuration of the roadways, and daily volume capacities generally defined by the Highway Capacity Manual that are 10,000 vehicles per lane for major roadways.

Table 2 provides a Project volume analysis based on the existing period analysis, included here based on CEQA precedence that project impact analyses should include a scenario without future estimated traffic growth.

Table 2 – Project Study Roadway Segment
Existing Volumes Analysis

Roadway Segment	Existing Daily Volumes	Daily Construction Trips	Existing with Construction	Roadway Capacity
Rosamond Blvd east of 100th St W	1,226	320	1,546	20,000
Rosamond Blvd east of 50th St W	6,297	320	6,617	20,000
Rosamond Blvd west of 25th St W	18,651	320	18,971	40,000

Table 3 provides a Project volume analysis at the roadway segments based on a future volume analysis. Future year-2022 volumes were defined by multiplying the existing year-2019 volumes by an ambient growth rate for the area defined by modeled sub-regional analysis output within the Metro Congestion Management Program (CMP).

Table 3 – Project Study Roadway Segment
Future Volumes Analysis

Roadway Segment	Existing Daily Volumes	Future 2022 without Construction	Daily Construction Trips	Future 2022 with Construction	Roadway Capacity
Rosamond Blvd east of 100th St W	1,226	1,276	320	1,596	20,000
Rosamond Blvd east of 50th St W	6,297	6,553	320	6,873	20,000
Rosamond Blvd west of 25th St W	18,651	19,408	320	19,728	40,000

For the remainder of the construction period, construction traffic volumes would decline from the peak levels analyzed in these tables.

The roadway capacities of the roadway segments range from 20,000 to 40,000 vehicles per day. The roadway segments analyzed here would be operating in the range of 1,596 to 19,728 total vehicles per day based on the construction period numbers in Table 2 and Table 3.

On all of the roadway study segments, adequate capacity would remain during the construction period. At least half of the roadway capacity would remain. During the other non-peak months of the overall construction schedule, traffic volumes would decline from these peak levels.

The proposed Project would not create any significant impacts at the analyzed locations.

B. VMT Metrics Considerations

California Environmental Quality Act (CEQA) guidelines have recently changed to require vehicle miles traveled (VMT) metrics in CEQA transportation analysis efforts and not level of service (LOS). LOS metrics can continue to be used under local agency review of traffic circulation, but automobile delay cannot be the determinant of impacts.

VMT analysis is required under CEQA for review of impacts that could be caused by development projects. VMT metrics are not an appropriate measurement of project construction activity, however. VMT data focuses on trip type, automobile use, transit use, walking and bicycling, and general auto trip reduction qualities of development and the management of travel to and from development sites. As project construction activities involve necessary travel to and from the site by construction employees and the necessary use of construction truck delivery and hauling operations, VMT is not an appropriate analysis tool and has been excluded from this analysis.

ATTACHMENT A –
STUDY ROADWAY SEGMENT 24-HOUR TRAFFIC COUNT SUMMARIES

Tuesday, May 22, 2018 | CITY: Rosamond | PROJECT: JB71216

ADT1 Rosamond east of 100th. | Prepared by: Field Data Services of Arizor | **Prepared by AimTD LLC tel. 714 253 7888**

AM Period	NB		SB		EB		WB			PM Period	NB		SB		EB		WB		
0:00	0		0		0		1			12:00	0		0		6		10		
0:15	0		0		0		0			12:15	0		0		4		11		
0:30	0		0		0		0			12:30	0		0		6		4		
0:45	0	0	0	0	0	0	0	1	1	12:45	0	0	0	0	3	19	3	28	47
1:00	0		0		6		1			13:00	0		0		13		3		
1:15	0		0		0		0			13:15	0		0		10		7		
1:30	0		0		2		1			13:30	0		0		3		7		
1:45	0	0	0	0	1	9	0	2	11	13:45	0	0	0	0	5	31	3	20	51
2:00	0		0		0		0			14:00	0		0		10		6		
2:15	0		0		0		0			14:15	0		0		8		5		
2:30	0		0		1		0			14:30	0		0		7		3		
2:45	0	0	0	0	1	2	0	0	2	14:45	0	0	0	0	8	33	3	17	50
3:00	0		0		1		0			15:00	0		0		7		3		
3:15	0		0		1		0			15:15	0		0		9		6		
3:30	0		0		2		1			15:30	0		0		11		8		
3:45	0	0	0	0	0	4	2	3	7	15:45	0	0	0	0	9	36	5	22	58
4:00	0		0		2		2			16:00	0		0		23		6		
4:15	0		0		0		4			16:15	0		0		72		4		
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5:30	0		0		3		91			17:30	0		0		14		3		
5:45	0	0	0	0	0	4	39	224	228	17:45	0	0	0	0	13	59	5	16	75
6:00	0		0		7		17			18:00	0		0		6		3		
6:15	0		0		10		9			18:15	0		0		3		4		
6:30	0		0		3		16			18:30	0		0		3		3		
6:45	0	0	0	0	3	23	13	55	78	18:45	0	0	0	0	8	20	3	13	33
7:00	0		0		6		12			19:00	0		0		3		2		
7:15	0		0		3		11			19:15	0		0		3		2		
7:30	0		0		0		9			19:30	0		0		3		4		
7:45	0	0	0	0	2	11	11	43	54	19:45	0	0	0	0	2	11	1	9	20
8:00	0		0		3		5			20:00	0		0		6		3		
8:15	0		0		5		6			20:15	0		0		1		4		
8:30	0		0		8		3			20:30	0		0		2		4		
8:45	0	0	0	0	3	19	7	21	40	20:45	0	0	0	0	2	11	2	13	24
9:00	0		0		8		1			21:00	0		0		3		3		
9:15	0		0		7		6			21:15	0		0		0		5		
9:30	0		0		10		5			21:30	0		0		1		2		
9:45	0	0	0	0	8	33	8	20	53	21:45	0	0	0	0	0	4	0	10	14
10:00	0		0		6		6			22:00	0		0		9		4		
10:15	0		0		13		4			22:15	0		0		0		0		
10:30	0		0		11		3			22:30	0		0		2		2		
10:45	0	0	0	0	5	35	4	17	52	22:45	0	0	0	0	1	12	0	6	18
11:00	0		0		11		5			23:00	0		0		0		1		
11:15	0		0		5		7			23:15	0		0		1		1		
11:30	0		0		6		8			23:30	0		0		0		2		
11:45	0	0	0	0	9	31	0	20	51	23:45	0	0	0	0	2	3	0	4	7

Total Vol.			176		423	**599**			446		181	**627**

Daily Totals

NB	SB	EB	WB	Combined
		622	604	**1226**

	AM			PM		
Split %	29.4%	70.6%	**48.9%**	71.1%	28.9%	**51.1%**
Peak Hour	10:15	5:00	**5:15**	16:00	12:00	**16:00**
Volume	40	224	**229**	207	28	**230**
P.H.F.	0.77	0.62	**0.61**	0.67	0.64	**0.70**

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Tuesday, May 22, 2018 | CITY: Rosamond | PROJECT: JB71216

ADT2 Rosamond east of 55th. | Prepared by: Field Data Services of Arizor | **Prepared by AimTD LLC tel. 714 253 7888**

AM Period	NB		SB		EB		WB			PM Period	NB		SB		EB		WB		
0:00	0		0		4		5			12:00	0		0		42		37		
0:15	0		0		3		4			12:15	0		0		29		46		
0:30	0		0		2		2			12:30	0		0		30		34		
0:45	0	0	0	0	0	9	2	13	22	12:45	0	0	0	0	49	150	43	160	310
1:00	0		0		2		1			13:00	0		0		48		38		
1:15	0		0		1		2			13:15	0		0		41		44		
1:30	0		0		1		2			13:30	0		0		36		45		
1:45	0	0	0	0	1	5	6	11	16	13:45	0	0	0	0	38	163	35	162	325
2:00	0		0		3		2			14:00	0		0		41		41		
2:15	0		0		1		0			14:15	0		0		51		55		
2:30	0		0		2		1			14:30	0		0		51		70		
2:45	0	0	0	0	2	8	1	4	12	14:45	0	0	0	0	42	185	83	249	434
3:00	0		0		1		5			15:00	0		0		76		86		
3:15	0		0		4		3			15:15	0		0		102		54		
3:30	0		0		8		2			15:30	0		0		44		56		
3:45	0	0	0	0	10	23	6	16	39	15:45	0	0	0	0	60	282	52	248	530
4:00	0		0		11		5			16:00	0		0		56		59		
4:15	0		0		3		10			16:15	0		0		76		42		
4:30	0		0		8		11			16:30	0		0		87		60		
4:45	0	0	0	0	17	39	11	37	76	16:45	0	0	0	0	54	273	65	226	499
5:00	0		0		6		26			17:00	0		0		70		60		
5:15	0		0		13		59			17:15	0		0		90		81		
5:30	0		0		15		52			17:30	0		0		66		66		
5:45	0	0	0	0	37	71	26	163	234	17:45	0	0	0	0	59	285	53	260	545
6:00	0		0		31		28			18:00	0		0		58		42		
6:15	0		0		39		26			18:15	0		0		37		48		
6:30	0		0		29		27			18:30	0		0		47		41		
6:45	0	0	0	0	60	159	42	123	282	18:45	0	0	0	0	33	175	40	171	346
7:00	0		0		78		58			19:00	0		0		28		31		
7:15	0		0		82		60			19:15	0		0		28		41		
7:30	0		0		54		64			19:30	0		0		31		42		
7:45	0	0	0	0	44	258	55	237	495	19:45	0	0	0	0	30	117	27	141	258
8:00	0		0		43		67			20:00	0		0		19		35		
8:15	0		0		66		88			20:15	0		0		27		34		
8:30	0		0		113		119			20:30	0		0		22		25		
8:45	0	0	0	0	46	268	30	304	572	20:45	0	0	0	0	15	83	32	126	209
9:00	0		0		26		26			21:00	0		0		16		20		
9:15	0		0		38		18			21:15	0		0		22		26		
9:30	0		0		48		20			21:30	0		0		20		20		
9:45	0	0	0	0	36	148	32	96	244	21:45	0	0	0	0	11	69	15	81	150
10:00	0		0		38		28			22:00	0		0		6		19		
10:15	0		0		28		29			22:15	0		0		7		10		
10:30	0		0		29		31			22:30	0		0		10		9		
10:45	0	0	0	0	41	136	28	116	252	22:45	0	0	0	0	6	29	10	48	77
11:00	0		0		39		37			23:00	0		0		10		3		
11:15	0		0		39		38			23:15	0		0		5		6		
11:30	0		0		35		40			23:30	0		0		2		13		
11:45	0	0	0	0	56	169	40	155	324	23:45	0	0	0	0	2	19	5	27	46
Total Vol.						1293		1275	**2568**							1830		1899	**3729**

Daily Totals

NB	SB	EB	WB	Combined
		3123	3174	**6297**

	AM			PM		
Split %	50.4%	49.6%	**40.8%**	49.1%	50.9%	**59.2%**
Peak Hour	6:45	7:45	**7:45**	16:30	14:15	**16:30**
Volume	274	329	**595**	301	294	**567**
P.H.F.	0.84	0.69	**0.64**	0.84	0.85	**0.83**

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Tuesday, May 22, 2018 | CITY: Rosamond | PROJECT: JB71216

ADT3 Rosamond west of 25th. | Prepared by: Field Data Services of Arizor | **Prepared by AimTD LLC tel. 714 253 7888**

AM Period	NB		SB		EB		WB			PM Period	NB		SB		EB		WB		
0:00	0		0		12		12			12:00	0		0		105		108		
0:15	0		0		3		24			12:15	0		0		72		121		
0:30	0		0		5		9			12:30	0		0		102		115		
0:45	0	0	0	0	5	25	14	59	84	12:45	0	0	0	0	110	389	134	478	867
1:00	0		0		6		12			13:00	0		0		109		156		
1:15	0		0		3		16			13:15	0		0		134		138		
1:30	0		0		5		7			13:30	0		0		185		132		
1:45	0	0	0	0	4	18	11	46	64	13:45	0	0	0	0	132	560	140	566	1126
2:00	0		0		4		9			14:00	0		0		108		167		
2:15	0		0		4		9			14:15	0		0		149		165		
2:30	0		0		10		8			14:30	0		0		212		145		
2:45	0	0	0	0	4	22	6	32	54	14:45	0	0	0	0	143	612	172	649	1261
3:00	0		0		5		17			15:00	0		0		111		174		
3:15	0		0		20		6			15:15	0		0		186		211		
3:30	0		0		30		9			15:30	0		0		127		189		
3:45	0	0	0	0	43	98	9	41	139	15:45	0	0	0	0	159	583	234	808	1391
4:00	0		0		45		8			16:00	0		0		122		230		
4:15	0		0		50		12			16:15	0		0		160		202		
4:30	0		0		58		15			16:30	0		0		147		219		
4:45	0	0	0	0	59	212	23	58	270	16:45	0	0	0	0	151	580	234	885	1465
5:00	0		0		88		26			17:00	0		0		159		268		
5:15	0		0		103		68			17:15	0		0		139		275		
5:30	0		0		121		27			17:30	0		0		133		237		
5:45	0	0	0	0	137	449	40	161	610	17:45	0	0	0	0	130	561	213	993	1554
6:00	0		0		120		43			18:00	0		0		128		207		
6:15	0		0		175		45			18:15	0		0		122		197		
6:30	0		0		202		69			18:30	0		0		94		160		
6:45	0	0	0	0	179	676	108	265	941	18:45	0	0	0	0	106	450	157	721	1171
7:00	0		0		251		182			19:00	0		0		89		145		
7:15	0		0		313		212			19:15	0		0		86		142		
7:30	0		0		269		118			19:30	0		0		60		119		
7:45	0	0	0	0	166	999	144	656	1655	19:45	0	0	0	0	67	302	129	535	837
8:00	0		0		140		136			20:00	0		0		79		116		
8:15	0		0		140		149			20:15	0		0		55		125		
8:30	0		0		163		108			20:30	0		0		76		98		
8:45	0	0	0	0	164	607	81	474	1081	20:45	0	0	0	0	62	272	97	436	708
9:00	0		0		112		61			21:00	0		0		63		98		
9:15	0		0		105		69			21:15	0		0		40		99		
9:30	0		0		127		88			21:30	0		0		23		61		
9:45	0	0	0	0	113	457	99	317	774	21:45	0	0	0	0	34	160	68	326	486
10:00	0		0		119		84			22:00	0		0		35		73		
10:15	0		0		116		85			22:15	0		0		22		53		
10:30	0		0		97		82			22:30	0		0		18		53		
10:45	0	0	0	0	101	433	87	338	771	22:45	0	0	0	0	22	97	35	214	311
11:00	0		0		98		112			23:00	0		0		11		37		
11:15	0		0		94		114			23:15	0		0		16		40		
11:30	0		0		96		108			23:30	0		0		6		36		
11:45	0	0	0	0	119	407	112	446	853	23:45	0	0	0	0	11	44	21	134	178

Total Vol.					4403		2893	**7296**							4610		6745	**11355**	

Daily Totals

NB	SB	EB	WB	Combined
		9013	9638	**18651**

	AM			PM		
Split %	60.3%	39.7%	**39.1%**	40.6%	59.4%	**60.9%**
Peak Hour	6:45	7:00	**7:00**	14:30	16:45	**16:45**
Volume	1012	656	**1655**	652	1014	**1596**
P.H.F.	0.81	0.77	**0.79**	0.77	0.92	**0.93**

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APPENDIX F

MITIGATION MONITORING AND REPORTING PROGRAM

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1.0 INTRODUCTION

The California Environmental Quality Act (CEQA) was amended in 1989 to add section 21081.6 to the Public Resources Code. Section 21081.6 (a) (1) states that *"the public agency shall adopt a reporting or monitoring program for the changes made to the project or conditions of project approval, adopted in order to mitigate or avoid significant effects on the environment. The reporting or monitoring program shall be designed to ensure compliance during project implementation."*

Furthermore, Section 21081.6 requires a public agency to adopt a mitigation monitoring and reporting program for assessing and ensuring compliance with any required mitigation measured identified for the proposed project. Section 21081.6 provides general guidelines in implementing mitigation monitoring and reporting programs and mandates that specific reporting and monitoring requirements be defined prior to the close of the public review period for the mitigated negative declaration.

The Mitigation Monitoring and Reporting Program (MMRP) table below lists those mitigation measures that may be included as conditions of approval for the proposed Rosamond Switching Station Project. These measures correspond to those discussed in the Initial Study/Mitigated Negative Declaration. To ensure that the Project's mitigation measures would be properly implemented, a monitoring program has been developed that specifies the timing of and responsibility for monitoring each measure. The Los Angeles Department of Water and Power (LADWP) would have the primary responsibility for monitoring and reporting the implementation of the mitigation measures, as described.

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Mitigation Monitoring and Reporting Program (MMRP)
Rosamond Switching Station Project

						VERIFICATION OF COMPLIANCE		
No.	Section of the Initial Study	Task and Description	Timing of Implementation	Method of Implementation	Responsible Party	Initials	Date	Remarks
BIOLOGICAL RESOURCES								
BIO-1	Section 3.4.3	Prior to, and as close to the actual construction date as feasible, pre-construction focused floral surveys shall be conducted within the Project study area. The focused floral surveys shall be conducted within the appropriate blooming periods to determine presence/absence of special status plant species determined to have a potential to occur on-site, with focus on the alkali mariposa lily, which blooms from April to June.	Prior to construction	LADWP to retain a qualified biologist to conduct pre-construction surveys during appropriate blooming season.	LADWP and Qualified Biologist			
BIO-2	Section 3.4.3	A qualified biologist(s) shall monitor all initial earth-moving and vegetation altering construction activities to ensure that standard and special-status species-specific avoidance and minimization recommendations are adhered to. The monitor shall retain stop work authority in the event there is the likelihood of imminent take of special-status species. The biological monitor shall conduct a general pre-construction inspection no more than 14 days prior to the start of construction to verify that no special-status species are in the Project work area or its buffers. The monitor shall also conduct periodic surveys in and around work area to verify adherence to any applicable environmental compliance requirements. If the site is adequately fenced off following initial vegetation disturbance, the monitor will only be needed for periodic check-ins.	During construction	LADWP to retain a qualified biologist to monitor all initial earth-moving and vegetation altering construction activities.	LADWP and Qualified Biologist			
BIO-3	Section 3.4.3	The footprint of disturbance shall be minimized to the extent feasible. Access to the Project site shall be via pre-existing access routes, to the greatest extent possible, and the work area boundaries shall be delineated with staking, flagging, or other comparable markings to minimize surface disturbance associated with vehicle straying. Signs and/or fencing shall be placed around the Project area to restrict access the construction work areas and Project-related vehicles.	Prior to and during construction activities	LADWP to conduct site inspections to ensure compliance with this measure.	LADWP and Construction Contractor			

						VERIFICATION OF COMPLIANCE		
No.	Section of the Initial Study	Task and Description	Timing of Implementation	Method of Implementation	Responsible Party	Initials	Date	Remarks
BIO-4	Section 3.4.3	Upon Project completion, any disturbance shall be, to the extent practicable in areas not occupied by permanent Project facilities, restored to pre-construction conditions. As required, the area of Project-related temporary disturbance shall be revegetated (reseeded) to pre-disturbance levels.	Post-construction activities	LADWP to retain qualified biologist to restore disturbed areas not occupied by permanent facilities, to the extent practicable.	LADWP and Qualified Biologist			
BIO-5	Section 3.4.3	Only certified weed-free straw and hay bales shall be used, as necessary, during construction and weed-free seed for post-construction revegetation.	During construction and post-construction	LADWP to conduct site inspections to ensure compliance with this measure.	LADWP and Construction Contractor			
BIO-6	Section 3.4.3	A qualified biologist(s) shall conduct pre-construction focused burrowing owl surveys within the Project footprint to determine presence/absence of the species. Surveys shall also record presence of any other species that might be considered to be of concern. If burrows are found, the appropriate CDFW-recommended buffer or a buffer deemed appropriate by a qualified biologist(s), shall be installed until occupancy status is determined. If the buffer cannot be maintained during the non-breeding season, owls may be evicted from the burrows using accepted methodology as approved by resource agencies; however evictions shall not occur during the nesting season. Occupied burrows shall not be disturbed during the owl nesting season and evictions shall not occur from, February 1 through August 31.	Prior to construction	LADWP to retain a qualified biologist to conduct pre-construction surveys during appropriate owl nesting season.	LADWP and Qualified Biologist			
BIO-7	Section 3.4.3	If construction occurs between February 15 through August 15, the time period typically referenced in California for the general bird nesting season, pre-construction nesting surveys shall be conducted within the Project study area by a qualified biologist within one week of the start of construction. If no active bird nests are found within this area, no further mitigation is required. If an active nest is found a 250-foot no disturbance buffer shall be instated around the nest if it belongs to a non-listed or migratory bird. If the nest belongs to a listed or fully protected species, a 500-foot no disturbance buffer shall be instated around the nest. Nest buffers may be negotiated and nest removal prior to nesting season may be implemented through discussions with CDFW or other agencies, as applicable.	Prior to construction	LADWP to retain a qualified biologist to conduct pre-construction nesting surveys should construction occur between February 15 through August 15.	LADWP and Qualified Biologist			

						VERIFICATION OF COMPLIANCE		
No.	Section of the Initial Study	Task and Description	Timing of Implementation	Method of Implementation	Responsible Party	Initials	Date	Remarks
BIO-8	Section 3.4.3	During construction, workers shall control areas where wildlife could hide or be trapped (e.g., open trenches, sheds, pits, uncovered basins, and laydown areas). Open trenches that could entrap smaller animals shall be provided with escape ramps and shall be backfilled as quickly as possible.	During construction	LADWP and/or qualified biologist to conduct site inspections to ensure compliance with this measure.	LADWP, Qualified Biologist, and Construction Contractor			
BIO-9	Section 3.4.3	Prior to the start of construction, a Worker Environmental Awareness Program (WEAP) shall be prepared. All field-related Project personnel, including managers, supervisors, and workers, shall be required to undergo a WEAP training prior to construction. The WEAP training shall address adopted mitigation measures. The WEAP include training related to wildlife and plant species that could be encountered during Project activities, what to do if these species are encountered, and what to do if injured or dead wildlife is encountered. WEAP training shall include potential to encounter cultural and paleontological resources and the procedures to manage and report such finds. If new personnel are brought onto the Project during the construction phase, they shall undergo the WEAP training prior to starting work at the site. A sign-in sheet shall be kept to document each worker's attendance at the WEAP training.	Prior to construction	LADWP and/or qualified biologist to prepare and present a WEAP in accordance with this measure.	LSDWP, Qualified Biologist, and Construction Contractor			
BIO-10	Section 3.4.3	Project-related equipment shall be cleaned (pressure wash or compressed air) prior to entering the Project area for the first time to reduce the chance of transporting noxious weed seeds from outside the area.	During construction	LADWP and/or the construction contractor to conduct inspections to ensure compliance with this measure.	LADWP and Construction Contractor			
BIO-11	Section 3.4.3	To avoid attracting predators and nuisance species, the Project footprint shall be clear of debris, where possible. All food-related trash items shall be enclosed in sealed containers and regularly removed from the Project site.	During construction	LADWP and/or the Construction Contractor to conduct site inspections to ensure compliance with this measure.	LADWP and Construction Contractor			
BIO-12	Section 3.4.3	No pets or firearms shall be allowed on-site, and no harassment, injuring, or killing of wildlife shall be allowed.	During construction	LADWP and/or the Construction Contractor to conduct site inspections to ensure compliance with this measure.	LADWP and Construction Contractor			

						VERIFICATION OF COMPLIANCE		
No.	Section of the Initial Study	Task and Description	Timing of Implementation	Method of Implementation	Responsible Party	Initials	Date	Remarks
CULTURAL RESOURCES								
CUL-1	Section 3.5.3	In the event that pre-contact cultural resources are discovered during Project-related construction activities, all work in the immediate vicinity of the find (within a 60-foot buffer) shall cease and a qualified archaeologist meeting Secretary of Interior standards shall be hired to assess the find. Work on the other portions of the Project outside of the buffered area may continue during this assessment period. Additionally, Tribes that have requested notification, including the San Manuel Band of Mission Indians Cultural Resources Department and the Tule River Tribe, shall be contacted, as detailed within mitigation measure TCR-1, if any such find occurs and be provided information after the archaeologist makes his/her initial assessment of the nature of the find, so as to provide Tribal input with regards to significance and treatment	During construction	The LADWP-appointed archaeological monitor will adhere to the requirements outlined in this measure should pre-contact cultural resources resources be inadvertently encountered during construction.	LADWP-appointed archaeological monitor			
CUL-2	Section 3.5.3	If significant Native American resources are discovered and avoidance cannot be ensured, the archaeologist shall develop a Monitoring and Treatment Plan, the drafts of which shall be provided to interested Tribes for review and comment, as detailed within mitigation measure TCR-1. The archaeologist shall monitor the remainder of the Project and implement the Plan accordingly.	During construction	The LADWP-appointed archaeological monitor will adhere to the requirements outlined in this measure should Native American Resources be inadvertently encountered during construction.	LADWP-appointed archaeological monitor			
CUL-3	Section 3.5.3	If human remains or funerary objects are encountered during any activities associated with Project-related construction activity, work in the immediate vicinity (within a 100-foot buffer of the find) shall cease and the County Coroner shall be contacted pursuant to State Health and Safety Code §7050.5 that code enforced for the duration of the Project	During construction	The LADWP-appointed archaeological monitor will adhere to the requirements outlined in this measure should human remains be inadvertently encountered during construction.	LADWP-appointed archaeological monitor			

						VERIFICATION OF COMPLIANCE		
No.	Section of the Initial Study	Task and Description	Timing of Implementation	Method of Implementation	Responsible Party	Initials	Date	Remarks
HAZARDS AND HAZARDOUS MATERIALS								
HAZ-1	Section 3.9.3	Prior to construction of the Project, a SPCC Plan shall be prepared and certified by a professional engineer; a complete copy shall be maintained on-site. The SPCC Plan would include engineered and operational methods for preventing, containing, and controlling potential releases and provisions for a quick and safe cleanup during all phases of construction activities and operation of the Project. The SPCC Plan for facility operation would be updated on a regular basis as new equipment is commissioned and turned over from construction to operations.	Prior to construction	LADWP and/or the construction contractor will prepare a SPCC Plan in accordance with the requirements identified in this measure.	LADWP and Construction Contractor			
HAZ-2	Section 3.9.3	An Emergency Action Plan shall be prepared in coordination with the Kern County Fire Department and Kern County Building Department and shall address proper planning, risk assessment, storage methods, response protocols, and employee training. The Emergency Action Plan shall indicate and describe in detail the backup fire suppression equipment that will be available to County Fire Department responders in the event of a BESS fire. A map or plan identifying the locations of nearby existing fire hydrants shall be included. Any specialized fire response manuals or technical guidelines applicable to the Project shall be included in the Emergency Action Plan. The Emergency Action Plan shall effectively address all emergencies that may be reasonably expected to occur at the Project site focusing on the BESS components. The plan shall include protocol for notifying adjacent land uses in the event of a fire.	Prior to construction	LADWP will prepare an Emergency Action Plan, in coordination with the Kern County Fire Department, in accordance with the requirements identified in this measure.	LADWP			
HYDROLOGY AND WATER QUALITY								
HYD-1	Section 3.10.3	Prior to construction, a SWPPP would be developed. The SWPPP shall describe the BMPs that would be implemented to control erosion, sediment, tracking, construction materials, construction wastes, and non-stormwater flows. This would be accomplished by, but not limited to, minimizing the acreage of disturbed and exposed soil during the construction phase and implementing soil stabilization measures where necessary. Methods may include straw wattles, straw bale barriers, or silt fencing,	Prior to construction	LADWP and/or construction contractor will prepare a SWPPP in accordance with the requirements identified in this measure.	LADWP and Construction Contractor			

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		which would be placed at construction boundaries. Gravel ramps may be installed at access points to public roadways to prevent or minimize the tracking of mud, dirt, sediment, or similar materials onto the roadway. Selection of appropriate erosion control materials will be based on soil properties and anticipated surface flow or runoff. Diesel fuel, gasoline, oil, and other lubricants, as well as adhesives and sealants, would be utilized during the construction. Bulk quantities may be stored in the designated construction yard/staging area. Vehicle fueling and maintenance activities would be restricted to staging areas. All construction vehicles would be monitored for leaks and receive regular off-site preventive maintenance to reduce the chance of leakage.						
HYD-2	Section 3.10.3	Prior to construction, a Drainage, Erosion, and Sedimentation Control Plan shall be prepared. The Drainage Plan would be designed to minimize runoff and shall include engineering recommendations to minimize the potential for impeding or redirecting 100-year flood flows. The final design of the Project facilities shall be graded as required by Kern County Floodplain Damage Prevention Ordinance.	Prior to construction	LADWP and/or construction contractor will prepare a Drainage, Erosion, and Sedimentation Control Plan in accordance with the requirements identified in this measure.	LADWP and Construction Contractor			
TRANSPORTATION								
TRAFFIC-1	Section 3.17.3	Prior to the start of construction, LADWP shall submit a Traffic Control Plan to agencies with jurisdiction over public roads that would be directly affected by construction activities. Although no road closures are anticipated, the Plan shall define the use of flag persons, warning signs, lights, barricades, cones, etc. to control construction traffic as necessary. The Plan shall include measures to avoid disruptions or delays in access for emergency service vehicles. Appropriate police department, fire department, ambulance services, and paramedic services shall be provided with the Plan and notified in advance of Project construction by LADWP. The Plan shall also include contact information for those agencies, assign responsibility for notifying the service providers, and specify coordination procedures.	Prior to construction	LADWP and/or construction contractor will prepare a Traffic Control Plan that addresses the requirements identified in this measure.	LADWP and Construction Contractor			

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TRIBAL CULTURAL RESOURCES								
TCR-1	Section 3.18.3	Tribes that have requested notification, including the San Manuel Band of Mission Indians Cultural Resources Department and Tule River Tribe, shall be contacted, as detailed in CUL-1, of any pre-contact cultural resources discovered during Project implementation, and be provided information regarding the nature of the find, so as to provide Tribal input with regards to significance and treatment. Should the find be deemed significant, as defined by CEQA (as amended, 2015), a Cultural Resources Monitoring and Treatment Plan (Plan) shall be created by the archaeologist, in coordination with Tribal representatives, and all subsequent finds shall be subject to this the monitoring Plan. This Plan shall allow for a monitor to be present that represents the Tribes for the remainder of the Project, should this be requested by an interested Tribe.	During construction	LADWP to notify Tribes, as detailed in CUL-1, of any pre-contact cultural resources discovered during construction activities and develop a Cultural Resources Monitoring and Treatment Plan in coordination with the Tribes in accordance with this measure.	LADWP and Qualified Archaeologist			
TCR-2	Section 3.18.3	Any and all archaeological/cultural documents created as a part of the Project (isolate records, site records, survey reports, testing reports, etc.) shall be supplied to the Lead Agency, which will share this information with interested Tribes. The Lead Agency shall, in good faith, consult with interested Tribes throughout Project construction.	Prior to construction / During construction	LADWP and qualified archaeologist. The qualified archaeologist will share all cultural-related documents with LADWP. LADWP will consult with interested Tribes throughout Project construction.	LADWP and Qualified Archaeologist			